Tamarack Lake, October, 2025

Fish Survey of Tamarack Lake (ID #62-002200), Tamarack Nature Center, Minnesota, 2025

Survey Dates: October 1 and 2, 2025

MnDNR Permit Number: 37282

Prepared for:
VLAWMO and MnDNR

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October 24, 2025

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Introduction

Tamarack Lake (ID: 61-002200) is a 115-acre shallow lake, located in the Tamarack Nature Center in White Bear Township, Minnesota. In October 2025, the Vadnais Lake Area Water Management Organization (VLAWMO) sponsored a fish survey conducted by Blue Water Science under permit number 37282 granted from the MnDNR. The objectives were to characterize the fish community in Tamarack Lake.

Methods

Four trapnets were sampled for one day for a total of four lifts to survey fish in Tamarack Lake. The trapnet was a MnDNR-style with a 2 x 3 feet square frame with two funnel mouth openings and 25-feet lead. Net mesh size was 3/8 inch. Four standard trap nets were set on Thursday morning October 2, 2025. Four nets were fished overnight and sampled the following day (October 3). Trapnet locations are shown in Figure 1 and pictures of a trapnet set and catch are shown in Figure 2.

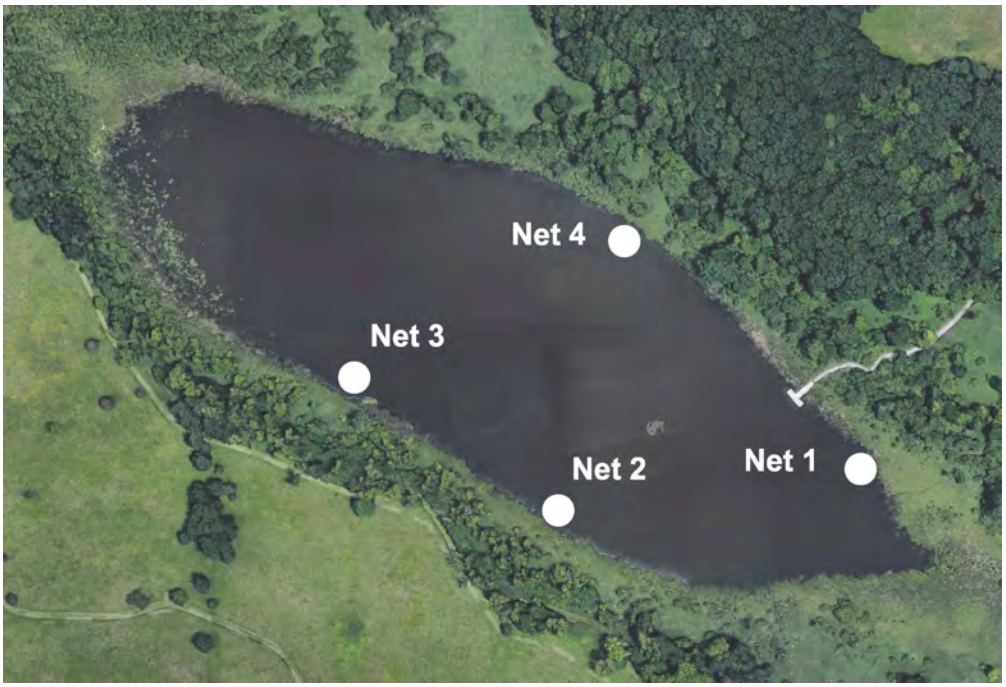


Figure 1. Map of trapnet sets in Tamarack Lake.

A trapnet is a live fish trap. In Tamarack Lake fish ran into the 25-foot lead net and follow it back through a series of hoops with funnel mouths. Fish ended up in the back hoop. The flag marks the end of the back hoop. Fish were removed from the back end of the net.

Fish were transferred to tubs, and were counted and measured and released.

Figure 2. Trapnet set and fish sampling in the Tamarack Lake fish survey.

Results

Fish Results: A total of four fish species were sampled in Tamarack Lake on October 3, 2025. Green sunfish and fathead minnows were the most abundant species followed by black bullheads. Nets 1 and 3 were the most productive (Table 1). The average number of green sunfish caught per net was high with an average haul of 155 fish per net (Table 1). Black bullhead numbers were relatively low compared to standard ranges for similar lakes compiled by the MnDNR (Table 1).

Turtle Results: Snapping turtles and painted turtles were also sampled in the trapnets and were common in Tamarack Lake. Painted turtles and snapping turtles likely do well because there is a fair percentage of a natural shoreline area. Average number of painted turtles was 23 turtles/net.

Table 1. Tamarack Lake trapnet results for the number of fish sampled for the fish survey conducted in October 2025.

	October 3, 2025				Total Catch	Fish per Net (n=4)	Normal Range (MnDNR)
	Net 1	Net 2	Net 3	Net 4			
Black bullhead (*Ameiurus melas*)	31	10	28	2	71	17.8	2.5 - 70.2
Green sunfish (*Lepomis cyanellus*)	208	92	185	133	618	155	0.4 - 3.8
Fathead minnow (*Pimephales promelas*)	239	239	241	0	719	180	NA
Stickleback minnow (*Culaea inconstans*)	8	2	8	0	18	4.5	NA
TOTAL FISH	486	343	462	135	1426	357	--
Turtles - painted	29	12	27	22	90	23	NA
Turtles - snapping		1	1	2	4	1.0	NA

Fish Lengths: Fish lengths are shown in Figure 3 and Table 2. Black bullhead lengths ranged were from less than 3 inches up to 13 inches with over 90% of the black bullhead population was less than 3 inches. Green sunfish were abundant with lengths measured <3 to 6.5 inches with small green sunfish being dominant.

Table 2. Length frequency of fish from the Tamarack Lake fish survey for October 3, 2025.

Tamarack	Black bullhead	Green sunfish	Fathead minnow	Stickleback minnow	Painted turtle	Snapper turtle
<3.0	64	346	719	18		
3		188				
3.5		33				
4		32				
4.5		1				
5		2				
5.5		4				
6	1	7				
6.5		5				
7						
7.5						
8						
8.5						
9						
9.5	1					
10	1					
10.5						
11						
11.5						
12	3					
12.5						
13	1					
13.5						
14						
14.5						
15						
Measured	71	618	719	18	0	0
Counts			719	18	90	4
TOTALS	**71**	**618**	**1438**	**36**	**90**	**4**
#/net (4 nets)	18	155	360	9	23	1

Representative Fish Species of Tamarack Lake

Black bullhead

Green sunfish

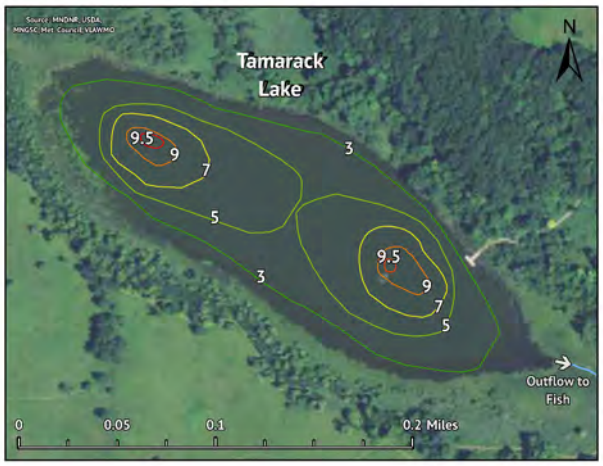
Conclusions and Recommendations

The trapnet survey found the fish community was composed of four species. The green sunfish abundance was extremely high for trapnet catches. Green sunfish spawning is occurring and without significant predation pressure the green sunfish population has become abundant. Black bullheads were present at modest levels and their numbers were dominated by young-of-the-year fish. Black bullhead numbers appear to be within the normal range for a lake like Tamarack. Its possible the abundant green sunfish numbers could have an adverse impact on water quality due to zooplankton predation, sediment disturbance, and nutrient excretion. Because Tamarack Lake likely has frequent winterkills, as shown with the fish structure of the lake, no fish stocking is recommended at this time. However, if a winter aeration system was installed to reduce winterkill, fish stocking could be considered in the future.

A group of children and their instructors stopped by to observe the turtle and fish catch.

The fish biomass was dominated by small green sunfish.

The shoreline of Tamarack Lake is undeveloped. This condition is advantageous for native wildlife including snapping turtles. Painted turtles were found at 23 turtles per net.



Tamarack Lake is less than 12 feet deep and winterkill likely occurs in some years (map is from VLAWMO).