

# Sureshot Lake

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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.

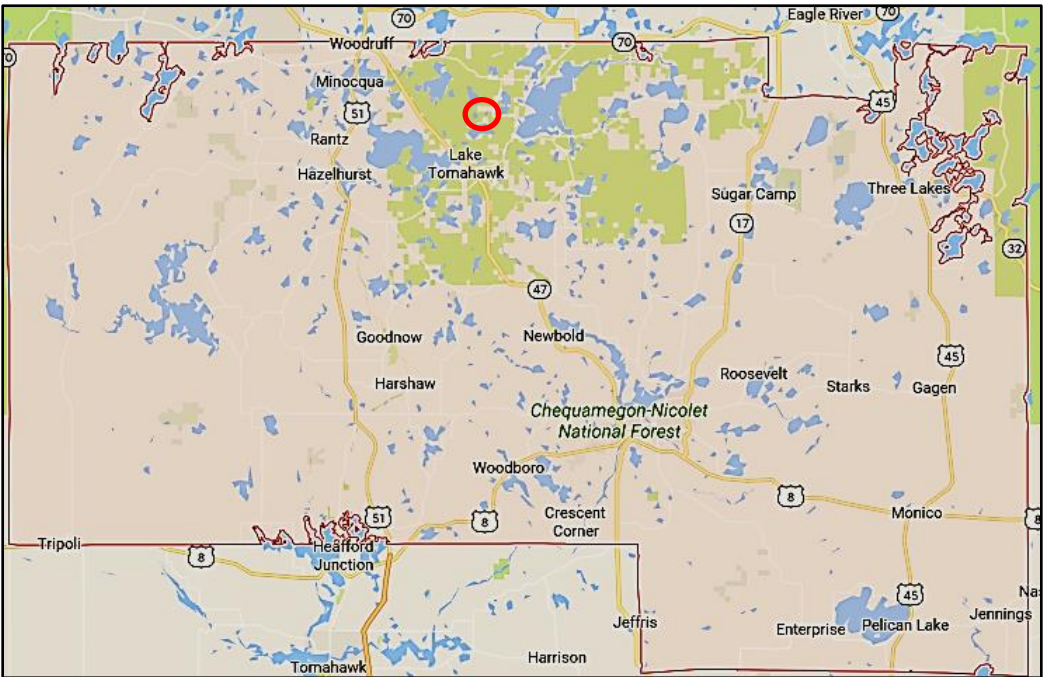
**Findings:** Taken 12 p.m. – 2:00 p.m. on August 9<sup>th</sup>, 2018

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%



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## 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.

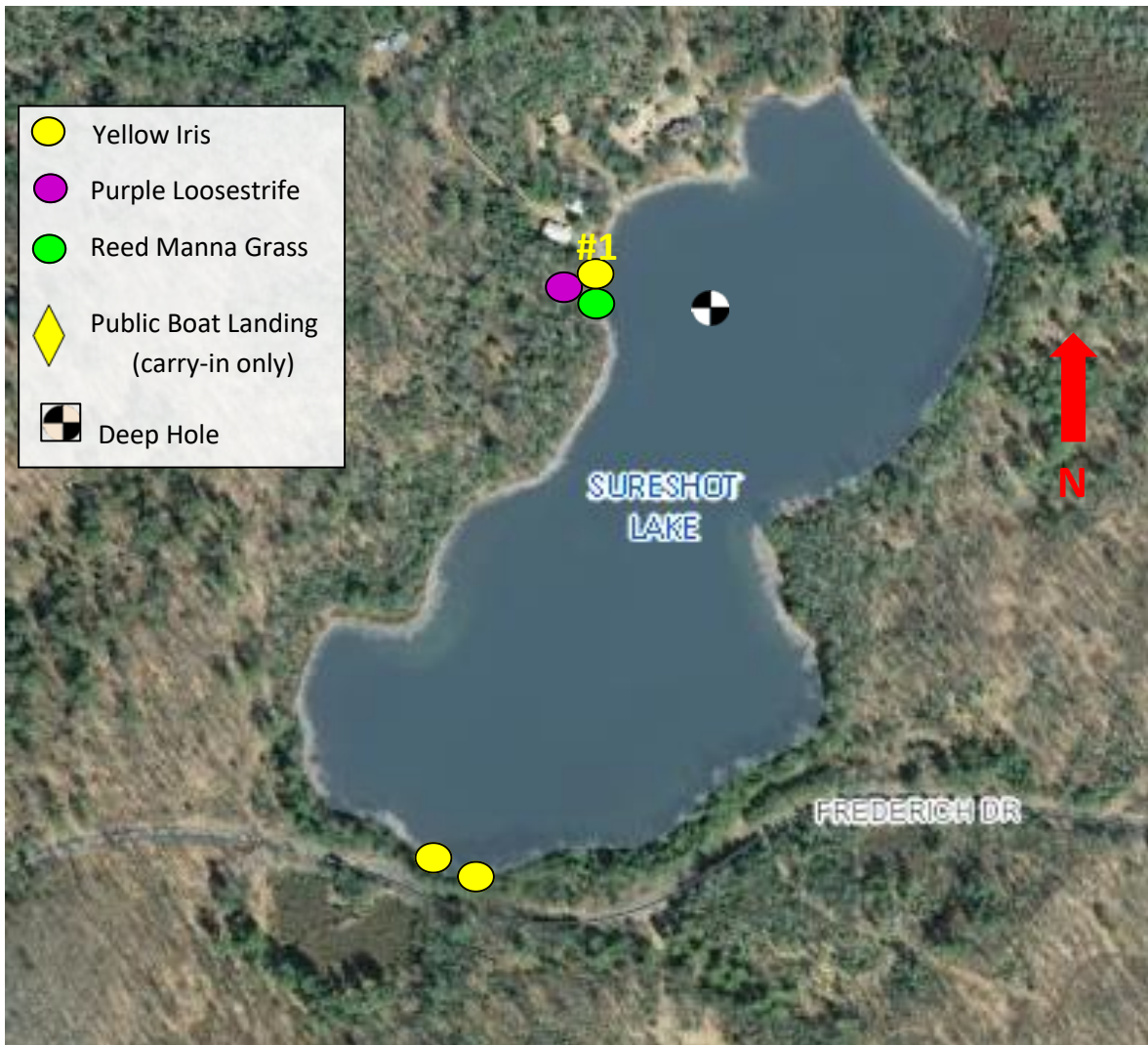
In addition to searching for the variegated reed manna grass, we monitored the entire shoreline for AIS and obtained baseline water quality data from the deep hole. We monitored for AIS via meandering the shoreline in the canoe, walking along the shoreline, used the aqua scope, looked through vegetation, 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.

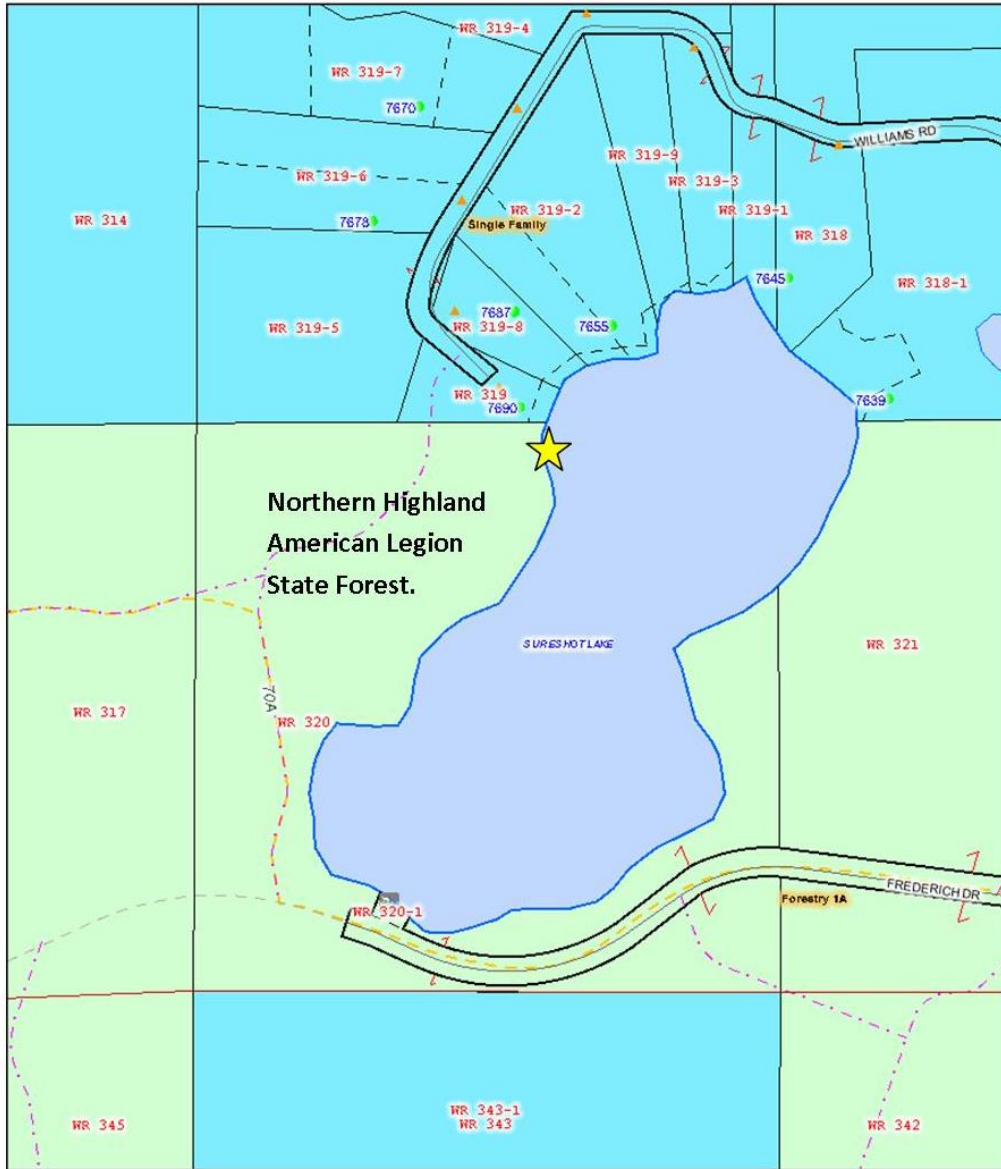
After our visit to Sureshot Lake, we delivered the AIS Incident reports and samples of the variegated reed manna grass, purple loosestrife and yellow iris to the WDNR for verification. All three were given positive identification. All new invasive discoveries are shown in Map 1.

**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

N



★ 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.

Resources: <http://dnr.wi.gov/lakes/lakepages/LakeDetail.aspx?wbic=1021000&page=facts>

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 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





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

