

Swamp Lake

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Clarity Report on July 5th, 2018



Land & Water Conservation Department

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Swamp Lake AIS Monitoring and Water Clarity Report

Field Date: July 5th, 2018
WBIC: 1522400
Previous AIS Findings: None
New AIS Findings: None
Field Crew: Aubrey Nycz, AIS Project Leader, Jody Partin, AIS Project Assistant,
Oneida County Land and Water Conservation Department
Report By: Jody Partin

On July 5th, 2018, Aubrey and I went to Swamp Lake to implement AIS monitoring along with water clarity and quality assessments at the request of Steve Moran, owner of Moran's Resort. Swamp Lake is a 293 acre eutrophic lake located in Oneida County and has one public boat launch. The shoreline along Swamp Lake is composed of private owners and public land. The lake has a maximum depth of 8 feet, and the substrate is reported to be 80% muck, 10% sand, 5% gravel, and 5% rock. Along with reporting the depth and substrate, the Wisconsin Department of Natural Resources also reports that the lake has northern pike, largemouth bass, walleye, and panfish present.

The weather while conducting research on Swamp Lake was ideal. The outside temperature was in the low 80 degrees Fahrenheit, the sky was sunny, and there was a pleasant breeze. There was no adverse weather to impede our measurements in any way.

The owner of Moran Resort, Steve Moran, took us out on his pontoon boat to do the lake monitoring. He was familiar with many of the plants and he also knew how to do Secchi readings to observe the water clarity and quality. When conducting our AIS lake survey, the AIS team 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.

We instructed Mr. Moran and assisted him in using the dissolved oxygen meter to measure water health. The deep hole is directly in front of his resort, as the area had been dredged some time ago. 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. Thankfully, both of these measurements were relatively average in nature, and there should be no concern for the health of Swamp Lake. The Secchi disk reading was 5 feet, and the dissolved oxygen readings can be found in table 2.

The AIS team was glad to see that no new invasive species 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 Ferny Pondweed, Watershield, Pickerelweed, and Large-leaf Pondweed. These plants, along with others, can be seen below in table 1.

Findings: Taken 11:30 a.m. – 12:30 p.m. on July 5th, 2018

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

Secchi: The Secchi reading on this lake was 5 feet out of an 8 foot maximum depth. The water color was a brownish 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 Swamp Lake circled in red (approximate location).



Figure 2. Map of Swamp Lake with boat landing and location of Secchi disk reading labeled.

-  Public boat landing
-  Deep hole & location of Secchi disk reading



Table 1. Plants found in Swamp Lake when monitoring.

<p>Common Plant Name Scientific Plant Name</p>	<p>Description</p>	<p>Image</p>
<p>Pickereel 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: Jody Partin</p>
<p>Large Leaf Pondweed <i>Potamogeton amplifolius</i></p>	<p>An aquatic plant with sickle-shaped submergent leaves. Leaves tend to be 4-7 cm wide and 8-20 cm long. This plant is native.</p>	 <p>Photo Credit: Dan Busemeyer</p>
<p>Fern-leaf Pondweed <i>Potamogeton robbinsii</i></p>	<p>A stiff, robust plant that produces only underwater leaves. It is usually dark-green with flat closely spaced leaves pointing away from the stem on two sides. Fern pondweed is also able to stabilize bottom sediments. Fern pondweed is known to provide habitat for small aquatic animals used as food by predator fishes, especially northern pike. This plant is native.</p>	 <p>Photo Credit: UWSP</p>

<p>Water Shield</p> <p><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>White Water Lily</p> <p><i>Calla Palustris</i></p>	<p>A native pant 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. This plant is native.</p>	 <p>Photo Credit: Joseph A. Marcus</p>
<p>Bullhead Pond Lily</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>

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

Depth (Feet)	Dissolved Oxygen Levels (mg/L)	Temperature (°F)	Percent Dissolved Oxygen (%)
1	7.18	80.1	93.7
2	6.79	78.9	87.5
3	4.97	76.6	62.5
4	0.92	66.6	10.4
5	0.08	49.8	0.8
6	0.06	48.1	0.5

