

# Sweeny Lake

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Page 1: AIS Monitoring and Water  
Clarity Report of July 12<sup>th</sup>, 2017



Land & Water Conservation Department

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

Field Date: July 12<sup>th</sup>, 2017  
WBIC: 1589600  
Previous AIS Findings: Chinese Mystery Snail, Purple Loosestrife  
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 July 12<sup>th</sup>, 2017, Aubrey and I went to Sweeny Lake to implement AIS monitoring along with water clarity and quality assessments. Sweeny Lake is a medium sized, 191 acre eutrophic lake located in Oneida County, and has one public boat launch. Besides the public boat launch, the entire shoreline around the lake belongs to the American Legion State forest, and it is widely open to the public as well. The lake has a maximum depth of 18 feet, and the substrate is reported to be 80% sand, 5% gravel, 10% rock, and 5% muck. Along with reporting the depth and substrate, the Wisconsin Department of Natural Resources also reports that the lake has musky, northern pike, walleye, largemouth bass, and panfish present. We observed many bluegill along the shoreline, but no other fish during the monitoring.

The weather while conducting research on Sweeny Lake was fair. The outside temperature was 80 degrees Fahrenheit, the sky was partly cloudy, little to no wind, and the water clarity was fair. 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 we had 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 Sweeny Lake, Aubrey and I went to the deep hole on the backside of the island, towards the middle of the lake. After locating the deep hole with our sonar unit, 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 Sweeny Lake. The Secchi disk reading was 8 feet, and the dissolved oxygen readings can be found in table 2.

Aubrey and I did observe some Chinese Mystery Snails in Sweeny Lake, however, this invasive was already known to have been established in the lake. That being said, we were glad to see that no new invasives were present at this time. The lake seems to be healthy, and many native plants were present and thriving. The four most common native plants we observed were Pickerel Weed, White Water Lily, Bullhead Pond Lily, and Large Purple Bladderwort. These plants can be seen below in table 1.

**Findings:** Taken 2:00 p.m. – 4:00 p.m. on July 12<sup>th</sup>, 2017

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



Secchi: The Secchi reading on this lake was 8 feet out of an 18 foot maximum depth. The water color was a greenish color, and appeared murky when glancing across the lake.

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

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







Figure 2. Map of Sweeny Lake with the boat landing and location of Secchi disk readings labeled.

-  Public boat landing
  -  Deep hole & location of Secchi disk reading
- Secchi Disk Readings:  
Hemlock Lake - Deep Hole  
Coordinates - Not Available



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

Common Plant Name Scientific Plant Name	Description	Image
<p>Pickrel 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>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>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>Large Purple Bladderwort <i>Utricularia purpurea</i></p>	<p>An aquatic plant with leaves containing small sacks that trap small invertebrates. This plant usually has unrooted stems that easily tangle with other plants. In the water, this plant tends to look cloudy or slimy. This plant is native.</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	8.95	78.9°	117.6%
4	9.05	78.2°	118.1%
6	9.30	75.4°	117.9%
8	9.11	74.3°	114.2%
10	6.32	70.4°	76.0%
12	0.81	66.7°	9.4%