

MINNESOTA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF FISH AND WILDLIFE
SECTION OF FISHERIES

COMPLETION REPORT LAKE SUPERIOR SUMMER CREEL SURVEY 2023

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Abstract

Anglers fished for 200,974 hours in the Minnesota waters of Lake Superior during the 2023 summer access-based creel survey and charter census. This is a 22% increase from the same period, sampled from late May to Early October, in 2022 and is 8% above the 10-year average of 184,770. Nearly all effort in 2023, 99%, was from boat in the Minnesota waters of Lake Superior. The fishing effort in 2023 was the fourth highest in the last 30 years and 71% of effort occurred in the Lower Shore area from Duluth to Two Harbors.

Minnesota-based anglers on Lake Superior generally target salmonines, which includes Lake Trout (*Salvelinus namaycush*) of both the lean and siscowet strains, Coho Salmon (*Oncorhynchus kisutch*), Chinook Salmon (*O. tshawytscha*), and Rainbow Trout (*O. mykiss*) of both the Steelhead and Kamloops strains. However, since the cessation of the Kamloops program in 2017 Kamloops have become increasingly scarce and none were reported by anglers this year. Anglers caught 52,163 total salmonines, of which 42,403 were harvested. Anglers caught 45% more salmonines than 2022. The combined salmonid catch rate was 0.2596 fish per hour (f/hr), a 30% increase from 2022. Anglers in 2023 harvested 81% of all salmonids caught close to the average of 86% in the past 10 years.

Anglers caught 37,241 lean Lake Trout and 1,264 siscowet Lake Trout and harvested 30,751 leans and 999 siscowets. Lean Lake Trout were caught at a rate 0.1853 f/hr, accounted for 71% of all salmonines caught, and 73% of all salmonines harvested. The catch rate for lean Lake Trout was 19% higher than the rate seen in 2022. The lean Lake Trout caught were 92% wild fish, the highest ever observed. In MN-1 near Duluth, stocked fish were only 13% of the catch. The average length of harvested lean Lake Trout was 21.6 inches long which is slightly longer than 2022.

During the 2023 season Anglers also caught Coho Salmon, Chinook Salmon, Pink Salmon (*O. gorbuscha*), Steelhead Rainbow Trout, Brown Trout (*Salmo trutta*), and Brook Trout (*Salvelinus fontinalis*). Anglers caught 4,877 Coho Salmon at a rate of 0.0243 f/h which is more than double last years catch. Anglers caught 729 Chinook Salmon which is 32% less than 2022 and the third lowest in the last 30 years. Anglers caught 7,839 Pink Salmon this year, the most ever recorded. A combined total of 13,545 salmon were caught in 2023 with 6,659 from the Lower Shore and 6,886 from the Upper Shore. Anglers also kept 13 and released 60 other Salmonines which consisted of Brook and Brown Trout respectively. A total of 140 Steelhead Rainbow Trout were caught and released by anglers. They also caught 568 Walleye (*Sander vitreus*), 76 Cisco (*Coregonus artedi*), 40 Lake Whitefish (*Coregonus clupeaformis*), and 25 Northern Pike (*Esox lucius*).

Fifty-five charter captains were licensed to fish in Minnesota waters of Lake Superior in 2023. Four captains reported no trips and 2 captains fished only in St. Louis River Estuary. Beginning in 2018, charter results are reported as a separate angler type in the annual Lake Superior summer creel survey report.

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Introduction

Lake Superior and its tributaries contain habitats that support unique pelagic and anadromous fisheries, contributing greatly to the diversity of angling opportunities in Minnesota. Several salmonines, including Lake Trout, Steelhead Rainbow Trout, Coho Salmon, and Chinook Salmon, provide quality recreational fisheries along the North Shore of Lake Superior throughout the year.

During the first half of the 20th century, Lake Trout were the mainstay of the Lake Superior sport fishery and, along with Cisco supported an important commercial fishery. By the late 1940s the Lake Trout harvest began to decline due to overfishing (Hansen et al. 1995). During the 1950s the Sea Lamprey (*Petromyzon marinus*) became established in Lake Superior and preyed heavily on Lake Trout. Populations of Lake Trout declined precipitously, due to mortality from Sea Lamprey, and both the sport and commercial fisheries collapsed. By the early 1960s, effective control of Sea Lamprey had been achieved. Minnesota and other states and provinces began stocking salmonids to rehabilitate the depleted Lake Trout stocks and to introduce new strains of salmon species to diversify the fishery. Efforts to follow the recovery plan (Hansen 1996) were successful and Minnesota suspended stocking of Lake Trout in 2016. The state of Minnesota has monitored the recreational fishery in the Minnesota waters of Lake Superior annually since 1969.

This current report presents results from Minnesota's 2023 Lake Superior summer creel survey and charter fishing census. Charter captains reported their entire year's effort and catch as required by law (State Statute 97C.311). In addition, data were not collected from Wisconsin-based anglers who fished in Minnesota waters of Lake Superior. Therefore, only the components of Minnesota-based private sport fishing and charter fishing in Minnesota waters for the full year are included in this report.

Lake Superior Management Plans (Schreiner et al. 1995; Schreiner et al. 2006; Goldsworthy et al. 2016) have suggested periodic diet sampling for salmonines to evaluate changes in the fish community and the impact of limited forage on the salmonine populations. Lake Trout, a primary predator species in Lake Superior, historically persisted on a forage base of Cisco and other coregonines. Establishment of Rainbow Smelt (*Osmerus mordax*) and overfishing of Cisco stocks led to the replacement of coregonines by Smelt as the primary forage of Lake Trout (Dryer et al. 1965). Conner et al. (1993) found that Smelt were the most important forage for various salmonines in Minnesota waters of Lake Superior. Smelt abundance declined in the early 1980s (Geving 1998) and remains low. However, Lake Trout diets are still comprised primarily of Smelt in May (Blankenheim 2018), most likely due to their high concentrations in warmer waters and to the lack of Cisco recruitment in recent years (Goldsworthy et al. 2016). Diet samples were collected in 2023 and were processed independently from this survey as a part of a different study.

Methods

This report of summer Lake Superior fishing is comprised of two primary components and a subcomponent of the charter fishery. The primary components include 1) a survey of private sport anglers, which is access-based and follows a stratified random statistical design and in 2023 was conducted from May 27 through October 8, and 2) a census of chartered anglers throughout the year. The subcomponent includes a survey of chartered trips to determine specific catch characteristics that are not reported in the charter census. The basic statistical method and formulas for the private sport angler survey are described by Bindman and Mach (1997), and more detail of the design of the Lake Superior summer creel survey is described by Halpern (1995a, b). The private sport angling survey includes private sport boaters, charter captains' personal trips, and shore anglers. The charter census includes data that are supplied by charter captains in monthly fishing reports. These data are required of charter captains and include location and time of fishing, number of anglers and lines, number of each species that were kept or released, and the number of fish with fin clips that indicate stocking. Being a census, no observable measurement error exists with these data. However, reporting error does exist, is not readily calculated, is presumed to be unbiased, and is ignored in this report. In previous years, charter trips were included in the creel survey, which is somewhat redundant and may increase variance estimates. Beginning in 2018, as a subcomponent to the charter census, charter trips are also surveyed to determine angler demographics and fish attributes such as length, weight, number of Lamprey wounds, and occurrence of fin clips. The survey and census components include only fishing in the Minnesota waters of Lake Superior (Figure 1) and excluded angling in tributaries and Wisconsin.

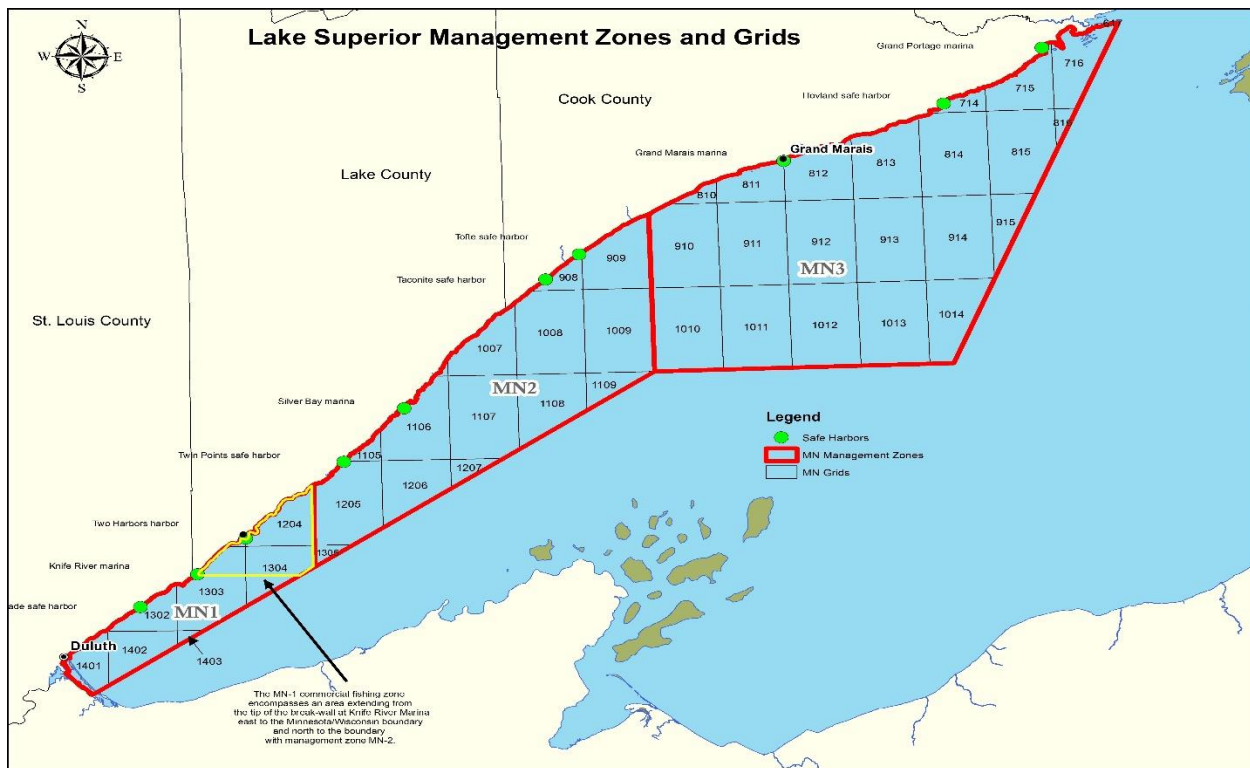


Figure 1. Map of statistical zones and safe harbors in the Minnesota waters of Lake Superior.

The 2023 survey began on May 27 and ended on October 8, when the Lake Trout season closed. The data collected during the few days in May and October were included in the June and October periods respectively. The creel clerks visited the stations and groups of stations (Clusters) that are described in Table 1. Clusters 1 and 2 are located closer to Duluth to the southwest and comprise the Lower Shore, whereas Clusters 3 and 4 are to the northeast and comprise the Upper Shore. Two clerks work on the creel survey, one in each Shore area. Halpern (2003) describes the general mechanics of this creel survey in more detail. The sampling design was revised in 2017 when sampling effort was dropped from two locations. One very small public access was dropped at Tofte in the Taconite Harbor area due to low use and high travel times to the access. Also, Harbor Cove was dropped from the Harbor Cove/Lakehead Marina station due to the owner’s removal of permission to use the property. The counts from Taconite Harbor and Lakehead Marina, were adjusted based on previous estimates of effort at the dropped accesses. Taconite Harbor received 88% of the effort at Station 9 in 2014-2015 and Harbor Cove Marina received 50% of the effort at Station 2 from 2014 through 27 July 2017. Also in 2020, sampling effort was reduced but not eliminated at the Twin Points public access due to decreased fishing in recent years.

References to creel survey numbers for 2022 are from Beckman (2023). Results from the creel survey and charter census are reported both separately and combined within tables in this report to assess total catch and effort trends. Figures generally include combined data, except for angler effort and for the number of captains and their number of trips.

Table 1. Creel survey clusters and stations for the 2023 Lake Superior summer creel survey.

| Shore | Cluster | Station | Description |
|-------|---------------------------|---------|--|
| Lower | 1-Duluth | 1 | Charter Dock |
| | | 2 | Lakehead Boat Basin |
| | | 3 | Rice’s Point Landing |
| Lower | 2-McQuade to Two Harbors | 4 | McQuade Public Access |
| | | 5 | Knife River-Knife River Marina |
| | | 6 | Two Harbors-Agate Bay Access |
| Upper | 3-Twin Points to Tofte | 7 | Twin Points Access |
| | | 8 | Silver Bay Access and Marina |
| | | 9 | Taconite Harbor, Tofte |
| Upper | 4-Grand Marais to Hovland | 10 | Grand Marais Access and Marina |
| | | 11 | Devil Track and Brule Rivers, Hovland Access |

Results and Discussion

Fishing Effort

Private sport fishing effort in the Minnesota waters of Lake Superior anglers was estimated from 570 activity counts for the Lower Shore and 475 for the Upper Shore in 2023 (Table 2). Effort along the North Shore was measured by each clerk on 96 days of the 135-day survey season. Private sport anglers fished for 139,160 hours (Figure 2) during 35,705 trips, which lasted 3.90 hours and contained 2.16 anglers on average. Charter anglers fished for 61,814 hours during 2,357 trips, which lasted 5.02 hours and contained 5.77 anglers on average (Figure 2). Of those trips 96% were on Lake Superior and 4% were on the St. Louis River Estuary.

Overall angler effort increased by 22% from 2022 and was the fifth highest observed since 1993 (Figure 2). Survey design changes in 1994 eliminated sampling locations where anglers caught few salmonines. Since 1993, effort from Minnesota-based anglers has varied from 138,522 to 216,488 hours (Figure 2). Effort in the Lower Shore area accounted for 64% of the private sport angling effort from boats, 51% of the fishing effort from shore (Table 3), and 89% of the effort from charters in 2023 (Table 4). Overall, 71% of fishing effort came from the Lower Shore.

Shore angling continues to comprise a small fraction of summer angling effort on Lake Superior. Shoreline anglers fished for just 2,218 hours, accounting for 1% of the total fishing effort in 2023.

Individual charter captains ran anywhere from 0 to 139 trips in 2023 (Figure 3). Four captains reported no trips, and 2 others only ran trips in the St. Louis River Estuary. Eight captains made more than 100 trips in 2023.

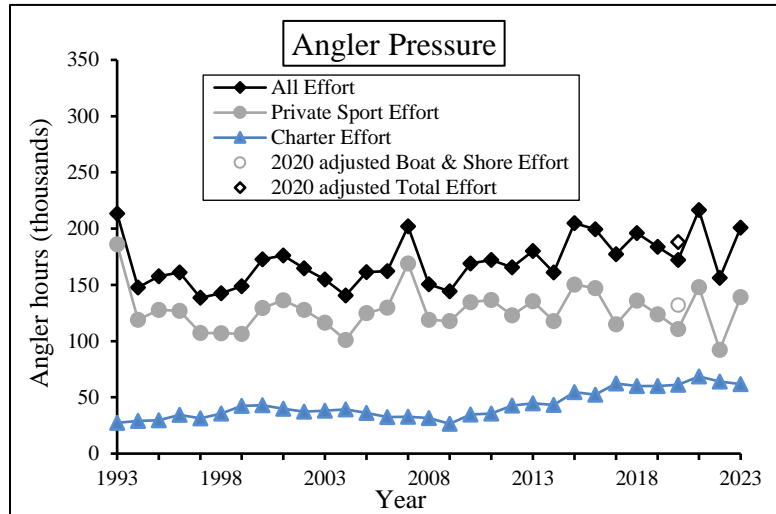


Figure 2. Angling effort in the Lake Superior summer creel survey, 1993-2023. The design of the summer Lake Superior creel survey was changed in 1994 (Halpern 1995a, b).

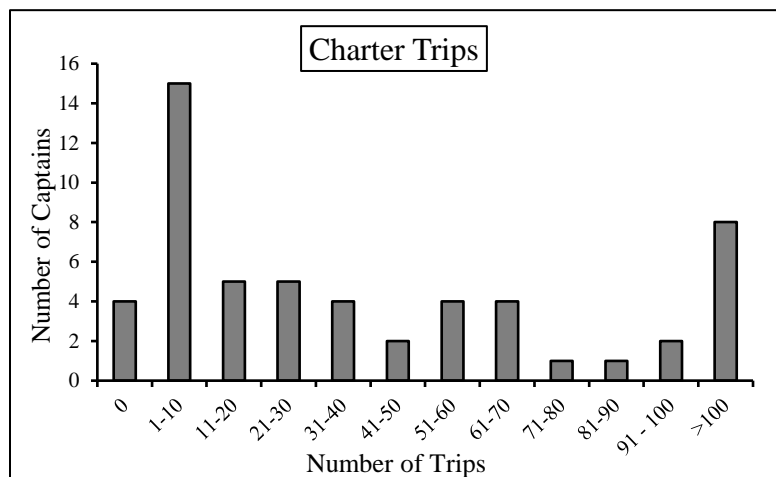


Figure 3. Number of trips by individual charter captains for the 2023 summer season.

Catch and Catch Rates

Salmonines

Salmonines include trout and salmon species. Private sport anglers caught 34,641 salmonines (Table 5) and charter anglers caught 17,622 salmonines (Table 6), for a total catch of 52,263 salmonines in 2023 (Table 7). The total salmonine catch was 46% higher than the catch of 28,441 salmonines in 2022 and the second highest observed in the last 30 years (Figure 4). Anglers released 19% of the total salmonine catch in 2023.

Angler catch and harvest rates were calculated in fish per hour (f/hr). Private sport anglers caught 0.2489 and harvested 0.1906 f/hr (Table 8). Charter anglers caught 0.2851 and harvested 0.2585 f/hr (Table 9). Combined, anglers caught 0.2600 and harvested 0.2115 f/hr in 2023 (Table 10). These rates were 30% and 25% higher than 2022, respectively. The combined salmonine catch rate was the highest recorded in the last 30 years (Figure 3). Charter anglers continue to catch salmonines at a higher rate than private sport anglers.

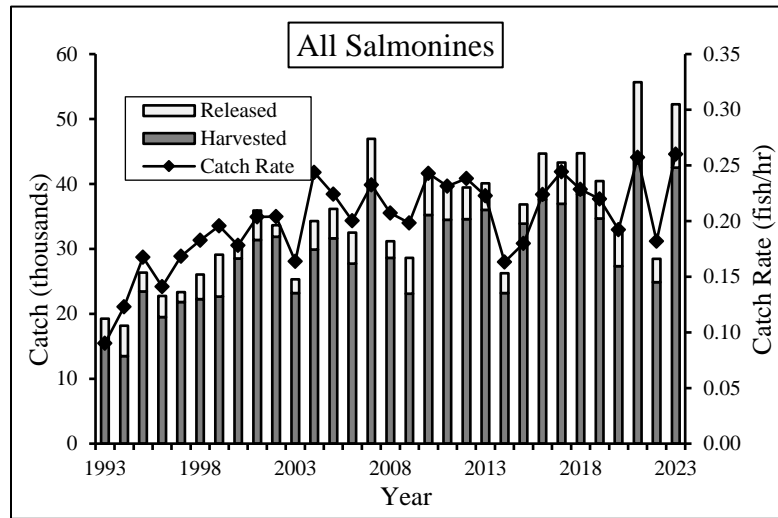


Figure 4. All Salmonines combined catch and catch rate in the Minnesota waters of Lake Superior during summer creel surveys from 1993-2023.

Lean Lake Trout

Private sport anglers caught 23,713 and kept 18,667 lean Lake Trout (Table 5), whereas charter anglers caught 13,528 and kept 12,084 in 2023 (Table 6). Combined, anglers caught 37,241, the second highest catch in the last 30 years (Figure 5). Anglers released 17% of the leans they caught, 6,490 fish, and harvested 30,751 fish, which was 34% higher than in 2022. Lean Lake Trout accounted for 71% of all salmonines caught and 72% of all salmonines harvested. Sixty percent of all harvested lean Lake Trout were from the Lower Shore area (Table 7). Overall, anglers caught 0.1853 and kept 0.1530 f/hr (Table 10). Among private sport parties fishing from a boat, 52% caught one or more, 32% caught two or more, and 21% caught at least three lean Lake Trout per trip (Table 11). Success rates were much higher for charter angling parties, 97% of parties caught at least one fish, 91% caught at least two fish, and 85% caught at least three lean Lake Trout (Table 12).

Lean Lake Trout lengths were similar between private sport anglers and charter anglers in 2023. The average harvested fish lengths were 21.4 and 22.1 inches respectively (Table 13 and 14). Over 90% of the fish were 16.5-27.4 inches long. Overall, mean length and length distributions were similar to harvested fish in 2022. Private sport anglers released 18% of fish that were ≥ 24 inches long (Table 15) and charter anglers released 33% of fish that were ≥ 24 inches long (Table 16). Private sport anglers kept fish that were 2.86 pounds on average (Table 17) and charter anglers kept fish that were 2.69 pounds on average (Table 18). Yield for lean Lake Trout was 60,418 pounds by private sport anglers (Table 19) and 38,981 pounds by charter anglers (Table 20). The yield for private sport anglers in 2023 was 54% higher than 2022 and the combined yield of 99,399 pounds was 44% more than in 2022 (Table 21). The yield for charter anglers was 29% higher than 2022.

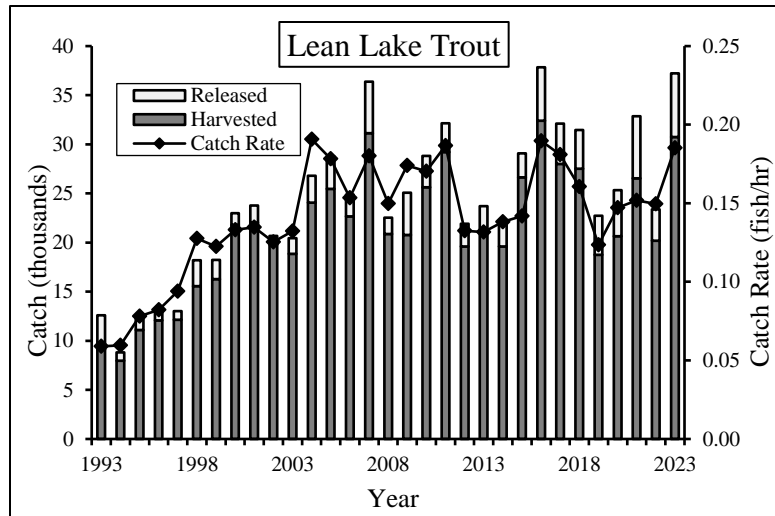


Figure 5. Lean Lake Trout catch and catch rate in the Minnesota waters of Lake Superior during summer creel surveys from 1993-2023.

In 2023, creel clerks checked 1,211 Lake Trout and observed no fin clips on 94% of harvested fish, which indicates that the fish were wild and not stocked. Including fish measured by anglers, wild fish comprised 87% of the fish caught from Duluth to Two Harbors, and 98% from the Twin Points to Taconite Harbor, and 100% from the Grand Marais area (Figure 6). Minnesota stocked Lake Trout through 2015 in the Lower Shore area and through 2003 in the Upper Shore area. Wisconsin has stocked Lake Trout through 2023. Stocked fish from the 2009-2014 year classes were poorly represented in the recreational fishery in 2023, indicating that Minnesota stocking produced few of the fish that anglers harvested.

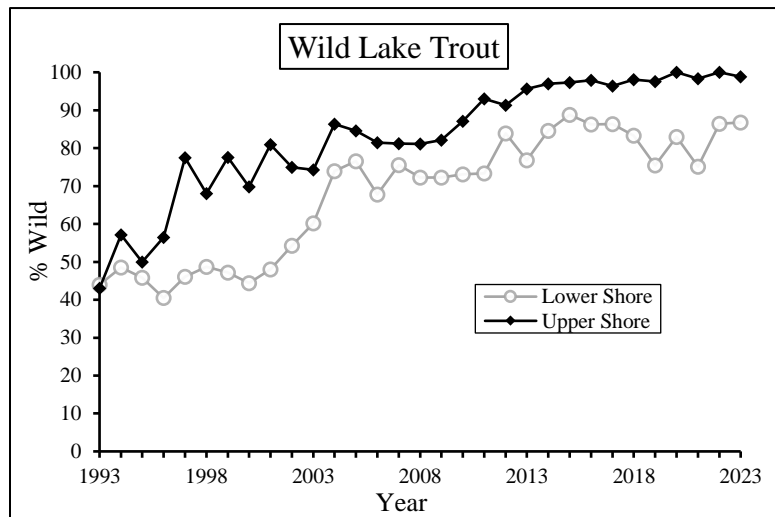


Figure 6. Percent wild Lake Trout observed by creel clerks during the Lake Superior summer creel surveys from 1993-2023.

Siscowet

Siscowet, a deep-water form of Lake Trout, have generally contributed little to the sport fishery, but catch has remained above 1,000 since 2015 which had been observed only twice in the past (Figure 7). Anglers caught a total of 1,264 siscowet in 2023 which is very similar to 2022. However, the catch in 2023 was below the previous 10-year average catch of 1,343 fish.

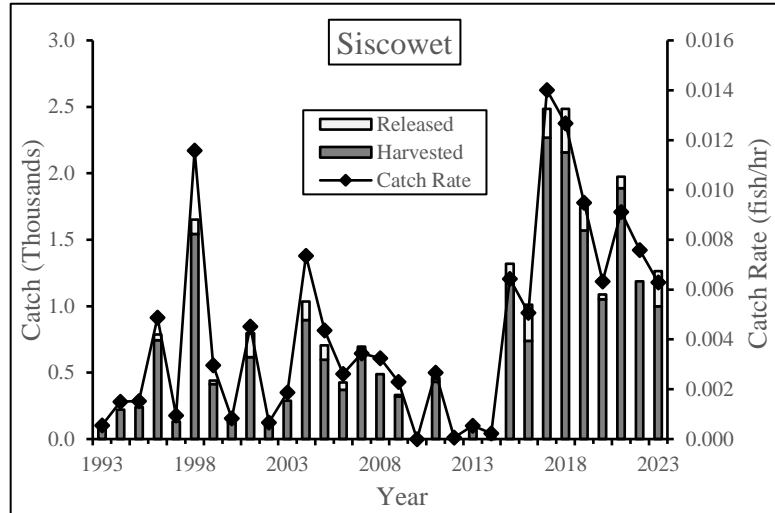


Figure 7. Siscowet Lake Trout catch and catch rate in the Minnesota waters of Lake Superior during summer creel surveys from 1993-2023.

Coho Salmon

Private sport anglers caught 2,507 and kept 2,460 Coho Salmon (Table 5), whereas charter anglers caught 2,370 and kept 2,361 fish in 2023 (Table 6). Overall, anglers caught 4,877 Coho Salmon including the new state record that was 10 pounds and 14 ounces (Figure 8). Anglers only released 56 fish which was 1% of their total catch. Coho Salmon accounted for 9% of all salmonines caught and 11% of all salmonines harvested. Ninety-four percent of the fish were caught in the Lower Shore area which is similar to 2022 (Table 7). The catch rate of private sport anglers was 0.0180 f/h (Table 8) and charter anglers caught 0.0383 f/h (Table 9). Among private sport parties, 4.8% caught one or more, 1.2% caught two or more, and 0.8% caught at least three fish per trip (Table 11). Success rates were better for charter angling parties; 32% of parties caught one or more, 11% caught two or more fish, and 3.6% caught at least three fish (Table 12). Typically, Coho Salmon are first caught in the Lower Shore area and then later in the Upper Shore area, but this did not occur in 2023. Anglers kept Coho Salmon that were 20.5 inches long on average (Tables 13 and 14), which is slightly larger than the average length of 17.9 inches in 2022. The average weight of fish harvested was 2.49 pounds substantially higher than the 2022 average of 1.49 (Tables 20 and 21).

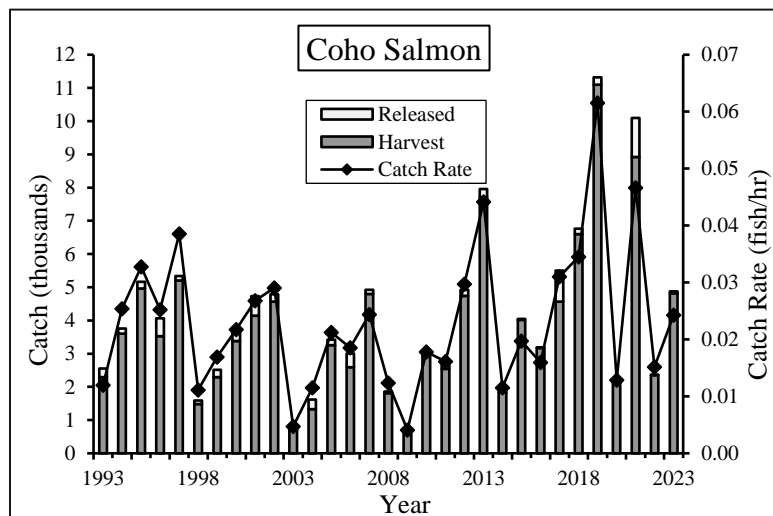


Figure 8. Coho Salmon catch and catch rate in the Minnesota waters of Lake Superior during summer creel surveys from 1993-2023.

Combined, anglers harvested 11,996 pounds of Coho Salmon in 2023 (Table 21). The harvest of Coho Salmon has varied considerably among years (Figure 8), which reflects the naturally fluctuating year-class strength for Coho Salmon in Lake Superior. Coho Salmon were

last stocked in 2006 by the Michigan DNR and last stocked in Minnesota waters in 1974; thus, all Coho Salmon caught in Lake Superior are naturally reproduced.

Chinook Salmon

Private sport anglers caught 425 and released no Chinook Salmon, whereas charter anglers caught 304 and kept all but 3 fish in 2023. In total, anglers caught 729 fish, which is the third lowest observed in the last 30 years (Figure 9). Chinook Salmon accounted for only 1.4% of all salmonines caught and 1.7% of all salmonines harvested. Most fish, 63%, were caught in Lower Shore water (Table 7). Private sport anglers caught 0.0031 f/hr (Table 8) and charter anglers caught 0.0049 f/hr (Table 9), or 0.0036 f/h overall (Table 10), 47% lower than 2022. Among private sport parties, 3.2% caught one or more and only 0.4% caught two or more (Table 11). Success rates were higher for charter angling parties; 9.8% of parties caught at least one fish and 1.2% caught at least two fish (Table 12). Chartered anglers kept fish that were 25.9 inches long on average (Table 14), which is 2.6 inches than fish caught in 2022. Combined, anglers harvested 4,191 pounds of Chinook Salmon in 2022 (Table 21), which is very similar to 2022 despite anglers catching less fish in 2023. Creel clerks examined 25 fish for stocking clips and observed no clipped fish, which indicates that Chinook Salmon stocking in other jurisdictions does not contribute directly to the fish caught in the Minnesota waters of Lake Superior.

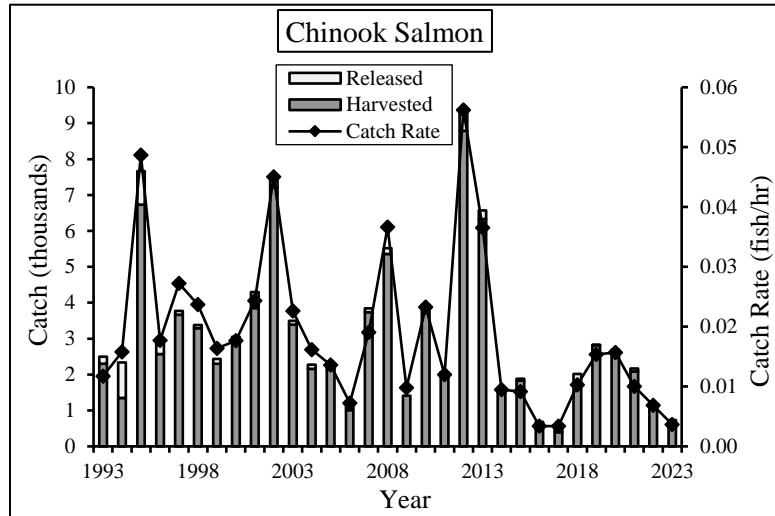


Figure 9. Chinook Salmon catch and catch rate in the Minnesota waters of Lake Superior during summer creel surveys from 1993-2023.

Steelhead Rainbow Trout

Minnesota-based anglers caught 140 steelhead Rainbow Trout in 2023, the lowest catch observed in the last 30 years (Figure 10). Half were caught in the Upper Shore and half from the Lower Shore (Table 7). The location of highest catches changes annually, indicating that steelhead movement patterns vary from year to year. Anglers kept no steelhead in the summer of 2023. Despite the ban on harvest of unclipped steelhead in the Minnesota waters of Lake Superior, there is likely some incidental take that goes undetected as anglers sometimes misidentify smaller steelhead as salmon.

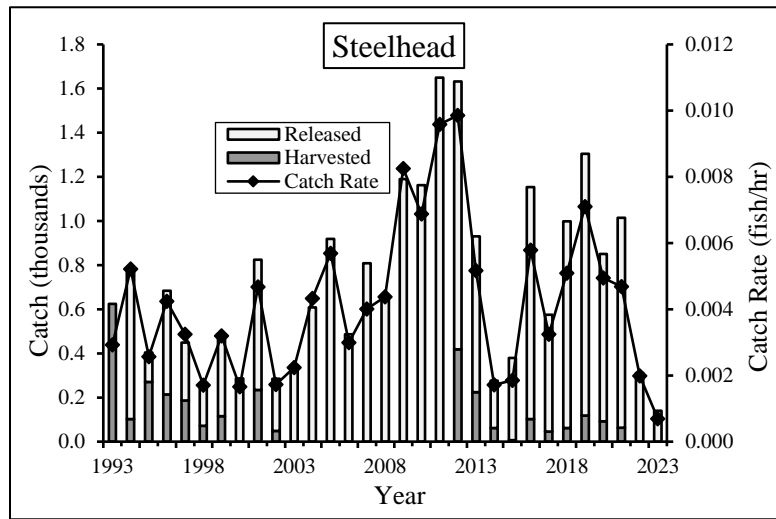


Figure 10. Steelhead Rainbow Trout catch and catch rate in the Minnesota waters of Lake Superior during summer creel surveys from 1993-2023.

Pink Salmon

Minnesota-based anglers caught 7,939 Pink Salmon in 2023, the most ever recorded and a dramatic shift from last year's catch of 7 fish (Table 7). Pink Salmon catches fluctuate drastically from year to year but seem to be trending towards larger booms in recent years. Pink Salmon reproduce naturally in Lake Superior and the fluctuation in catch likely reflects the variability in reproductive success of Pink Salmon along the North Shore (Schreiner et al. 2006).

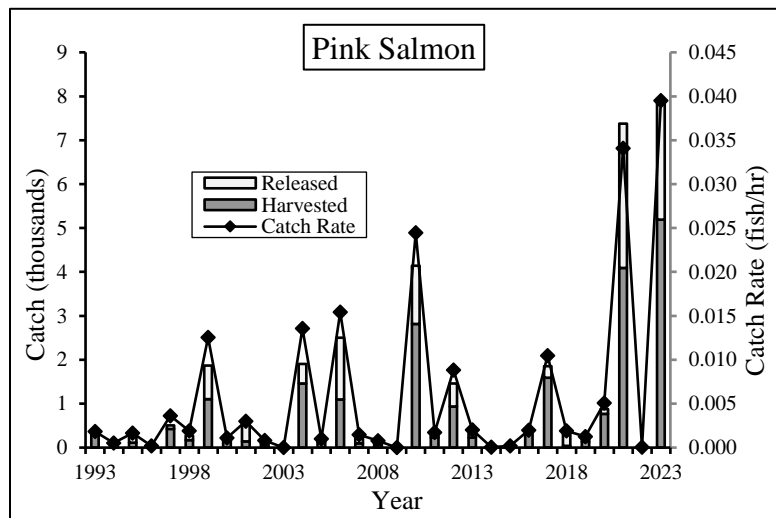


Figure 11. Pink Salmon catch and catch rate in the Minnesota waters of Lake Superior during summer creel surveys from 1993-2023.

Other Species

Anglers catch low numbers of several other fish species during the summer. Catch data for the infrequently caught salmonines were combined and reported as 73 “other salmonines” (Table 7). The combined species included 13 harvested Brown Trout and 60 released Brook Trout. Anglers caught these other salmonines at a rate of 0.0004 f/h (Table 10). Walleye were the most often caught non-salmonine and of the 568 that were caught, 323 were harvested (Table 7). The total Walleye yield was 798 pounds (Table 21). Anglers also caught 76 Cisco, 40 Lake Whitefish, and 25 Northern Pike in Lake Superior.

Angler Demographics

Residence

Creel clerks ask anglers for the zip code of their primary residence, age range, and gender during each interview conducted to assess the demographics of North Shore summer anglers. Zip code data has been collected every year since 2012. Minnesota and Wisconsin accounted for 93.3% of all interviewed anglers in 2023 which is very similar to previous years (Figure 12). The anglers interviewed during the summer creel surveys have primarily resided in the zip code districts near Lake Superior and the Twin Cities. However, anglers from all around Minnesota, Wisconsin, and the country continue to fish the Minnesota waters of Lake Superior each year. This illustrates the recreational and economic value of this fishery.

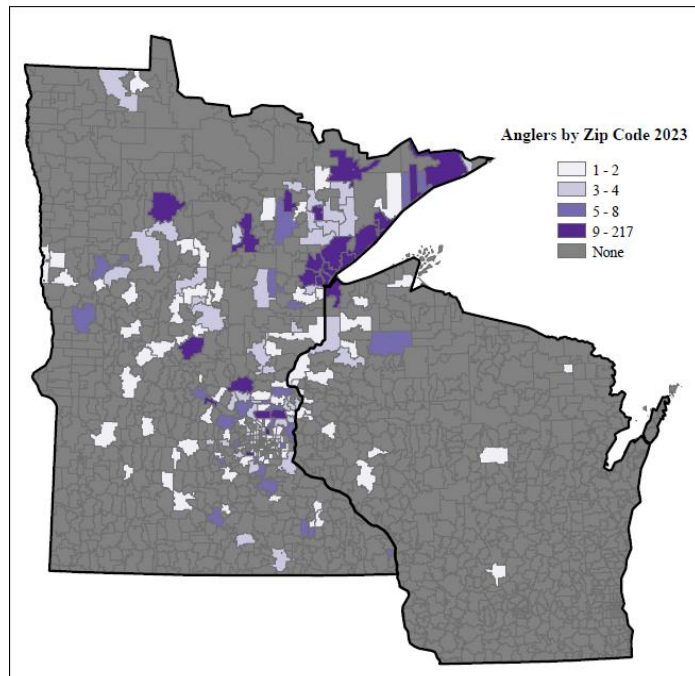


Figure 12. Zip codes of interviewed anglers from Minnesota and Wisconsin in 2023. N=1,730.

Age and Gender

Since 2012, anglers were asked to provide their age and preferred gender. The distribution of ages in 2023 was very similar to the overall trend seen through the years (Figure 13). Individuals identifying as male continue to make up the majority of anglers interviewed. Of the 1,873 anglers that answered in 2023, 83% of them identified as male and 17% as female (Figure 14). The percentage of male and female anglers has been very similar since 2012.

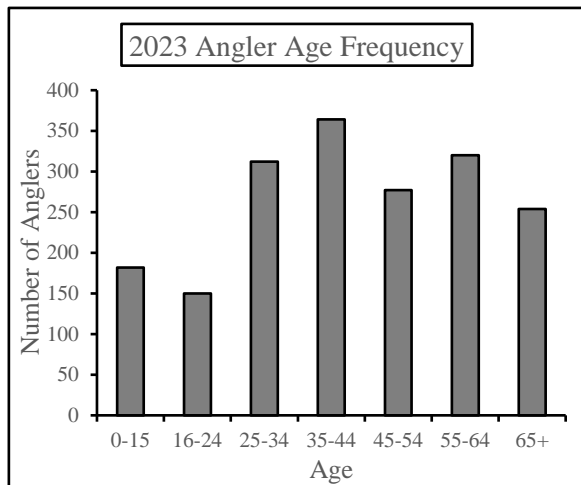


Figure 14. Age of anglers interviewed during the 2023 Lake Superior creel survey. N=1,859.

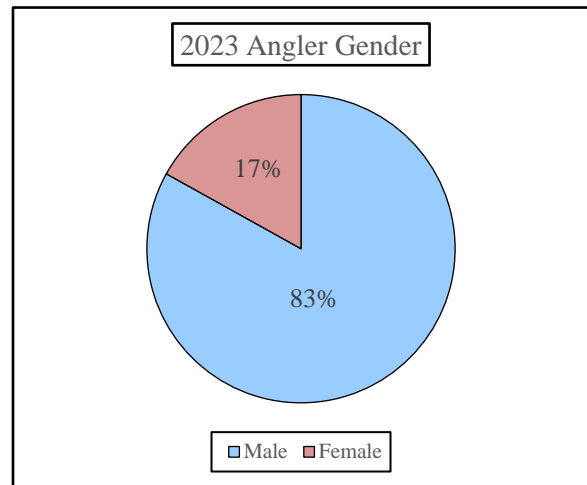


Figure 13. Gender of anglers interviewed during the 2023 Lake Superior summer creel survey. N=1,873.

Summary

The Lake Superior creel survey continues to provide essential information on the fishery in the Minnesota waters of Lake Superior. This is vital to the future management of Lake Superior fish stocks and for coordinated management among Lake Superior fisheries management agencies. The summer of 2023 was a good year for angling on Lake Superior, particularly for Pink Salmon and lean Lake Trout which were record and near record catches, respectively. The Lake Trout being caught in the Minnesota waters of Lake Superior are primarily wild fish, a testament to the success of recovery efforts. This is especially true in the Upper Shore where 98.8% of the harvested fish were wild in 2023. The percentage of stocked Lake Trout near Duluth continues to trend downward despite continued stocking by the Wisconsin DNR.

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MINNESOTA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF FISH AND WILDLIFE
SECTION OF FISHERIES

COMPLETION REPORT
LAKE SUPERIOR SUMMER CREEL SURVEY
2023

by
Nathan T. Beckman
Lake Superior Fisheries Office

Approved: 0/00/2024
Area Supervisor Date

Approved: 0/00/2024
Regional Fisheries Approval Date

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Table 2. Frequency of clerk visits, number of activity counts, and interviews by cluster, day type, and angler type during the 2023 Lake Superior summer creel survey.

| District ¹ | Cluster ² | Day Type | Days Visited | Activity Counts | Days | | | Interviews | | |
|-----------------------|----------------------|----------|--------------|-----------------|------|-------|---------|------------|-------|---------|
| | | | | | Boat | Shore | Charter | Boat | Shore | Charter |
| MN-1 | 1 | Weekday | 30 | 144 | 13 | 4 | 16 | 6 | 0 | 31 |
| | | Weekend | 21 | 96 | 11 | 6 | 7 | 5 | 0 | 13 |
| | | Total | 51 | 240 | 24 | 10 | 23 | 11 | 0 | 44 |
| MN-1 | 2 | Weekday | 40 | 192 | 26 | 9 | 0 | 118 | 19 | 0 |
| | | Weekend | 32 | 138 | 21 | 10 | 1 | 117 | 21 | 1 |
| | | Total | 72 | 330 | 47 | 19 | 1 | 235 | 40 | 1 |
| MN-2 | 3 | Weekday | 30 | 135 | 21 | 3 | 9 | 48 | 3 | 11 |
| | | Weekend | 22 | 100 | 18 | 7 | 4 | 65 | 7 | 4 |
| | | Total | 52 | 235 | 39 | 10 | 13 | 113 | 10 | 15 |
| MN-3 | 4 | Weekday | 37 | 140 | 21 | 14 | 10 | 82 | 24 | 11 |
| | | Weekend | 23 | 100 | 18 | 15 | 8 | 102 | 30 | 10 |
| | | Total | 60 | 240 | 39 | 29 | 18 | 184 | 54 | 21 |
| Lower | 1 & 2 | Weekday | 70 | 336 | 39 | 13 | 16 | 124 | 19 | 31 |
| | | Weekend | 53 | 234 | 32 | 16 | 8 | 122 | 21 | 14 |
| | | Total | 123 | 570 | 71 | 29 | 24 | 246 | 40 | 45 |
| Upper | 3 & 4 | Weekday | 67 | 275 | 42 | 17 | 19 | 130 | 27 | 22 |
| | | Weekend | 45 | 200 | 36 | 22 | 12 | 167 | 37 | 14 |
| | | Total | 112 | 475 | 78 | 39 | 31 | 297 | 64 | 36 |
| Total | All | Weekday | 235 | 1045 | 149 | 68 | 55 | 543 | 104 | 81 |
| | | Weekend | 98 | 434 | 68 | 38 | 20 | 289 | 58 | 28 |
| | | Total | 333 | 1479 | 217 | 106 | 75 | 832 | 162 | 109 |

¹ Great Lakes Fishery Commission Statistical Districts.

² Cluster 1=Duluth, Cluster 2=McQuade-Two Harbors, Cluster 3=Twin Points-Taconite Harbor, Cluster 4=Grand Marais-Hovland.

Table 3. Monthly distribution of fishing effort for private sport boat and shore anglers by cluster, station, and month as a percentage of the angler hours during the 2023 Lake Superior summer creel survey.

| District ¹ | Cluster ² | Station | Boat ³ | | | | | Shore ⁴ | | | | |
|-----------------------|----------------------|---------|-------------------|------|------|------|--------|--------------------|------|------|------|--------|
| | | | June | July | Aug | Sept | Summer | June | July | Aug | Sept | Summer |
| MN-1 | 1 | 1, 2, 3 | 35.8 | 11.6 | 11.9 | 10.9 | 16.8 | 0 | 0 | 0 | 0 | 0 |
| | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 2 | 17.9 | 9.1 | 8.3 | 8.8 | 10.8 | 0 | 0 | 0 | 0 | 0 |
| | | 3 | 17.9 | 2.5 | 3.5 | 2.1 | 6.0 | 0 | 0 | 0 | 0 | 0 |
| MN-1 | 2 | 4,5,6 | 45.3 | 54.0 | 30.3 | 53.4 | 46.9 | 44.7 | 21.5 | 61.6 | 55.7 | 50.7 |
| | | 4 | 26.0 | 25.6 | 12.2 | 18.4 | 21.0 | 12.4 | 0 | 0 | 6.9 | 5.4 |
| | | 5 | 12.8 | 15.8 | 7.4 | 18.3 | 14.0 | 0 | 0 | 0 | 0 | 0 |
| | | 6 | 6.5 | 12.6 | 10.7 | 16.7 | 11.9 | 32.4 | 21.5 | 61.6 | 48.8 | 45.3 |
| MN-2 | 3 | 7,8,9 | 10.8 | 23.4 | 31.6 | 26.4 | 23.2 | 23.9 | 3.8 | 15.9 | 0 | 9.6 |
| | | 7 | 2.2 | 2.3 | 2.8 | 4.1 | 2.8 | 0 | 0 | 10.5 | 0 | 2.7 |
| | | 8 | 7.1 | 18.5 | 20.1 | 17.7 | 16.1 | 0 | 0 | 0 | 0 | 0 |
| | | 9 | 1.6 | 2.7 | 8.7 | 4.7 | 4.2 | 23.9 | 3.8 | 5.5 | 0 | 6.9 |
| MN-3 | 4 | 10,11 | 8.0 | 11.0 | 26.2 | 9.2 | 13.2 | 31.4 | 74.7 | 22.4 | 44.3 | 39.7 |
| | | 10 | 5.0 | 8.6 | 20.5 | 8.8 | 10.4 | 31.4 | 59.5 | 22.4 | 14.9 | 25.8 |
| | | 11 | 3.0 | 2.4 | 5.8 | 0.4 | 2.7 | 0 | 15.2 | 0 | 29.4 | 13.9 |
| | | Lower | 1 & 2 | 1-6 | 81.1 | 65.6 | 42.2 | 64.3 | 63.6 | 44.7 | 21.5 | 61.6 |
| Upper | 3 & 4 | 7-11 | 18.8 | 34.4 | 57.8 | 35.6 | 36.4 | 55.3 | 78.5 | 38.3 | 44.3 | 49.3 |

¹ Great Lakes Fishery Commission Statistical Districts.

² Cluster 1=Duluth, Cluster 2=McQuade-Two Harbors, Cluster 3=Twin Points-Taconite Harbor, Cluster 4=Grand Marais-Hovland.

³ Excludes charter fishing effort and includes personal charter captain's trips.

⁴ All shore fishing in Cluster 1 occurs in the St. Louis Estuary, not in Lake Superior, and is not included.

Table 4. Monthly distribution of fishing effort for charter anglers and for all anglers by cluster, station and month as a percentage of angler hours during the 2023 Lake Superior summer creel survey.

| District ¹ | Cluster ² | Station | Charter ³ | | | | | All | | | | |
|-----------------------|----------------------|---------|----------------------|------|------|------|--------|------|------|------|------|--------|
| | | | June | July | Aug | Sept | Summer | June | July | Aug | Sept | Summer |
| MN-1 | 1 | 1,2,3 | 91.9 | 81.3 | 84.7 | 82.1 | 85.9 | 58.8 | 30.3 | 35.2 | 26.4 | 37.8 |
| | | 1 | 57.7 | 47.3 | 52.8 | 53.5 | 53.2 | 23.9 | 12.8 | 17.1 | 11.8 | 16.4 |
| | | 2 | 34.0 | 33.9 | 31.9 | 28.6 | 32.6 | 24.4 | 15.8 | 15.8 | 13.0 | 17.4 |
| | | 3 | 0.2 | 0.2 | 0 | 0 | 0.1 | 10.4 | 1.8 | 2.4 | 1.6 | 4.1 |
| MN-1 | 2 | 4,5,6 | 1.3 | 3.7 | 3.0 | 3.9 | 2.8 | 27.1 | 40.3 | 21.9 | 42.6 | 33.3 |
| | | 4 | 0.1 | 0.2 | 0 | 0.3 | 0.1 | 15.1 | 18.6 | 8.1 | 14.2 | 14.4 |
| | | 5 | 1.2 | 2.9 | 2.3 | 3.4 | 2.2 | 7.9 | 12.3 | 5.7 | 14.7 | 10.2 |
| | | 6 | 0.1 | 0.7 | 0.7 | 0.3 | 0.4 | 4.1 | 9.4 | 8.1 | 13.7 | 8.7 |
| MN-2 | 3 | 7,8,9 | 4.5 | 11.6 | 7.6 | 8.8 | 7.7 | 8.3 | 20.1 | 23.6 | 22.0 | 18.3 |
| | | 7 | 0.7 | 0 | 0 | 1.5 | 0.5 | 1.5 | 1.7 | 2.0 | 3.4 | 2.1 |
| | | 8 | 1.4 | 5.9 | 2.6 | 3.2 | 3.1 | 4.7 | 15.0 | 14.2 | 14.2 | 12.0 |
| | | 9 | 2.4 | 5.6 | 5.0 | 4.1 | 4.1 | 2.1 | 3.5 | 7.4 | 4.4 | 4.2 |
| MN-3 | 4 | 10,11 | 2.3 | 3.4 | 4.7 | 5.2 | 3.6 | 5.9 | 9.2 | 19.2 | 9.0 | 10.5 |
| | | 10 | 2.3 | 3.4 | 4.7 | 5.1 | 3.6 | 4.1 | 7.4 | 15.4 | 8.1 | 8.5 |
| | | 11 | 0 | 0 | 0 | 0.1 | 0 | 1.7 | 1.8 | 3.8 | 0.9 | 2.0 |
| | | Lower | 1 & 2 | 1-6 | 93.2 | 85.0 | 87.7 | 86.0 | 88.7 | 85.9 | 70.6 | 57.1 |
| Upper | 3 & 4 | 7-11 | 6.8 | 15.0 | 12.3 | 14.0 | 11.3 | 14.2 | 29.3 | 42.8 | 31.0 | 28.8 |

¹ Great Lakes Fishery Commission Statistical Districts.

² Cluster 1=Duluth, Cluster 2=McQuade-Two Harbors, Cluster 3=Twin Points-Taconite Harbor, Cluster 4=Grand Marais-Hovland.

³ Does not include charter fishing effort that was based in Wisconsin.

Table 5. Catch by species, cluster, and shore area for all private sport anglers during the 2023 Lake Superior summer creel survey. Standard error is in parenthesis.

| District ¹ | Cluster ² | Fate | Lake Trout | Coho Salmon | Chinook Salmon | Steelhead | Siscowet | Pink Salmon | Other ³ Salmonines | Total Salmonines | Walleye |
|-----------------------|----------------------|----------|-------------------|------------------|----------------|------------|--------------|------------------|-------------------------------|-------------------|-------------------|
| MN-1 | 1 | Kept | 1,421 (672) | 1,530 (1,290) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 2,951 (1,455) | 0 (0) |
| | | Released | 732 (881) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 732 (881) | 0 (0) |
| | | Total | 2,153 (1,108) | 1,530 (1,290) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 3,683 (1,701) |
| MN-1 | 2 | Kept | 7,174 (3,337) | 694 (503) | 178 (126) | 0 (0) | 409 (251) | 1,025 (519) | 0 (0) | 9,480 (3,426) | 32 (40) |
| | | Released | 2,761 (1,626) | 0 (0) | 0 (0) | 32 (38) | 265 (266) | 479 (389) | 0 (0) | 3,537 (1,693) | 0 (0) |
| | | Total | 9,935 (3,712) | 694 (503) | 178 (126) | 32 (38) | 674 (366) | 1,504 (649) | 0 (0) | 0 (0) | 13,017 (3,821) |
| MN-2 | 3 | Kept | 6,799 (2,889) | 217 (168) | 126 (118) | 0 (0) | 0 (0) | 1,958 (1,100) | 0 (0) | 9,100 (3,098) | 0 (0) |
| | | Released | 834 (478) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 709 (609) | 0 (0) | 1,543 (774) | 0 (0) |
| | | Total | 7,633 (2,928) | 217 (168) | 126 (118) | 0 (0) | 0 (0) | 2,667 (1,257) | 0 (0) | 0 (0) | 10,643 (3,193) |
| MN-3 | 4 | Kept | 3,273 (1,421) | 19 (33) | 121 (122) | 0 (0) | 16 (23) | 1,567 (960) | 0 (0) | 4,996 (1,720) | 0 (0) |
| | | Released | 719 (1,421) | 47 (40) | 0 (0) | 63 (48) | 0 (0) | 1,413 (805) | 60 (79) | 2,302 (1,636) | 0 (0) |
| | | Total | 3,992 (2,010) | 66 (52) | 121 (122) | 63 (48) | 16 (23) | 2,980 (1,253) | 60 (79) | 7,298 (2,374) | 0 (0) |
| Lower | 1 & 2 | Kept | 8,595 (3,404) | 2,224 (1,385) | 178 (126) | 0 (0) | 409 (251) | 1,025 (519) | 0 (0) | 12,431 (3,722) | 32 (40) |
| | | Released | 3,493 (1,849) | 0 (0) | 0 (0) | 32 (38) | 265 (266) | 479 (389) | 0 (0) | 4,269 (1,909) | 0 (0) |
| | | Total | 12,088 (3,874) | 2,224 (1,385) | 178 (126) | 32 (38) | 674 (366) | 1,504 (649) | 0 (0) | 0 (0) | 16,700 (4,183) |
| Upper | 3 & 4 | Kept | 10,072 (3,220) | 236 (171) | 247 (170) | 0 (0) | 16 (23) | 3,525 (1,460) | 0 (0) | 14,096 (3,543) | 0 (0) |
| | | Released | 1,553 (1,499) | 47 (40) | 0 (0) | 63 (48) | 0 (0) | 2,122 (1,009) | 60 (79) | 3,845 (1,810) | 0 (0) |
| | | Total | 11,625 (3,552) | 283 (176) | 247 (170) | 63 (48) | 16 (23) | 5,647 (1,775) | 60 (79) | 17,941 (3,979) | 0 (0) |
| Total | All | Kept | 18,667 (4,685) | 2,460 (1,395) | 425 (211) | 0 (0) | 425 (252) | 4,550 (1,550) | 0 (0) | 26,527 (5,139) | 32 (40) |
| | | Released | 5,046 (2,381) | 47 (40) | 0 (0) | 95 (61) | 265 (266) | 2,601 (1,082) | 60 (79) | 8,114 (2,630) | 0 (0) |
| | | Total | 23,713 (5,060) | 2,507 (1,395) | 425 (211) | 95 (39) | 690 (366) | 7,151 (1,710) | 60 (9) | 34,641 (5,537) | 32 (40) |

¹ Great Lakes Fishery Commission Statistical Districts.

² Cluster 1=Duluth, Cluster 2=McQuade-Two Harbors, Cluster 3=Twin Points-Taconite Harbor, Cluster 4=Grand Marais-Hovland.

³ 60 released Brook Trout.

Table 6. Catch¹ by species, cluster, and shore area for chartered anglers¹ during the 2023 Lake Superior summer creel survey. Standard error is 0 for all values.

| District ² | Cluster ³ | Fate | Lake Trout | Coho Salmon | Chinook Salmon | Steelhead | Siscowet | Pink Salmon | Other ⁴ Salmonines | Total Salmonines | Walleye |
|-----------------------|----------------------|----------|------------|-------------|----------------|-----------|----------|-------------|-------------------------------|------------------|---------|
| MN-1 | 1 | Kept | 9,466 | 2,309 | 264 | 0 | 549 | 39 | 12 | 12,639 | 291 |
| | | Released | 246 | 7 | 3 | 38 | 0 | 6 | 0 | 300 | 245 |
| | | Total | 9,712 | 2,316 | 267 | 38 | 549 | 45 | 12 | 12,939 | 536 |
| MN-1 | 2 | Kept | 341 | 42 | 14 | 0 | 21 | 37 | 1 | 456 | 0 |
| | | Released | 134 | 1 | 0 | 0 | 0 | 31 | 0 | 166 | 0 |
| | | Total | 475 | 43 | 14 | 0 | 21 | 68 | 1 | 622 | 0 |
| MN-2 | 3 | Kept | 1,651 | 5 | 13 | 0 | 0 | 362 | 0 | 2,031 | 0 |
| | | Released | 798 | 1 | 0 | 5 | 0 | 2 | 0 | 806 | 0 |
| | | Total | 2,449 | 6 | 13 | 5 | 0 | 364 | 0 | 2,837 | 0 |
| MN-3 | 4 | Kept | 626 | 5 | 10 | 0 | 4 | 205 | 0 | 850 | 0 |
| | | Released | 266 | 0 | 0 | 2 | 0 | 106 | 0 | 374 | 0 |
| | | Total | 892 | 5 | 10 | 2 | 4 | 311 | 0 | 1,224 | 0 |
| Lower | 1 & 2 | Kept | 9,807 | 2,351 | 278 | 0 | 570 | 76 | 13 | 13,095 | 291 |
| | | Released | 380 | 8 | 3 | 38 | 0 | 37 | 0 | 466 | 245 |
| | | Total | 10,187 | 2,359 | 281 | 38 | 570 | 113 | 13 | 13,561 | 536 |
| Upper | 3 & 4 | Kept | 2,277 | 10 | 23 | 0 | 4 | 567 | 0 | 2,881 | 0 |
| | | Released | 1,064 | 1 | 0 | 7 | 0 | 108 | 0 | 1,180 | 0 |
| | | Total | 3,341 | 11 | 23 | 7 | 4 | 675 | 0 | 4,061 | 0 |
| Total | All | Kept | 12,084 | 2,361 | 301 | 0 | 574 | 643 | 13 | 15,976 | 291 |
| | | Released | 1,444 | 9 | 3 | 45 | 0 | 145 | 0 | 1,646 | 245 |
| | | Total | 13,528 | 2,370 | 304 | 45 | 574 | 788 | 13 | 17,622 | 536 |

¹The Minnesota results include all charter fishing in the Minnesota waters of Lake Superior, including trips that originated from Wisconsin.

²Great Lakes Fishery Commission Statistical Districts.

³Cluster 1=Duluth, Cluster 2=McQuade-Two Harbors, Cluster 3=Twin Points-Taconite Harbor, Cluster 4=Grand Marais-Hovland.

⁴13 kept Brown Trout.

Table 7. Catch¹ by species, cluster, and shore area for all anglers during the 2023 Lake Superior summer creel survey. Standard error is in parenthesis.

| District ² | Cluster ³ | Fate | Lake Trout | Coho Salmon | Chinook Salmon | Steelhead | Siscowet | Pink | Other ⁴ Salmonines | Total Salmonines | Walleye |
|-----------------------|----------------------|----------|------------|-------------|----------------|-----------|----------|---------|-------------------------------|------------------|---------|
| MN-1 | 1 | Kept | 10,887 | 3,839 | 264 | 0 | 549 | 39 | 12 | 15,590 | 291 |
| | | | (672) | (1,290) | (0) | (0) | (0) | (0) | (0) | (1,455) | (0) |
| | | Released | 978 | 7 | 3 | 38 | 0 | 6 | 0 | 1,032 | 245 |
| (881) | (0) | | (0) | (0) | (0) | (0) | (0) | (881) | (0) | | |
| MN-1 | 2 | Kept | 7,515 | 736 | 192 | 0 | 430 | 1,062 | 1 | 9,936 | 32 |
| | | | (3,337) | (503) | (126) | (0) | (251) | (519) | (0) | (3,426) | (40) |
| | | Released | 2,895 | 1 | 0 | 32 | 265 | 510 | 0 | 3,703 | 0 |
| (1,626) | (0) | | (0) | (38) | (266) | (389) | (0) | (1,693) | (0) | | |
| MN-2 | 3 | Kept | 8,450 | 222 | 139 | 0 | 0 | 2,320 | 0 | 11,131 | 0 |
| | | | (2,889) | (168) | (118) | (0) | (0) | (1,100) | (0) | (3,098) | (0) |
| | | Released | 1,632 | 1 | 0 | 5 | 0 | 711 | 0 | 2,349 | 0 |
| (478) | (0) | | (0) | (0) | (0) | (609) | (0) | (774) | (0) | | |
| MN-3 | 4 | Kept | 3,899 | 24 | 131 | 0 | 20 | 1,772 | 0 | 5,846 | 0 |
| | | | (1,421) | (33) | (122) | (0) | (23) | (960) | (0) | (1,720) | (0) |
| | | Released | 985 | 47 | 0 | 65 | 0 | 1,519 | 60 | 2,676 | 0 |
| (1,421) | (40) | | (0) | (48) | (0) | (805) | (79) | (1,636) | (0) | | |
| Lower | 1 & 2 | Kept | 18,402 | 4,575 | 456 | 0 | 979 | 1,101 | 13 | 25,526 | 323 |
| | | | (3,404) | (1,385) | (126) | (0) | (251) | (519) | (0) | (3,722) | (40) |
| | | Released | 3,873 | 8 | 3 | 70 | 265 | 516 | 0 | 4,735 | 245 |
| (1,849) | (0) | | (0) | (38) | (266) | (389) | (0) | (1,909) | (0) | | |
| Upper | 3 & 4 | Kept | 12,349 | 246 | 270 | 0 | 20 | 4,092 | 0 | 16,977 | 0 |
| | | | (3,220) | (171) | (170) | (0) | (23) | (1,460) | (0) | (3,543) | (0) |
| | | Released | 2,617 | 48 | 0 | 70 | 0 | 2,230 | 60 | 5,025 | 0 |
| (1,499) | (40) | | (0) | (48) | (0) | (1,009) | (79) | (1,810) | (0) | | |
| Total | All | Kept | 30,751 | 4,821 | 726 | 0 | 999 | 5,193 | 13 | 42,503 | 323 |
| | | | (4,685) | (1,395) | (211) | (0) | (252) | (1,550) | (0) | (5,139) | (40) |
| | | Released | 6,490 | 56 | 3 | 140 | 265 | 2,746 | 60 | 9,760 | 245 |
| (2,381) | (40) | | (0) | (61) | (266) | (1,082) | (79) | (2,630) | (0) | | |
| Total | All | Kept | 37,241 | 4,877 | 729 | 140 | 1,264 | 7,939 | 73 | 52,263 | 568 |
| | | | (5,060) | (1,395) | (211) | (39) | (366) | (1,710) | (9) | (5,537) | (40) |

¹ The Minnesota results include all charter fishing and excludes Wisconsin-based private sport anglers.

² Great Lakes Fishery Commission Statistical Districts.

³ Cluster 1=Duluth, Cluster 2=McQuade-Two Harbors, Cluster 3=Twin Points-Taconite Harbor, Cluster 4=Grand Marais-Hovland.

⁴ Includes 60 Brook Trout and 13 Brown Trout.

Table 8. Catch rate (fish/hr) by species, cluster, and shore area for private sport boat and shore anglers during the 2023 Lake Superior summer creel survey. Standard error is in parenthesis.

| District ¹ | Cluster ² | Fate | Lake Trout | Coho Salmon | Chinook Salmon | Steelhead | Siscowet | Pink Salmon | Other ³ Salmonines | Total Salmonines | Walleye | |
|-----------------------|----------------------|----------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------------------|--------------------|--------------------|--------------------|
| MN-1 | 1 | Kept | 0.0619 (0.0009) | 0.0667 (0.0033) | 0.0000 (0.0000) | 0.0000 (0.0000) | 0.0000 (0.0000) | 0.0000 (0.0000) | 0.0000 (0.0000) | 0.1286 (0.0044) | 0.0000 (0.0000) | |
| | | Released | 0.0319 (0.0015) | 0.0000 (0.0000) | 0.0000 (0.0000) | 0.0000 (0.0000) | 0.0000 (0.0000) | 0.0000 (0.0000) | 0.0000 (0.0000) | 0.0000 (0.0000) | 0.0319 (0.0015) | 0.0000 (0.0000) |
| | | Total | 0.0938 (0.0018) | 0.0667 (0.0033) | 0.0000 (0.0000) | 0.0000 (0.0000) | 0.0000 (0.0000) | 0.0000 (0.0000) | 0.0000 (0.0000) | 0.0000 (0.0000) | 0.1605 (0.0046) | 0.0000 (0.0000) |
| MN-1 | 2 | Kept | 0.1099 (0.0028) | 0.0106 (0.0001) | 0.0027 (0.0000) | 0.0000 (0.0000) | 0.0063 (0.0000) | 0.0157 (0.0001) | 0.0000 (0.0000) | 0.1452 (0.0031) | 0.0005 (0.0000) | |
| | | Released | 0.0423 (0.0006) | 0.0000 (0.0000) | 0.0000 (0.0000) | 0.0005 (0.0000) | 0.0041 (0.0000) | 0.0073 (0.0000) | 0.0000 (0.0000) | 0.0542 (0.0007) | 0.0000 (0.0000) | |
| | | Total | 0.1522 (0.0029) | 0.0106 (0.0001) | 0.0027 (0.0000) | 0.0005 (0.0000) | 0.0103 (0.0000) | 0.0230 (0.0001) | 0.0000 (0.0000) | 0.1994 (0.0031) | 0.0005 (0.0000) | |
| MN-2 | 3 | Kept | 0.2125 (0.0087) | 0.0068 (0.0000) | 0.0039 (0.0000) | 0.0000 (0.0000) | 0.0000 (0.0000) | 0.0612 (0.0012) | 0.0000 (0.0000) | 0.2845 (0.0104) | 0.0000 (0.0000) | |
| | | Released | 0.0261 (0.0002) | 0.0000 (0.0000) | 0.0000 (0.0000) | 0.0000 (0.0000) | 0.0000 (0.0000) | 0.0222 (0.0004) | 0.0000 (0.0000) | 0.0482 (0.0006) | 0.0000 (0.0000) | |
| | | Total | 0.2386 (0.0087) | 0.0068 (0.0000) | 0.0039 (0.0000) | 0.0000 (0.0000) | 0.0000 (0.0000) | 0.0834 (0.0013) | 0.0000 (0.0000) | 0.3327 (0.0104) | 0.0000 (0.0000) | |
| MN-3 | 4 | Kept | 0.1729 (0.0061) | 0.0010 (0.0000) | 0.0064 (0.0000) | 0.0000 (0.0000) | 0.0008 (0.0000) | 0.0828 (0.0027) | 0.0000 (0.0000) | 0.2638 (0.0095) | 0.0000 (0.0000) | |
| | | Released | 0.0380 (0.0011) | 0.0025 (0.0000) | 0.0000 (0.0000) | 0.0033 (0.0000) | 0.0000 (0.0000) | 0.0746 (0.0019) | 0.0032 (0.0000) | 0.1216 (0.0032) | 0.0000 (0.0000) | |
| | | Total | 0.2108 (0.0062) | 0.0035 (0.0000) | 0.0064 (0.0000) | 0.0033 (0.0000) | 0.0008 (0.0000) | 0.1574 (0.0033) | 0.0032 (0.0000) | 0.3854 (0.0100) | 0.0000 (0.0000) | |
| Lower | 1 & 2 | Kept | 0.0974 (0.0016) | 0.0252 (0.0003) | 0.0020 (0.0000) | 0.0000 (0.0000) | 0.0046 (0.0000) | 0.0116 (0.0000) | 0.0000 (0.0000) | 0.1409 (0.0020) | 0.0004 (0.0000) | |
| | | Released | 0.0396 (0.0005) | 0.0000 (0.0000) | 0.0000 (0.0000) | 0.0004 (0.0000) | 0.0030 (0.0000) | 0.0054 (0.0000) | 0.0000 (0.0000) | 0.0484 (0.0005) | 0.0000 (0.0000) | |
| | | Total | 0.1370 (0.0016) | 0.0252 (0.0003) | 0.0020 (0.0000) | 0.0004 (0.0000) | 0.0076 (0.0000) | 0.0170 (0.0000) | 0.0000 (0.0000) | 0.1893 (0.0021) | 0.0004 (0.0000) | |
| Upper | 3 & 4 | Kept | 0.1978 (0.0043) | 0.0046 (0.0000) | 0.0049 (0.0000) | 0.0000 (0.0000) | 0.0003 (0.0000) | 0.0692 (0.0009) | 0.0000 (0.0000) | 0.2768 (0.0054) | 0.0000 (0.0000) | |
| | | Released | 0.0305 (0.0002) | 0.0009 (0.0000) | 0.0000 (0.0000) | 0.0012 (0.0000) | 0.0000 (0.0000) | 0.0417 (0.0004) | 0.0012 (0.0000) | 0.0755 (0.0007) | 0.0000 (0.0000) | |
| | | Total | 0.2283 (0.0043) | 0.0056 (0.0000) | 0.0049 (0.0000) | 0.0012 (0.0000) | 0.0003 (0.0000) | 0.1109 (0.0009) | 0.0012 (0.0000) | 0.3523 (0.0054) | 0.0000 (0.0000) | |
| Total | All | Kept | 0.1341 (0.0012) | 0.0177 (0.0001) | 0.0031 (0.0000) | 0.0000 (0.0000) | 0.0031 (0.0000) | 0.0327 (0.0001) | 0.0000 (0.0000) | 0.1906 (0.0015) | 0.0002 (0.0000) | |
| | | Released | 0.0363 (0.0002) | 0.0003 (0.0000) | 0.0000 (0.0000) | 0.0007 (0.0000) | 0.0019 (0.0000) | 0.0187 (0.0001) | 0.0004 (0.0000) | 0.0583 (0.0003) | 0.0000 (0.0000) | |
| | | Total | 0.1704 (0.0012) | 0.0180 (0.0001) | 0.0031 (0.0000) | 0.0007 (0.0000) | 0.0050 (0.0000) | 0.0514 (0.0001) | 0.0004 (0.0000) | 0.2489 (0.0016) | 0.0002 (0.0000) | |

¹ Great Lakes Fishery Commission Statistical Districts.

² Cluster 1=Duluth, Cluster 2=McQuade-Two Harbors, Cluster 3=Twin Points-Taconite Harbor, Cluster 4=Grand Marais-Hovland.

³ 60 released Brown Trout.

Table 9. Catch rate (fish/hr) by species, cluster, and shore area for charter anglers during the 2023 Lake Superior summer creel survey. Standard error is 0 for all values.

| District ¹ | Cluster ² | Fate | Lake Trout | Coho Salmon | Chinook Salmon | Steelhead | Siscowet | Pink Salmon | Other ³ Salmonines | Total Salmonines | Walleye |
|-----------------------|----------------------|----------|------------|-------------|----------------|-----------|----------|-------------|-------------------------------|------------------|---------|
| MN-1 | 1 | Kept | 0.1782 | 0.0435 | 0.0050 | 0.0000 | 0.0103 | 0.0007 | 0.0002 | 0.2380 | 0.0055 |
| | | Released | 0.0046 | 0.0001 | 0.0001 | 0.0007 | 0.0000 | 0.0001 | 0.0000 | 0.0056 | 0.0046 |
| | | Total | 0.1829 | 0.0436 | 0.0050 | 0.0007 | 0.0103 | 0.0008 | 0.0002 | 0.2436 | 0.0101 |
| MN-1 | 2 | Kept | 0.1999 | 0.0246 | 0.0082 | 0.0000 | 0.0123 | 0.0217 | 0.0006 | 0.2673 | 0.0000 |
| | | Released | 0.0785 | 0.0006 | 0.0000 | 0.0000 | 0.0000 | 0.0182 | 0.0000 | 0.0973 | 0.0000 |
| | | Total | 0.2784 | 0.0252 | 0.0082 | 0.0000 | 0.0123 | 0.0399 | 0.0006 | 0.3646 | 0.0000 |
| MN-2 | 3 | Kept | 0.3455 | 0.0010 | 0.0027 | 0.0000 | 0.0000 | 0.0757 | 0.0000 | 0.4250 | 0.0000 |
| | | Released | 0.1670 | 0.0002 | 0.0000 | 0.0010 | 0.0000 | 0.0004 | 0.0000 | 0.1687 | 0.0000 |
| | | Total | 0.5125 | 0.0013 | 0.0027 | 0.0010 | 0.0000 | 0.0762 | 0.0000 | 0.5936 | 0.0000 |
| MN-3 | 4 | Kept | 0.2820 | 0.0023 | 0.0045 | 0.0000 | 0.0018 | 0.0923 | 0.0000 | 0.3829 | 0.0000 |
| | | Released | 0.1198 | 0.0000 | 0.0000 | 0.0009 | 0.0000 | 0.0477 | 0.0000 | 0.1685 | 0.0000 |
| | | Total | 0.4018 | 0.0023 | 0.0045 | 0.0009 | 0.0018 | 0.1401 | 0.0000 | 0.5514 | 0.0000 |
| Lower | 1 & 2 | Kept | 0.1789 | 0.0429 | 0.0051 | 0.0000 | 0.0104 | 0.0014 | 0.0002 | 0.2389 | 0.0053 |
| | | Released | 0.0069 | 0.0001 | 0.0001 | 0.0007 | 0.0000 | 0.0007 | 0.0000 | 0.0085 | 0.0045 |
| | | Total | 0.1858 | 0.0430 | 0.0051 | 0.0007 | 0.0104 | 0.0021 | 0.0002 | 0.2474 | 0.0098 |
| Upper | 3 & 4 | Kept | 0.3253 | 0.0014 | 0.0033 | 0.0000 | 0.0006 | 0.0810 | 0.0000 | 0.4116 | 0.0000 |
| | | Released | 0.1520 | 0.0001 | 0.0000 | 0.0010 | 0.0000 | 0.0154 | 0.0000 | 0.1686 | 0.0000 |
| | | Total | 0.4774 | 0.0016 | 0.0033 | 0.0010 | 0.0006 | 0.0964 | 0.0000 | 0.5802 | 0.0000 |
| Total | All | Kept | 0.1955 | 0.0382 | 0.0049 | 0.0000 | 0.0093 | 0.0104 | 0.0002 | 0.2585 | 0.0047 |
| | | Released | 0.0234 | 0.0001 | 0.0000 | 0.0007 | 0.0000 | 0.0023 | 0.0000 | 0.0266 | 0.0040 |
| | | Total | 0.2189 | 0.0383 | 0.0049 | 0.0007 | 0.0093 | 0.0127 | 0.0002 | 0.2851 | 0.0087 |

¹ Great Lakes Fishery Commission Statistical Districts.

² Cluster 1=Duluth, Cluster 2=McQuade-Two Harbors, Cluster 3=Twin Points-Taconite Harbor, Cluster 4=Grand Marais-Hovland.

³ 13 kept Brown Trout.

Table 10. Catch rate (fish/hr) by species, cluster, and shore area for all anglers during the 2023 Lake Superior summer creel survey. Standard error is in parenthesis.

| District ¹ | Cluster ² | Fate | Lake Trout | Coho Salmon | Chinook Salmon | Steelhead | Siscowet | Pink Salmon | Other ³ Salmonines | Total Salmonines | Walleye |
|-----------------------|----------------------|----------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------------------|--------------------|--------------------|
| MN-1 | 1 | Kept | 0.1432 (0.0009) | 0.0505 (0.0033) | 0.0035 (0.0000) | 0.0000 (0.0000) | 0.0072 (0.0000) | 0.0005 (0.0000) | 0.0002 (0.0000) | 0.2050 (0.0044) | 0.0038 (0.0000) |
| | | Released | 0.0129 (0.0015) | 0.0001 (0.0000) | 0.0000 (0.0000) | 0.0005 (0.0000) | 0.0000 (0.0000) | 0.0001 (0.0000) | 0.0000 (0.0000) | 0.0136 (0.0015) | 0.0032 (0.0000) |
| | | Total | 0.1560 (0.0018) | 0.0506 (0.0033) | 0.0035 (0.0000) | 0.0005 (0.0000) | 0.0072 (0.0000) | 0.0006 (0.0000) | 0.0002 (0.0000) | 0.2186 (0.0046) | 0.0070 (0.0000) |
| MN-1 | 2 | Kept | 0.1122 (0.0028) | 0.0110 (0.0001) | 0.0029 (0.0000) | 0.0000 (0.0000) | 0.0064 (0.0000) | 0.0159 (0.0001) | 0.0000 (0.0000) | 0.1483 (0.0031) | 0.0005 (0.0000) |
| | | Released | 0.0432 (0.0006) | 0.0000 (0.0000) | 0.0000 (0.0000) | 0.0005 (0.0000) | 0.0040 (0.0000) | 0.0076 (0.0000) | 0.0000 (0.0000) | 0.0553 (0.0007) | 0.0000 (0.0000) |
| | | Total | 0.1554 (0.0029) | 0.0110 (0.0001) | 0.0029 (0.0000) | 0.0005 (0.0000) | 0.0104 (0.0000) | 0.0235 (0.0001) | 0.0000 (0.0000) | 0.2036 (0.0031) | 0.0005 (0.0000) |
| MN-2 | 3 | Kept | 0.2298 (0.0087) | 0.0060 (0.0000) | 0.0038 (0.0000) | 0.0000 (0.0000) | 0.0000 (0.0000) | 0.0631 (0.0012) | 0.0000 (0.0000) | 0.3027 (0.0104) | 0.0000 (0.0000) |
| | | Released | 0.0444 (0.0002) | 0.0000 (0.0000) | 0.0000 (0.0000) | 0.0001 (0.0000) | 0.0000 (0.0000) | 0.0193 (0.0004) | 0.0000 (0.0000) | 0.0639 (0.0006) | 0.0000 (0.0000) |
| | | Total | 0.2742 (0.0087) | 0.0061 (0.0000) | 0.0038 (0.0000) | 0.0001 (0.0000) | 0.0000 (0.0000) | 0.0824 (0.0013) | 0.0000 (0.0000) | 0.3666 (0.0104) | 0.0000 (0.0000) |
| MN-3 | 4 | Kept | 0.2059 (0.0061) | 0.0013 (0.0000) | 0.0069 (0.0000) | 0.0000 (0.0000) | 0.0011 (0.0000) | 0.0936 (0.0027) | 0.0000 (0.0000) | 0.3087 (0.0095) | 0.0000 (0.0000) |
| | | Released | 0.0520 (0.0011) | 0.0025 (0.0000) | 0.0000 (0.0000) | 0.0034 (0.0000) | 0.0000 (0.0000) | 0.0802 (0.0019) | 0.0032 (0.0000) | 0.1413 (0.0032) | 0.0000 (0.0000) |
| | | Total | 0.2579 (0.0062) | 0.0037 (0.0000) | 0.0069 (0.0000) | 0.0034 (0.0000) | 0.0011 (0.0000) | 0.1738 (0.0033) | 0.0032 (0.0000) | 0.4501 (0.0100) | 0.0000 (0.0000) |
| Lower | 1 & 2 | Kept | 0.1286 (0.0016) | 0.0320 (0.0003) | 0.0032 (0.0000) | 0.0000 (0.0000) | 0.0068 (0.0000) | 0.0077 (0.0000) | 0.0001 (0.0000) | 0.1784 (0.0020) | 0.0023 (0.0000) |
| | | Released | 0.0271 (0.0005) | 0.0001 (0.0000) | 0.0000 (0.0000) | 0.0005 (0.0000) | 0.0019 (0.0000) | 0.0036 (0.0000) | 0.0000 (0.0000) | 0.0331 (0.0005) | 0.0017 (0.0000) |
| | | Total | 0.1557 (0.0016) | 0.0320 (0.0003) | 0.0032 (0.0000) | 0.0005 (0.0000) | 0.0087 (0.0000) | 0.0113 (0.0000) | 0.0001 (0.0012) | 0.2115 (0.0548) | 0.0040 (0.0000) |
| Upper | 3 & 4 | Kept | 0.2132 (0.0043) | 0.0042 (0.0000) | 0.0047 (0.0000) | 0.0000 (0.0000) | 0.0003 (0.0000) | 0.0706 (0.0009) | 0.0000 (0.0000) | 0.2931 (0.0054) | 0.0000 (0.0000) |
| | | Released | 0.0452 (0.0002) | 0.0008 (0.0000) | 0.0000 (0.0000) | 0.0012 (0.0000) | 0.0000 (0.0000) | 0.0385 (0.0004) | 0.0010 (0.0000) | 0.0868 (0.0007) | 0.0000 (0.0000) |
| | | Total | 0.2584 (0.0043) | 0.0051 (0.0000) | 0.0047 (0.0000) | 0.0012 (0.0000) | 0.0003 (0.0000) | 0.1091 (0.0009) | 0.0010 (0.0000) | 0.3798 (0.0054) | 0.0000 (0.0000) |
| Total | All | Kept | 0.1530 (0.0012) | 0.0240 (0.0001) | 0.0036 (0.0000) | 0.0000 (0.0000) | 0.0050 (0.0000) | 0.0258 (0.0001) | 0.0001 (0.0000) | 0.2115 (0.0015) | 0.0016 (0.0000) |
| | | Released | 0.0323 (0.0002) | 0.0003 (0.0000) | 0.0000 (0.0000) | 0.0007 (0.0000) | 0.0013 (0.0000) | 0.0137 (0.0001) | 0.0003 (0.0000) | 0.0486 (0.0003) | 0.0012 (0.0000) |
| | | Total | 0.1853 (0.0012) | 0.0243 (0.0001) | 0.0036 (0.0000) | 0.0007 (0.0000) | 0.0063 (0.0000) | 0.0395 (0.0001) | 0.0004 (0.0000) | 0.2600 (0.0016) | 0.0028 (0.0000) |

¹ Great Lakes Fishery Commission Statistical Districts.

² Cluster 1=Duluth, Cluster 2=McQuade-Two Harbors, Cluster 3=Twin Points-Taconite Harbor, Cluster 4=Grand Marais-Hovland.

³ Includes 60 Brook Trout and 13 Brown Trout.

Table 11. Percent of private sport angling parties, by angler type, that caught specific numbers of fish during the 2023 Lake Superior summer creel survey. Excludes personal trips by charter captains.

| Number Caught | Lake Trout | | Coho Salmon | | Chinook Salmon | | Steelhead | | Siscowet | | Pink Salmon | | Total Salmonines | |
|---------------|------------|-------|-------------|-------|----------------|-------|-----------|-------|----------|-------|-------------|-------|------------------|-------|
| | Boat | Shore | Boat | Shore | Boat | Shore | Boat | Shore | Boat | Shore | Boat | Shore | Boat | Shore |
| 0 | 48.3 | 97.9 | 95.2 | 100.0 | 96.8 | 100.0 | 98.5 | 100.0 | 96.7 | 100.0 | 72.7 | 100.0 | 32.7 | 93.6 |
| 1 | 19.3 | 2.1 | 3.6 | 0.0 | 2.8 | 0.0 | 1.5 | 0.0 | 2.3 | 0.0 | 9.8 | 0.0 | 16.5 | 4.3 |
| 2 | 11.0 | 0.0 | 0.4 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 | 7.2 | 0.0 | 14.6 | 0.0 |
| 3 | 6.2 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 4.2 | 0.0 | 8.9 | 2.1 |
| 4 | 4.4 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 2.5 | 0.0 | 7.2 | 0.0 |
| 5 | 2.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.1 | 0.0 | 5.7 | 0.0 |
| 6 | 3.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 | 0.0 | 6.1 | 0.0 |
| 7 | 1.5 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 2.8 | 0.0 |
| 8 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 1.7 | 0.0 |
| 9 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 | 1.3 | 0.0 |
| 10 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 | 0.0 |
| 11 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 |
| >=12 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 1.4 | 0.0 |

Table 12. Percent of chartered angling parties that caught specific numbers of fish during the 2023 Lake Superior summer creel survey.

| Number Caught | Lake Trout | Coho Salmon | Chinook Salmon | Steelhead | Siscowet | Pink Salmon | Other Salmonines | Total Salmonines |
|---------------|------------|-------------|----------------|-----------|----------|-------------|------------------|------------------|
| 0 | 2.7 | 68 | 90.2 | 97.5 | 84 | 80.4 | 100 | 1.4 |
| 1 | 6.2 | 21 | 8.6 | 2.5 | 11.1 | 6.2 | 0 | 1.2 |
| 2 | 6.2 | 7.4 | 1.2 | 0 | 1.2 | 4.9 | 0 | 3.7 |
| 3 | 8.6 | 1.2 | 0 | 0 | 2.5 | 3.7 | 0 | 11.1 |
| 4 | 17.3 | 1.2 | 0 | 0 | 1.2 | 1.2 | 0 | 9.9 |
| 5 | 11.1 | 0 | 0 | 0 | 0 | 1.2 | 0 | 8.6 |
| 6 | 8.6 | 0 | 0 | 0 | 0 | 1.2 | 0 | 9.9 |
| 7 | 4.9 | 0 | 0 | 0 | 0 | 1.2 | 0 | 11.1 |
| 8 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 | 3.7 |
| 9 | 4.9 | 0 | 0 | 0 | 0 | 0 | 0 | 8.6 |
| 10 | 6.2 | 0 | 0 | 0 | 0 | 0 | 0 | 3.7 |
| 11 | 1.2 | 1.2 | 0 | 0 | 0 | 0 | 0 | 2.5 |
| >=12 | 18.4 | 0 | 0 | 0 | 0 | 0 | 0 | 24.6 |

Table 13. Length-frequency distribution (in) and sample size of harvested salmonines by private sport boat and shore anglers during the 2023 Lake Superior summer creel survey.

| Length (in) | Lake Trout | Coho Salmon | Chinook Salmon | Kamloops | Steelhead | Siscowet | Pink Salmon |
|--------------|------------|-------------|----------------|----------|-----------|----------|-------------|
| <13.5 | | 1 | | | | | 3 |
| 13.5 to 14.4 | 1 | | | | | | 9 |
| 14.5 to 15.4 | 2 | | | | | | 12 |
| 15.5 to 16.4 | 15 | | | | | | 31 |
| 16.5 to 17.4 | 27 | 1 | 1 | | | 1 | 36 |
| 17.5 to 18.4 | 29 | 1 | 1 | | | | 15 |
| 18.5 to 19.4 | 22 | 10 | | | | 2 | 1 |
| 19.5 to 20.4 | 40 | 5 | | | | | |
| 20.5 to 21.4 | 53 | 6 | | | | 6 | |
| 21.5 to 22.4 | 44 | 2 | 1 | | | 2 | |
| 22.5 to 23.4 | 38 | 3 | | | | | |
| 23.5 to 24.4 | 18 | 1 | 1 | | | | |
| 24.5 to 25.4 | 22 | | | | | 2 | |
| 25.5 to 26.4 | 11 | 2 | 1 | | | 1 | |
| 26.5 to 27.4 | 9 | | 1 | | | | |
| 27.5 to 28.4 | 6 | | 2 | | | 1 | |
| 28.5 to 29.4 | 4 | | 1 | | | | |
| 29.5 to 30.4 | 3 | | 2 | | | | |
| 30.5 to 31.4 | 4 | | 1 | | | | |
| 31.5 to 32.4 | 1 | | 1 | | | | |
| 32.5 to 33.4 | | | 1 | | | | |
| >33.4 | | | | | | | |
| Average | 21.4 | 20.3 | 26.8 | 0 | 0 | 21.8 | 16.3 |
| Sample Size | 349 | 32 | 14 | 0 | 0 | 15 | 107 |

Table 14. Length-frequency distribution (in) and sample size of harvested salmonines by charter anglers¹ during the 2023 Lake Superior summer creel survey.

| Length (in) | Lake Trout | Coho Salmon | Chinook Salmon | Kamloops | Steelhead | Siscowet | Pink Salmon |
|--------------|------------|-------------|----------------|----------|-----------|----------|-------------|
| <13.5 | | 1 | | | | | 3 |
| 13.5 to 14.4 | 1 | 1 | | | | | 6 |
| 14.5 to 15.4 | 2 | | 1 | | | | 3 |
| 15.5 to 16.4 | 3 | | | | | | 11 |
| 16.5 to 17.4 | 15 | | 1 | | | | 3 |
| 17.5 to 18.4 | 27 | 4 | | | | | 3 |
| 18.5 to 19.4 | 42 | 10 | | | | 2 | |
| 19.5 to 20.4 | 52 | 11 | | | | 5 | |
| 20.5 to 21.4 | 55 | 6 | | | | 5 | |
| 21.5 to 22.4 | 28 | 2 | | | | | |
| 22.5 to 23.4 | 48 | 2 | | | | 5 | |
| 23.5 to 24.4 | 37 | 5 | | | | 2 | |
| 24.5 to 25.4 | 28 | 3 | 2 | | | | |
| 25.5 to 26.4 | 27 | 1 | | | | | |
| 26.5 to 27.4 | 16 | | | | | | |
| 27.5 to 28.4 | 8 | 1 | 1 | | | | |
| 28.5 to 29.4 | 7 | | 1 | | | | |
| 29.5 to 30.4 | 5 | | 1 | | | | |
| 30.5 to 31.4 | 2 | | | | | | |
| 31.5 to 32.4 | 1 | | | | | | |
| 32.5 to 33.4 | 2 | | 2 | | | | |
| >33.4 | | | | | | | |
| Average | 22.1 | 20.6 | 25.9 | 0 | 0 | 21.3 | 15.5 |
| Sample Size | 406 | 47 | 9 | 0 | 0 | 19 | 29 |

¹Includes clients of chartered boat trips and excludes personal trips by licensed charter captains.

Table 15. Length-frequency distribution (in) and sample size of released salmonines by private sport boat and shore anglers during the 2023 Lake Superior summer creel survey. Excludes personal trips by charter captains.

| Length (in) | Lake Trout | Coho Salmon | Chinook Salmon | Kamloops | Steelhead | Siscowet | Pink Salmon | Brook Trout |
|--------------|------------|-------------|----------------|----------|-----------|----------|-------------|-------------|
| <9.5 | 1 | | | | | | | |
| 9.5 to 10.4 | 1 | | | | | | | |
| 10.5 to 11.4 | | 2 | | | | | | |
| 11.5 to 12.4 | 3 | | | | | | | |
| 12.5 to 13.4 | | 2 | | | | | 2 | 3 |
| 13.5 to 14.4 | 8 | | | | | | 7 | |
| 14.5 to 15.4 | 4 | | | | | | 23 | 2 |
| 15.5 to 16.4 | 9 | | | | | | 40 | |
| 16.5 to 17.4 | 11 | | | | | | 56 | 1 |
| 17.5 to 18.4 | 15 | | | | | | 11 | |
| 18.5 to 19.4 | 3 | | | | | 1 | 1 | |
| 19.5 to 20.4 | 30 | | | | | 1 | 1 | |
| 20.5 to 21.4 | 7 | | | | | 5 | | |
| 21.5 to 22.4 | 22 | | | | | 1 | | |
| 22.5 to 23.4 | 10 | | | | 1 | 1 | | |
| 23.5 to 24.4 | 16 | | | | 2 | | | |
| 24.5 to 25.4 | 9 | | | | 1 | | | |
| 25.5 to 26.4 | 10 | | | | 2 | | | |
| 26.5 to 27.4 | 3 | | | | | | | |
| 27.5 to 28.4 | 5 | | | | | | | |
| 28.5 to 29.4 | 2 | | | | | | | |
| 29.5 to 30.4 | 4 | | | | 2 | | | |
| 30.5 to 31.4 | 1 | | | | | | | |
| 31.5 to 32.4 | 2 | | | | | | | |
| 32.5 to 33.4 | | | | | | | | |
| 33.5 to 34.4 | 2 | | | | | | | |
| >34.4 | | | | | | | | |
| Average | 21.2 | 11 | 0 | 0 | 26 | 19.9 | 15.3 | 13.3 |
| Sample Size | 178 | 4 | 0 | 0 | 8 | 9 | 141 | 6 |

Table 16. Length-frequency distribution (in) and sample size of released salmonines by charter anglers¹ during the 2023 Lake Superior summer creel survey.

| Length (in) | Lake Trout | Coho Salmon | Chinook Salmon | Kamloops | Steelhead | Siscowet | Pink Salmon |
|--------------|------------|-------------|----------------|----------|-----------|----------|-------------|
| <9.5 | 1 | | | | | | |
| 9.5 to 10.4 | | | | | | | |
| 10.5 to 11.4 | | | | | | | |
| 11.5 to 12.4 | 2 | | | | | | |
| 12.5 to 13.4 | | | | | | | 1 |
| 13.5 to 14.4 | 2 | | | | | | 4 |
| 14.5 to 15.4 | 1 | | | | | 1 | |
| 15.5 to 16.4 | | | | | | | |
| 16.5 to 17.4 | 2 | | | | | | 5 |
| 17.5 to 18.4 | 5 | | | | | | |
| 18.5 to 19.4 | 5 | | | | | | |
| 19.5 to 20.4 | 14 | | | | | | |
| 20.5 to 21.4 | | | | | 1 | | |
| 21.5 to 22.4 | 14 | | | | | | |
| 22.5 to 23.4 | | | | | | | |
| 23.5 to 24.4 | 12 | | | | 1 | | |
| 24.5 to 25.4 | | | | | | | |
| 25.5 to 26.4 | 5 | | | | | | |
| 26.5 to 27.4 | 2 | | | | | | |
| 27.5 to 28.4 | 3 | | | | | | |
| 28.5 to 29.4 | 2 | | | | | | |
| 29.5 to 30.4 | 2 | | | | | | |
| 30.5 to 31.4 | | | | | | | |
| 31.5 to 32.4 | 2 | | | | | | |
| >32.4 | | | | | | | |
| Average | 21.9 | 0 | 0 | 0 | 22.5 | 15 | 15.4 |
| Sample Size | 74 | 0 | 0 | 0 | 2 | 1 | 10 |

¹Includes clients of chartered boat trips and excludes personal trips by licensed charter captains.

Table 17. Average weight¹ (lbs) of harvested fish by species, cluster, and shore area for private boat and shore anglers in the 2023 Lake Superior summer creel survey. Standard error is in parentheses.

| District ³ | Cluster ⁴ | Lake Trout | Coho Salmon | Chinook Salmon | Steelhead | Siscowet | Pink Salmon | Walleye |
|-----------------------|----------------------|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|
| MN-1 | 1 | 3.71 (2.70) | 2.28 (2.70) | 0.00 (0.00) | 0.00 (0.00) | 0.00 (0.00) | 0.00 (0.00) | 0.00 (0.00) |
| MN-1 | 2 | 3.58 (2.44) | 2.33 (2.38) | 3.66 (2.80) | 0.00 (0.00) | 3.19 (2.79) | 0.96 (0.69) | 2.47 (3.27) |
| MN-2 | 3 | 3.10 (1.96) | 2.45 (2.79) | 7.57 (10.22) | 0.00 (0.00) | 0.00 (0.00) | 1.23 (1.00) | 0.00 (0.00) |
| MN-3 | 4 | 2.57 (1.61) | 2.45 (6.23) | 7.57 (11.05) | 0.00 (0.00) | 3.19 (2.79) | 1.25 (1.12) | 0.00 (0.00) |
| MN-1 | Lower | 3.60 (2.09) | 2.30 (2.01) | 3.66 (2.80) | 0.00 (0.00) | 3.19 (2.79) | 0.96 (0.69) | 2.47 (3.27) |
| MN-2 & 3 | Upper | 2.93 (1.41) | 2.45 (2.62) | 7.57 (7.52) | 0.00 (0.00) | 3.19 (4.88) | 1.24 (0.74) | 0.00 (0.00) |
| Total | All | 3.24 (1.21) | 2.31 (1.84) | 5.93 (4.34) | 0.00 (0.00) | 3.19 (2.69) | 1.17 (0.59) | 2.47 (3.27) |
| | Sample Size | 349 | 32 | 14 | 0 | 15 | 107 | 1 |

¹ Due to low sample size, weights were calculated from length-weight regression, average weight is based on mostly non-weighed fish.

² Great Lakes Fishery Commission Statistical Districts.

³ Cluster 1=Duluth, Cluster 2=McQuade-Two Harbors, Cluster 3=Twin Points-Taconite Harbor, Cluster 4=Grand Marais-Hovland.

Table 18. Average¹ weight (lbs) of harvested fish by species, cluster, and shore area for charter anglers during the 2023 Lake Superior summer creel survey². Standard error is in parentheses.

| District ³ | Cluster ⁴ | Lake Trout | Coho Salmon | Chinook Salmon | Steelhead | Siscowet | Pink Salmon | Walleye |
|-----------------------|----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| MN-1 | 1 | 3.22 (0.34) | 2.67 (0.44) | 5.70 (0.49) | 0.00 (0.00) | 2.61 (0.40) | 1.09 (0.33) | 2.47 (0.80) |
| MN-1 | 2 | 3.12 (0.38) | 3.05 (0.29) | 5.70 (0.57) | 0.00 (0.00) | 2.60 (0.58) | 1.09 (0.35) | 0.00 (0.00) |
| MN-2 | 3 | 3.40 (0.29) | 2.02 (0.98) | 3.66 (1.07) | 0.00 (0.00) | 0.00 (0.00) | 0.87 (0.12) | 0.00 (0.00) |
| MN-3 | 4 | 3.00 (0.32) | 2.02 (1.13) | 3.66 (1.31) | 0.00 (0.00) | 3.10 (2.13) | 0.99 (0.15) | 0.00 (0.00) |
| MN-1 | Lower | 3.21 (0.33) | 2.68 (0.43) | 5.70 (0.46) | 0.00 (0.00) | 2.60 (0.39) | 1.09 (0.24) | 2.47 (0.80) |
| MN-2 & 3 | Upper | 3.29 (0.23) | 2.02 (0.75) | 3.66 (0.83) | 0.00 (0.00) | 3.10 (2.13) | 0.91 (0.10) | 0.00 (0.00) |
| Total | All | 3.23 (0.27) | 2.67 (0.43) | 5.54 (0.43) | 0.00 (0.00) | 2.61 (0.39) | 0.93 (0.09) | 2.47 (0.80) |
| | Sample Size | 406 | 47 | 9 | 0 | 19 | 29 | 3 |

¹ Due to low sample size, weights were calculated from length-weight regression, average weight is based on mostly non-weighed fish.

² Includes clients of chartered boat trips and excludes personal trips by licensed charter captains.

³ Great Lakes Fishery Commission Statistical Districts.

⁴ Cluster 1=Duluth, Cluster 2=McQuade-Two Harbors, Cluster 3=Twin Points-Taconite Harbor, Cluster 4=Grand Marais-Hovland.

Table 19. Yield¹ (lbs) by species, cluster, and shore area for private sport boat and shore anglers during the 2023 Lake Superior summer creel survey. Standard error is in parentheses.

| District ² | Cluster ³ | Lake Trout | Coho Salmon | Chinook Salmon | Steelhead | Siscowet | Pink Salmon | Other ⁴ Salmonines | Total Salmonines | Walleye |
|-----------------------|----------------------|--------------------|------------------|------------------|-----------|----------------|------------------|-------------------------------|--------------------|------------|
| MN-1 | 1 | 5,266 (2,926) | 3,490 (2,910) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 8,756 (4,127) | 0 (0) |
| MN-1 | 2 | 25,683 (12,781) | 1,617 (1,168) | 651 (233) | 0 (0) | 1,305 (814) | 982 (499) | 0 (0) | 30,238 (12,872) | 79 (53) |
| MN-2 | 3 | 21,063 (9,877) | 532 (445) | 954 (930) | 0 (0) | 0 (0) | 2,404 (1,414) | 0 (0) | 24,954 (10,031) | 0 (0) |
| MN-3 | 4 | 8,405 (3,804) | 47 (86) | 916 (964) | 0 (0) | 51 (29) | 1,951 (1,275) | 0 (0) | 11,370 (4,127) | 0 (0) |
| MN-1 | 1 & 2 | 30,949 (13,112) | 5,107 (3,136) | 651 (233) | 0 (0) | 1,305 (814) | 982 (499) | 0 (0) | 38,994 (13,518) | 79 (53) |
| MN-2 & 3 | 3 & 4 | 29,468 (10,584) | 578 (453) | 1,871 (1,340) | 0 (0) | 51 (29) | 4,355 (1,904) | 0 (0) | 36,323 (10,847) | 0 (0) |
| Total | All | 60,418 (16,851) | 5,685 (3,168) | 2,522 (1,360) | 0 (0) | 1,356 (814) | 5,337 (1,968) | 0 (0) | 75,318 (17,331) | 79 (53) |

¹ Estimates are rounded to the nearest pound.

² Great Lakes Fishery Commission Statistical Districts.

³ Cluster 1=Duluth, Cluster 2=McQuade-Two Harbors, Cluster 3=Twin Points-Taconite Harbor, Cluster 4=Grand Marais-Hovland.

⁴ No other salmonines were harvested in 2023. Anglers also harvested Cisco (106 lbs) and Lake Whitefish (75 lbs).

Table 20. Yield¹ (lbs) by species, cluster, and shore area for charter anglers during the 2023 Lake Superior summer creel survey. Standard error is in parentheses.

| District ² | Cluster ³ | Lake Trout | Coho Salmon | Chinook Salmon | Steelhead | Siscowet | Pink Salmon | Other ⁴ Salmonines | Total Salmonines | Walleye |
|-----------------------|----------------------|--------------------|------------------|------------------|-----------|----------------|--------------|-------------------------------|--------------------|--------------|
| MN-1 | 1 | 30,433 (10,378) | 6,163 (4,069) | 1,505 (1,048) | 0 (0) | 1,430 (905) | 43 (0) | 26 (5) | 39,600 (11,233) | 719 (261) |
| MN-1 | 2 | 1,062 (655) | 128 (69) | 80 (60) | 0 (0) | 55 (42) | 40 (22) | 2 (1) | 1,367 (663) | 0 (0) |
| MN-2 | 3 | 5,607 (3,030) | 10 (10) | 48 (49) | 0 (0) | 0 (0) | 313 (127) | 0 (0) | 5,978 (3,033) | 0 (0) |
| MN-3 | 4 | 1,879 (1,063) | 10 (11) | 37 (42) | 0 (0) | 12 (6) | 202 (80) | 0 (0) | 2,141 (1,067) | 0 (0) |
| MN-1 | 1 & 2 | 31,495 (10,398) | 6,291 (4,070) | 1,585 (1,050) | 0 (0) | 1,485 (905) | 83 (22) | 28 (5) | 40,967 (11,252) | 719 (261) |
| MN-2 & 3 | 3 & 4 | 7,486 (3,211) | 20 (15) | 84 (65) | 0 (0) | 12 (6) | 516 (150) | 0 (0) | 8,119 (3,215) | 0 (0) |
| Total | All | 38,981 (10,883) | 6,311 (4,070) | 1,669 (1,052) | 0 (0) | 1,497 (905) | 599 (152) | 28 (5) | 49,086 (11,702) | 719 (261) |

¹ Estimates are rounded to the nearest pound.

² Great Lakes Fishery Commission Statistical Districts.

³ Cluster 1=Duluth, Cluster 2=McQuade-Two Harbors, Cluster 3=Twin Points-Taconite Harbor, Cluster 4=Grand Marais-Hovland.

⁴ Brown Trout (28 lbs). Anglers also harvested Northern Pike (83 lbs), Lake Whitefish (51 lbs), and Cisco (16 lbs).

Table 21. Yield¹ (lbs) by species, cluster, and shore area for all anglers during the 2023 Lake Superior summer creel survey. Standard error is in parentheses.

| District ² | Cluster ³ | Lake Trout | Coho Salmon | Chinook Salmon | Steelhead | Siscowet | Pink Salmon | Other ⁴ Salmonines | Total Salmonines | Walleye |
|-----------------------|----------------------|--------------------|-------------------|------------------|-----------|------------------|------------------|-------------------------------|---------------------|--------------|
| MN-1 | 1 | 35,699 (10,782) | 9,653 (5,003) | 1,505 (1,048) | 0 0 | 1,430 (905) | 43 0 | 26 (5) | 48,356 (11,967) | 719 (261) |
| MN-1 | 2 | 26,745 (12,798) | 1,745 (1,170) | 731 (241) | 0 0 | 1,359 (815) | 1,022 (499) | 2 (1) | 31,605 (12,889) | 79 (53) |
| MN-2 | 3 | 26,670 (10,331) | 542 (445) | 1,002 (932) | 0 0 | 0 0 | 2,718 (1,420) | 0 0 | 30,932 (10,480) | 0 0 |
| MN-3 | 4 | 10,284 (3,950) | 57 (86) | 953 (965) | 0 0 | 63 (30) | 2,153 (1,277) | 0 0 | 13,511 (4,263) | 0 0 |
| MN-1 | 1 & 2 | 62,445 (16,735) | 11,398 (5,138) | 2,236 (1,075) | 0 0 | 2,789 (1,218) | 1,065 (499) | 28 (5) | 79,961 (17,588) | 798 (266) |
| MN-2 & 3 | 3 & 4 | 36,954 (11,060) | 598 (453) | 1,955 (1,342) | 0 0 | 63 (30) | 4,871 (1,910) | 0 0 | 44,442 (11,313) | 0 0 |
| Total | All | 99,399 (20,059) | 11,996 (5,158) | 4,191 (1,719) | 0 0 | 2,853 (1,218) | 5,936 (1,974) | 28 (5) | 124,403 (20,912) | 798 (266) |

¹ Estimates are rounded to the nearest pound.

² Great Lakes Fishery Commission Statistical Districts.

³ Cluster 1=Duluth, Cluster 2=McQuade-Two Harbors, Cluster 3=Twin Points-Taconite Harbor, Cluster 4=Grand Marais-Hovland.

⁴ Brown Trout (28 lbs). Anglers also harvested Lake Whitefish (126 lbs), Cisco (122 lbs), and Northern Pike (83 lbs).