

# Rice Lake

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Land & Water Conservation Department

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## Rice Lake AIS Monitoring and Water Clarity Report

WBIC: 1617200  
Previous AIS Findings: None  
New AIS Findings: Chinese Mystery Snails  
Field Date: July 30, 2020  
Field Crew: Aubrey Nycz, AIS Project Leader, and Rachel Cook, AIS Project Assistant, Oneida County Land and Water Conservation Department  
Report by: Rachel Cook

On July 30<sup>th</sup>, 2020, Aubrey and I went to Rice Lake to conduct AIS monitoring and to assess water clarity and quality. Rice Lake is a 122-acre drainage lake in Oneida County. To access the lake, we put the canoe into a narrow channel near the parking spot on Rice Lake Road (seen in Figure 2) and paddled in. The lake is surrounded by Rice Lake State Natural Area, as well as the Thunder Lake Wildlife Area, so the perimeter was all wetland and undisturbed. The lake has a maximum depth of 3 feet, and the substrate is reported to be 99% muck. Along with reporting the depth and substrate, the Wisconsin Department of Natural Resources also reports that the lake has panfish present, although we did not see any fish while monitoring.

The weather while conducting research on Indian Lake was fairly nice for monitoring. The outside temperature was 70 degrees Fahrenheit, the sky was partly cloudy, and there was a slight wind. The water was very dark, so we couldn't see very well past the surface. We began monitoring the lake from the channel, moving in a counter-clockwise direction around the lake, meandering in and out of wetland areas as well. We looked on the shoreline itself and also in the water, noting the plants and animals we had observed in the process.

To observe the water clarity and quality of Rice Lake, Aubrey and I went to the middle of the lake. Rice Lake is a very flat, shallow waterbody, so we made sure that we found the maximum depth with our sonar unit, but we didn't try to test at a specific location. There is no contour map for this lake, so we used our best judgement in finding the 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 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 secchi disk reading and dissolved oxygen readings were comparable to previous results, and there should be

no concern for the water health on Rice Lake. The Secchi disk reading was 1.5 feet, and the dissolved oxygen readings can be found in Table 2.

Aubrey and I did observe Chinese Mystery Snails in Rice Lake floating on or near many of the wetland plants in the water. We collected five snails to bring back for verification. Besides the snails, Rice Lake still had many native plants and animals present and thriving. The most common plants we observed were White Water Lily, Northern Arrowhead, Bullhead Pond Lily, Pickerel Weed, and Watershield. These plants can be seen below in Table 1.

**Findings:** Taken 1:00 p.m. – 2:30 p.m. on July 30<sup>th</sup>, 2020

Aquatic Invasive Species:

Chinese Mystery Snails were seen in the water and on top of floating plant material.

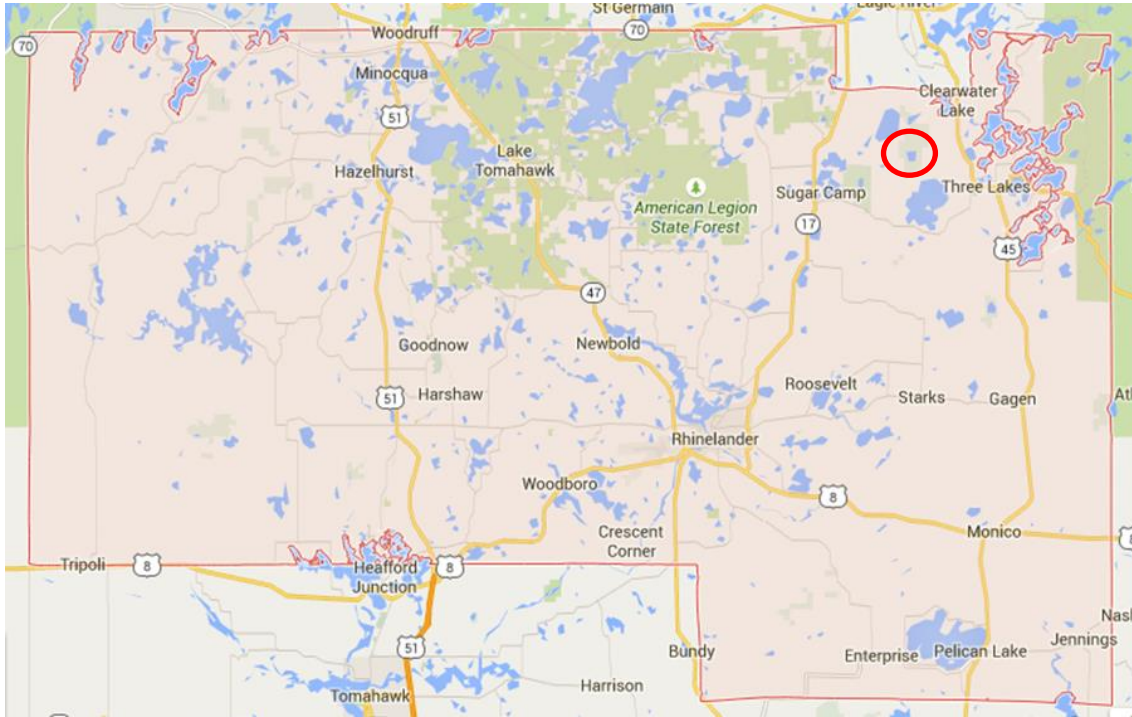
Secchi Disk:

The Secchi reading on this lake was 1.5 feet out of a 3 foot maximum depth. The water looked dark and red.

Dissolved Oxygen:

These measurements can be seen in Table 2.

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



**Figure 2.** Map of Rice Lake with canoe access point and location of Secchi disk reading labeled.








Deep hole and location of Secchi disk reading



Access Point



**Table 1.** Plants found in Rice Lake while monitoring.

<p><b>Common Name</b> <b>Scientific Plant Name</b></p>	<p><b>Description</b></p>	<p><b>Image</b></p>
<p>Pickerel Weed <i>Pontederia cordata</i></p>	<p>An aquatic plant with thin, bright green leaves. Emergent leaves tend to be arrow shaped with 6 parted, blue flowers. This plant is native.</p>	 <p>Photo Credit: ediblewildfood.com</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: Stephanie Boismenu</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>Bullhead Pond Lily <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>Northern Arrowhead <i>Sagittaria cuneate</i></p>	<p>Submergent leaves are 1-5cm wide, up to 60cm long, and have a prominent midvein. Floating leaves when present are arrow-shaped with two short lobes. Flowers are white with 3 petals. This is native.</p>	 <p>vancouverislandgrows.com</p>

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

<b>Depth (Feet)</b>	<b>Dissolved Oxygen Levels (mg/L)</b>	<b>Temperature (F)</b>	<b>Percent Dissolved Oxygen</b>
1	6.39	75.9	80.9
2	6.28	75.7	79.3



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## Rice Lake AIS Monitoring and Water Clarity Report

WBIC: 1617200  
Previous AIS Findings: None  
New AIS Findings: None  
Field Date: June 24, 2015  
Field Crew: Stephanie Boismenu and Samantha Zommers, AIS Project Assistants, Oneida County Land and Water Conservation Department  
Report By: Samantha Zommers

Stephanie and I monitored Rice Lake on June 24<sup>th</sup>, 2015. Rice Lake is located in the town of Three Lakes (Figure 1). It is a drainage lake of 122 acres and maximum depth of 3 feet. The substrate on the lake is 99% muck with brown, turbid waters. Although the lake is shallow and turbid, there are still panfish present. Rice Lake's trophic state is listed as eutrophic. Eutrophic lakes are characterized by an excessive amount of nutrients, allowing the lake to support an abundance of plants and algae. Rice Lake is completely surrounded and protected by the Thunder Lake State Wildlife Area.

Since there is no access point to this lake through a landing or drop area, Stephanie and I navigated through a channel that runs alongside Rice Lake Road. We lowered the canoe into the channel and navigated into the lake. On our way down the channel, we had to maneuver over two beaver dams. There was a storm coming in during the afternoon which made the skies cloudy and the lake windy. We did our best to get the monitoring done well and finished in time to avoid the storms.

The depth finder was used during our monitoring to find a deep point (Figure 2) on the lake since there is no contour map available through the Department of Natural Resources. Stephanie navigated the canoe until we found a good anchoring point. At this anchoring deep point we took the GPS point of our locations and did measurements on water clarity using the Secchi disk, dissolved oxygen using the dissolved oxygen meter, and temperature (Table 1).



After data collection, we paddled to five locations of the lake shore to perform an AIS presence/absence check (Figure 2). The protocol for this process is to complete a visual inspection of the littoral zone along 100 feet of the shoreline in each area. For the five locations of AIS presence/absence checks, we meandered the shoreline via walking along the shoreline, looking through vegetation, and checking under and around solid surfaces. In addition to the five presence/absence checks, we also visually inspected from the canoe for the entire shoreline of the lake.

**Findings:**

Aquatic Invasive Species:

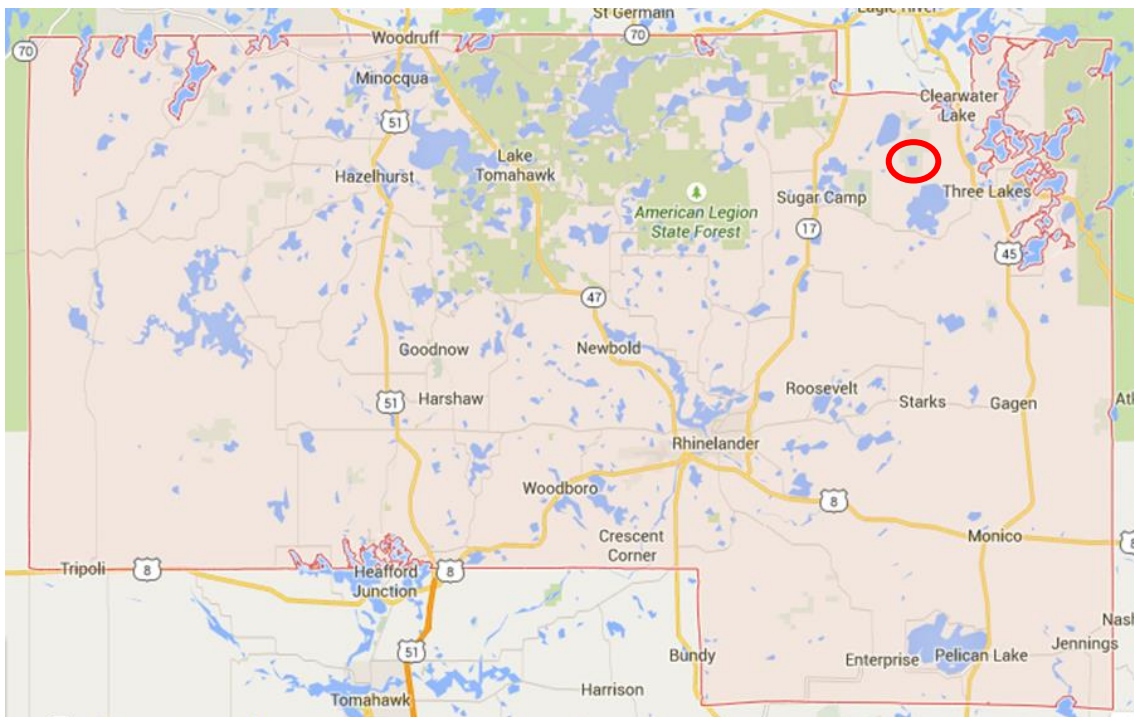
Fortunately, there were no invasive species discovered while monitoring this lake.

Secchi:

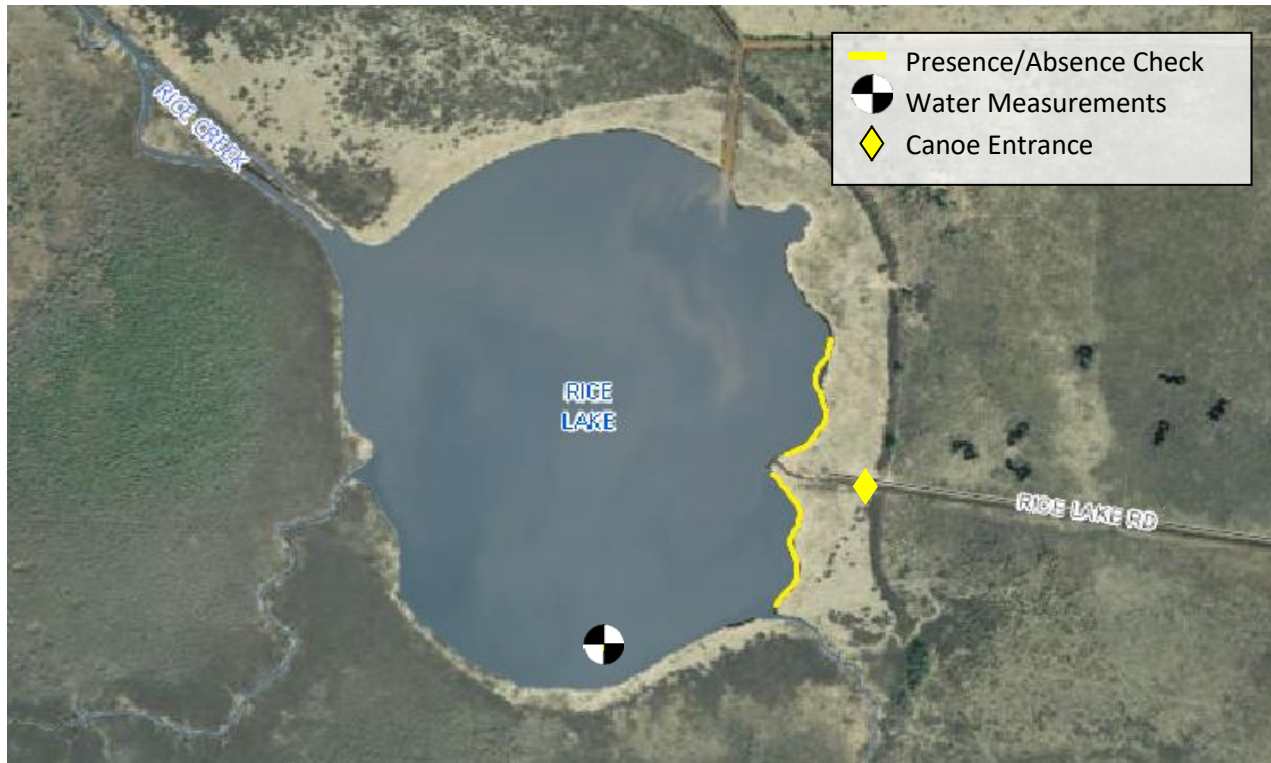
The Secchi reading on this lake was 1 foot out of a 3 foot max depth. The water color was murky and brown which made for a short Secchi reading.

Dissolved Oxygen:

These measurements can be seen on Table 1.



**Figure 1.** Map of Oneida County, WI with Rice Lake circled.



**Figure 2.** Map of Rice Lake with our presence/absence checks, deep hole, and canoe entrance.

Water Quality GPS Coordinate: 45.81455, -89.23058

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

Depth (Feet)	Dissolved Oxygen Levels (mg/L)	Temperature (F)
1	8.35	75.4
2	8.38	74.7

Resources: <http://dnr.wi.gov/lakes/lakepages/LakeDetail.aspx?wbic=1617200&page=facts>