Loon Lake

Presque Isle County, T33N, R02E
Black River watershed, last surveyed 2017

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Environment

Loon Lake is a 47-acre natural lake located approximately 10 miles southeast of Onaway, Michigan in Presque Isle County (Figure 1). The lake has no obvious inlet or outlet but lies within the Tomahawk Creek sub-drainage which drains to the Black River and Black Lake (Figure 2).

Loon Lake is a shallow lake with a maximum depth of near 10 feet (Figure 3). It has a generous littoral zone with fair amounts of submerged and emergent aquatic vegetation. The bottom substrate is primarily sand and muck, and the water is stained black. Shoreline development is minimal, with nearly the entire riparian zone owned by the State of Michigan and managed under the state forest system. One private parcel and residence is located on the south shore. The lake-shoreline interface is predominantly wetland, with an upland forest component consisting of oak and conifer trees.

A small unimproved public-access boat launch is located on the southeast shore (see Photos), and is only suitable for small boats, canoes, and kayaks; parking is very limited. Standard State of Michigan fishing regulations apply for all species at Loon Lake.

History

Past survey data is very limited for Loon Lake, and no known stocking records exist for this waterbody. The Michigan Department of Conservation used four experimental gill-net lifts to examine the fish community of Loon Lake in July of 1968. Species collected included Northern Pike, Yellow Perch, Pumpkinseed, Brown Bullhead, and Golden Shiner. It is likely that other species were present but were not collected in the gill-nets. Ten pike were collected and ranged in length from 10-35 inches, and represented by five age classes. Yellow perch were 5-13 inches and represented by two year classes. A dissolved oxygen and temperature profile in seven feet of water showed no thermal stratification with high dissolved oxygen present throughout the water column during the July survey.

Current Status

The most recent fish community survey of Loon Lake was conducted from June 26-28, 2017. Effort consisted of: 2 experimental gill-net lifts, 4 large mesh trap-net lifts, 4 large mesh fyke-net lifts, and 2 small mesh fyke-net lifts. A total of 603 fish were captured during the survey (Table 1). This was considered a good number of fish for a small lake and limited sampling effort. The most abundant species in the catch was Bluegill, followed by Largemouth Bass. Panfish made up 75% of the survey catch by number and 61% by weight. Largemouth Bass, the only captured predator, comprised 20% of the total catch by number, and 29% by weight. Northern Pike, though likely present, were not captured during the survey.

Bluegills are currently the most abundant panfish in Loon Lake, and a good proportion (78%) are 7 inches or larger (Table 2), which is considered a desirable size for tablefare. Fair numbers of small

Bluegill were also collected. Growth of this species was average when compared to Bluegill growth across Michigan (Table 1), but well within an acceptable range. Nine year classes of Bluegill were captured (Table 3), which is a considerable number of year classes. Thus, Bluegill can get to large sizes in Loon Lake by living to older ages.

Panfish diversity is relatively good in Loon Lake, and sizes are generally desirable. Pumpkinseed sunfish, Black Crappie, and Yellow Perch were considered present, but not abundant. All three species could attain larger sizes, particularly perch and crappie. Pumpkinseed can attain sizes attractive to anglers and supplement the Bluegill catch. All the Black Crappie collected were age 4 to 6 and ranged in length from 10 to 12 inches. Yellow Perch were less common, but likely add to the catch of panfish by anglers.

The predator population is restricted to Largemouth Bass in Loon Lake based on the survey catch, although pike may be present in low numbers. Largemouth Bass are the top predator in Loon Lake. Eight year classes of Largemouth Bass were sampled (Table 3), and growth of this species was considered slightly below average when compared to other Michigan waters. Legal size (14 inches and larger) Largemouth Bass were less abundant, with most fish captured in the 12-13 inch size range.

The diversity of non-game fish collected in Loon Lake was low, with only bullheads captured. Species such as White Sucker and Bowfin, often captured in other northern Michigan natural lakes, were not captured and likely not present.

Analysis and Discussion

Loon Lake is a small natural lake in northeast Michigan with moderate productivity. It has a vegetated littoral zone and a shallow main basin. It is likely that there is some fish winterkill during severe winters. The lake has a largely undeveloped shoreline with the exception of one private residence.

The current fish community of the lake can be generally characterized as having : 1) a panfish community of good diversity and acceptable sizes, 2) a naturally-reproducing predator population consisting primarily of Largemouth Bass that exhibit slightly below average growth rates, 3) a non-game fish community low in species diversity and abundance.

Loon Lake exhibits a good quality panfish community and offers anglers the opportunity to catch Bluegill and Pumpkinseed, Black Crappie, and Yellow Perch. Largemouth Bass of a variety of sizes and ages can be found and are vital in helping balance the panfish community through predation. The slow growth rates and general lesser abundance of larger bass may indicate that some harvest may be occurring. Based on survey results, this species should afford anglers an opportunity to catch good numbers of mid-size bass. Northern Pike were not captured, but past reports indicate they have been present in Loon Lake.

The non-game fish community of Loon Lake is low in diversity and consists of bullheads.

Management Direction

No change in fisheries management is recommended for Loon Lake at this time. The fish community currently in the lake is very acceptable for a shallow natural lake in northern Michigan. The current

Michigan statewide standard fishing regulations are appropriate. Moderation in angler harvest may be essential in maintaining the quality panfish population at Loon Lake. Access for anglers is fair through a small two-track on the southeast side of the lake. The relatively limited access to the lake complements the natural character of this small waterbody. This lake sits amid a group of natural lakes (Francis, Big and Little Tomahawk, Shoepac) and floodings (Tomahawk Creek Flooding) in southwestern Presque Isle County. These waterbodies as a group are important to anglers not only for fishing, but for camping destinations as well. The Department of Natural Resources should continue to preserve and protect the public land surrounding Loon Lake and protect the lakes wetland interface from further development.

References

Figure 1. Location of Loon Lake in northern Michigan.

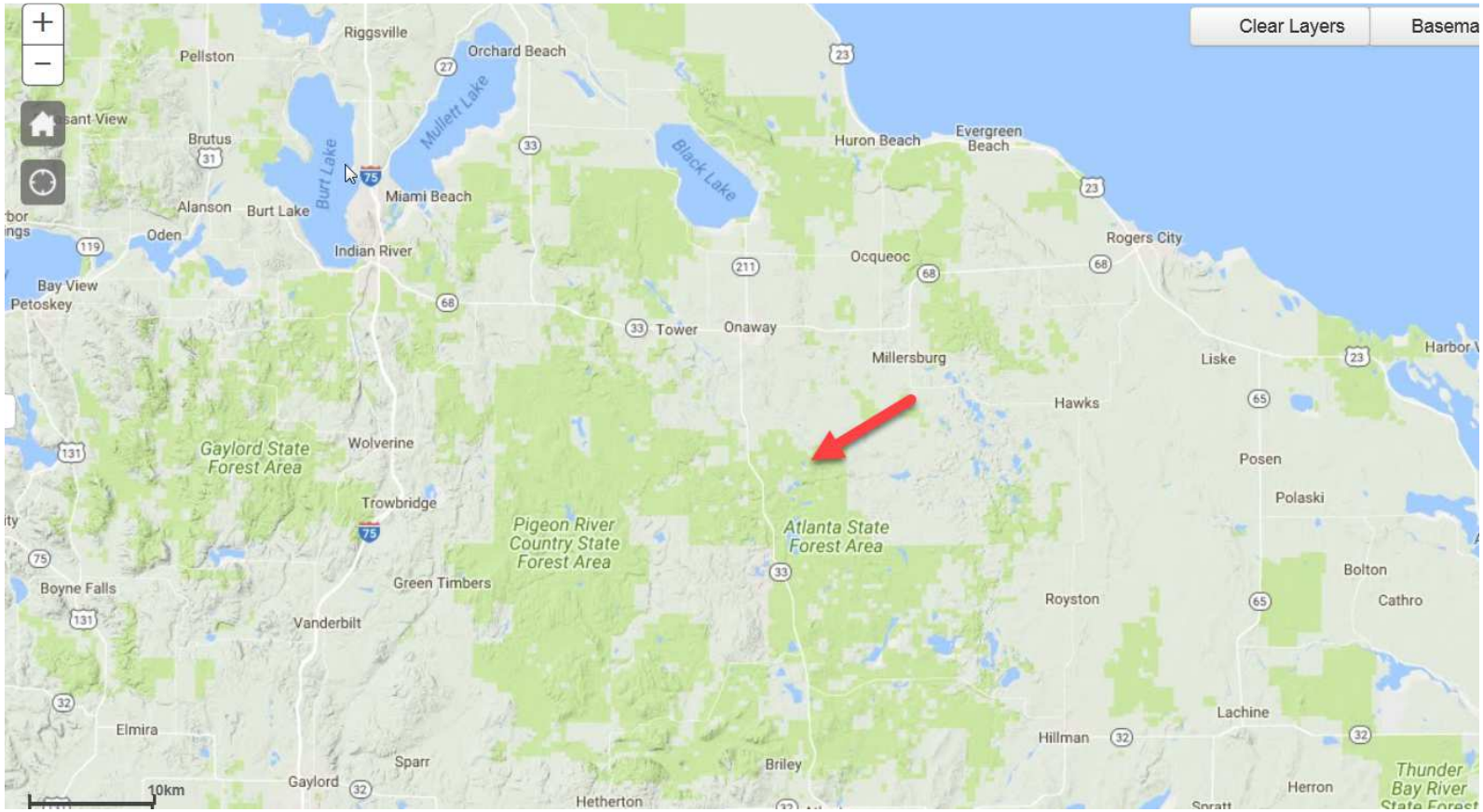

Figure 2. Loon Lake and adjacent area.

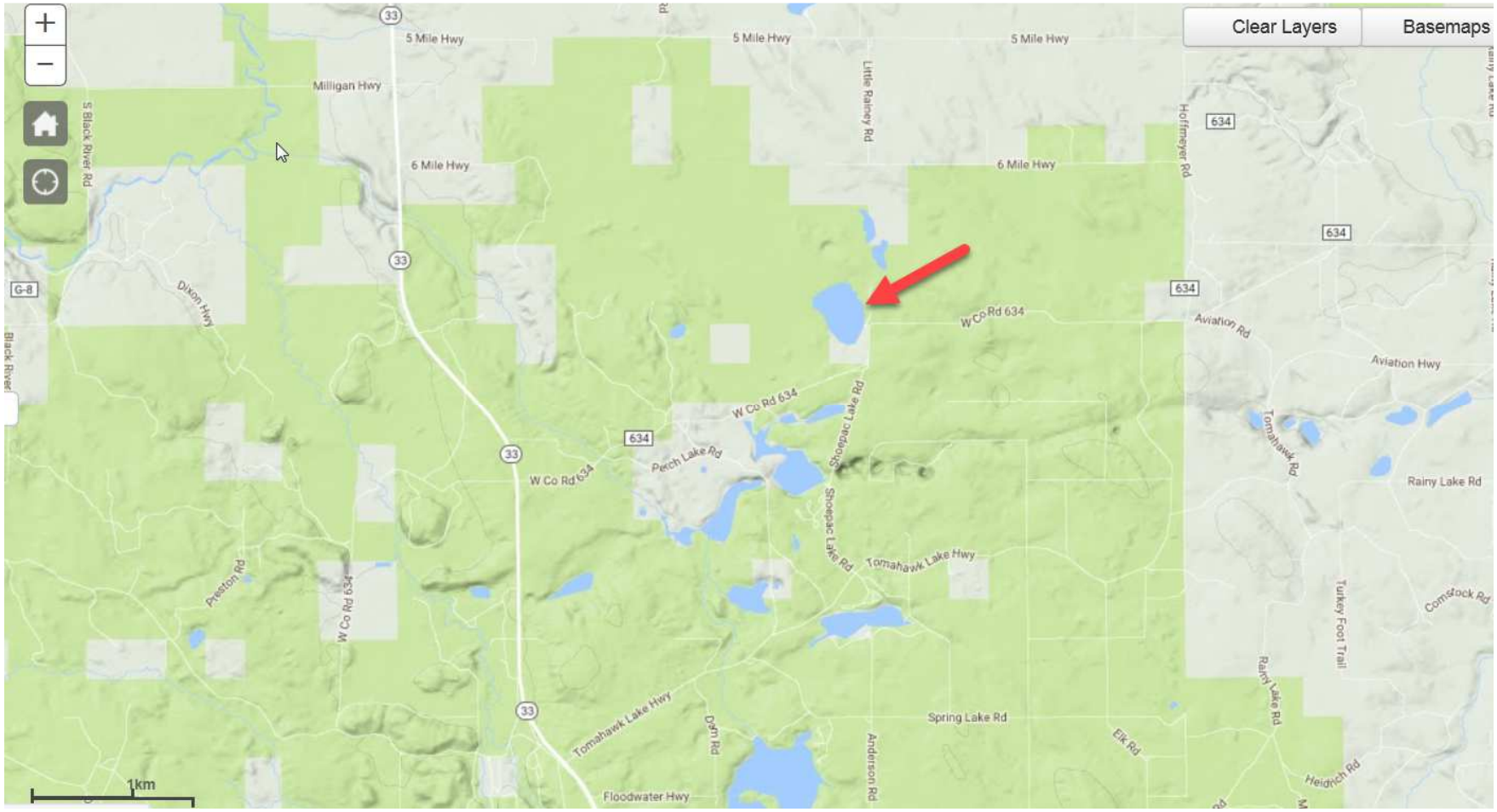

Figure 3. Loon Lake depth map.

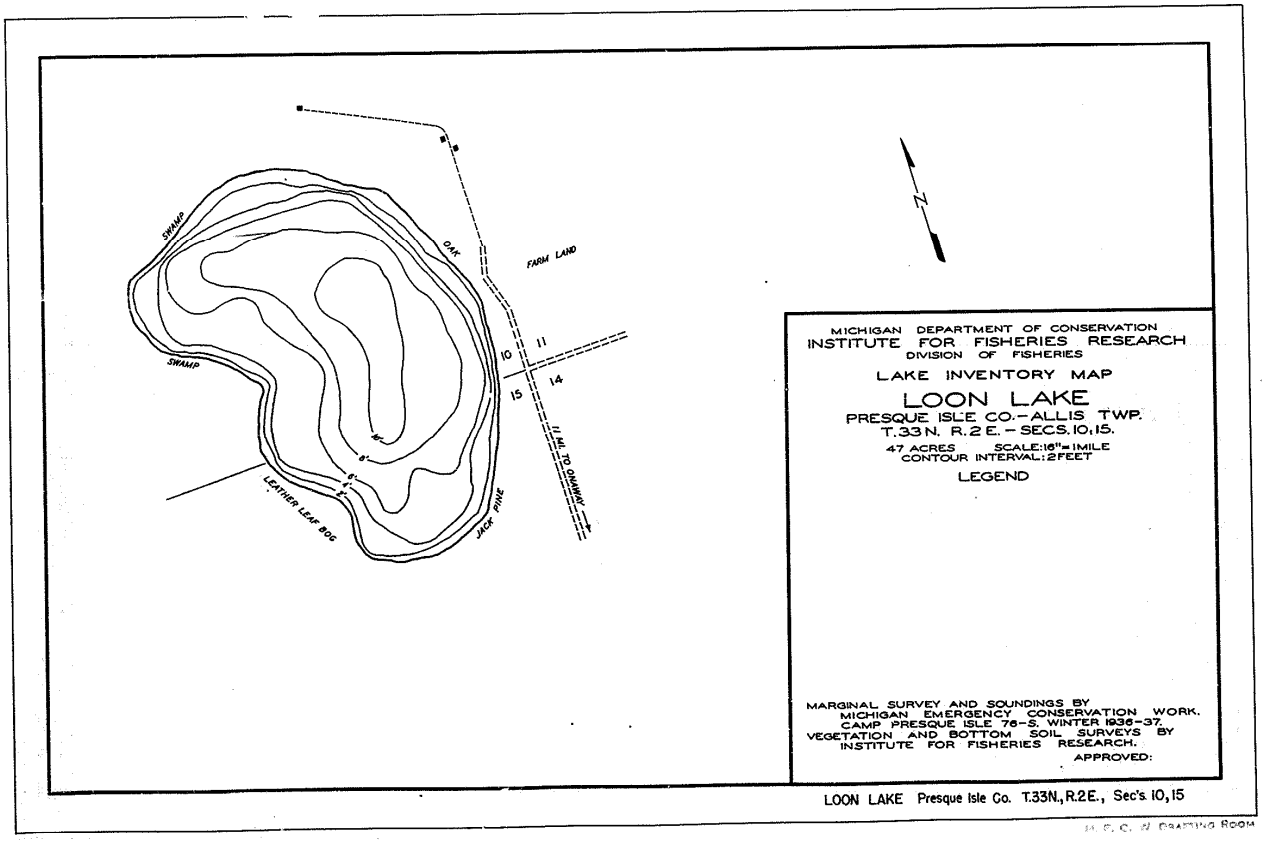

Table 1. Species and relative abundance of fishes collected with survey gear at Loon Lake, June 26-28, 2017.

Common Name	Number	Percent by number	Length Range *(inches)*	Weight (lbs)*	Percent by weight	Mean growth index** (inches)
Bluegill	416	69.0	1 - 9	124.4	51.6	+0.1
Largemouth Bass	123	20.4	1 - 17	70.5	29.3	-0.7
Pumpkinseed	18	3.0	6 - 8	7.3	3.0	+0.7
Brown Bullhead	15	2.5	11 - 14	13.4	5.6	
Black Crappie	13	2.2	10 - 12	10.9	4.5	+1.7
Black Bullhead	11	1.8	9 - 13	8.7	3.6	
Yellow Perch	7	1.2	7 - 13	5.8	2.4	
Total	603		241.0			

* calculated based on length-weight relationships

**based on a comparison to statewide growth for that species (inches)

Table 2. Length-frequency distribution of certain game fishes collected during the June 2017 survey at Loon Lake.

Length (in)	Bluegill	Pumpkinseed	Black Crappie	Yellow Perch	Largemouth Bass
1	1				44
2	6				3
3	1				
4	2				
5	3				
6	77	1			
7	246	11		1	8
8	76	6			7
9	4				2
10			3		9
11			9	1	9
12			1	3	12
13				2	21
14					5
15					1
16					1
17					

Table 3.-Mean length (inches) at age for various game fishes of Loon Lake. Number in parentheses represents number aged.

Species	Age group	June 2017
Bluegill	I	2.1 (4)
	II	2.4 (2)
	III	3.5 (1)
	IV	4.6 (2)
	V	7.2 (11)
	VI	7.4 (14)
	VII	7.8 (8)
	VIII	8.5 (2)
	IX	9.5 (3)
Pumpkinseed	I	--
	II	--
	III	--
	IV	--
	V	7.4 (4)
	VI	7.4 (7)
	VII	8.0 (5)
	VIII	8.3 (2)
Largemouth	I	2.0 (1)
Bass	II	8.3 (16)
	III	10.1 (7)
	IV	11.7 (16)
	V	12.9 (7)
	VI	13.7 (10)
	VII	14.5 (4)
	VIII	17.2 (2)
Yellow perch	I	--
	II	--
	III	--
	IV	7.7 (1)
	V	--
	VI	11.6 (1)
	VII	--
	VIII	12.2 (1)
	IX	12.8 (1)
	X	12.2 (1)
	XI	--
	XII	13.0 (1)
	XIII	13.4 (1)

Table 3.-continued.

Species	Age group	June 2017
Black Crappie	I	--
	II	--
	III	--
	IV	11.3(4)
	V	11.4 (7)
	VI	11.6 (2)

Photo 1. Loon Lake unimproved access site.

Photo 2. Loon Lake shoreline.