



Land & Water Conservation Department

# Sureshot Lake

## Oneida County, Wisconsin

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## Sureshot Lake AIS Monitoring and Water Clarity Report

WBIC: 1021000  
Previous AIS Findings: Purple Loosestrife, Reed Manna Grass  
New AIS Findings: Yellow Iris  
Field Date: June 11, 2020  
Field Crew: Aubrey Nycz, AIS Lead Program Assistant, and Rachel Cook, AIS Project Assistant, Oneida County Land and Water Conservation Department  
Report By: Aubrey Nycz

**Purpose of lake monitoring:** 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.

The Oneida County AIS program monitors Oneida County waterbodies for the presence of aquatic invasive plants, animals, and organisms and obtains baseline water quality data. Early detection of AIS is crucial for rapid response, containment, and management. Obtaining baseline water quality data provides an indicator of each lake’s current health and documents changes in water quality over time. Lake monitoring is in collaboration with the Department of Natural Resources, UW Extension’s Citizens Lake Monitoring Network Program, and Great Lakes Indian Fish Wildlife Commission. The AIS Team follows the DNR’s monitoring protocols and collected data is entered into the DNR’s statewide database.

**Data Collected:** Suspected invasive species samples, AIS high-risk areas, Secchi disk readings, dissolved oxygen, water temperature, water column appearance, water color, and perception of water quality, shoreline and woody habitat notes, and GPS coordinates.

**Areas observed:** Perimeter of whole lake’s littoral zone, including beaches and boat landings, inlets and outlets, and under and around docks and piers.

**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 are used to achieve the survey: survey from the canoe, walking along the shoreline and shallows, using aqua view scopes, sifting through vegetation, examining underwater solid surfaces, and analyzing rake tows and D-net samples.

**Target 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, and yellow iris.

**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.

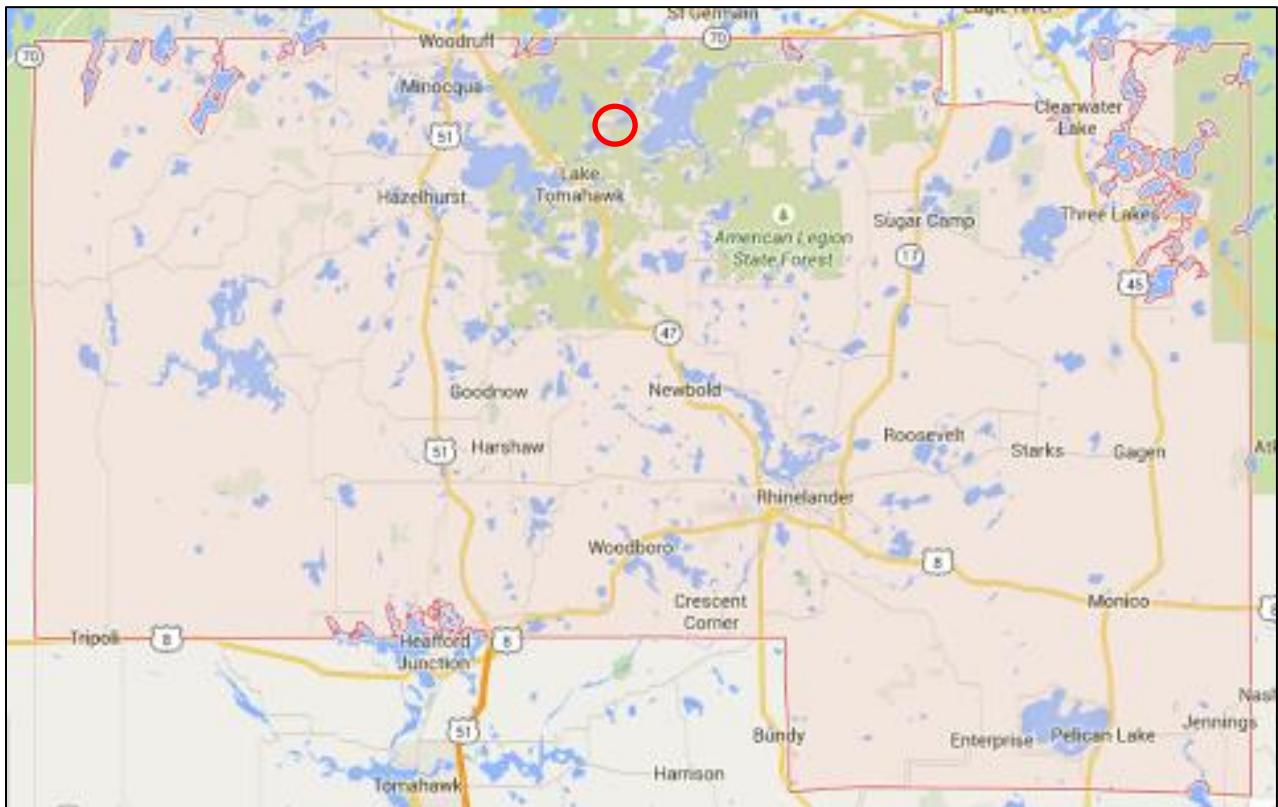
**Facts and figures about Sureshot Lake:** Sureshot Lake, located in the Town of Woodruff, Oneida County, is a 19 acre seepage lake with a maximum depth of 27 feet (Figure 1). There is one public boat landing on Sureshot Lake located on Lake Cunard Campground Road (Figure 2). The substrate is 65% sand, 20% gravel, 5% rock, and 10% muck. Along with reporting the depth and substrate, the Wisconsin Department of Natural Resources (DNR) reports that the lake has largemouth bass.

**Notes from the field (weather):** The weather while conducting research on Sureshot Lake was not ideal. The outside temperature was 65 degrees Fahrenheit, and at times, we experienced heavy rain and wind. One struggle we had was when there were large waves on the water. This made it difficult to get a close look at the submerged plants.




**Notes from the field (aquatic invasive species monitoring):** We completed a visual meander survey around the entire lake 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. We looked both in the water and along the shoreline and made note of the plants and animals we observed in the process (see table 1). On the northern side of the lake, we discovered a single Yellow Iris plant. We recorded the invasive that we found on our GPS unit and collected samples of the plant to report to the DNR (figure 2).

**Notes from the field (water quality monitoring):** To observe the water clarity and quality on Sureshot Lake, we used a depth finder and maps indicating where data had been collected in the past to locate the deep hole. After locating 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 Sureshot Lake were comparable to those in years' past. These measurements can be found in table 2. The Secchi disk reading was at 13 feet out of a maximum depth of 27 feet.

**Figure 1.** Map of Oneida County, WI with Sureshot Lake circled in red.





**Figure 2.** AIS boat launch and shoreline surveillance monitoring location.

	<b>Boat Landing</b>
	<b>Yellow Iris</b>
	<b>Secchi disk reading</b>
<i>Coordinates where the dissolved oxygen and Secchi disk data was collected:</i>	
Latitude: 45.850585	
Longitude: -89.575118	



**Table 1.** Common plants found in Sureshot Lake while monitoring.

<p><b>Blue Flag Iris (<i>Iris versicolor</i>)</b>  <b>Description:</b> A semi-aquatic to emergent perennial. Flowers are deep blue to purple, 6 parted, 6-8 cm wide. Sepals may have greenish-yellow markings at the base surrounded by a white zone. Leaves are narrow, sword-like; arranged in flattened, fan-like clusters. Flowers stalks (20-80 cm high) are taller than the leaves.  <b>Status:</b> Native  <i>Photo Credit: Wisconsin Department of Natural Resources</i></p>	
<p><b>Yellow Iris (<i>Iris pseudacorus</i>)</b>  <b>Description:</b> A flowering plant with dark green or blue-green leaves and yellow petals. This plant grows to be 3-5 feet tall. The center of the leaves are thick.  <b>Status:</b> INVASIVE  <i>Photo Credit: Stephanie Boismenu</i></p>	

**Bullhead Pond Lily (*Nuphar variegata*)**

**Description:** An aquatic plant with heart-shaped leaves that can grow to be 15 inches long. This plant also has a yellow, cup-shaped flower.

**Status:** Native

*Photo Credit: Jomegat's Weblog*



**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*



**White Water Lily (*Nymphaea odorata*)**

**Description:** An aquatic plant that has large, round leaves that can grow to be 12 inches in diameter. White water lilies also have large, white flowers with many petals.

**Status:** Native

*Photo Credit: Stephanie Boismenu*



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

Depth (Feet)	Dissolved Oxygen Levels (mg/L)	Percent of Dissolved Oxygen	Temperature (°F)
2	8.26	94.7	66.6
4	8.16	93.9	67.1
6	8.13	93.7	67.2
8	8.1	93.4	67.2
10	10.01	100.2	62.4
12	9.87	102.7	58.4
14	7.93	78.0	53.8
16	5.31	50.1	50.5
18	3.99	36.6	48.4
20	3.73	33.5	46.9
22	1.83	16.1	45.7
24	0.15	1.3	45.1

Resources: <https://dnr.wi.gov/lakes/lakepages/LakeDetail.aspx?wbic=1021000>

## Sureshot Lake AIS Boat Launch and Shoreline Surveillance Monitoring Report

WBIC: 1021000  
Previous AIS Findings: Purple Loosestrife and Reed Manna Grass  
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

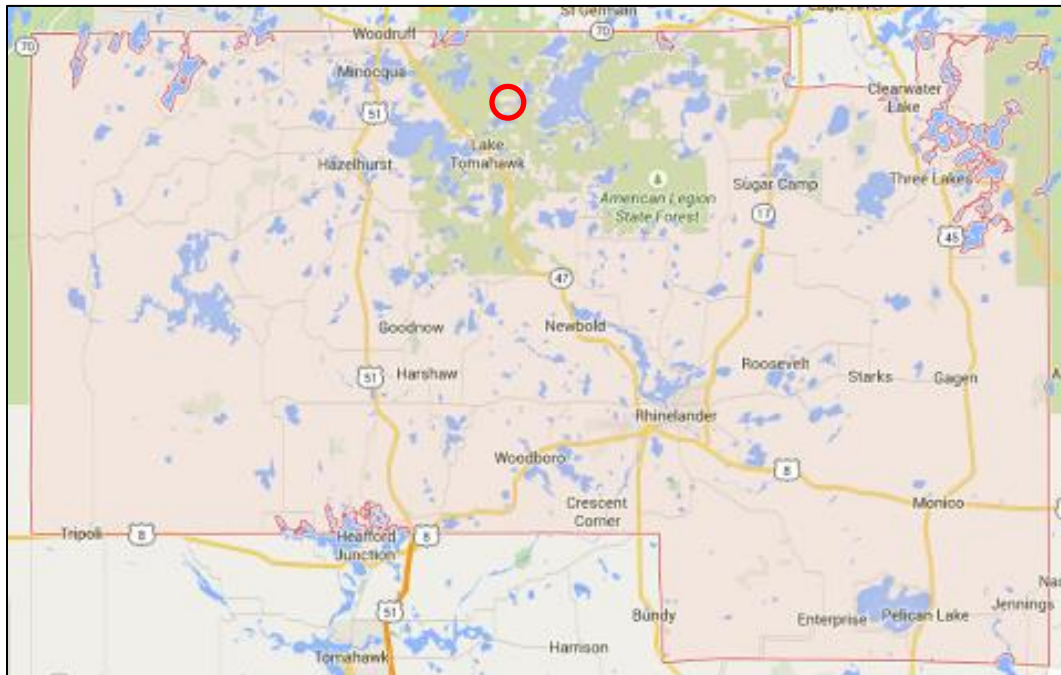
On May 31, 2020, Aubrey Nycz, AIS Lead Project Assistant, visited the Sureshot Lake canoe launch landing located on Cunard Campground Road, in Oneida County, to perform an AIS landing check (Figure 1). The main duties performed at AIS landing checks are to inspect shoreline vegetation, shallow aquatic 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.

Sureshot Lake is a 19 acre seepage lake with one public canoe launch landing. I chose to monitor this lake because it is the only lake in Oneida County that has had Reed Manna Grass in the past. This invasive species has been removed from the lake, however, I wanted to make sure I did not see it growing near the landing. Later in the summer, I plan to return to Sureshot Lake with a canoe to monitor the entire perimeter of the lake. The shoreline on Sureshot Lake is a combination of sand and muck, and it holds a variety of native plants.

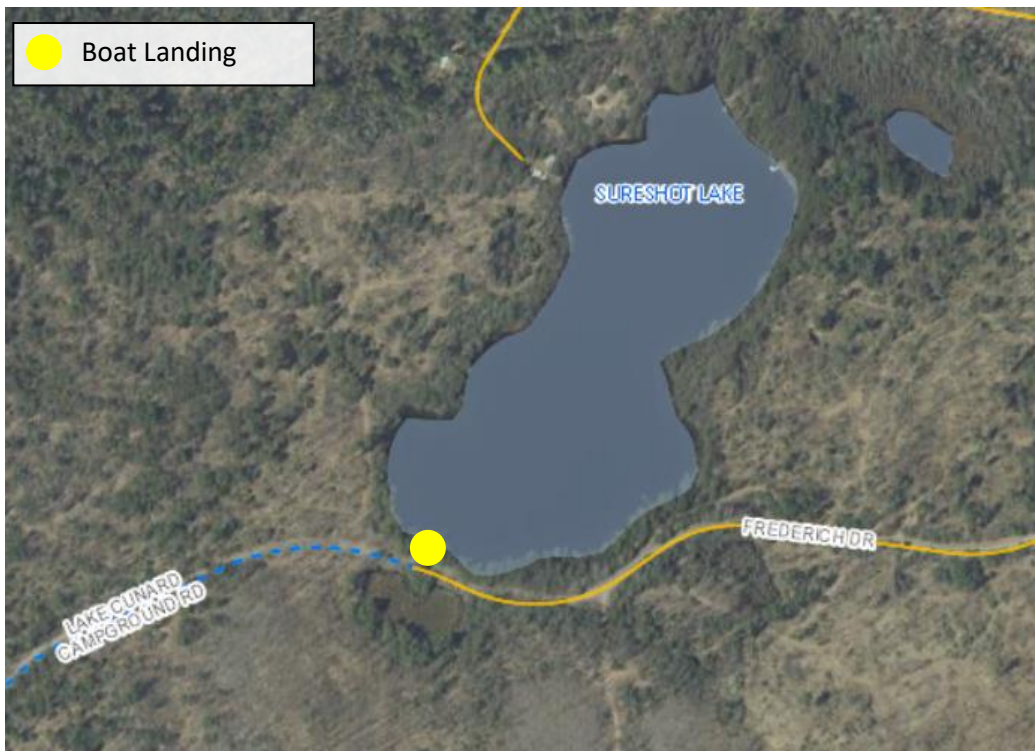
Sureshot Lake contains two kinds of invasive species. According to the Wisconsin Department of Natural Resources, purple loosestrife and reed manna grass are already present in the lake. While monitoring at the canoe landing, I did not observe any of these invasive species.



**Figure 1.** Map of Oneida County, WI with Sureshot Lake circled in red.



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



**Resources:** <https://dnr.wi.gov/lakes/lakepages/LakeDetail.aspx?wbic=1021000>



## **Sureshot Lake AIS Monitoring and Water Clarity Report**

WBIC: 1021000  
Previous AIS Findings: Purple Loosestrife, Reed Manna Grass, Yellow Iris  
New AIS Findings: None  
Field Date: September 23, 2019  
Field Crew: Stephanie Boismenu, AIS Coordinator, and Lauren Radtke, AIS Project Assistant, Oneida County Land and Water Conservation Department  
Report By: Lauren Radtke

On September 23, 2019, Stephanie Boismenu and I visited Sureshot Lake to conduct Aquatic Invasive Species (AIS) monitoring (Figure 1). Sureshot Lake, located in Oneida County, is a 19 acre seepage lake with a maximum depth of 27 feet. The substrate is 65% sand, 20% gravel, 5% rock, and 10% muck. Along with reporting the depth and substrate, the Wisconsin Department of Natural Resources (DNR) reports that the lake has largemouth bass. We observed largemouth bass and panfish while out on Sureshot Lake.

We launched our canoe at the boat landing located off of Fredrich Dr. (Figure 2). The weather while conducting research on Sureshot Lake was ideal. The outside temperature was 70 degrees Fahrenheit, the sky was sunny, and the wind was calm.

### **AIS Monitoring**

We completed a visual meander survey around the entire lake 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. We looked both in the water and along the shoreline and made note of the plants and animals we observed in the process. A detailed list of the plants found while we were monitoring can be found in table 2. We did discover some potential yellow iris on the lake.

### **Water Quality Monitoring**

To observe the water clarity and quality on Sureshot Lake, we used a depth finder and maps indicating where data has been collected in the past to locate the deep hole. After locating 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 would be under stress. The dissolved oxygen measurements on Sureshot Lake were normal. These measurements can be found in table 1. The Secchi disk reading was at 14 feet.

## Findings

Taken between 2:45pm and 4:30pm

## Aquatic Invasive Species

No previously undiscovered invasive species were detected, but some potential yellow iris was found on Sureshot Lake.

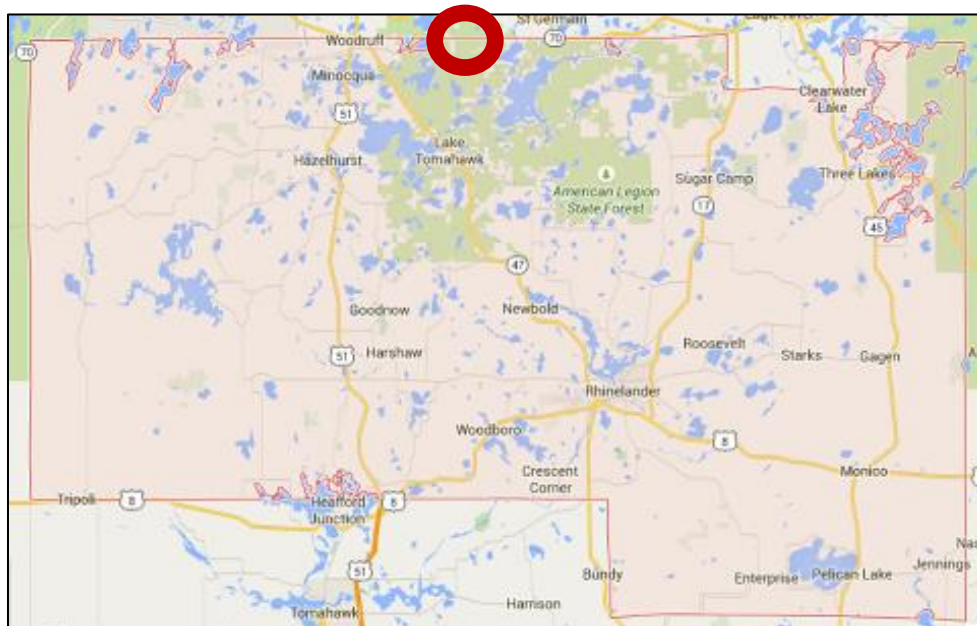
## Secchi

The Secchi reading on this lake was 14 feet out of a 27 feet maximum depth. The water was a brownish color, but was clear when glancing across the lake.

## Dissolved Oxygen

Dissolved oxygen measurements can be found on Table 1.

**Figure 1.** Map of Oneida County, WI with Sureshot Lake circled in red.









**Figure 2.** Map of Sureshot Lake with the location of the Secchi disk reading and location of invasive species labeled



**Table 1.** Dissolved oxygen levels and temperatures at the deep hole.

Depth (Feet)	Dissolved Oxygen Levels (mg/L)	Percent of Dissolved Oxygen	Temperature (°F)
2	8.37	98.5	69.0
4	8.34	97.5	68.3
6	8.42	98.8	67.8
8	8.67	97.6	64.9
10	8.68	96.7	64.0
12	8.42	93.1	63.3
14	5.21	57.1	62.6
16	3.35	36.5	62.1
18	2.08	22.5	61.5
20	0.13	1.4	59.6

**Table 2.** Plants found in Sureshot Lake while monitoring

<p><b>Yellow Iris</b> (<i>Iris pseudacorus</i>)</p> <p><b>Description:</b> A flowering plant with dark green or blue-green leaves and yellow petals. This plant grows to be 3-5 feet tall. The center of the leaves are thick.</p> <p><b>Status:</b> <b>INVASIVE</b></p> <p><i>Photo Credit: Stephanie Boismenu</i></p>	
<p><b>Water Arum</b> (<i>Calla palustris</i>)</p> <p><b>Description:</b> A native plant common in more acidic, shallow water and bogs. They typically bloom between May and June, and can be identified by having waxy smooth, heart-shaped leaves, and nearly cylindrical white flowers called the spadix.</p> <p><b>Status:</b> Native</p> <p><i>Photo Credit: Gowganda Photography</i></p>	
<p><b>White Water Lily</b> (<i>Nymphaea odorata</i>)</p> <p><b>Description:</b> An aquatic plant that has large, round leaves that can grow to be 12 inches in diameter. White water lilies also have large, white flowers with many petals.</p> <p><b>Status:</b> Native</p> <p><i>Photo Credit: Stephanie Boismenu</i></p>	
<p><b>Common Name:</b> Water Shield <i>Brasenia schreberi</i></p> <p><b>Description:</b> 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.</p> <p><b>Status:</b> Native</p> <p><i>Photo Credit: Shannon Sharp</i></p>	
<p><b>Pickrel Weed</b> <i>Pontederia cordata</i></p> <p><b>Description:</b> An aquatic plant with thin, bright green leaves. Emergent leaves tend to be arrow shaped with 6 parted, blue flowers.</p> <p><b>Status:</b> Native</p> <p><i>Photo Credit: Jody Partin</i></p>	
<p><b>Sundew</b> (<i>Drosera spp.</i>)</p> <p><b>Description:</b> A wetland plant that has flattened green leaves with bright red glands. These glands have a sticky goo to entrap insects that are attracted to the plants fragrance and bright colors.</p> <p><b>Status:</b> Native.</p> <p><i>Photo Credit: James Henderson</i></p>	



**Three-way Sedge** (*Dulichium arundinaceum*)

**Description:** An emergent plant. Leaves are hairless, flat, and up to 6in long and 1/3in wide. Leaf arrangement is alternate and 3-ranked (leaves align in a “three-way” pattern).

**Status:** Native

*Photo Credit:* minnesotawildflowers.info



**Giant Bur-Reed** (*Sparganium eurycarpum*)

**Description:** Emergent plant about 2-6 feet tall. Erect to ascending alternate leaves along the central stem. Strong keel creating a flattened triangular cross-section of leaf. Bur-like appearance for lower pistillate flowers. Flowers have two stigmas. Flower stalk zig-zags.

**Status:** Native.

*Photo Credit:* wildflower.org



**Soft-stem Bulrush** (*Schoenoplectus tabernaemontani*)

An emergent aquatic plant. Spikes have branching lusters at the top of the stem with 15 to 200 spikelets (flower clusters). 3 to 4 leaves at the base of the stem. Plants form colonies from rhizomes.

**Status:** Native

*Photo Credit:* minnesotawildflowers.info



**Leather-leaf** (*Chamaedaphne calyculata*)

**Description:** A plant that can grow in riparian habitats as well as wetland sites. Leather-leaf is often mistaken for blueberry, but an easy way to identify Leather-leaf is feeling the coarse textured leaf as well as noticing very little veining present.

**Status:** Native

*Photo Credit:* Peter M. Dzuik



**Steeplebush** (*Spiraea tomentosa*)

**Description:** Mound-shaped shrub 2-4 feet tall. Usually unbranched. Leaves are alternate, abundant along the stem, and are coarsely toothed along their margins. Central stem terminates in a dense panicle of pink flowers 4-8 inches long.

**Status:** Native

*Photo Credit:* wildseedproject.net







Land & Water Conservation Department

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## Sureshot Lake AIS Monitoring and Water Clarity Report

Field Date: August 9<sup>th</sup>, 2018  
WBIC: 1021000  
Previous AIS Findings: Purple Loosestrife, Reed Manna Grass, Yellow Iris  
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 9<sup>th</sup>, 2018, Aubrey and I went to Sureshot Lake to implement AIS monitoring along with water clarity and quality assessments. Sureshot Lake is a 19 acre oligotrophic lake located in Oneida County, and has one public boat launch. The lake is mainly surrounded by the American Legion State Forest, but the north end of the lake does have several private lots. Sureshot Lake has a maximum depth of 27 feet, and the substrate is reported to be 65% sand, 20% gravel, 5% rock, and 10% muck. Along with reporting the depth and substrate, the Wisconsin Department of Natural Resources reports that the lake has largemouth bass present. We did observe largemouth bass, and we also observed a variety of panfish as well.

The weather while conducting research on Sureshot Lake was ideal. The outside temperature was 80 degrees Fahrenheit, the sky was sunny, there was no wind, and the water clarity was good. There was no adverse weather to impede our measurements in any way.

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.

To observe the water clarity and quality of Sureshot Lake, Aubrey and I went to what we thought was the deep hole towards the north end of the lake. Sureshot Lake does not have a bathymetric

map, so we attempted to find the deep hole with our sonar unit. After locating the suspected deep hole, we used a Secchi disk to measure water 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 Sureshot Lake. The Secchi disk reading was 15.5 feet, and the dissolved oxygen readings can be found in table 2.

Aubrey and I did not observe any new invasive species on Sureshot Lake, however, there were two previously documented invasives still present. We found several clumps of Purple Loosestrife, and also a few scattered Yellow Iris plants as well. The Purple Loosestrife and Yellow Iris plants were mainly found on the northern end of the lake, and were in front of several homes. Besides the Purple Loosestrife and Yellow Iris, the lake seems to be healthy and thriving. While out on Sureshot Lake, we took note of the most common plants we observed, and they can be seen below in table 1.

Another important note is that Sureshot Lake used to have an invasive plant known as Variegated Reed Manna Grass. This is a highly invasive plant and it was pulled soon after it was found in 2015. The Oneida County AIS Team has returned several times in order to watch for the invasive, but since its removal in 2015, no Variegated Reed Manna Grass has been viewed. The Oneida County AIS Team plans on returning in the future to check on the Purple Loosestrife and Yellow iris locations, as well as watching for the possible return of Variegated Reed Manna Grass.

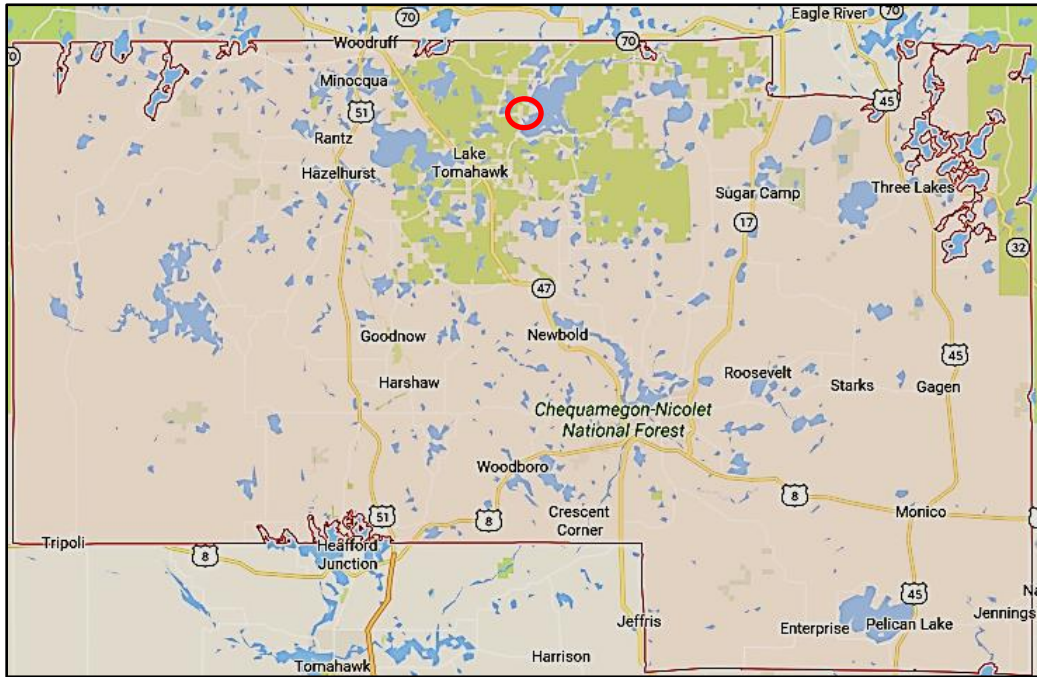
**Findings:** Taken 12 p.m. – 2:00 p.m. on August 9<sup>th</sup>, 2018

Aquatic Invasive Species: Purple Loosestrife and Yellow Iris

Secchi: The Secchi reading on this lake was 15.5 feet out of a 27 foot maximum depth. The water color was a brownish color, and was very clear when glancing across the lake.

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

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








**Figure 2.** Map of Sureshot Lake with the location of the Secchi disk reading labeled.

-  Deep hole & location of Secchi disk reading
- Secchi Disk Readings:  
Sureshot Lake - Deep Hole  
Coordinates - Not Available
-  Public Boat Landing
-  Yellow Iris
-  Purple Loosestrife



**Table 1.** Plants found in Sureshot Lake when monitoring.

<p><b>Common Name</b> <b>Scientific Plant Name</b></p>	<p><b>Description</b></p>	<p><b>Image</b></p>
<p>Bullhead Pond Lily (Spatterdock)  <i>Nuphar variegata</i></p>	<p>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.</p>	 <p>Photo Credit: Jomegat's Weblog</p>
<p>Water Shield  <i>Brasenia schreberi</i></p>	<p>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. This plant is native.</p>	 <p>Photo Credit: Shannon Sharp</p>
<p>Purple Loosestrife  <i>Lythrum salicaria</i></p>	<p>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!</p>	 <p>Photo Credit: Dave Britton</p>
<p>White Water Lily  <i>Nymphaea odorata</i></p>	<p>An aquatic plant that has large, round leaves that can grow to be 12 inches in diameter. White water lilies also have large, white flowers with many petals. This plant is native.</p>	 <p>Photo Credit: Joseph A. Marcus</p>
<p>Yellow Iris  <i>Iris pseudacorus</i></p>	<p>A flowering plant with dark green or blue-green leaves and yellow petals. This plant grows to be 3-5 feet tall. The center of the leaves are thick. This plant is invasive!</p>	 <p>Photo Credit: Dawn Sucee, Ontario Federation of Anglers and Hunters (OFAH)</p>

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

<b>Depth (Feet)</b>	<b>Dissolved Oxygen Levels (mg/L)</b>	<b>Temperature (F)</b>	<b>Percent Dissolved Oxygen</b>
2	7.71	77.6	99.6
4	7.92	76.4	101.0
6	7.91	75.8	100.2
8	7.88	75.1	99.2
10	7.76	74.2	96.7
12	6.93	72.6	85.0
14	6.73	68.9	79.2
16	4.62	63.1	51.0
18	2.46	57.6	24.5





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## **Sureshot Lake AIS Monitoring and Water Clarity Report**

Field Date: August 11<sup>th</sup>, 2017  
WBIC: 1021000  
Previous AIS Findings: Purple Loosestrife, Variegated Reed Manna Grass, Yellow Iris  
New AIS Findings: None  
Field Crew: Stephanie Boismenu, AIS Coordinator, and Aubrey Nycz, AIS Lead Program Assistant, Oneida County Land and Water Conservation Department  
Report By: Aubrey Nycz

On August 11<sup>th</sup>, 2017, Stephanie and I went to Sureshot Lake to implement AIS monitoring along with water clarity and quality assessments. Sureshot Lake is a 19 acre oligotrophic lake located in Oneida County, and has one public, small craft, boat launch. The lake is also partly surrounded by state owned land. Because of this, over half of the lake is not built up with housing, and the shoreline looks natural in many areas. Sureshot Lake has a maximum depth of 27 feet, and the substrate is reported to be 65% sand, 20% gravel, 5% rock, and 10% muck. Along with reporting the depth and substrate, the Wisconsin Department of Natural Resources reports that the lake has largemouth bass and panfish present. We observed this firsthand as bluegill and largemouth bass were seen along the shoreline.

The weather while conducting research on Sureshot Lake was fair. The outside temperature was 70 degrees Fahrenheit, the sky was partly cloudy, there was light wind, and the water clarity was good. There was no adverse weather to impede our measurements in any way.

When conducting our AIS lake survey, Stephanie 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 to have a closer look at some of the plants growing along the shoreline. One reason for walking parts of the shoreline was to look for variegated reed manna grass. In September of 2015, members of our team found this invasive plant growing along the shoreline, and it was reported to be the only location in Wisconsin to house this grass. When the team found the reed

manna grass in 2015, they removed all visible plants by digging and hand pulling. Our team returned to this location in September of 2016 and in August of 2017 to verify that the plant had not continued to grow. Thankfully, we have not found any traces of variegated reed manna grass the past two years that we have monitored this lake.

To observe the water clarity and quality of Sureshot Lake, Stephanie and I went to the deep hole on the north 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 Sureshot Lake. The Secchi disk reading was 11 feet, and the dissolved oxygen readings can be found in table 2.

Stephanie and I did observe Purple Loosestrife on Sureshot Lake, however, this invasive is already known to have been established here. In order to help control the purple loosestrife population on this waterbody, Stephanie and I removed all loosestrife plants that we found by digging and hand pulling. We also found some iris plants growing along the shoreline, which we believed were yellow iris. Because the plants were not blooming, and we were not able to see the color of the petals, we did not remove the plants. Blue flag iris and yellow iris look very similar when they are not in bloom, therefore, we did not want to mistake a native plant for an invasive one, and remove a healthy plant from the shoreline. The four most common plants we observed were Purple Loosestrife, Water Smartweed, White Water Lilies, and Yellow Iris. These plants can be seen below in table 1.

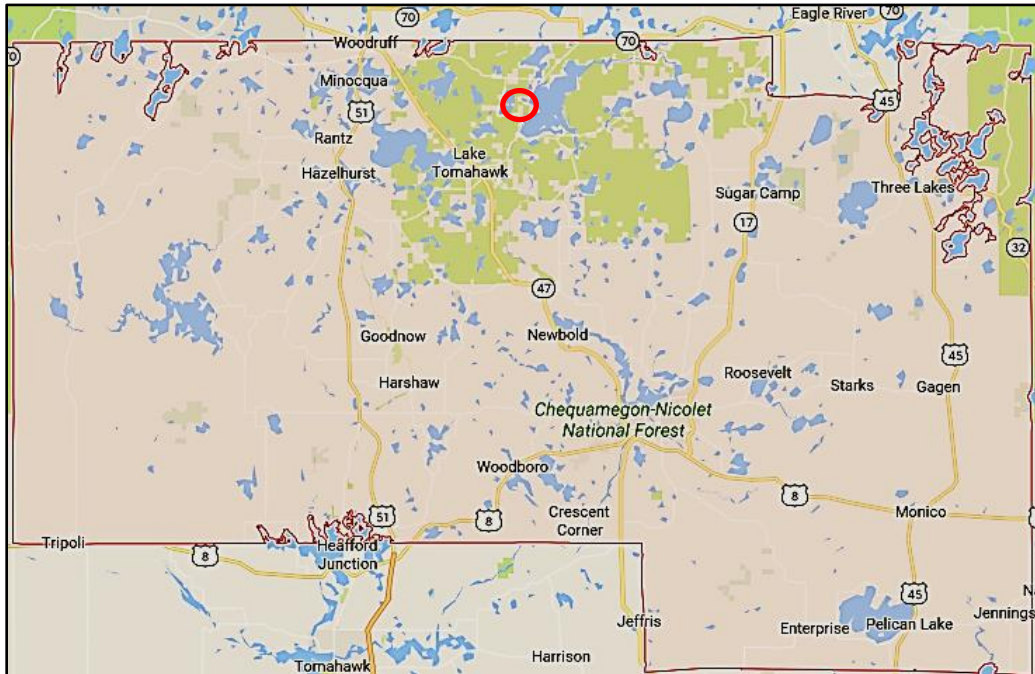
**Findings:** Taken 2:00 p.m. – 4:00 p.m. on August 11<sup>th</sup>, 2017

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

Secchi: The Secchi reading on this lake was 11 feet out of a 27 foot maximum depth. The water color was a brownish 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 Sureshot Lake circled in red (approximate location)



**Figure 2.** Map of Sureshot Lake with the location of the Secchi disk reading labeled.

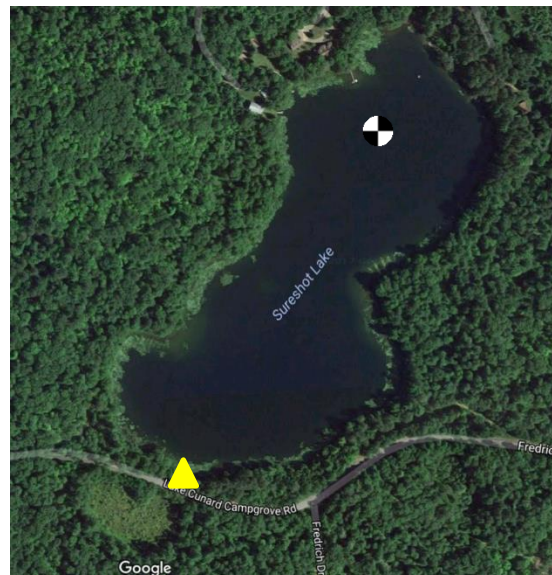


Deep hole & location of Secchi disk reading





Secchi Disk Readings:  
 Sureshot Lake - Deep Hole  
 Coordinates - Not Available



Public Boat Landing



**Table 1.** Plants found Sureshot Lake when monitoring.

Common Name Scientific Plant Name	Description	Image
<p>Purple Loosestrife</p> <p><i>Lythrum salicaria</i></p>	<p>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!</p>	 <p>Photo Credit: Dave Britton</p>
<p>Water Smartweed</p> <p><i>Persicaria amphibia</i></p>	<p>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.</p>	 <p>Photo Credit: Superior National Forest/CCSA</p>
<p>White Water Lily</p> <p><i>Nymphaea odorata</i></p>	<p>An aquatic plant that has large, round leaves that can grow to be 12 inches in diameter. White water lilies also have large, white flowers with many petals. This plant is native.</p>	 <p>Photo Credit: Joseph A. Marcus</p>
<p>Yellow Iris</p> <p><i>Iris pseudacorus</i></p>	<p>A flowering plant with dark green or blue-green leaves and yellow petals. This plant grows to be 3-5 feet tall. The center of the leaves are thick. This plant is invasive!</p>	 <p>Photo Credit: Dawn Sucee, Ontario Federation of Anglers and Hunters (OFAH)</p>

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

<b>Depth (Feet)</b>	<b>Dissolved Oxygen Levels (mg/L)</b>	<b>Temperature (F)</b>	<b>Percent Dissolved Oxygen</b>
2	7.62	72.0°	92.2%
4	7.56	71.6°	91.2%
6	7.37	71.3°	88.6%
8	7.34	71.2°	88.2%
10	4.81	70.5°	57.4%
12	4.00	70.1°	47.5%
14	0.27	67.6°	3.1%
16	0.13	62.8°	1.4%



## AIS Incident Report

### **Variegated Reed Manna Grass (*Glyceria maxima var. variegata*) Discovered in Sureshot Lake, Oneida County, WI**

WBIC: 1021000  
Field Date: September 3, 2015  
Field Crew: Stephanie Boismenu AIS Lead Program Assistant and Sara Mills,  
AIS Project Assistants, Oneida County Land & Water  
Previous AIS Findings: None  
New AIS Findings: Variegated Reed Manna Grass (*Glyceria maxima var. variegata*)  
Purple Loosestrife (*Lythrum salicaria*)  
Yellow Iris (*Iris pseudacorus*)  
Report by: Stephanie Boismenu, AIS Lead Program Assistant,  
Oneida County Land & Water Conservation

On September 3, 2015, Sara and I visited Sureshot Lake to follow-up on a report of a suspected AIS population of variegated reed manna grass. We canoed around the lake and located the variegated reed manna grass growing in the littoral zone, adjacent to the border of the Northern Highland American Legion State Forest and private property, located in the North West section of the lake (Map 1 & 2). It was growing in 1-3 feet of water and the substrate was muck. I was able to get out of the canoe and hand-harvest all of the plants that I could find, including its root mass, totaling about 15 individual plants. Unlike other AIS with dense roots systems, I was surprised by its lack of root structure and how easily each plant pulled out of the sediment. Photographs and GPS coordinates were obtained and an AIS Incident Report was completed.

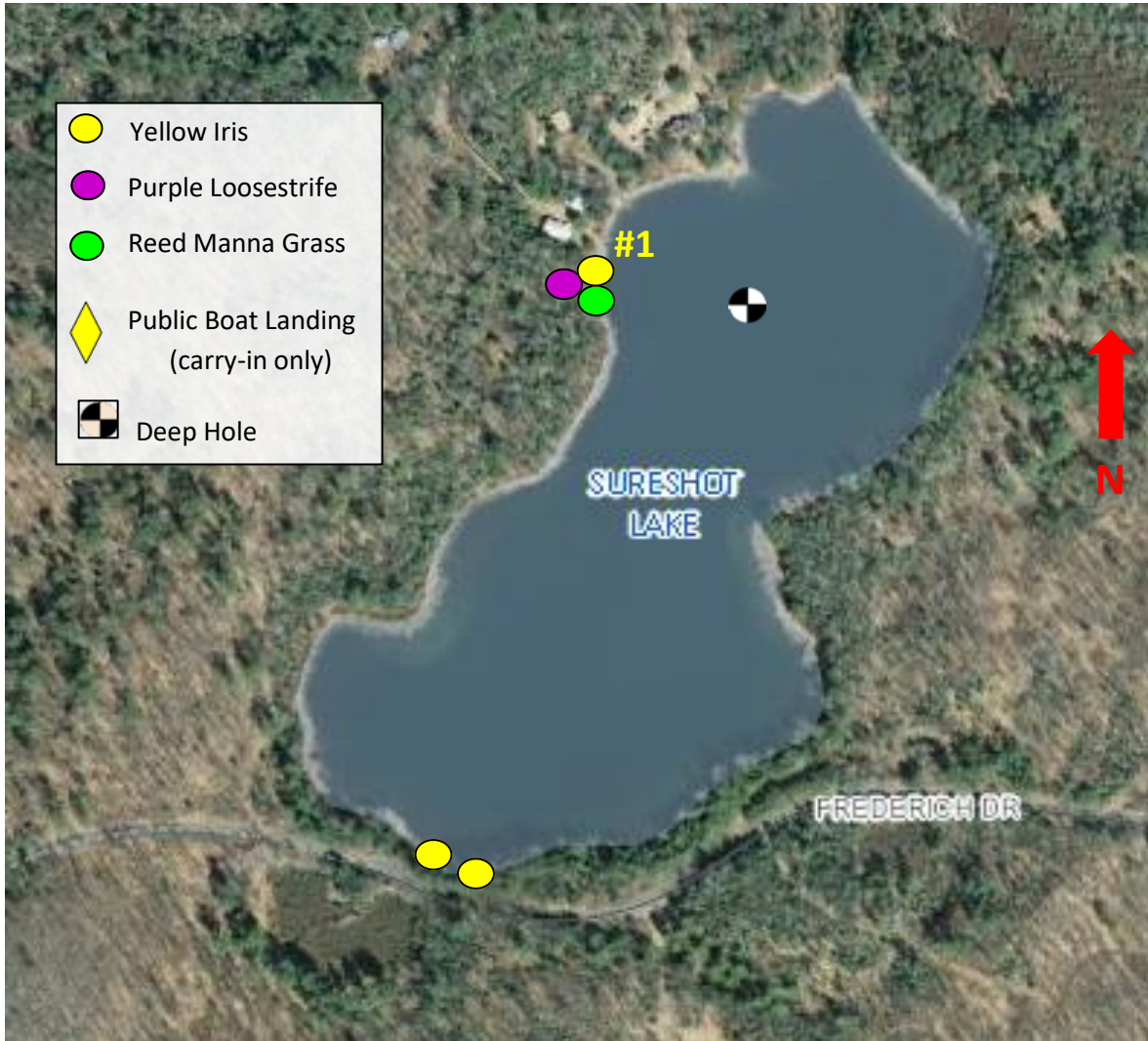
We also found purple loosestrife and yellow iris (#1 on Map 1) next to the variegated reed manna grass and other emergent vegetation. All iris plants were found without flowers. Confirmed yellow iris #1 was found in an approximate 4' by 6' bed. Photographs and GPS coordinates were obtained and AIS Incident Reports was completed. The homeowner adjacent (Map 2) to the stand of plants came to see what we were doing and reported to us that some of the irises blooms are yellow and some bloom blue.

In addition to searching for the variegated reed manna grass, we monitored the entire shoreline for AIS and obtained baseline water quality data from the deep hole. We monitored for AIS via meandering the shoreline in the canoe, walking along the shoreline, used the aqua scope, looked through vegetation, and checked under and around solid surfaces. We located two potential yellow irises near the canoe launching site (#2 & #3 on Map 1). Yellow iris #2 and #3 (single plants) were not sampled due to lack of identifying features including seed pods. Leaf size and blue-

green coloration caused us to believe it to be yellow iris, but they are not definitive identifying features. Before further management, yellow iris #2 and #3 need to be confirmed during the flowering period.

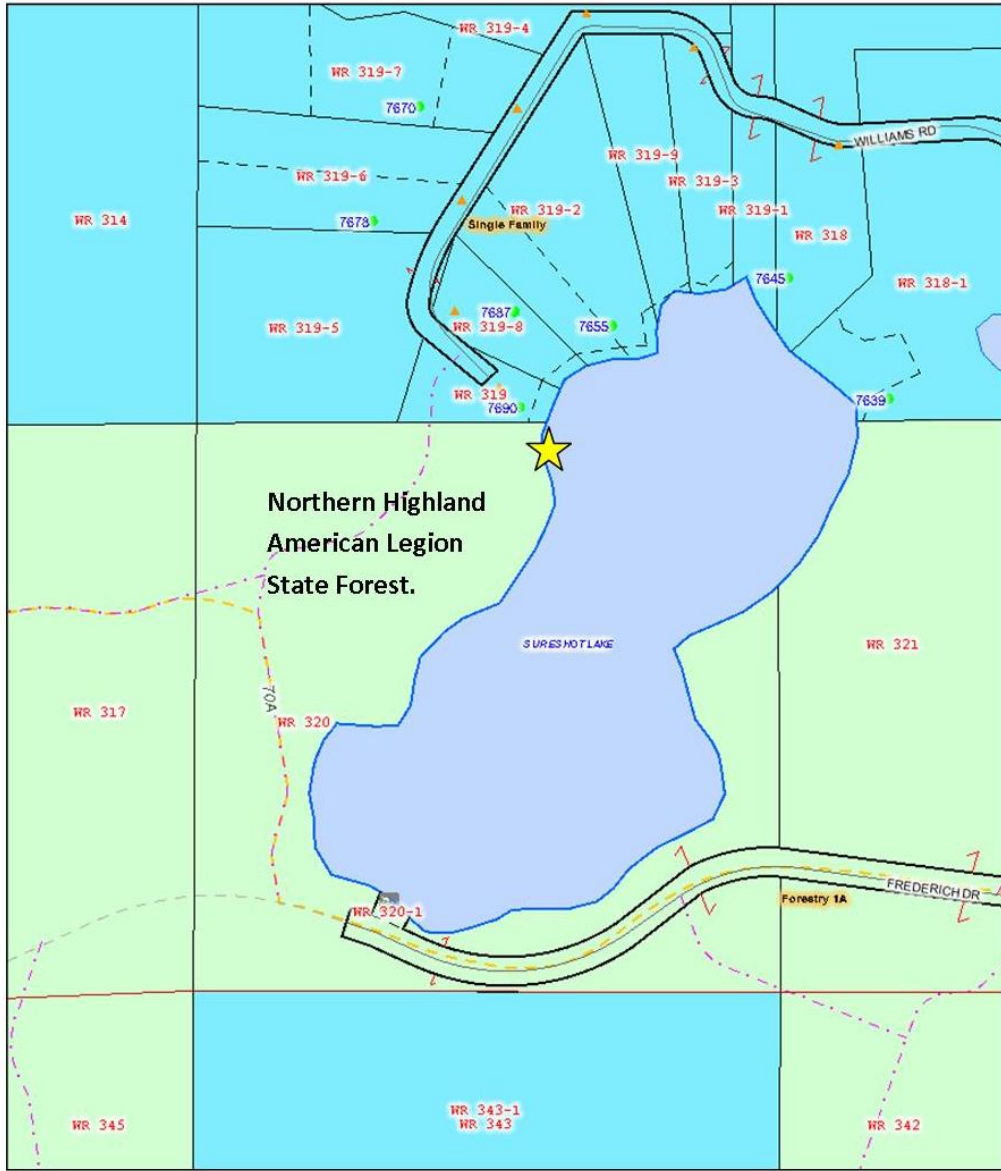
After our visit to Sureshot Lake, we delivered the AIS Incident reports and samples of the variegated reed manna grass, purple loosestrife and yellow iris to the WDNR for verification. All three were given positive identification. All new invasive discoveries are shown in Map 1.

**Map 1.** Map of Sureshot Lake with locations of newly discovered invasive species



Confirmed yellow iris #1 GPS Coordinates:	45.85080704, -89.57683104
Unconfirmed yellow iris #2 GPS Coordinates:	45.84781068, -89.57745594
Unconfirmed yellow iris #3 GPS Coordinates:	45.84780247, -89.57786003
Confirmed purple loosestrife GPS Coordinates:	45.85090039, -89.57678201
Confirmed reed manna grass GPS Coordinates:	45.85090039, -89.57678201
Deep Hole GPS Coordinates:	45.85066431, -89.57563666

**Map 2. Oneida County GIS Map showing property locations.**



★ Location of invasive Reed Manna Grass (*Glyceria maxima var. variegata*)



Oneida County GIS  
Data Mapping



**DISCLAIMER**  
All information is believed accurate but is NOT guaranteed to be without error. This map and its underlying data are intended to be used as a general index to land related information and are not intended for detailed, site-specific analysis.

Photos by Stephanie Boismenu, AIS Lead Program Assistant, Oneida County Land & Water Conservation





Variegated reed manna grass (*Glyceria maxima* var. *variegata*) from Sureshot Lake, Oneida County WI.  
Photos by Stephanie Boismenu, AIS Lead Program Assistant, Oneida County Land & Water Conservation





Variegated reed manna grass (*Glyceria maxima* var. *variegata*) from Sureshot Lake, Oneida Coty WI.  
Photos by Stephanie Boismenu, AIS Lead Program Assistant, Oneida County Land & Water Conservation





Variegated reed manna grass (*Glyceria maxima* var. *variegata*) from Sureshot Lake, Oneida Coty WI.  
Photos by Stephanie Boismenu, AIS Lead Program Assistant, Oneida County Land & Water Conservation





Variegated reed manna grass (*Glyceria maxima* var. *variegata*) from Sureshot Lake, Oneida Coty WI.  
Photos by Stephanie Boismenu, AIS Lead Program Assistnt, Oneida County Land & Water Conservation

