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LAKE SUPERIOR SPRING CREEL SURVEY

North Shore Streams

2025

Report Completed by: Nick Peterson

Creel Clerks: Sam Gravelle, Joel Tibruzi, & Phil Kunze

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DEPARTMENT OF NATURAL RESOURCES

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Overview of Lake Superior Spring Creel Surveys and Fisheries Management

The Minnesota DNR uses fisheries assessments and creel surveys (angler surveys) to gather data for the Lake Superior Fisheries Management Plan (LSMP; Goldsworthy et al. 2017). The LSMP aligns with lake-wide management strategies developed by the Great Lakes Fisheries Commission (GLFC 1997) and other agencies (Horns et al. 2003). Creel surveys help understand public use of fisheries by collecting information about angling effort, catch, harvest, and satisfaction. These surveys involve in-person interviews where anglers share details about their fishing trips, catches, and opinions on regulations or management.

The Lake Superior spring creel survey starts when tributaries thaw and become fishable. The Minnesota shoreline is divided into two regions: the "Lower Shore" (Lester River to Split Rock River) and the "Upper Shore" (Beaver River to Brule River). Angler interviews are conducted at nine tributaries in each region, with combined data referred to as “shore wide” estimates. The survey measures fishing pressure, catch, and catch rates for individual tributaries, as well as for the lower shore, upper shore, and overall. Anglers fishing in tributaries are called stream anglers, while those fishing in Lake Superior near tributary mouths, including McQuade Harbor, are considered lake anglers (Figure 1).

The spring creel survey focuses on sport fish in Lake Superior tributaries, particularly Rainbow Trout *Oncorhynchus mykiss*. Two types of Rainbow Trout are managed in Minnesota waters: steelhead, a migratory form supported by limited natural reproduction and stocking, and Kamloops, a hatchery strain previously stocked for harvest (Close and Hassinger 1981). The Kamloops program ended in 2018 and was replaced by a genetically screened, fin clipped steelhead stocking program (Miller et al. 2020). Clipped Rainbow Trout, marked with an adipose fin clip, are legal to harvest at 16 inches or longer.

The Rainbow Trout stocking program has undergone significant changes in the past decade. The Kamloops were replaced with Superior strain steelhead derived from the French and Knife rivers. Before 2022, distinguishing between Kamloops and Superior strain catches was challenging. Since then, catch rates for the two strains have been reported separately due to the rarity of Kamloops and their differences in size and age (Table 5; Peterson 2022, Peterson 2023).

The spring creel survey has also provided valuable data on other species in Lake Superior. Brook Trout *Salvelinus fontinalis*, one of the few native salmonids, are often the second most targeted species. Interest in Brook Trout has grown as agencies work on their protection and restoration (Schreiner et al. 2008; Miller et al. 2016; Mamoozadeh et al. 2023). Several non-native sport fish also offer angling opportunities in spring and fall, including Brown Trout *Salmo trutta*, Chinook Salmon *Oncorhynchus tshawytscha*, Coho Salmon *Oncorhynchus kisutch*, and Pink Salmon *Oncorhynchus gorbuscha*. However, most of these species are caught in Lake Superior, not its tributaries, during the spring. Other non-native species return to spawn in fall, so few or none are caught in rivers in spring. Additionally, species like Lake Trout *Salvelinus namaycush*, White Sucker *Catostomus commersoni*, Longnose Sucker *Catostomus catostomus*, and Round Whitefish *Prosopium cylindraceum* are occasionally caught in rivers or near their mouths in spring.

Fish lengths in the creel surveys were estimated by anglers or measured by creel clerks, while weights were calculated using regression data from Minnesota DNR surveys, such as Knife River trap data (Peterson 2023). Rainbow Trout under and over 16 inches were analyzed separately to exclude juveniles, with this report focusing on fish 16 inches or larger unless stated otherwise. Long-term averages (1992 to present) provide a general value but do not show variability. To address this, data is also compared to the interquartile range (IQR), which represents the middle 50% of values and excludes outliers. The IQR spans from the first quartile (Q1), below which 25% of values fall, to the third quartile (Q3), below which 75% fall, indicating typical conditions and variability. Data outside the IQR suggests unusual conditions.

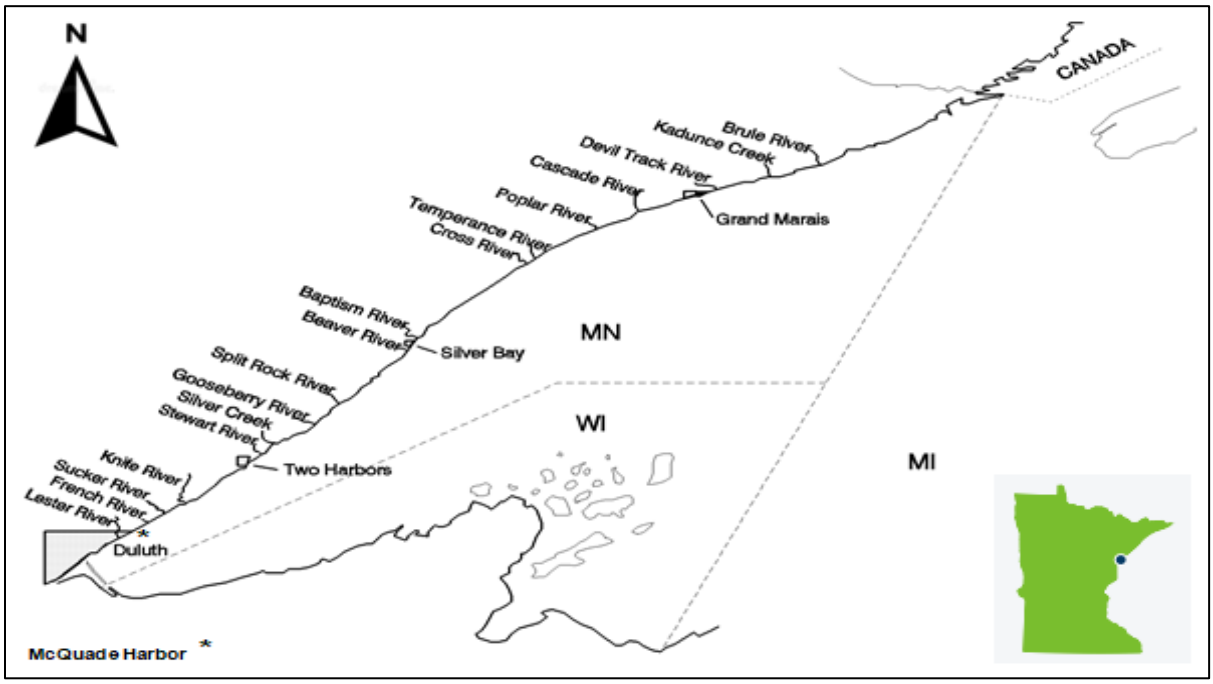


Figure 1. Map of sampling stations for the Lake Superior spring creel survey. McQuade Harbor/Talmadge River, French River, Poplar River, and Temperance River were not surveyed in 2025.

Hydrological Extremes in North Shore Rivers (2023-2025)

For three consecutive years, much of the North Shore faced high water and turbid conditions due to frequent spring rains (Peterson 2022, Peterson 2023, Peterson 2024). In late December 2023, a major flood event peaked at 1,200 cubic feet per second (cfs), breaking river ice, an unusual occurrence for the season. In 2024, water discharge stayed at or above the historic average until mid-July. Notable events included a rainstorm that caused Knife River discharge to surge from 26 to 3,580 cfs in just five hours, with similar flooding reported in other middle and upper shore rivers. Floods of this magnitude can harm newly hatched steelhead fry, leading to poor recruitment, growth, and survival.

Fortunately, streamflow conditions in 2025 were relatively stable compared to the more variable conditions observed during 2023 and 2024. Discharge remained generally within seasonal norms for much of the year, with fewer prolonged high-flow or drought periods. The largest discharge occurred on July 23, 2025, when flow in the Knife River reached approximately 2,160 cfs. This event followed an extended period of relatively low flows associated with early summer dry conditions. Water levels remained below seasonal norms for much of the fall (Figure 2).

Challenges from Droughts and Floods in North Shore Rivers (1997-2024)

Aquatic life in North Shore rivers has faced increasingly erratic conditions, including droughts and floods, over the past few decades. These trends were analyzed using data from the USGS Knife River gage (location: 04015330), which represents lower shore rivers. While gages exist in the upper shore (e.g., Poplar and Brule Rivers), they lack consistent daily data, limiting their use for comparisons.

Stream conditions have become more variable in the past decade compared to 1997–2013, when there were only two flood years and one drought year. In contrast, from 2014–2024, there were three flood years, two drought years, and one year (2023) when maximum annual discharge exceeded the historic mean. These extreme events have likely impacted steelhead production in Minnesota tributaries to Lake Superior over the past decade (Figure 3).

Droughts cause water scarcity, fluctuating levels, oxygen depletion, and dangerously high stream temperatures for cold-water fish. Floods, meanwhile, disrupt habitats and displace aquatic life, reducing survival and reproduction. The impact of a flood on a year-class of steelhead depends on its timing (frequency and duration) and magnitude (e.g., 2000 CFS or 8000 CFS). Timing, especially during spring/summer when eggs and early-life stages are vulnerable, likely matters more than flow magnitude. However, a major event, like 7 inches of rain, likely affects all streams to some extent, particularly in the lower stream reaches. Floods and droughts impact steelhead production but what constitutes a significant impact remains unknown.

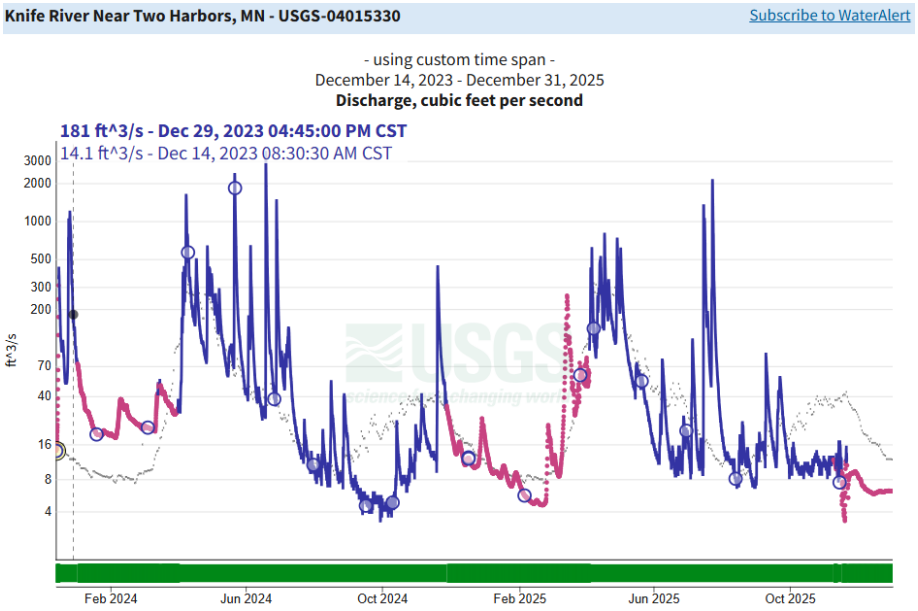


Figure 2. Knife River streamflow (cfs) from December 14, 2023 to December 31, 2025 from the USGS gage at Knife River, Minnesota (location: 04015330). Blue/pink lines represent hourly discharge values and the grey line represents seasonal norms.

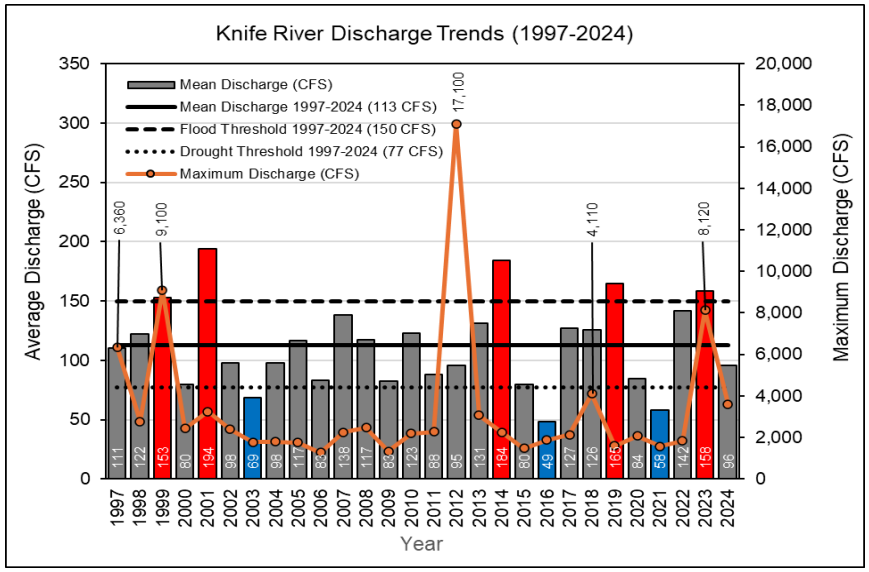


Figure 3. Average and maximum yearly discharge (cfs) for the Knife River from 1997 to 2024. The solid black line represents the overall average discharge, while the dashed lines mark the drought threshold (77 cfs) and flood threshold (150 cfs), based on one standard deviation from the mean. Years with average discharge below the drought threshold are shaded blue, and years above the flood threshold are shaded red. Data is from the USGS Knife River streamflow gage (location: 04015330).

Fishing Pressure Trends and Regional Insights

The 2025 spring creel survey ran from April 5 to May 18, with three creel clerks completing 448 site visits and interviewing 1,024 anglers across the region. Most interviews (76%; N=775) were conducted in the lower shore, and most (90%; N=926) were fishing streams. The Lester River had the most interviews in the lower shore (165), and the Baptism River in the upper shore (104).

Total fishing pressure in 2025 was 20,507 angler-hours, below the historic average range of 29,790 hours (Q1: 21,487, Q3: 37,760, Figure 4). Lower shore fishing pressure totaled 15,104 angler-hours, within the historic range (23,800; Q1: 17,749, Q3: 29,610). The Stewart River (3,408) and Lester River (2,880) saw the most angling activity, while Gooseberry River (1,525) and Silver Creek (464) had the least (Figure 5). The French River and McQuade Harbor/Talmadge River stations were not surveyed in 2025. Historically, these stations contributed approximately 6,000 angler-hours annually, but effort has declined substantially in recent years. In 2024, combined angler effort at these stations totaled only 454 angler-hours (Peterson 2024), making it no longer worthwhile to include them in the creel survey schedule.

Upper shore fishing pressure totaled 5,403 angler-hours, within the historic range (5,979; Q1: 4,153, Q3: 7,892). The Baptism River had the most fishing activity (2,075), while the Beaver River had the least (245). The Temperance and Poplar rivers were excluded from the 2024 and 2025 schedules. Poplar River access remains restricted, while excluding the Temperance River helped streamline creel clerk schedules. Historically, these rivers contributed only 2% and 1% of annual angler-hours, respectively (Figure 5).

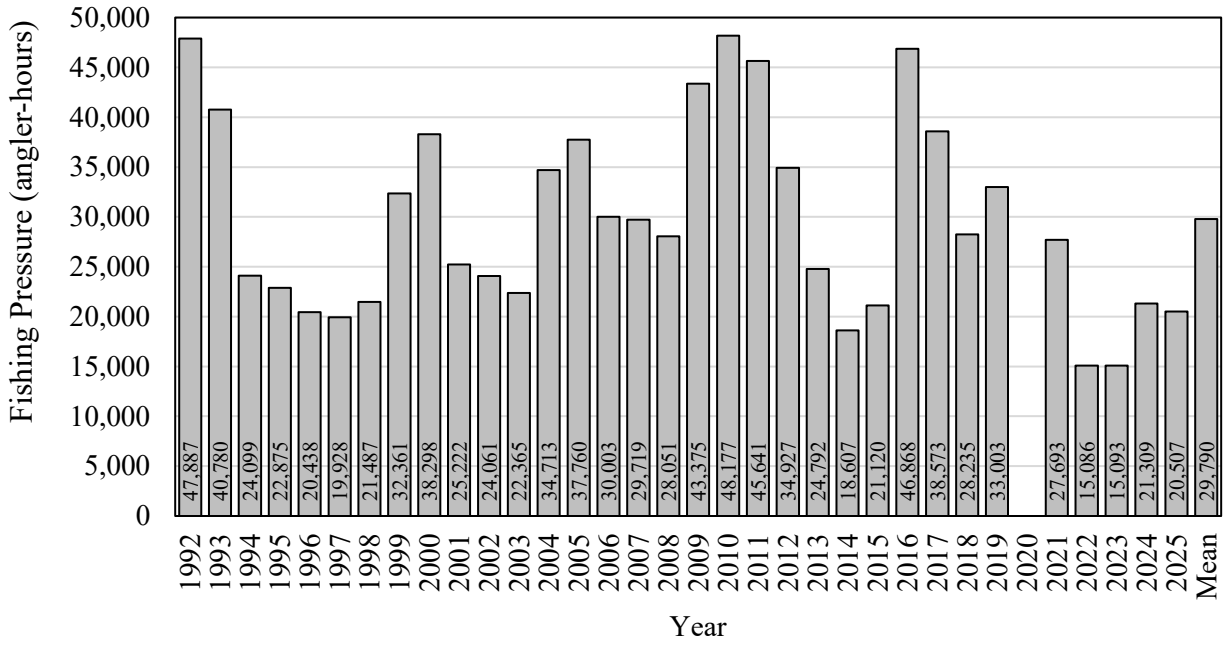


Figure 4. Total annual fishing pressure (angler-hours) in the Lake Superior spring creel survey compared to the historic average (Mean).

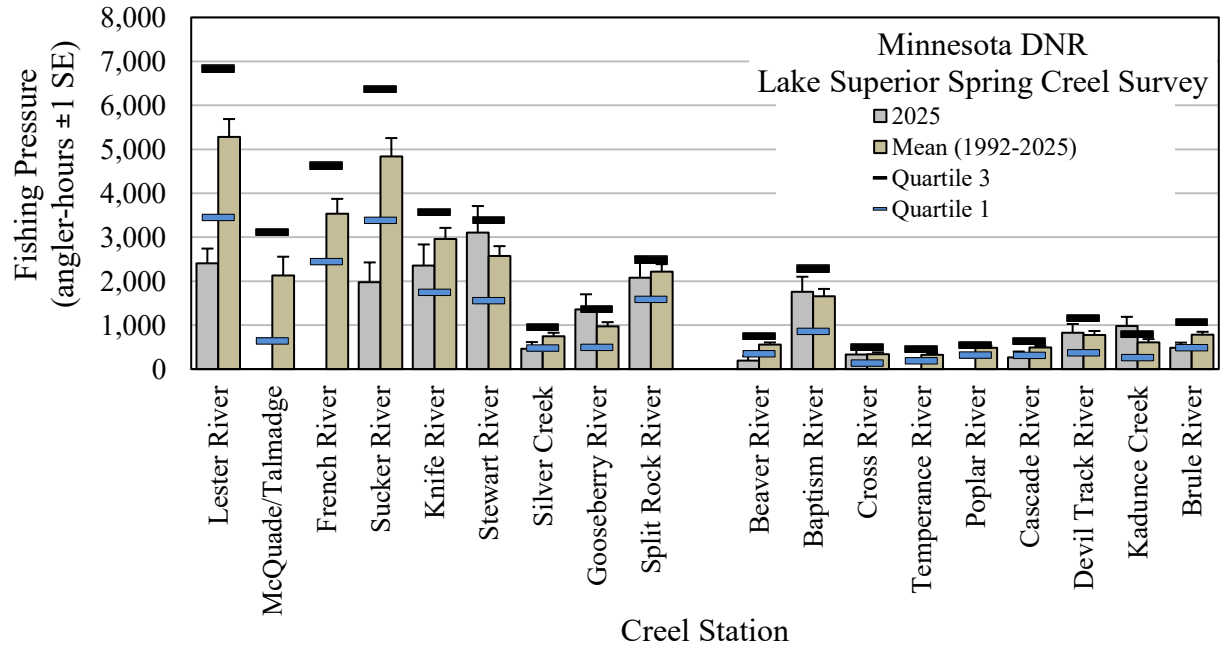


Figure 5. Annual fishing pressure (angler-hours) compared to the historic average and interquartile range at each creel station. Quartiles (black and blue lines) highlight the typical range of fishing pressure by excluding outliers, offering a clearer picture of normal variation.

Angler Population Estimates, Demographics, and Target Species

Angler population estimates were based on the total number of new anglers (first-time interviews) and recap anglers (previously interviewed) each day. Anglers were identified as new or recap by asking, “Have you been interviewed by a creel clerk this spring?” This method wasn’t used before 1996, so estimates aren’t available for 1992–1995. The Schnabel modification of the Lincoln-Petersen estimator calculated daily angler abundance and variance. Estimates typically increased during the first half of the survey and then stabilized, so the average of the last nine estimates was used for final population numbers and confidence intervals.

In 2025, an estimated 1,536 anglers participated in Minnesota’s Lake Superior tributary fishery, below the historic average of 1,591 (Table 3; Figure 6). A total of 1,024 interviews were collected, with 730 being new, first-time interviews. Most anglers (92%, 660) were Minnesota residents, 4% (26) were from Wisconsin, and less than 1% (29) were from other states. Female anglers accounted for 7% (36) of interviews, an increase from 5.5% in 2022, 4.7% in 2023, and 6% in 2024.

Rainbow Trout were the most targeted species by anglers (83% of all interviews); most (82%) were primarily targeting steelhead while very few (2%) were targeting clipped Rainbow Trout (Kamloops or clipped Steelhead). Brook Trout were the second most targeted species by anglers, mentioned in 10% of interviews. Other target species rarely mentioned by anglers included Atlantic Salmon *Salmo salar*, Brown Trout *Salmo trutta*, Coho Salmon *Oncorhynchus kisutch*, Lake Trout *Salvelinus namaycush*, Longnose Sucker *Catostomus catostomus*, Smallmouth Bass *Micropterus dolomieu*, and White Sucker *Catostomus commersonii*.

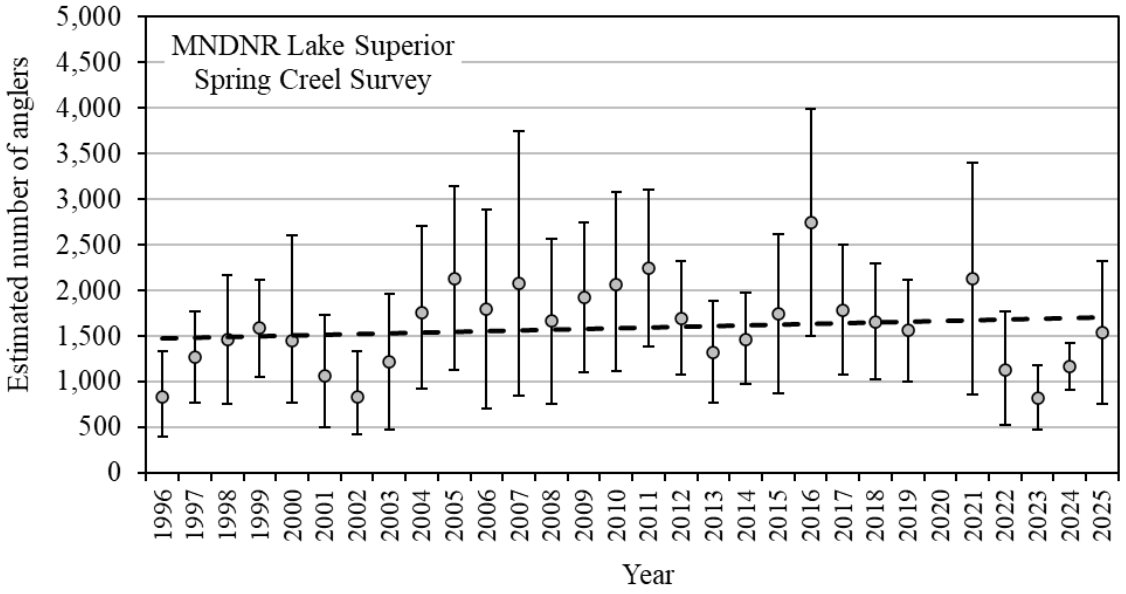


Figure 6. Annual estimates of new (first time interviewed the spring) anglers who were interviewed in the Lake Superior spring creel survey by year. Points show Lincoln–Petersen estimates and error bars represent confidence intervals. The dashed line indicates the long-term trend in angler abundance.

Fish Catch, Catch-Rates, and Harvest

Unclipped Steelhead

In 2025, an estimated 2,790 unclipped steelhead were caught, below the historic average of 2,869 (range: 403–7,184). Lower shore catches totaled 2,198, led by the Stewart River (762) and Gooseberry River (448), while the upper shore contributed 592, led by the Baptism River (251) and Devil Track River (157). The average size was 23.3 inches and 4.2 pounds. An estimated 733 small (<16 inches), unclipped steelhead were also caught in 2025, the highest since 2017 (Tables 5 and 6, Figure 7).

Although shore wide total catches of steelhead have declined slightly in recent years, catch rates have remained relatively stable. In 2025, anglers averaged one fish every 7.4 hours (0.136 fish per hour), better than the historic average of one fish every 10.4 hours (0.096 fish per hour) (Table 5; Figure 7). Lower shore rates were highest, with anglers catching one fish every 6.8 hours (0.146 fish per hour), with the best catch rates at the Gooseberry River (3.4 hours per fish) and Stewart River (4.5 hours per fish). Upper shore anglers averaged one fish every 9.1 hours (0.110 fish per hour), and the best catch rates were at the Devil Track River (5.3 hours per fish) and Beaver River (6.8 hours per fish) (Table 5; Figure 8).

Steelhead catch rates have improved over the past 30 years due to stocking programs and restrictive harvest regulations. Since 2006, catch-rates have exceeded the original management target of 0.100 fish per hour (10 hours per fish caught; Schreiner et al. 2006) every year except for 2012 (0.094) and 2014 (0.077), and have exceeded the revised management target of 0.120 fish per hour (8.3 hours per fish caught; Goldsworthy et al. 2017) in 13 of the last 19 years. Historically, upper shore rates were better, with anglers averaging one fish every 6.7 hours (0.15 fish per hour) between 2002 and 2018. However, since 2018, lower shore rates have surpassed those on the upper shore (Figure 8).

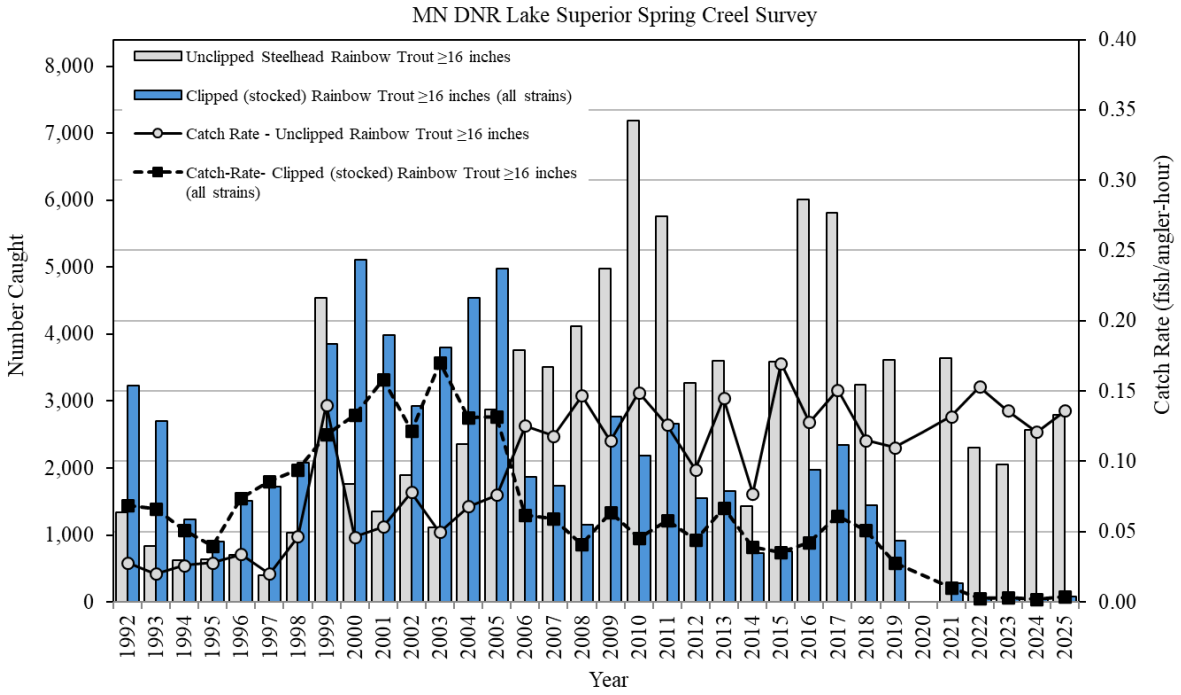


Figure 7. Shore wide estimated catch and catch-rate (fish per angler-hour) of unclipped and clipped (stocked) Rainbow Trout from the Lake Superior spring creel survey by year.

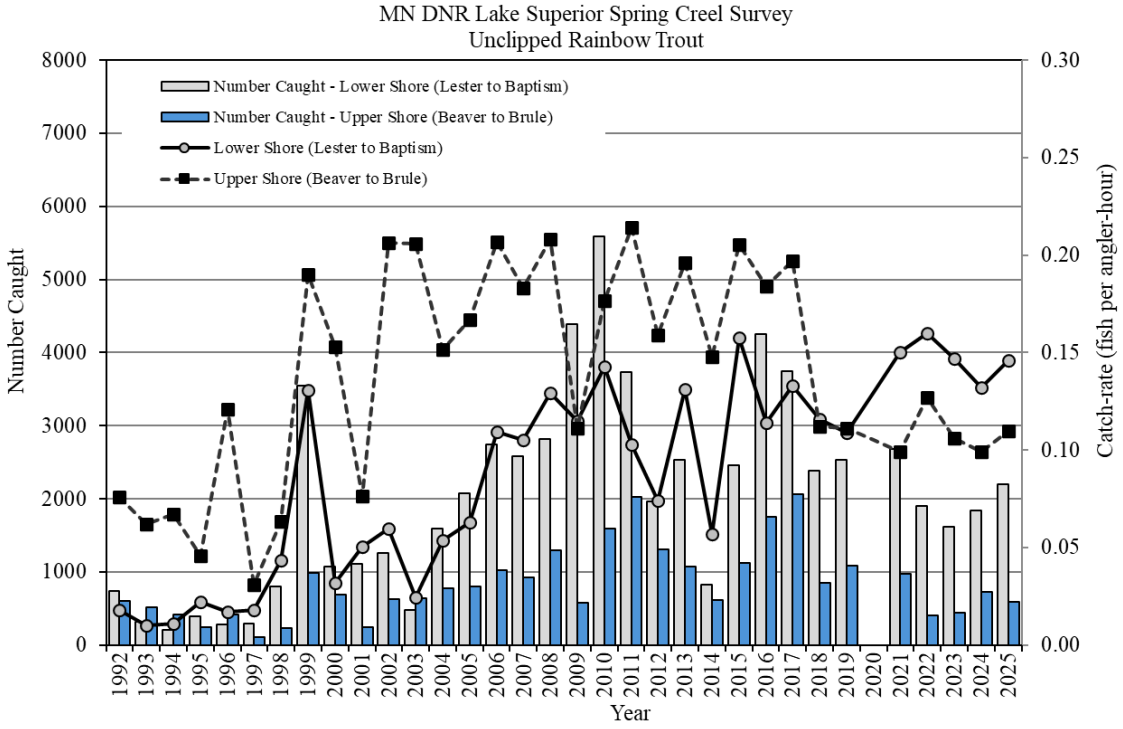


Figure 8. Estimated catch and catch rate (fish per angler-hour) of unclipped Rainbow Trout in the lower and upper shore from the Lake Superior spring creel survey by year.

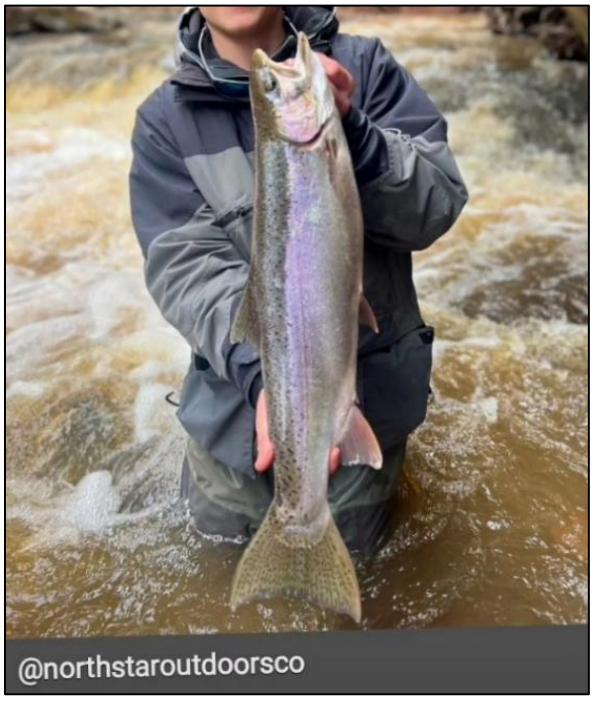
Superior Strain Steelhead Rainbow Trout

Anglers caught 251 clipped Superior strain steelhead in spring 2025, including 74 legal-sized fish (≥16 inches) and 177 sub-legal fish (<16 inches). Legal-sized steelhead were caught in six rivers: Lester River (29), Knife River (11), Stewart River (8), Gooseberry (8), Split Rock River (5), and Baptism River (13). On average, anglers caught one legal-sized fish every 250 hours of fishing (0.004 fish per hour) (Figure 9). More legal-sized fish were caught in streams (61) than the lake (13), and more were harvested (44) than released (30) (Table 5). Legal-sized clipped steelhead averaged 28.3 inches and 4.2 pounds (Table 6).

Sub-legal fish were caught in the Lester River (150), Knife River (11), and Stewart River (16). Of the 177 sub-legal sized fish caught, 15 were caught in the lake and 162 in streams (Figure 10). All sub-legal fish were released (Table 5). Sub-legal fish averaged 10.2 inches and 0.4 pounds (Table 6).

A summary of Superior strain stocking is provided in Table 7. The growth of Superior strain steelhead has been very similar to wild-produced steelhead. The size of Superior strain steelhead captured at the French River trap over the past few years averaged 12.9 inches at age-2, 15.9 inches at age-3, 21.0 inches at age-4, 24.6 inches at age-5, and 26.0 inches or larger at ages 6 and older.

Returns from the first stocked year classes of clipped Superior strain steelhead to the creel have been low; most of the 2017- and 2018-year classes were expected to return to rivers as adults to spawn by 2024. The return of adult steelhead, both wild and hatchery-produced, depends on many factors, including hatchery production, stocking efficiencies, and external influences like disease outbreaks and juvenile survival in streams and Lake Superior, many of which are outside the Minnesota DNR's control. Catch and harvest opportunities of stocked Superior strain steelhead should improve as more stocked year-classes mature and return as adults.



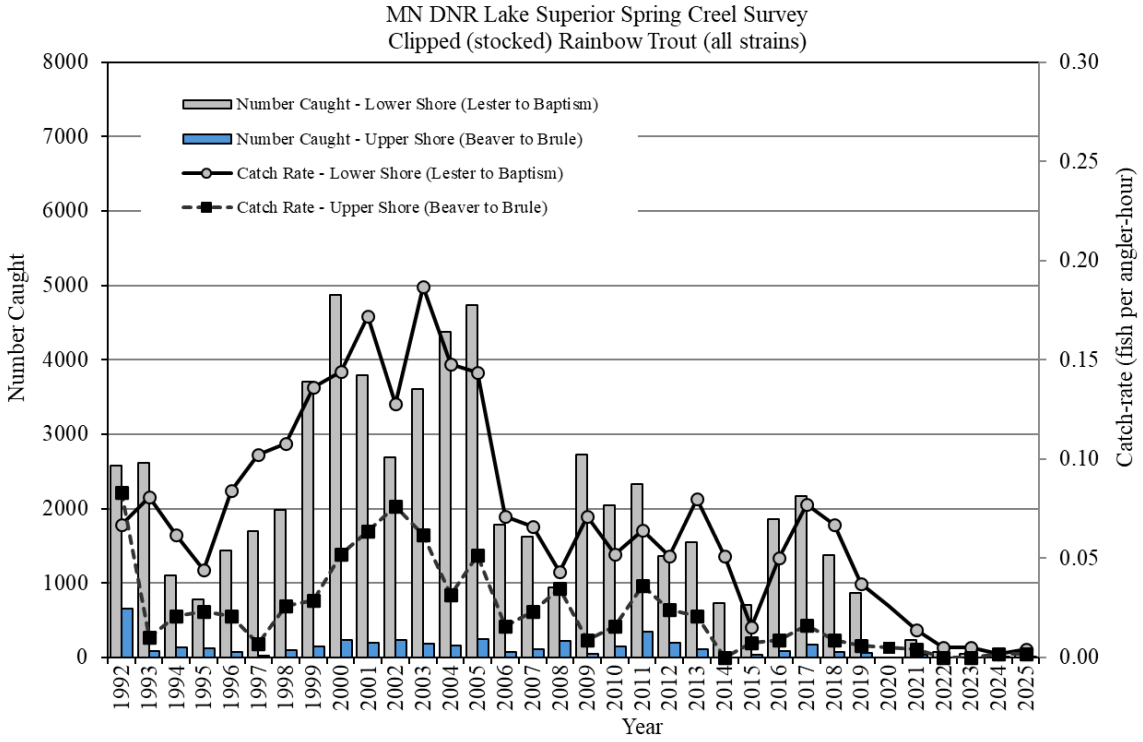


Figure 9. Estimated catch and catch rate (fish per angler-hour) of clipped (stocked) Rainbow Trout in the lower and upper shore from the Lake Superior spring creel survey by year. Totals in 2022 are combined for Kamloops and clipped Superior strain steelhead.

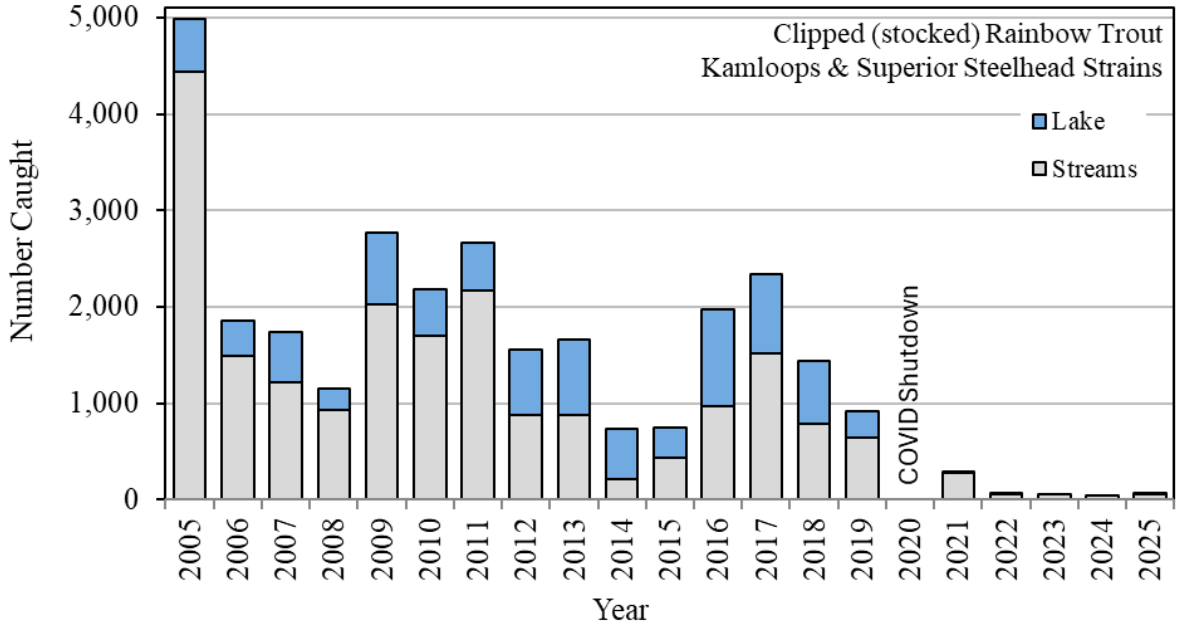


Figure 10. Estimated number of clipped (stocked) Rainbow Trout ≥16 inches caught in the lake and stream and the historic average (Mean) since 2005. Totals in 2022 are combined for Kamloops and clipped Superior strain steelhead.

Brook Trout

Brook Trout are the second most common species caught in the spring creel survey. In 2025, an estimated 526 were caught, above the historic average of 480 (Figure 11). The catch rate was low, with anglers catching one Brook Trout every 39 hours (0.026 fish per hour). Low spring catches are not concerning, as they do not reflect Brook Trout abundance below barriers at other times of the year (Peterson 2018). The average size was 10.4 inches and the largest reported was 17 inches (Table 6).

Compliance with Brook Trout harvest regulations (bag limit of 1, minimum size 20 inches) was excellent, with no illegal harvests in spring 2025. The Minnesota DNR prioritizes Coaster Brook Trout rehabilitation, and regulatory compliance is key to its success. To address reports of sub-legal harvests during summer, the DNR partnered with stakeholders, including The Greater Lake Superior Foundation, Minnesota Trout Unlimited, and Minnesota Steelheader, to post educational signs along the North Shore and increase public outreach via social media. Additional information on Brook Trout in Minnesota's Lake Superior waters is available on the Minnesota DNR's Lake Superior Area Fisheries website and the Coaster Genetics Project website.

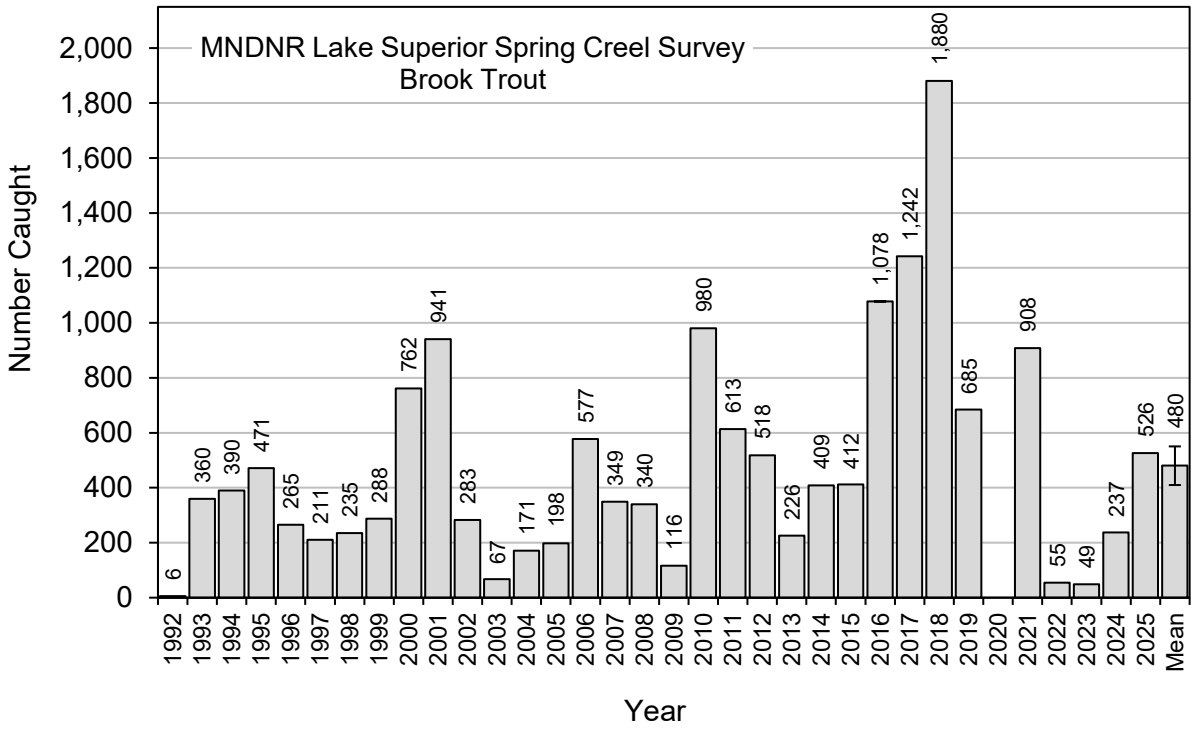


Figure 11. The estimated number of Brook Trout caught during the Lake Superior spring creel survey by year and the historic average (Mean ± 1 *SE*).

Other Fish Species

In the 2025 spring creel survey, anglers caught and released an estimated 134 Longnose Sucker, 24 White Sucker, 20 Brown Trout, and 8 Coho Salmon (Table 6). Online reports suggested additional Coho Salmon were caught by shore anglers before the survey began. Coho Salmon catches and fishing activity vary with Lake Superior conditions and year-class strength. These fish are naturally produced, as the last Coho stocking in Lake Superior occurred in Michigan in 2006. Most Coho caught in Minnesota waters likely originate from Wisconsin, Michigan, or Ontario, where stream habitats better support fall-run reproduction. Natural reproduction in Minnesota streams below barriers is largely unknown but likely minimal due to limited access and less favorable conditions. Low water levels, ice, and gravel bars in the fall often block access from Lake Superior, making North Shore streams unsuitable for fall-spawning species like Brook Trout, Brown Trout, and salmon.

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Tables

Table 1. Average, minimum, and maximum annual discharge are shown, along with drought (<77 cfs) and flood (>150 cfs) years. Annual average discharge was categorized as drought or flood based on thresholds calculated as one standard deviation below (77 cfs) or above (150 cfs) the overall mean discharge (113 cfs).

	Discharge (CFS)			
Year	Average	Minimum	Maximum	Drought/Flood Status*
1997	111	<1	6,360	-
1998	122	<1	2,780	-
1999	153	3	9,100	Flood
2000	80	<1	2,430	-
2001	194	<1	3,240	Flood
2002	98	<1	2,390	-
2003	69	<1	1,780	Drought
2004	98	4	1,790	-
2005	117	<1	1,760	-
2006	83	<1	1,280	-
2007	138	2	2,250	-
2008	117	5	2,480	-
2009	83	3	1,340	-
2010	123	5	2,190	-
2011	88	3	2,270	-
2012	95	2	17,100	-
2013	131	6	3,060	-
2014	184	6	2,250	Flood
2015	80	2	1,470	-
2016	49	6	1,870	Drought
2017	127	4	2,140	-
2018	126	5	4,110	-
2019	165	5	1,590	Flood
2020	84	5	2,070	-
2021	58	<1	1,570	Drought
2022	142	7	1,830	-
2023	158	3	8,120	Flood
2024	96	3	3,610	-
Mean	113	4	3,365	
SD	37	1	3,309	
N	28	19	28	

*The drought (77 cfs) and flood (150 cfs) thresholds were calculated with plus or minus one standard deviation from the overall mean discharge, respectively. Drought/Flood Status was determined by the annual average discharge values that were below (Drought) or above (Flood) the thresholds.

Table 2. Fishing pressure estimates (angler-hours) from the Lake Superior spring creel survey by shore zone, station, and year.

													1992-2025		
Shore Zone	Station	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Mean	Minimum	Maximum
Lower Shore	Lester River	3,699	7,293	4,955	3,051	3,115	--	2,933	2,215	2,199	2,272	2,405	5,283	2,199	10,476
	McQuade/Talmadge	1,659	5,453	3,612	2,657	3,158	--	359	401	196	205	-	2,127	196	5,453
	French River	2,409	6,014	3,678	1,868	2,033	--	422	295	131	250	-	3,531	131	8,544
	Sucker River	2,265	4,914	4,713	4,131	3,613	--	2,342	2,469	1,437	1,659	1,979	4,835	1,437	12,990
	Knife River	1,629	6,597	3,215	3,363	3,461	--	2,574	1,730	1,110	2,113	2,352	2,961	1,110	6,597
	Stewart River	1,653	3,385	3,658	2,620	3,830	--	4,111	2,265	3,247	2,389	3,104	2,577	720	5,782
	Silver Creek	577	582	529	522	759	--	703	403	254	561	464	747	131	1,996
	Gooseberry River	532	1,105	1,330	612	778	--	837	231	451	1,423	1,360	970	231	2,475
	Split Rock River	1,217	1,993	2,402	1,756	2,444	--	3,545	1,880	1,916	3,038	2,080	2,217	1,145	5,400
Upper Shore	Beaver River	473	436	685	346	572	--	565	134	169	161	197	559	134	1,159
	Baptism River	1,173	2,285	3,303	2,370	2,918	--	3,545	725	1,465	3,330	1,760	1,658	448	3,570
	Cross River	338	700	1,004	549	381	--	518	145	120	500	331	336	53	1,004
	Temperance River	359	370	494	319	306	--	175	91	30	-	-	328	30	788
	Poplar River	357	645	508	299	803	--	488	160	150	-	-	484	150	1,347
	Cascade River	438	846	601	307	301	--	789	160	180	454	267	490	160	939
	Devil Track River	1,355	1,421	1,841	2,066	1,833	--	1,481	276	266	1,227	827	772	75	2,066
	Kadunce Creek	448	1,420	1,030	570	1,630	--	1,006	1,092	1,405	795	976	609	79	1,630
	Brule River	539	1,410	1,015	829	1,069	--	1,302	415	369	932	485	786	207	1,505
Lower Shore		15,641	37,336	28,093	20,579	23,191		17,825	11,889	10,940	13,910	15,104	23,800	10,940	39,994
Upper Shore		5,479	9,533	10,480	7,656	9,812		9,868	3,197	4,153	7,399	5,403	5,979	3,046	10,480
Shorewide		21,120	46,868	38,573	28,235	33,003		27,693	15,086	15,093	21,309	20,507	29,790	15,086	48,177

Table 3. Fishing pressure estimates (angler-hours ± 1 standard error [*SE*]) from the 2025 Lake Superior spring creel survey by shore zone and station.

Shore Zone	StationName	Stream Pressure	(SE)	Lake Pressure	(SE)	Total Pressure	(SE)
Lower Shore	Lester River	2,405	306	475	138	2,880	337
	Sucker River	1,979	446	32	32	2,011	448
	Knife River	2,352	484	0	0	2,352	484
	Stewart River	3,104	633	304	159	3,408	605
	Silver Creek	464	151	0	0	464	151
	Gooseberry River	1,360	346	165	137	1,525	342
	Split Rock River	2,080	448	384	151	2,464	472
Upper Shore	Beaver River	197	88	48	48	245	100
	Baptism River	1,760	312	315	145	2,075	341
	Cross River	331	135	16	16	347	134
	Cascade River	267	121	85	58	352	133
	Devil Track River	827	199	0	0	827	199
	Kadunce River	976	197	80	57	1,056	213
	Brule River	485	118	16	16	501	117
Lower Shore		13,744	1,127	1,360	295	15,104	1,130
Upper Shore		4,843	480	560	174	5,403	510
Shorewide		18,587	1,225	1,920	343	20,507	1,240

Table 4. Annual estimates of new (first time interviewed the spring) anglers who were interviewed in the Lake Superior spring creel survey by year. Mean is the historic average and Lower C.I. and Upper C.I. are 95% error bars.

Year	Estimate	Lower C.I.	Upper C.I
1996	832	393	1,336
1997	1,269	764	1,775
1998	1,463	756	2,170
1999	1,587	1,051	2,122
2000	1,454	775	2,601
2001	1,069	494	1,725
2002	833	416	1,329
2003	1,218	468	1,968
2004	1,752	923	2,712
2005	2,133	1,122	3,145
2006	1,794	703	2,885
2007	2,073	840	3,744
2008	1,664	757	2,571
2009	1,923	1,106	2,741
2010	2,070	1,112	3,080
2011	2,243	1,379	3,107
2012	1,698	1,078	2,318
2013	1,325	769	1,882
2014	1,459	978	1,970
2015	1,744	872	2,616
2016	2,743	1,496	3,991
2017	1,787	1,074	2,500
2018	1,660	1,026	2,295
2019	1,561	1,002	2,121
2020	--	--	--
2021	2,128	862	3,394
2022	1,125	527	1,773
2023	825	473	1,178
2024	1,161	904	1,418
2025	1,536	752	2,321
Mean	1,591	858	2,372

Table 5. Estimated total catch and catch rate (fish per angler-hour) for unclipped (wild-produced) steelhead, clipped (stocked) Steelhead, and Brook Trout in the 2025 Lake Superior spring creel survey by station.

		Unclipped Steelhead				Clipped Steelhead (Superior strain)				Brook Trout	
		All Sizes		≥16 Inches		All Sizes		≥16 Inches		All Sizes	
Station	HRT	Catch	Catch-Rate	Catch	Catch-Rate	Catch	Catch-Rate	Catch	Catch-Rate	Catch	Catch-Rate
Lester	Harvested	10	0.003	10	0.003	10	0.003	10	0.003	0	0.000
River	Released	551	0.191	280	0.097	169	0.059	19	0.007	19	0.007
	Total	561	0.195	290	0.101	179	0.062	29	0.010	19	0.007
Sucker	Harvested	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000
River	Released	296	0.147	244	0.121	0	0.000	0	0.000	9	0.004
	Total	296	0.147	244	0.121	0	0.000	0	0.000	9	0.004
Knife	Harvested	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000
River	Released	166	0.071	122	0.052	22	0.009	11	0.005	11	0.005
	Total	166	0.071	122	0.052	22	0.009	11	0.005	11	0.005
Stewart	Harvested	8	0.002	8	0.002	8	0.002	8	0.002	0	0.000
River	Released	794	0.233	754	0.221	16	0.005	0	0.000	88	0.026
	Total	802	0.235	762	0.224	24	0.007	8	0.002	88	0.026
Silver	Harvested	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000
Creek	Released	66	0.142	66	0.142	0	0.000	0	0.000	0	0.000
	Total	66	0.142	66	0.142	0	0.000	0	0.000	0	0.000
Gooseberry	Harvested	0	0.000	0	0.000	8	0.005	8	0.005	0	0.000
River	Released	495	0.325	448	0.294	0	0.000	0	0.000	244	0.160
	Total	495	0.325	448	0.294	8	0.005	8	0.005	244	0.160
Split Rock	Harvested	0	0.000	0	0.000	5	0.002	5	0.002	0	0.000
River	Released	324	0.131	266	0.108	0	0.000	0	0.000	46	0.019
	Total	324	0.131	266	0.108	5	0.002	5	0.002	46	0.019
Lower Shore	Harvested	18	0.001	18	0.001	31	0.002	31	0.002	0	0.000
Total	Released	2,693	0.178	2,180	0.144	207	0.014	30	0.002	417	0.028
	Total	2,711	0.179	2,198	0.146	238	0.016	61	0.004	417	0.028

Table 5 *continued*. Estimated total catch and catch rate (fish per angler-hour) for unclipped (wild-produced) steelhead, clipped (stocked) Steelhead, and Brook Trout in the 2025 Lake Superior spring creel survey by station.

		Unclipped Steelhead				Clipped Steelhead (Superior strain)				Brook Trout	
		All Sizes		≥16 Inches		All Sizes		≥16 Inches		All Sizes	
Station	HRT	Catch	Catch-Rate	Catch	Catch-Rate	Catch	Catch-Rate	Catch	Catch-Rate	Catch	Catch-Rate
Beaver	Harvested	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000
River	Released	36	0.147	36	0.147	0	0.000	0	0.000	0	0.000
	Total	36	0.147	36	0.147	0	0.000	0	0.000	0	0.000
Baptism	Harvested	0	0.000	0	0.000	13	0.006	13	0.006	0	0.000
River	Released	308	0.148	251	0.121	0	0.000	0	0.000	57	0.027
	Total	308	0.148	251	0.121	13	0.006	13	0.006	57	0.027
Cross	Harvested	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000
River	Released	33	0.095	0	0.000	0	0.000	0	0.000	16	0.046
	Total	33	0.095	0	0.000	0	0.000	0	0.000	16	0.046
Cascade	Harvested	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000
River	Released	0	0.000	0	0.000	0	0.000	0	0.000	16	0.045
	Total	0	0.000	0	0.000	0	0.000	0	0.000	16	0.045
Devil Track	Harvested	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000
River	Released	188	0.227	157	0.190	0	0.000	0	0.000	0	0.000
	Total	188	0.227	157	0.190	0	0.000	0	0.000	0	0.000
Kadunce	Harvested	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000
Creek	Released	199	0.188	129	0.122	0	0.000	0	0.000	0	0.000
	Total	199	0.188	129	0.122	0	0.000	0	0.000	0	0.000
Brule	Harvested	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000
River	Released	48	0.096	19	0.038	0	0.000	0	0.000	19	0.038
	Total	48	0.096	19	0.038	0	0.000	0	0.000	19	0.038
Upper Shore	Harvested	0	0.000	0	0.000	13	0.002	13	0.002	0	0.000
Total	Released	812	0.150	592	0.110	0	0.000	0	0.000	108	0.020
	Total	812	0.150	592	0.110	13	0.002	13	0.002	108	0.020
Shorewide	Harvested	18	0.001	18	0.001	44	0.002	44	0.002	0	0.000
Total	Released	3,505	0.171	2,772	0.135	207	0.010	30	0.001	526	0.026
	Total	3,523	0.172	2,790	0.136	251	0.012	74	0.004	526	0.026

Table 6. Yield, average length (inches), and average weight (pounds) of fish species caught in the 2025 Lake Superior spring creel survey.

		Yield			Average Length (inches)			Average Weight (pounds)		
Species	Strain	Number Caught	Number Harvested	Pounds Harvested	Harvested	Released	All	Harvested	Released	All
Brook Trout	Wild	526	0	0	-	10.3	10.3	-	0.8	0.8
Brown Trout	Wild	20	0	0	-	10.0	10.0	-	0.8	0.8
Coho Salmon	Wild	8	0	0	-	11.0	11.0	-	0.4	0.4
Longnose Sucker	-	134	0	0	-	16.4	16.4	-	1.9	1.9
Unclipped Steelhead Rainbow Trout (≥16")	Wild	2,790	18	85	24.6	23.3	23.3	4.7	4.1	4.2
Unclipped Steelhead Rainbow Trout (<16")	Wild	733	0	0	-	10.2	10.2	-	0.5	0.5
Clipped Steelhead Rainbow Trout (≥16")	*Superior	74	44	0	28.3	-	28.3	4.7	-	4.7
Clipped Steelhead Rainbow Trout (<16")	*Superior	177	0	0	-	10.2	10.2	-	0.5	0.5
White Sucker	-	24	0	0	-	14.0	14.0	-	1.1	1.1

**Superior strain are a clipped (stocked) hatchery strain derived from eggs collected from wild-produced steelhead captured at the French and Knife rivers. Adults that produced this strain were genetically tested to remove Kamloops ancestry.*

Table 7. Summary of Superior (SUP) Strain steelhead Rainbow Trout stocking by stocking location, year stocked, and size between 2018 and 2025. The stock date range is the first and last date that fish were stocked at each river.

		Size					
Stocking Location	Year Stocked	*Fryling	**Fingerling	***Yearling	Total	Stock Date Range	Stocking Site(s)
French River	*2018*	*0*	*0*	*53,081*	*53,081*	April 27-May 7	Can't, Lakewood, Pioneer Roads
	2019	*0*	*0*	*70,301*	*70,301*	April 22-May 6	Can't, Lakewood, Pioneer Roads
	2020	*0*	*0*	*35,994*	*35,994*	April 20-April 21	Can't, Lakewood, Pioneer Roads
	2021	*0*	*0*	*0*	*0*		No egg take in 2020 (COVID) so no fish to stock in 2021
	2022	*0*	*0*	*31,194*	*31,194*	May 17.	Can't & Lakewood Roads
	2023	*59,359*	*0*	*26,150*	*85,509*	June 1-June 23	(Frylings) Lakewood Road, (Yearlings) Can't, Lakewood, Pioneer Roads
	2024	*0*	*0*	*61,436*	*61,436*	April 8-April 17	Can't, Lakewood, Pioneer Roads
	2025	*0*	*0*	*45,777*	*45,777*	April 21-April 24	McQuade, Can't, Lakewood, Pioneer Roads
Lester River	*2018*	*0*	*0*	*60,290*	*60,290*	April 23-May 1	N. Tischer, Lismore, Emerson Roads
	2019	*0*	*0*	*69,768*	*69,768*	April 8-May 6	N. Tischer, Lismore, Emerson Roads
	2020	*0*	*0*	*0*	*0*		All supply stocked in French River to support adult returns for egg take operations
	2021	*0*	*0*	*0*	*0*		No egg take in 2020 (COVID) so no fish to stock in 2021
	2022	*0*	*0*	*29,407*	*29,407*	May 17-June 2	Strand, N. Tischer, & Lismore Roads
	2023	*0*	*0*	*52,300*	*52,300*	June 6.	N. Tischer & Lismore Roads
	2024	*0*	*0*	*72,740*	*72,740*	April 8-April 17	Strand, N. Tischer, Lismore, & Emerson Roads
	2025	*0*	*0*	*57,018*	*57,018*	April 22-April 24	Strand, N. Tischer, Lismore, & Emerson Roads
[b]Sucker River	*2024*	*0*	*62,499*	*0*	*62,499*	October 22.	Berquist, McQuade (1st Crossing), & E. Pioneer Road
	2025	*0*	*20,000*	*0*	*20,000*	October 22.	E. Pioneer Road
[b]Knife River, Little	*2023*	*0*	*9,704*	*0*	*9,704*	November 17.	Korkki Road
[a]Knife River	*2024*	*0*	*0*	*6,992*	*6,992*	April 30-May 2	Westover Road
[a]Knife River, West Branch	*2024*	*0*	*0*	*6,873*	*6,873*	April 30-May 2	Fox Farm Road (snowmobile trail crossing)
[b]Lake Superior (Two Harbors)	*2024*	*0*	*62,499*	*0*	*62,499*	October 24.	Two Harbors boat ramp
Totals		59,359	154,702	679,321	893,382		

**Frylings averaged 2 inches total length and were not clipped prior to stocking.*

***Fingerlings averaged 3 inches total length and were not clipped prior to stocking.*

****Yearlings averaged 4 inches total length and were adipose (only) or adipose + pelvic fin clipped prior to stocking.*

[a] *Unplanned stocking provided by surplus hatchery production that exceeded the 120,000 annual stocking quota of clipped pre-smolt yearlings for spring stockings the Lester and French rivers.*

[b] *Unplanned stocking provided by surplus eggs from Superior strain adult captive broodstock.*

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MINNESOTA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF FISHERIES

COMPLETION REPORT:

LAKE SUPERIOR SPRING CREEL SURVEY

North Shore Streams

2025

Report Completed By:
Nick Peterson

Cory Goldsworthy
Digitally signed by Cory Goldsworthy
Date: 2026.06.01 07:30:13 -05'00'

Area Supervisor \ Date

David Weitzel
Digitally signed by David Weitzel
Date: 2026.06.01 08:26:55 -05'00'

Regional Fisheries Approval \ Date