

Sunset Lake

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 Clarity Report of June 25, 2015



Land & Water Conservation Department

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Sunset Lake AIS Monitoring and Water Clarity Report

WBIC: 1587600
Previous AIS Findings: None
New AIS Findings: Chinese Mystery Snails, Yellow Iris
Field Date: June 25, 2015
Field Crew: Stephanie Boismenu and Sara Mills, AIS Project Assistants,
Oneida County Land and Water Conservation Department
Report by: Sara Mills

Stephanie and I monitored Sunset Lake on June 25, 2015. It is a 35 acre lake located in the municipality of Stella (Figure 1). It is a flowage, groundwater drainage lake with a mean depth of 13 feet and a max depth of 16 feet. There are no public boat landings. The WDNR lists Sunset Lake's trophic state index as mesotrophic. Mesotrophic lakes are commonly clear waterbodies with a variety of submerged aquatic plants and support a wide variety of fish. They have an intermediate level of nutrients and productivity, more than oligotrophic lakes, but not nearly as much as eutrophic lakes.

We had to enter the lake via Starks Creek on Moens Lake Drive (Figure 3). Using the bathymetric map (Figure 2) and the depth finder, Stephanie and I navigated the canoe to the deep hole of the lake. We dropped the anchor to prevent the canoe from drifting while taking the measurements. I collected a GPS location for our measurements, a Secchi disk reading for water clarity, and dissolved oxygen and temperature for water quality (Table 1).

After data collection, we paddled to five locations on the lake shore to perform an AIS presence/absence check. The protocol for this process is to complete a visual inspection of the littoral zone along 100 feet of the shoreline in each area. Since there was not a public boat landing, we chose five areas around private docks that had motorized watercrafts (Figure 3). We visually inspected from the canoe, meandering the entire shoreline and via walking along the shoreline, using an aquascope, looking through vegetation, and checking around and under solid surfaces.

Findings:

Aquatic Invasive Species:

We discovered Chinese mystery snails during our first presence/absence check. We did not discover any live specimens, but we brought the empty shells to the DNR station in Rhinelander for proper identification. Also during our first presence/absence check, we discovered yellow iris growing along a private dock. Stephanie dug out a sample which we brought to the DNR

station in Rhinelander for identification. We discovered two more stands of yellow iris at other private docks. We obtained GPS coordinates for all AIS discovery locations (Figure 4).

Secchi:

Sunset Lake was very dark colored and mucky which resulted in a Secchi disk reading of 4 feet.

Dissolved Oxygen:

See Table 1.

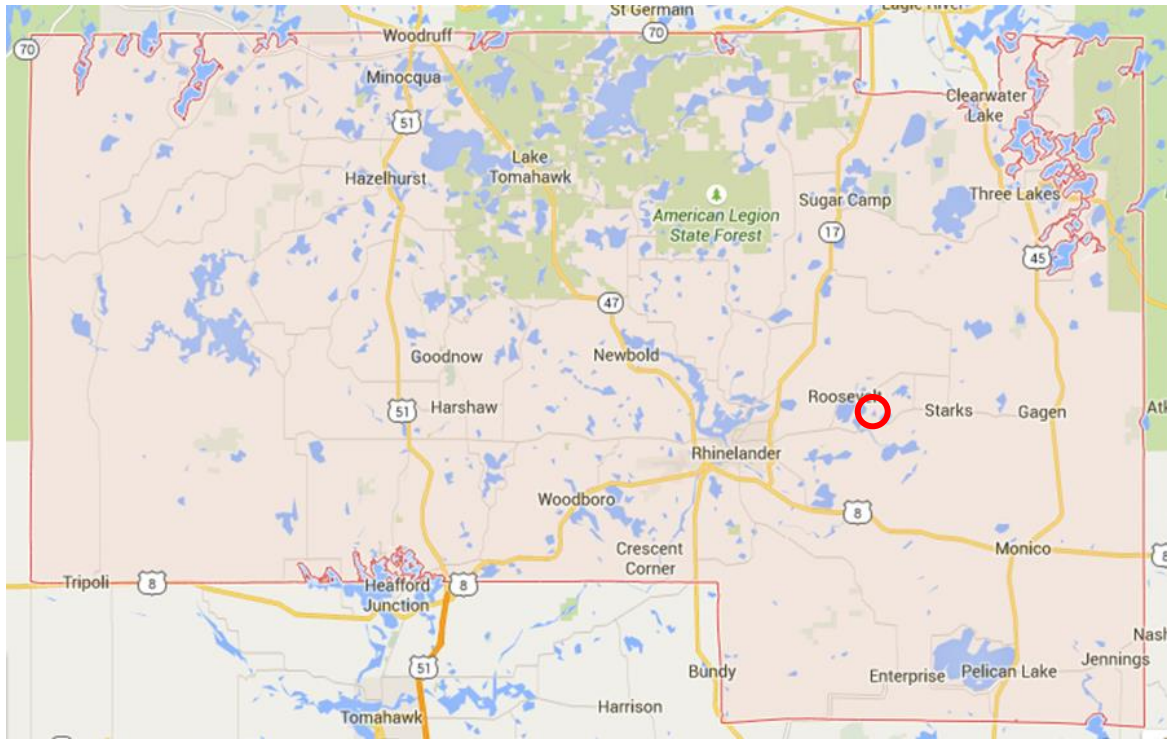


Figure 1. Map of Oneida County, WI with Sunset Lake circled.

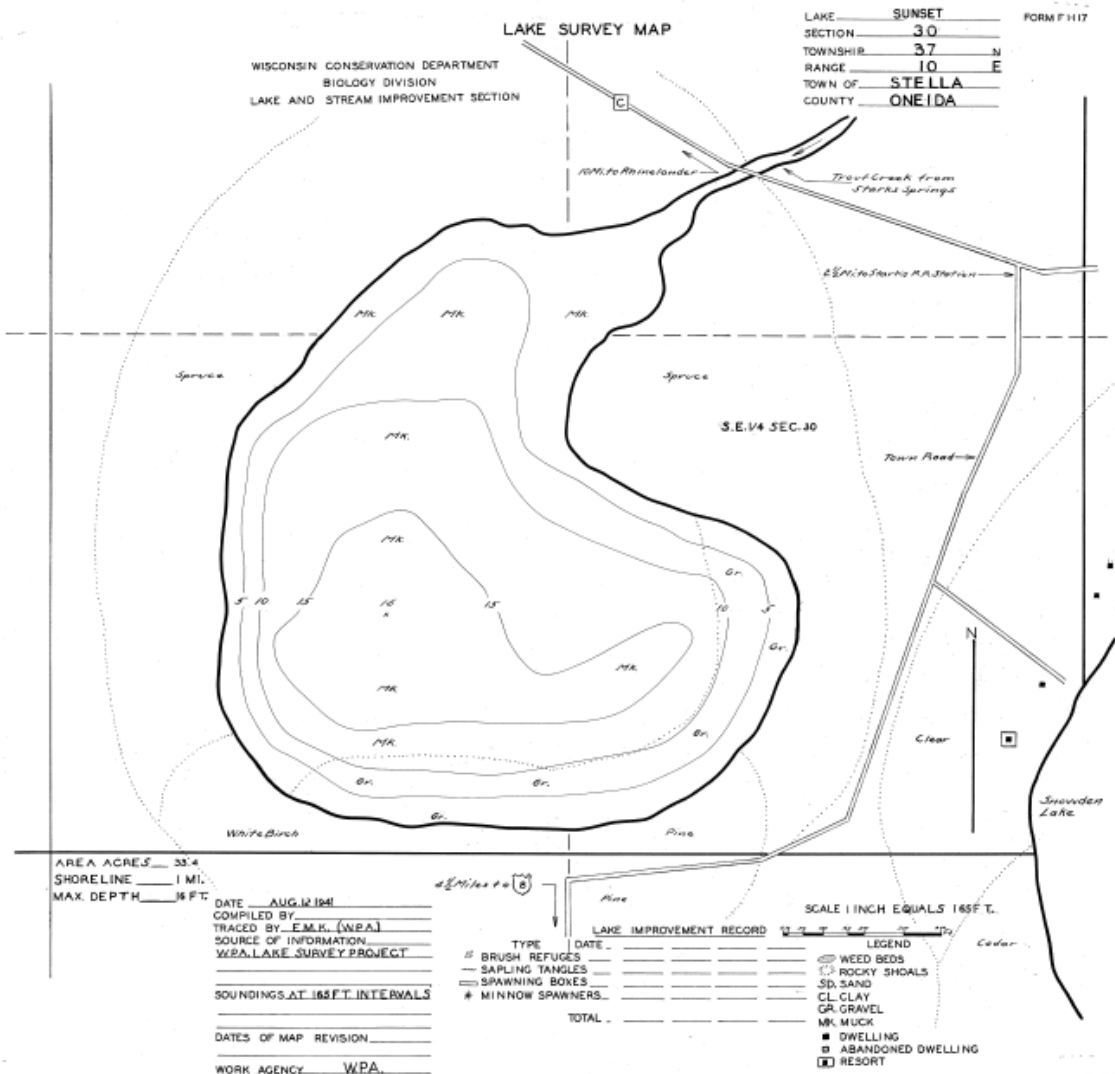


Figure 2. Bathymetric map of Sunset Lake. The map was made in 1941 and has a few inaccuracies. The road marked County C is actually Moens Lake Drive. Starks Creek is not visible on this map.

Map Source: Wisconsin Department of Natural Resources 608-266-2621, Sunset Lake – Oneida County, Wisconsin – DNR Lake Map, Date – August 12, 1941 – Historical Lake Map

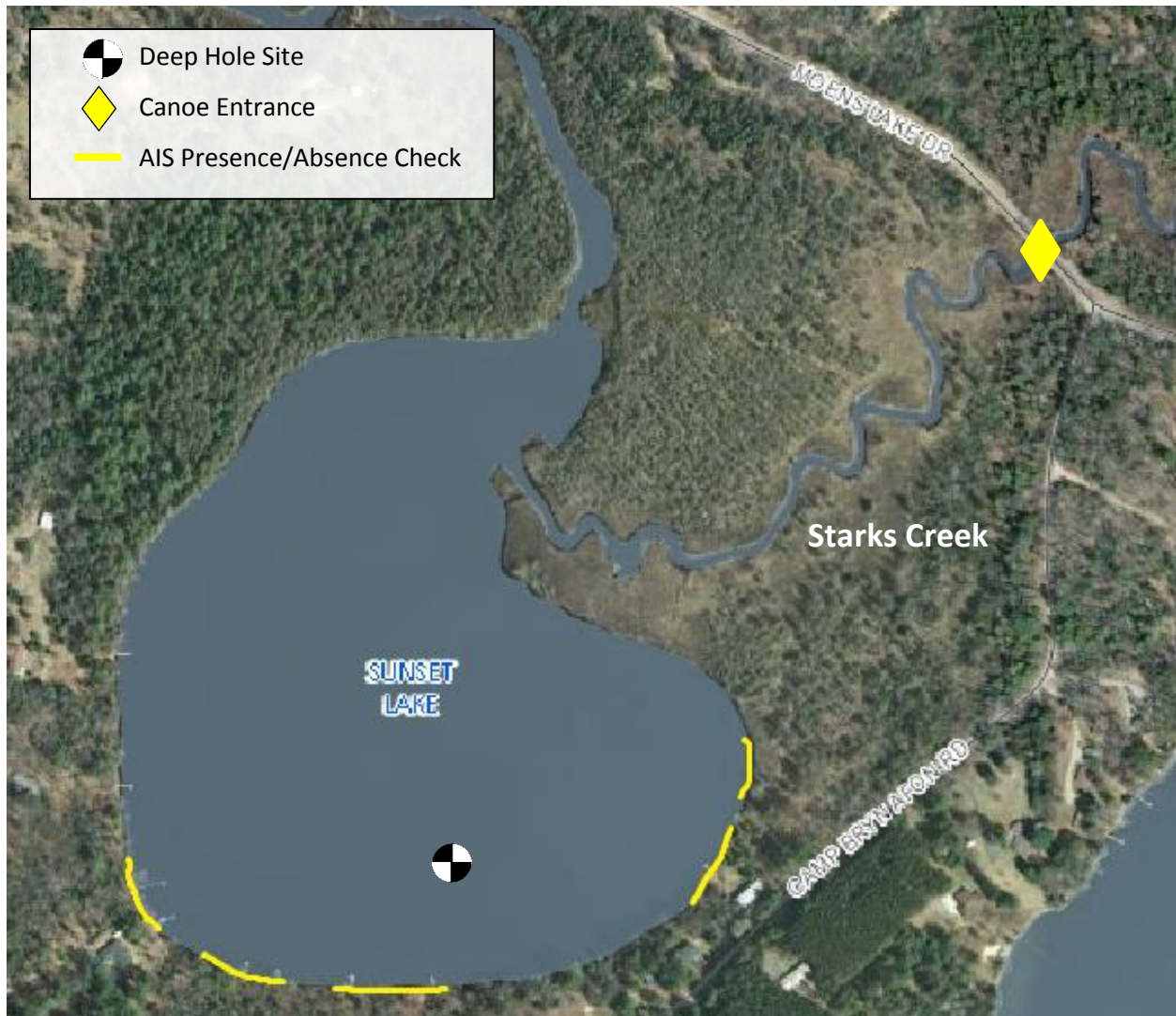


Figure 3. Map of Sunset Lake’s Deep Hole site, locations monitored for AIS presence/absence, and the site where we put the canoe in.

Deep Hole GPS Coordinates: 45.65957014, -89.28884321

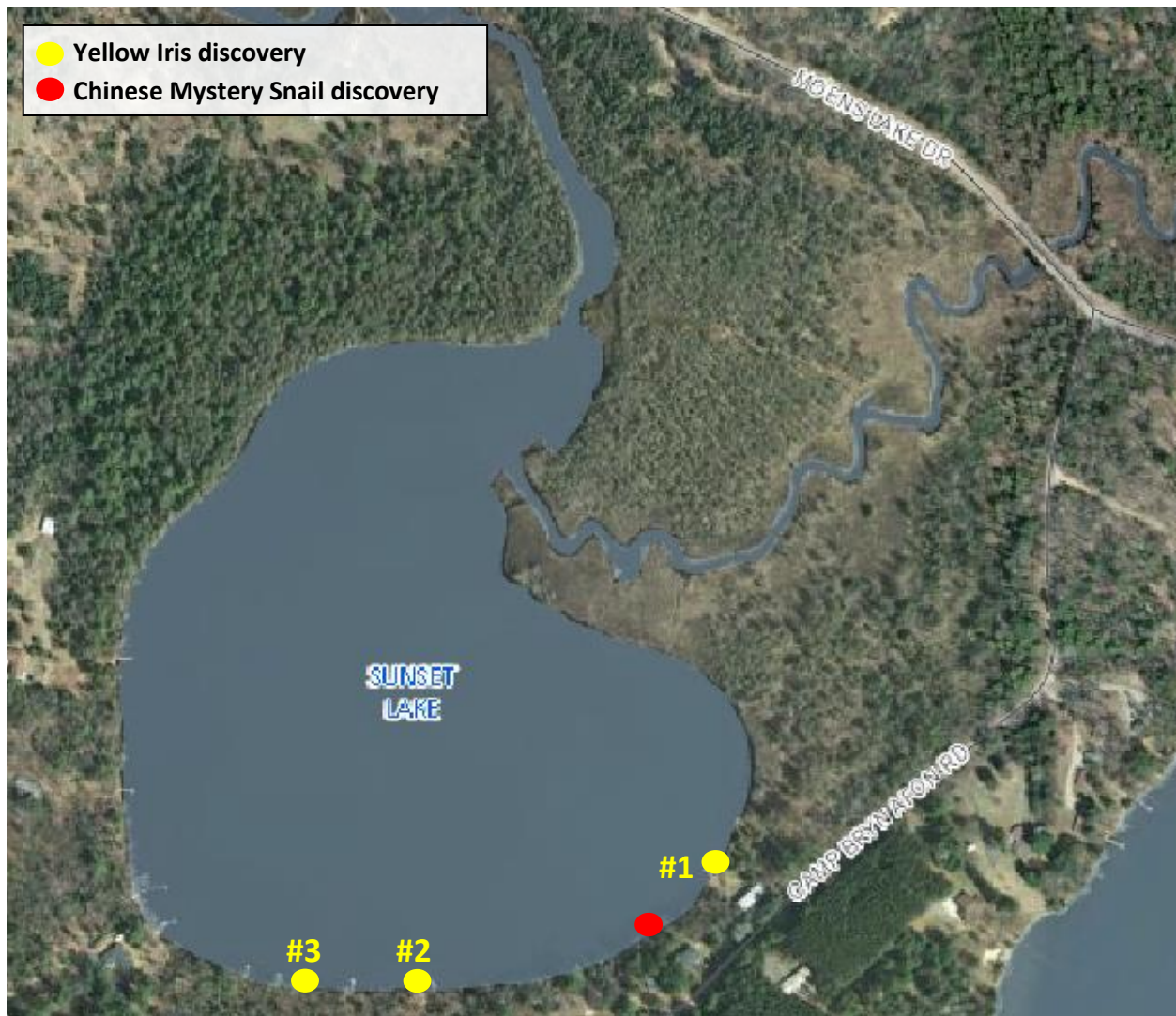


Figure 4. Map of Sunset Lake with AIS discoveries.

Yellow Iris #1 GPS Coordinates:	45.65925898, -89.28634653
Yellow Iris #2 GPS Coordinates:	45.65859550, -89.28865625
Yellow Iris #3 GPS Coordinates:	45.65849967, -89.28980651
Chinese Mystery Snail GPS Coordinates:	45.65859550, -89.28695325

Table 1. Dissolved oxygen levels and temperature readings at the deep hole site.

Depth	Dissolved Oxygen Level	Temperature
1'	9.27 mg/L	72.4°F
2'	9.29 mg/L	72.2°F
3'	9.28 mg/L	72.0°F
4'	9.27 mg/L	71.8°F
5'	10.52 mg/L	68.1°F
6'	10.39 mg/L	67.8°F
7'	5.43 mg/L	65.6°F
8'	4.29 mg/L	63.0°F
9'	4.34 mg/L	60.4°F
10'	1.83 mg/L	57.6°F
11'	0.15 mg/L	55.1°F
12'	0.11 mg/L	53.5°F
13'	0.09 mg/L	51.9°F
14'	0.07 mg/L	50.6°F

Resources: <http://dnr.wi.gov/lakes/lakepages/LakeDetail.aspx?wbic=1572500>