

# Big Carr Lake

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                  Clarity Report of August 9<sup>th</sup>, 2017



Land & Water Conservation Department

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## **Big Carr Lake AIS Monitoring and Water Clarity Report**

Field Date: August 9<sup>th</sup>, 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 9<sup>th</sup>, 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 9<sup>th</sup>, 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)

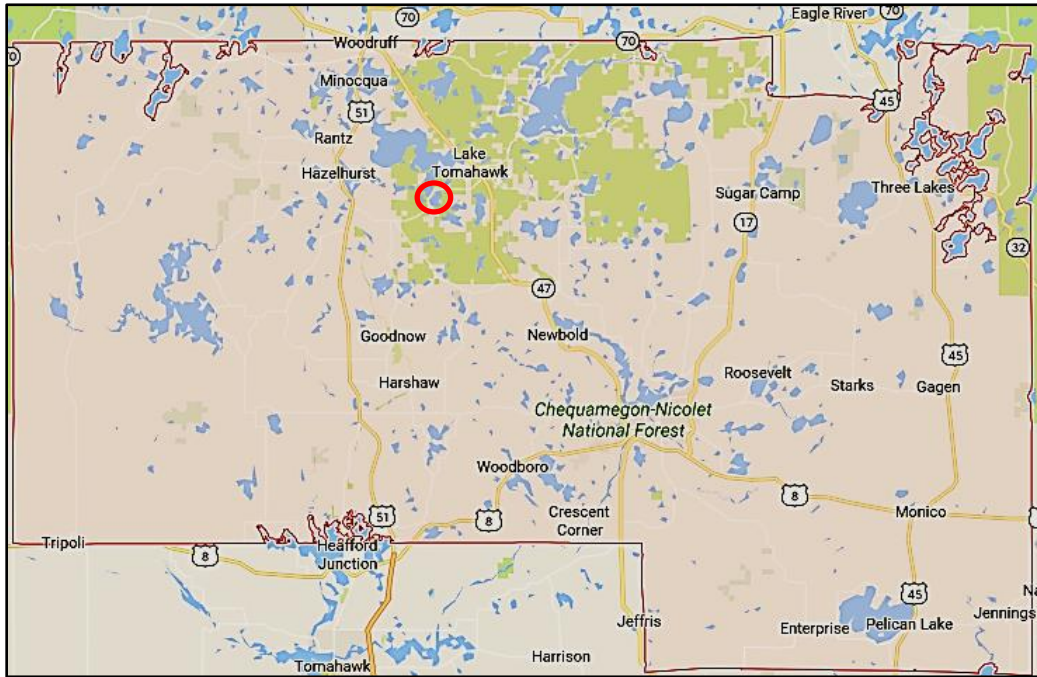





Figure 2. Map of Big Carr Lake with the location of the Secchi disk reading labeled.



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

Common Name Scientific Plant Name	Description	Image
<p>Bullhead Pond Lily (Spatterdock)</p> <p><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>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>

**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	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%