ONEIDA COUNTY LAND AND WATER CONSERVATION DEPARTMENT

Big Bearskin Lake

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Land & Water Conservation Department

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Big Bearskin Lake AIS Monitoring and Water Clarity Report

Field Date:	July 11th, 2018
WBIC:	1523600
Previous AIS Findings:	Chinese Mystery Snail, Rusty Crayfish
New AIS Findings:	None
Field Crew:	Stephanie Boismenue, AIS Coordinator, Aubrey Nycz, AIS Project Leader, Tom Boisvert, AIS Project Assistant, Vanessa Niemczyk, AIS Project Assistant, and Jody Partin, AIS Project Assistant, Oneida County Land and Water Conservation Department
Report By:	Vanessa Niemczyk

On July 11th, 2018, Stephanie, Aubrey, Jody, Tom, and I went to Big Bearskin Lake to implement AIS monitoring along with water clarity and quality assessments. Big Bearskin Lake is a 403 acre eutrophic lake located in Oneida County and has one public boat launch. The shoreline along Big Bearskin Lake is composed of private owners, the Bearskin State Trail, and the American Legion State Forest. The lake has a maximum depth of 26 feet, and the substrate is reported to be 20% sand, 25% gravel, 20% rock, and 35% muck. Along with reporting the depth and substrate, the Wisconsin Department of Natural Resources also reports that the lake has musky, panfish, largemouth bass, smallmouth bass, northern pike, and walleye present. We observed this firsthand as minnows and bass were seen in limited quantities along the shoreline.

The weather while conducting research on Big Bearskin Lake was ideal. The outside temperature was approximately 75 degrees Fahrenheit, the sky was partly cloudy, there was little to 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, 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. 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 Bearskin Lake, the AIS team went to the deep hole off of the right point of the island. 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. 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 Bearskin Lake. The Secchi disk reading was 7.5 feet, and the dissolved oxygen readings can be found in table 2.

The AIS team received a call from a resident on the lake that there was possible Eurasian Water Milfoil; however, upon closer look it was coontail. We were glad to see that no new invasive species were present at this time, and the lake seems to be healthy with many native plants resent and thriving. The three most common native plants we observed were Pickerel Weed, Bullhead Pond Lily, and White Water Lily. These plants, along with others, can be seen below in table 1.

Findings: Taken 10:30 a.m. – 3:30 p.m. on July 11th, 2018

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

Secchi: The Secchi reading on this lake was 7.5 feet out of a 26 foot maximum depth. The water color was a brownish color, and appeared 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 Bearskin Lake circled in red (approximate location).

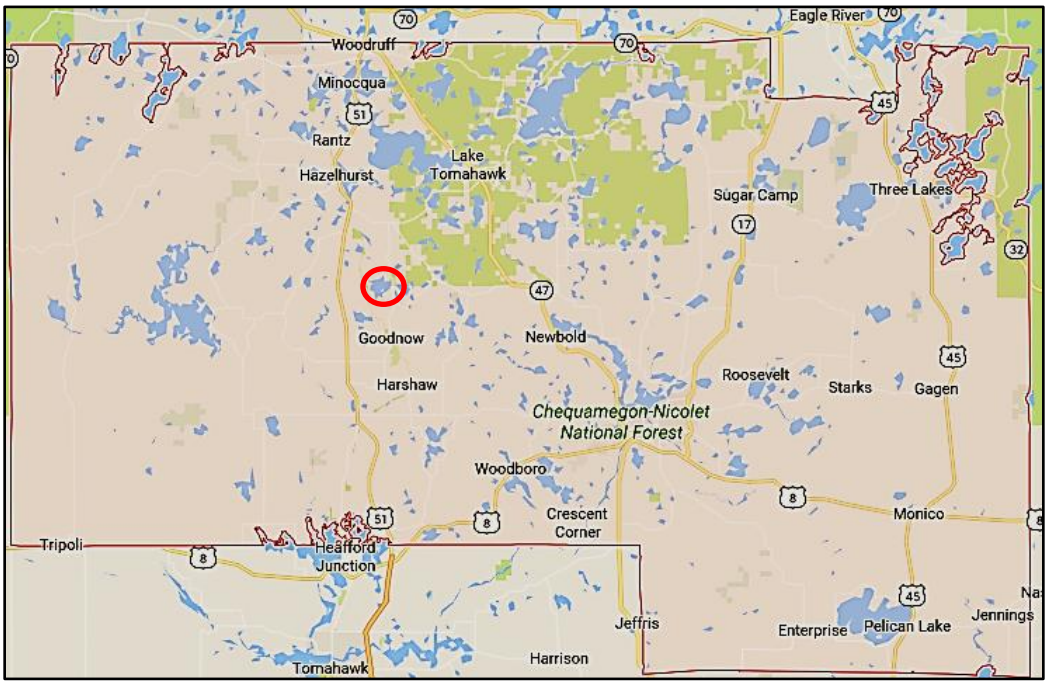

Figure 2. Map of Big Bearskin Lake with boat landing and location of Secchi disk reading labeled.

Public boat landing

Deep hole & location of Secchi disk reading

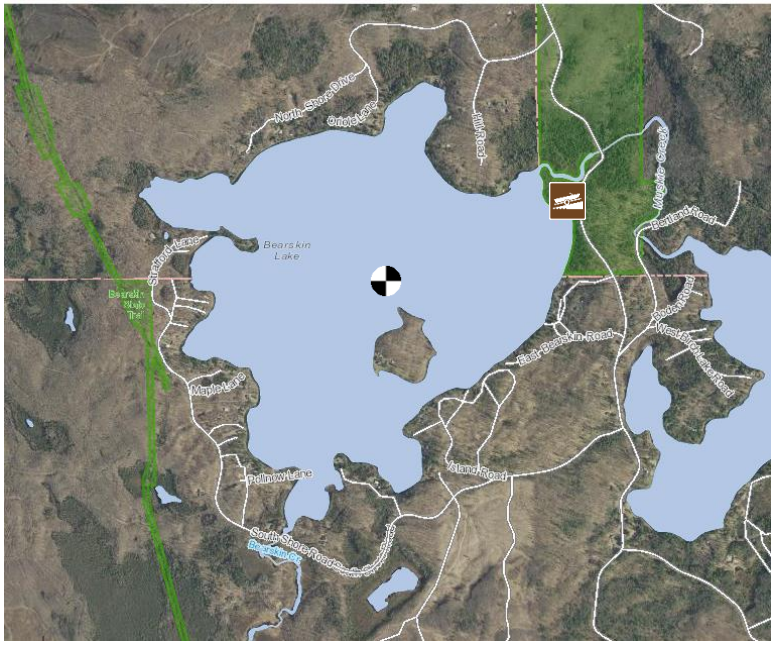

Table 1. Common plants found in Big Bearskin Lake when monitoring.

Common Plant Name Scientific Plant Name	Description	Image
Pickerel Weed *Pontederia cordata*	An aquatic plant with thin, bright green leaves. Emergent leaves tend to be arrow shaped with 6 parted, blue flowers. This plant is native.	 *Photo Credit: ediblewildfood.com*
Bullhead Pond Lily (Spatterdock) *Nuphar variegata*	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.	 *Photo Credit: Jomegat's Weblog*
White Water Lily *Nymphaea odorata*	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.	 *Photo Credit: Joseph A. Marcus*
Blue-Flag Iris *Iris versicolor & Iris virginica*	A flowering plant with light green leaves and petals. This plant grows to be 2-4 feet tall. The center of the leaf is thicker than the bottom and tip. This plant is native.	 *Photo Credit: Prairie Moon Nursery*

Wild Rice *Zizania palustris*	A native pant that grows above the water, but is rooted is mucky sediment. Leaves are green in color, they grow in clusters, and they appear ribbon-like. Stalks can grow 3 to 10 feet tall. This plant is native.	 *Photo Credit: Susan Bronson*

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

Depth (Feet)	Dissolved Oxygen Levels (mg/L)	Temperature (˚F)	Percent Dissolved Oxygen (%)
2	8.02	80.1	105.3
4	8.03	79.5	104.8
6	8.0	78.9	103.8
8	7.94	78.7	102.8
10	7.73	78.4	99.7
12	7.24	78.0	93.1
14	6.35	77.6	81.4