WISCONSIN DEPARTMENT OF NATURAL RESOURCES

LAKE SUPERIOR CREEL REPORT 2023

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INTRODUCTION

The Wisconsin Department of Natural Resources (DNR) Lake Superior Fisheries Management Team conducts an annual creel survey of the open-water and ice fishing seasons in Wisconsin waters of Lake Superior spanning from Superior, WI (Douglas County) to Saxon Harbor (Iron County). In addition, DNR staff gather monthly harvest reports from all charter trips (Sport Trolling License) and mandatory daily reports from guided trips (Wisconsin Guide License) in Wisconsin waters of Lake Superior. This creel survey is a major undertaking for the DNR's Lake Superior Fisheries Management Team in terms of time and money.

The harvest and data from this creel survey are important for numerous reasons. First, Lake Trout harvest estimates from management unit WI-2 are monitored closely to ensure the sport harvest does not exceed the portion of the quota allotted to sport fishing. Second, Lake Trout sport harvest, fishing effort and sizes of harvested Lake Trout are important inputs into a statistical catch-at-age model, which is used to estimate population size and ultimately set the Lake Trout total allowable catch in WI-2. Third, harvest estimates of all species from the creel survey are used to evaluate the effects of fishing regulation changes on sport fishing harvest. Lastly, harvest results are continually used to monitor "return-to-creel" rates of stocked fish and assess sport fishing preferences and the popularity of various fisheries.

METHODS

We estimated the sport fishery harvest in Wisconsin waters of Lake Superior during the normal Lake Trout sport fishing season (Dec. 1 through Sept. 30). Fishing effort, harvest and harvest rates were determined from 1) a series of randomized creel surveys during the ice fishing season (WI-2 only) and the open-water fishing season and 2) mandatory licensed charter and guided trip reporting.

In summary, the creel survey estimated fishing effort (hours) through a series of random vehicle/trailer counts at public access locations and then extrapolated those effort values to the total number of fishing days. Creel clerks interviewed anglers, which provided information such as the number of anglers in the party, time spent fishing, relative location fished, species targeted, number of fish harvested and biological characteristics (e.g., length, fin clips, etc.) of harvested fish. From this information, anglers were separated into various "fisheries" (see more details of different fisheries below) in order to allocate the estimated effort to various fisheries. Harvest rates (number of fish per angler hour) were also calculated from interview information. Harvest rates and total effort were calculated for each fishery by day type (i.e., weekend/weekday) at each location (e.g., Ashland route) within each month. Harvest estimates were calculated by multiplying the harvest rate by the total effort (angler hours) within each of these groupings.

Harvested fish were identified and measured to the nearest tenth of an inch. Fin clips and any tags that were present were recorded. Maxillae (or a jaw bone) were also sampled from a subset of Lake Trout to obtain estimates of fish ages. The Wisconsin waters of Lake Superior are divided into two management units: WI-1 or the Western Arm (west of the line running north-south from Bark Point; 46 deg. 53.21 min. N, 91 deg. 11.16 min. W) and WI-2 or the Apostle Islands region (east of the Bark Point line; Figure 1). Creel results were separated by management unit.

Interview and count (effort) data were entered into a Microsoft Access database and subsequently run through a program in the statistical program R (R version 4.1.3) to obtain harvest and effort estimates. Original functions to calculate creel statistics and randomize creel schedules were developed by Dr. Derek Ogle of Northland College.

DECEMBER OPEN-WATER SURVEY

We conducted an open-water creel survey along the main shore from Dec. 1, 2022 – Dec. 16, 2022 (final ice up) at access points near Washburn and Bayfield. Trailer counts and interviews were obtained using a stratified, access-point survey method. Interviews were conducted in the same manner as the open-water survey method (below).

ICE CREEL SURVEY

We also conducted an ice creel survey near Ashland (i.e., Second Landing-Long Bridge) from Dec. 17, 2022 to April 11, 2023 and near Washburn/Bayfield ("S" Curve-Bono Creek access through the northernmost area of fishing activity) from Dec. 19, 2022 – April 11, 2023. Vehicle counts were obtained using a stratified, access-point survey method. Two separate vehicle counts were made daily, starting at approximately 9 a.m. and 2 p.m. for each site in each random route. Vehicles present in morning and afternoon checks were not counted twice. Interviews for the ice creel survey were conducted at the access point. Any number of anglers in a single vehicle was considered an angling party. Anglers interviewed in the ice fishery were separated into three different fisheries: Ice Shallow Water (less than 60 feet), Ice Deep Water- "Bobbing" (greater than or equal to 60 feet) and Northern Pike Ice Spearing.

OPEN-WATER SURVEY

We conducted a single-loop time interval creel survey during the open-water fishing season on Wisconsin waters of Lake Superior. The following locations were surveyed (start date): Saxon (April 8), Washburn (May 10), Apostle Islands (Bayfield, Red Cliff, Little Sand Bay; April 26), Cornucopia and Port Wing (April 26) and Superior (May 13). The open-water creel survey ended on Sept. 30, 2023. The Ashland route was not surveyed in 2023 due to staffing constraints.

Creel clerks obtainted trailer counts and interviews using a randomized, single-loop time interval method (i.e., bus route). Using the time interval procedure, clerks counted vehicles with boat trailers and harbor boats at each access site. Boats going out to fish or returning from fishing were counted as a fraction of the time the clerk spent at the site (i.e., individual boat count = [creel shift in minutes – minutes at site] / creel shift in minutes). A boat beginning to fish was added to the initial count, and a boat stopping or returning from fishing was subtracted from the initial count.

Creel clerks interviewed angler parties returning from fishing at the access point. We treated the total number of anglers onboard as an angler party and categorized angler parties by fishery. For example, if the boat was fishing for cool-water species such as Northern Pike, Walleye or Yellow Perch in a predominately cool-water area, we recorded it in the "Open-Water Cool" fishery. If the boat was trolling for trout and salmon (i.e., cold-water species), we recorded it in the "Open-Water Cold" fishery. If the boat was strictly practicing catch-and-release Smallmouth Bass fishing, we recorded it in the "Smallmouth Bass Only" fishery. If the boat was targeting Lake Whitefish by jigging, we recorded it in the "Open-Water Whitefish" fishery. We categorized each interview into various fisheries so that effort from the boat and trailer counts accurately represented fishers on the water. If the boat was fishing for "anything that bites," we considered the area the boat fished and determined which fishery to place the interview. Finally, if the party was not fishing, we placed it in the category "Pleasure Boating" and did not apply this effort to harvest estimates.

We did not count boats from chartered or guided trips in effort estimates at a site due to mandatory reporting (see below). We also excluded sailboats from counts unless fishing gear (e.g., downriggers or rods) was present. Saxon Harbor and ports within Superior, Wisconsin are considered boundary waters with Michigan and Minnesota, respectively. We did not include effort and harvest of parties fishing in non-Wisconsin waters in Wisconsin harvest estimates. We assigned half the effort/harvest to Wisconsin for boats that fished both states' waters.

Lastly, creel clerks also asked anglers for their primary zip code of residence during interviews. We created a density map of the primary residence of anglers fishing Wisconsin waters of Lake Superior using a kernel density function in ArcGIS Pro.

CHARTER AND GUIDED TRIP REPORTING

We collected effort and harvest estimates from chartered trips (Sport Trolling License) in a madatory online reporting system. Information on the number of anglers, hours fished, location (grid) and the number of various species harvested were included in online reports. Similarly, we collected harvest, catch and effort information from guided trips (Wisconsin Guide License) via an online daily reporting system.

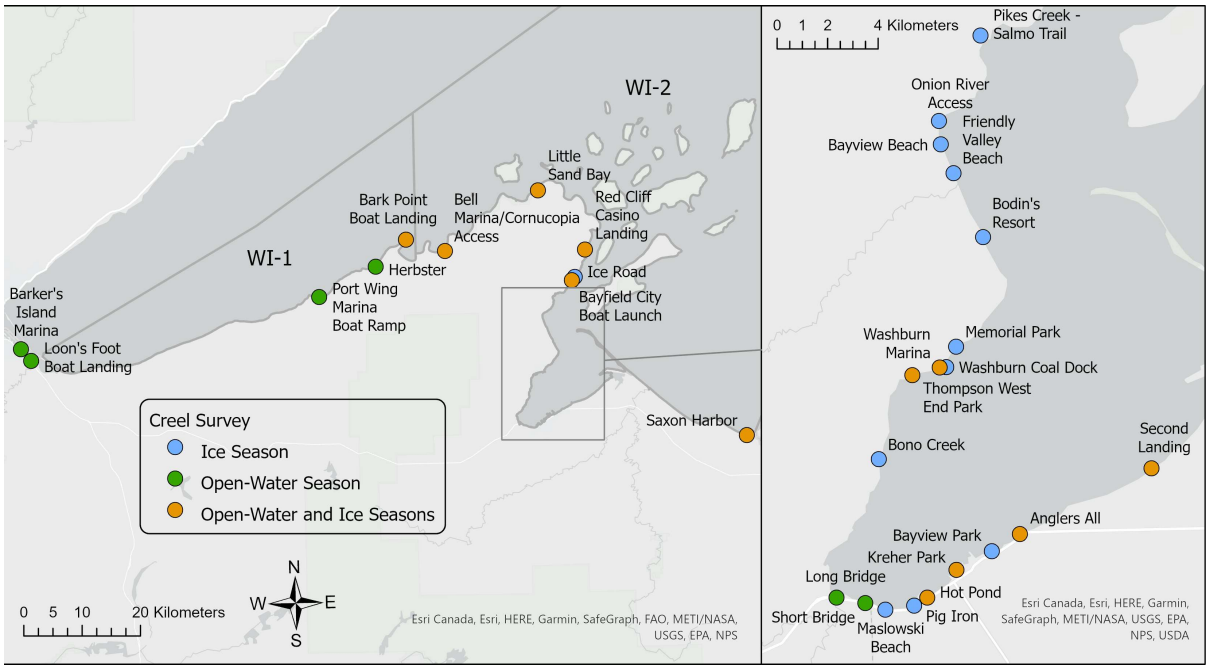

Figure 1. Wisconsin waters of Lake Superior, management units WI-1 and WI-2, and all ports sampled in the DNR Lake Superior Creel Survey (blue - ice season only; green - open-water season only; orange - both ice and open-water seasons).

RESULTS

ANGLER DEMOGRAPHICS

We determined primary residences based on zip codes provided during creel interviews. During the 2023 DNR Lake Superior Creel Survey, we interviewed anglers residing in 19 different U.S. states and 115 U.S. counties. Approximately 81.2% of anglers were Wisconsin residents, and 17.0% were Minnesota residents. Lake Superior anglers were represented in 55 of 72 (76%) Wisconsin counties in 2023.

Over the past three years (2021-2023), we interviewed anglers from 29 U.S. states, 193 U.S. counties, and 68 of 72 (94%) Wisconsin counties (Figure 2). Approximately 80% of anglers were Wisconsin residents, and 17% were Minnesota residents.

WI–1

The 2023 Lake Superior Creel Survey in WI-1 included 1,225 creel interviews of angler parties (2,701 anglers interviewed) resulting in an estimated 66,200 angler hours in WI-1, including chartered and guided trip reporting (Figure 3). Walleye (6,921), lake trout (3,238) and coho salmon (1,959) were the top three species harvested and accounted for 92% of the harvest (Figure 4). The total trout and salmon harvest was 5,566 fish. Walleye harvest rate was the highest (0.1045 fish/hour), followed by lake trout (0.0489 fish/hour) and coho salmon (0.0296 fish/hour).

The 2023 total effort in WI-1 was similar to last year's effort and 13% higher than recent average effort (58,719 angler hours). Walleye harvest (for the second consecutive year) nearly doubled the previous year's harvest (2022 = 3,586 and 2021 = 1,749) and was 110% higher than the recent average (3,300 fish). Lake trout harvest was similar to the previous two seasons (2022 = 3,265 fish, 2021=3,282 fish) but down slightly from the average in the recent time series (Figure 7). Coho salmon harvest was 82% higher than last year's harvest (1,076) and 35% higher than the recent average (1,455 fish). The total trout and salmon harvest was higher than the previous two seasons (Figure 4). Walleye and coho salmon harvest rate were both higher than last year and their recent averages. Lake trout harvest rate was similar to last year (0.0490 fish/hour) but lower than the recent average (0.0573 fish/hour).

OPEN-WATER COLD

The Open-Water Cold fishery accounted for most of the effort in WI-1 with 36,217 angler hours (55% of the total fishing effort in WI-1). Lake trout (2,972), coho salmon (1,815) and walleye (539) were the top three species harvested and accounted for 93% of the harvest in this fishery. The total trout and salmon harvest in this fishery was 5,063 fish. Lake trout harvest rate was highest (0.0821 fish/hour), followed by coho salmon (0.0501 fish/hour) and walleye (0.0149 fish/hour). The trout and salmon harvest rate was 0.1380 fish/hour (Figure 5).

The 2023 Open-Water Cold effort was slightly lower than last year's effort but higher than its recent average (34,560). Lake trout harvest was similar to last year (2,834) and to the recent average (2,829). The lake trout harvest rate was higher than last year (0.0744 fish/hour) and similar to the recent average (Figure 7). Coho salmon and walleye harvest and harvest rate were both higher than last year. The trout and salmon harvest rate was similar to recent years (Figure 5).

OPEN-WATER COOL

The Open-Water Cool fishery accounted for 28,501 angler hours in WI-1 (43% of the total fishing effort in WI-1). Walleye were the top species harvested (6,345) and accounted for 90% of the harvest in this fishery. Walleye harvest rate was 0.2226 fish/hour.

The 2023 Open-Water Cool effort, walleye harvest and walleye harvest rate were all higher than last year and their respective recent averages. For the second consecutive year walleye harvest and walleye harvest rate doubled (harvest: 2021 = 1,323 fish, 2022 = 3,082 fish; harvest rate: 2021 = 0.0520 fish/hour, 2022 = 0.1167 fish/hour).

CHARTER

The Charter fishery accounted for 1,328 angler hours in WI-1 (2% of the total fishing effort in WI-1). Lake trout (214), Chinook salmon (76) and coho salmon (74) were the top three species harvested and accounted for 96% of the harvest in this fishery. Lake trout harvest rate was highest (0.1611 fish/hour), followed by Chinook salmon (0.0572 fish/hour) and coho salmon (0.0557 fish/hour). The trout and salmon harvest rate was 0.2809 fish/hour (Figure 5).

The 2023 Charter effort declined for the third year in a row and lake trout harvest declined for the third year in a row. Effort, lake trout harvest, and lake trout harvest rate were all lower than their respective recent averages. The trout and salmon harvest rate was slightly higher than the last few years (Figure 5).

Please refer to the DNR Lake Superior Charter Fishing Report 2023 for a more detailed account of the 2023 Charter fishery.

WI–2

The 2023 Lake Superior Creel Survey in WI-2 included 2,066 creel interviews of angler parties (4,146 anglers interviewed) resulting in an estimated 223,209 angler hours, including charted and guided trip reporting (Figure 3). Lake whitefish (15,211), lake trout (11,093), yellow perch (7,969), coho salmon (4,888), brown trout (2,555), splake (2,034) and walleye (1,837) were the top seven game species harvested and accounted for 90% of the harvest (Figure 4). The total trout and salmon harvest was 20,885 fish. Lake whitefish harvest rate was highest (0.0681 fish/hour), followed by lake trout (0.0497 fish/hour), yellow perch (0.0357 fish/hour), coho salmon (0.0219 fish/hour), brown trout (0.0114 fish/hour), splake (0.0091 fish/hour) and walleye (0.0082 fish/hour).

The WI-2 2023 total effort declined for the third year in a row and were lower than the recent average. The total trout and salmon harvest was the lowest in recent years (Figure 4). The harvest and harvest rate for lake trout, coho salmon, brown trout and splake were all lower than last year. The harvest and harvest rate for lake whitefish were the highest in recent times. The harvest and harvest rate for walleye increased for the fourth year in a row.

DECEMBER OPEN-WATER

The December Open-Water fishery accounted for 159 angler hours in WI-2 (0.07% of the total fishing effort in WI-2; Figure 3). Brown trout harvest was the highest with 16 fish, followed by coho salmon (3) and splake (3). The trout and salmon harvest rate was 0.1384 fish/hour.

The 2023 December Open-Water effort and the harvest and harvest rate for brown trout, coho salmon and splake were all lower than last year and their recent averages. The trout and salmon harvest rate was the lowest in the recent time series (Figure 5).

ICE < 60 FEET - SHALLOW

The Ice <60 feet-Shallow fishery accounted for 67,458 angler hours in WI-2 (30.2% of the total fishing effort in WI-2; Figure 3). Yellow perch (6,910), lake whitefish (3,191), rainbow smelt (2,615), splake (1,320) and brown trout (748) were the top five species harvested and accounted for 91% of the total harvest in this fishery. The trout and salmon harvest was 2,382 fish. Yellow perch harvest rate was highest (0.1024 fish/hour), followed by lake whitefish (0.0473 fish/hour), rainbow smelt (0.0388 fish/hour), splake (0.0196 fish/hour) and brown trout (0.0111 fish/hour). The trout and salmon harvest rate was 0.0353 fish/hour.

The 2023 Ice <60 feet-Shallow fishery total effort and the harvest and harvest rates for lake whitefish, rainbow smelt, splake and brown trout were all lower than last year and their recent averages. Yellow perch harvest and harvest rate were up slightly from last year but down from recent averages. The trout and salmon harvest rate was lower than the recent average (Figure 5).

ICE ≥ 60 FEET - BOBBING

The Ice >60 feet-Bobbing fishery accounted for 12,632 angler hours in WI-2 (6% of the total fishing effort in WI-2; Figure 3). Lake whitefish (4,384) and lake trout (675) were the top two species harvested and accounted for 94% of the total harvest in this fishery. The total trout and salmon harvest was 806 fish. Lake whitefish harvest rate was highest (0.3471 fish/hour), followed by lake trout (0.0534 fish/hour). The trout and salmon harvest rate was 0.0638 fish/hour.

The 2023 Ice >60 feet-Bobbing fishery total effort was 56% lower than last year (28,942 angler hours) and 14% lower than recent average (14,608 angler hours). Lake whitefish harvest was 33% higher than last year (3,308 fish) and 77% higher than the recent average (2,478 fish). Lake whitefish harvest rate was higher than last year (0.1143 fish/hour) and higher than recent average (0.1788 fish/hour). Lake trout harvest was 57% lower than last year (1,586 fish) and 39% lower than the recent average (1,103 fish).

OPEN-WATER COLD

The Open-Water Cold fishery accounted for 78,676 angler hours in WI-2 (35.2% of the total fishing effort in WI-2; Figure 3). Lake trout (7,658), coho salmon (4,310) and brown trout (1,450) were the top three species harvested and accounted for 90% of the total harvest in this fishery. The trout and salmon harvest was 14,187 fish. Lake trout harvest rate was the highest (0.0973 fish/hour), followed by coho salmon (0.0548 fish/hour) and brown trout (0.0184 fish/hour). The trout and salmon harvest rate was 0.1803 fish/hour.

The 2023 Open-Water Cold fishery total effort was 2% lower than last year (80,537 angler hours) and 6% lower than recent average (83,954 angler hours). Lake trout harvest was 12% lower than last year (8,704 fish) and 11% lower than the recent average (8,559 fish). Lake trout harvest rate was lower than last year (0.1081 fish/hour) but similar to the recent average (Figure 7). Coho salmon harvest was 9% higher than last year (3,945 fish) and 4% higher than the recent average (4,160 fish). Coho salmon harvest rate was higher than last year (0.0490 fish/hour) and higher than the recent average (0.0497 fish/hour). Brown trout harvest was 18% higher than last year (1,225 fish) but 22% lower than the recent average (1,851 fish). Brown trout harvest rate was higher than last year (0.0152 fish/hour) but lower than the recent average (0.0220 fish/hour). The trout and salmon harvest rate was similar to the recent average (Figure 5).

OPEN-WATER COOL

The Open-Water Cool fishery accounted for 22,867 angler hours in WI-2 (10.2% of the total fishing effort in WI-2; Figure 3). Walleye (1,596), yellow perch (936) and northern pike (420) were the top three species harvested and accounted for 92% of the total harvest in this fishery. Walleye harvest rate was highest (0.0698 fish/hour), followed by yellow perch (0.0409 fish/hour) and northern pike (0.0184 fish/hour).

The 2023 Open-Water Cool fishery effort was 10% lower than last year (25,515 angler hours) and 29% lower than the recent average (32,193 angler hours). Total harvest was 20% higher than last year (2,659 fish) and 8% higher than the recent average (2,959 fish). Walleye harvest was similar to harvest in recent years (2022 = 1,482 fish; 2021 = 1,535 fish), and harvest rate was higher than recent years. Yellow perch and Northern pike harvest and harvest rates were higher than last year.

OPEN-WATER WHITEFISH

The Open-Water Whitefish fishery accounted for 7,981 angler hours in WI-2 (4% of the total fishing effort in WI-2; Figure 3). Lake whitefish harvest was 6,571 fish (99% of the harvest in this fishery) with a harvest rate of 0.0823 fish/hour.

The 2023 Open-Water Whitefish fishery effort was 111% higher than last year (3,775 angler hours) and 41% higher than the average effort since 2020. Lake whitefish harvest was 204% higher than last year (2,159 fish) and 64% higher than average. Lake whitefish harvest rate was higher than last year and higher than average (0.6891 fish/hour).

The 2023 participation and harvest were the highest since the Open-Water Whitefish fishery was separated into its own fishery in 2020.

SMALLMOUTH BASS

The smallmouth bass fishery accounted for 18,543 angler hours in WI-2 (8.3% of the total fishing effort in WI-2; Figure 3). This effort was higher than last year and higher than the average effort since 2019 (17,956 angler hours). Most of this effort occurs in May and June from anglers fishing the eastern side of Chequamegon Bay. No smallmouth bass harvest was observed during the 2023 survey.

CHARTER

The Charter fishery accounted for 10,681 angler hours in WI-2 (4.8% of the total fishing effort in WI-2; Figure 3). Lake trout (2,493), coho salmon (327) and brown trout (221) were the top three species harvested and accounted for 95% of the harvest in this fishery. The trout and salmon harvest was 3,183 fish. Lake trout harvest rate was the highest (0.2334 fish/hour), followed by coho salmon (0.0306 fish/hour) and brown trout (0.0207 fish/hour). The trout and salmon harvest rate was 0.2980 fish/hour.

The 2023 Charter fishery effort in WI-2 was the highest since 2000. Lake trout harvest was down slightly (2%) from last year but 18% higher than the recent average (2,117 fish). Coho salmon harvest was lower than last year and the recent average (391). Brown trout was lower than last year and the recent average (234). Lake trout, coho salmon and brown trout harvest rates were all lower than last year and recent averages. The trout and salmon harvest rate was the highest of all fisheries and similar to the last two seasons (Figure 5). Please refer to the DNR Lake Superior Charter Fishing Report 2023 for a more detailed account of the 2023 Charter fishery.

LAKE TROUT FISHERY

WI-1

Daily bag limit: 3, minimum length limit: 15 inches, only one > 25 inches

The estimated lake trout harvest by sport anglers in WI-1 was 3,238 fish. This was similar to the last two year's harvest (2022 = 3,265 fish and 2021 = 3,282 fish) but slightly lower than the long-term average since 2006 (Figure 7). The Open-Water Cold fishery represented the highest harvest (2,972), followed by the Charter (214) and the Open-Water Cool fisheries (52).

The total lake trout harvest rate in WI-1 was 0.0489 fish/hour. The Charter fishery had the highest lake trout harvest rate (0.1611 fish/hour) followed by the Open-Water Cold (0.0821 fish/hour) and the Open-Water Cool fisheries (0.0018 fish/hour). The lake trout harvest rate in the Open-Water Cold fishery was similar to the long-term average since 2006 (Figure 7).

WI-2

Daily bag limit: 2, minimum length limit: 15 inches, only one > 25 inches

The estimated lake trout harvest by sport anglers fishing in WI-2 was 11,093 fish. This was slightly lower than last year and lower than the long-term average since 2006 (Figure 7). The Open-Water Cold fishery represented the highest harvest (7,658) followed by the Charter (2,493), Ice > 60 Feet-Bobbing (675), Guide (143) and Ice < 60 Feet -Shallow fisheries (124).

The total lake trout harvest rate was 0.0497 fish/hour. This was lower than last year and lower than the recent average (0.0523 fish/hour). The Charter fishery had the highest lake trout harvest rate of all fisheries in WI-2 (0.2334 fish/hour), followed by the Open-Water Cold (0.0973 fish/hour), Ice > 60 Feet Bobbing (0.0534 fish/hour), Guide (0.0340 fish/hour) and Ice < 60 feet Shallow fisheries (0.0018 fish/hour). The lake trout harvest rate in the Open-Water Cold fishery was similar to the long-term average since 2006 (Figure 7).

ACKNOWLEDGEMENTS

We thank the creel clerks. They work hard obtaining accurate data for the survey, and they also play an important role by having positive interactions with the public. Their effort is greatly appreciated. The creel clerks involved for this report were: Emily Hutler (December Open-Water and Winter Creel-Ashland), Devin Engel (Winter Creel: Washburn-Bayfield-Red Cliff; Open-Water: Bayfield, Red Cliff, Little Sand Bay, Cornucopia-Port Wing), Charlie McBain (Open-Water: Washburn), Dean Kolpin (Open-Water: Saxon) and Reed Kostelny / Isaac Pinsonnault (Open-Water: Superior). We also thank Dr. Derek Ogle, formerly of Northland College, who developed the functions to calculate creel statistics and randomize creel schedules in the statistical program R.

Note: For more detailed breakdowns of the DNR Lake Superior Creel Survey results, please refer to the Lake Superior Supplemental Creel Report 2023.

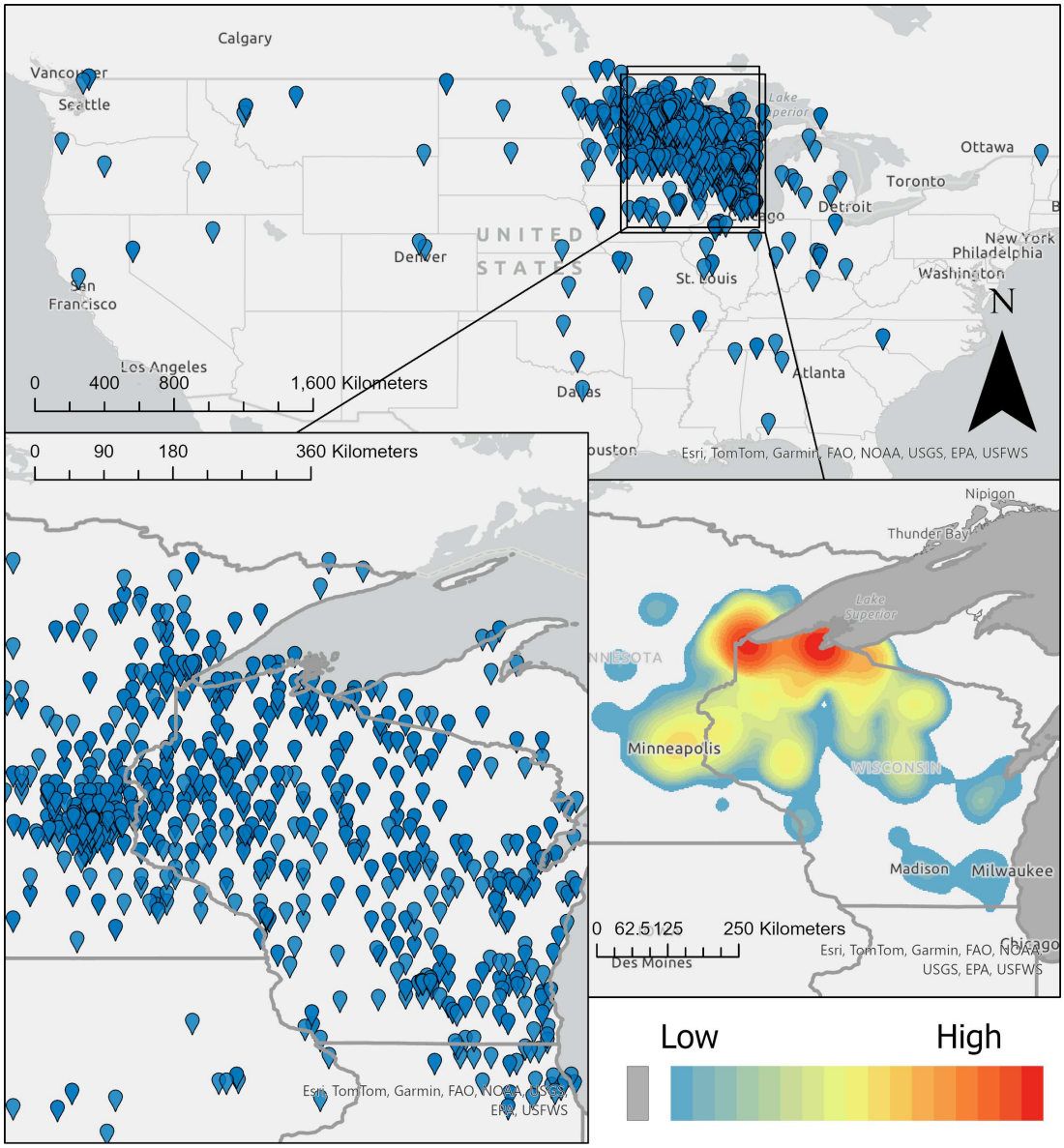

Figure 2. Bottom-left and top maps: individual zip code locations of angler primary residences observed during the 2021-2023 DNR Lake Superior Creel surveys. Bottom-right map: Density of primary residences of Lake Superior anglers interviewed in the 2021-2023 creel surveys. Red shades represent areas of higher density and blue shades represent areas of lower density. Residences were determined based on zip codes provided during creel interviews.

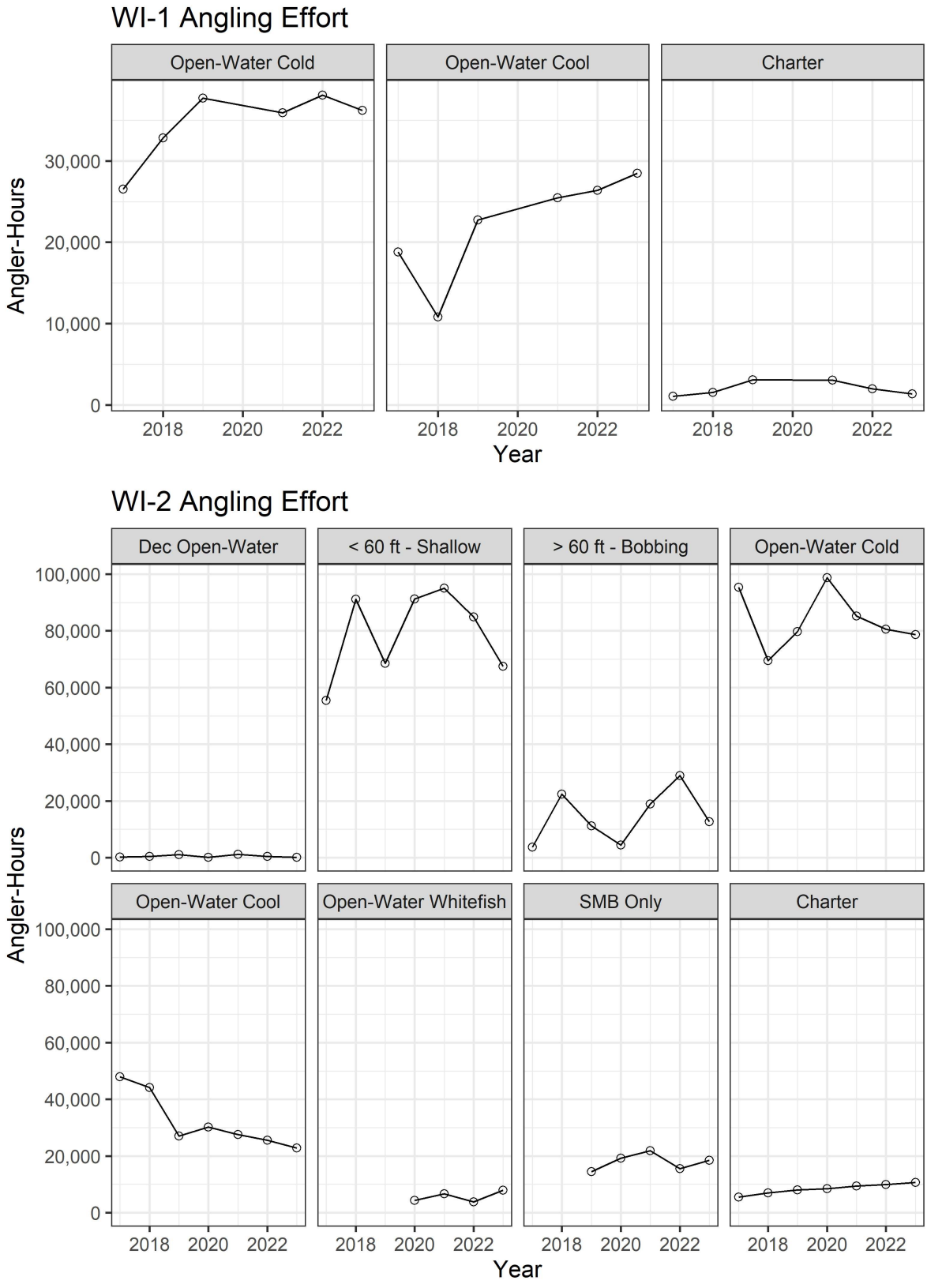

Figure 3. Total estimated fishing effort (angler hours) by each fishery sampled in the DNR Lake Superior Creel Survey within each management unit (WI-1 and WI-2) from 2017 to 2023.

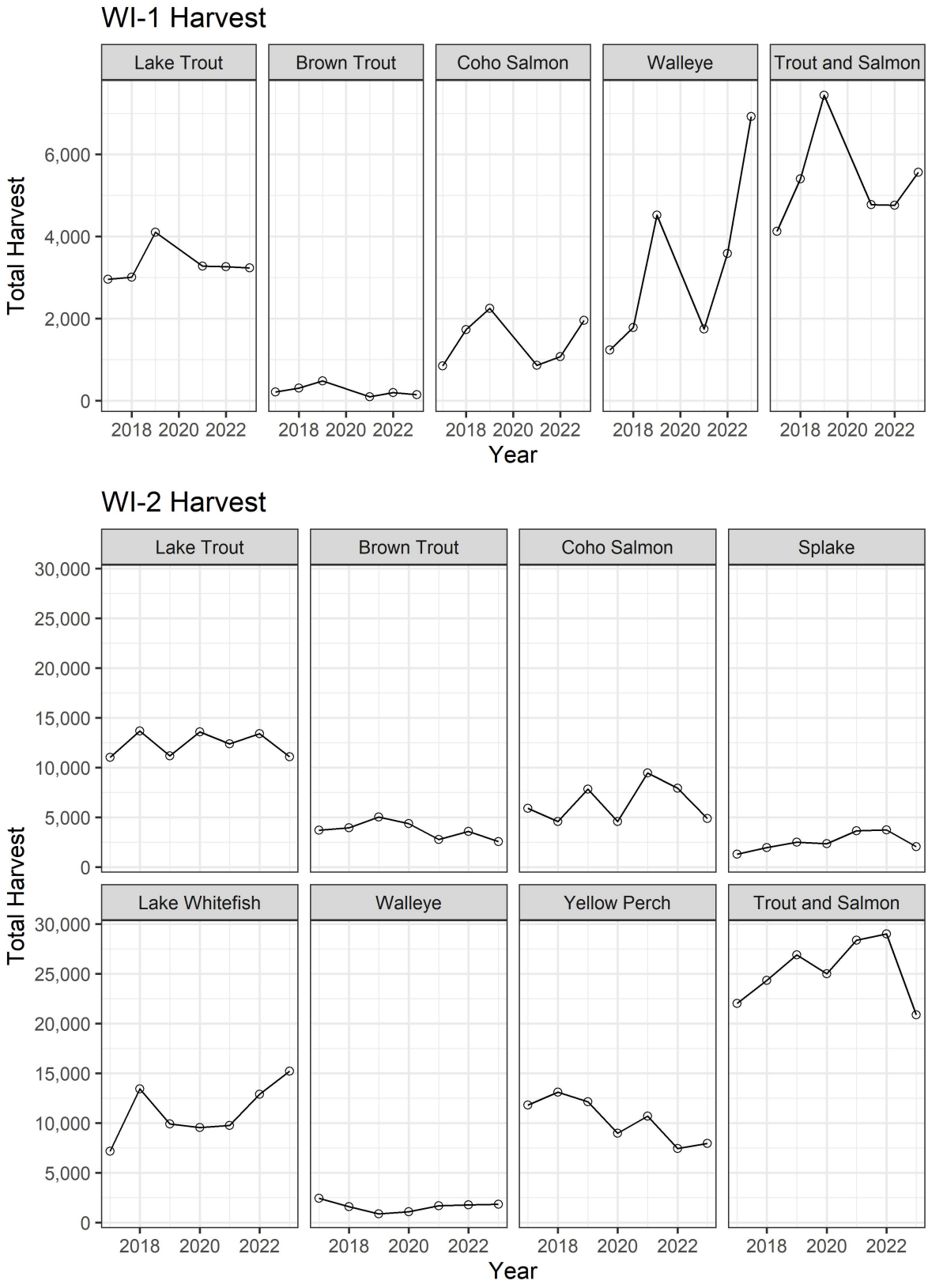

Figure 4. Total estimated harvest of the main species in the DNR Lake Superior Creel Survey within each management unit (WI-1 and WI-2) from 2017 to 2023. All trout and salmon combined are represented in the Trout and Salmon category.

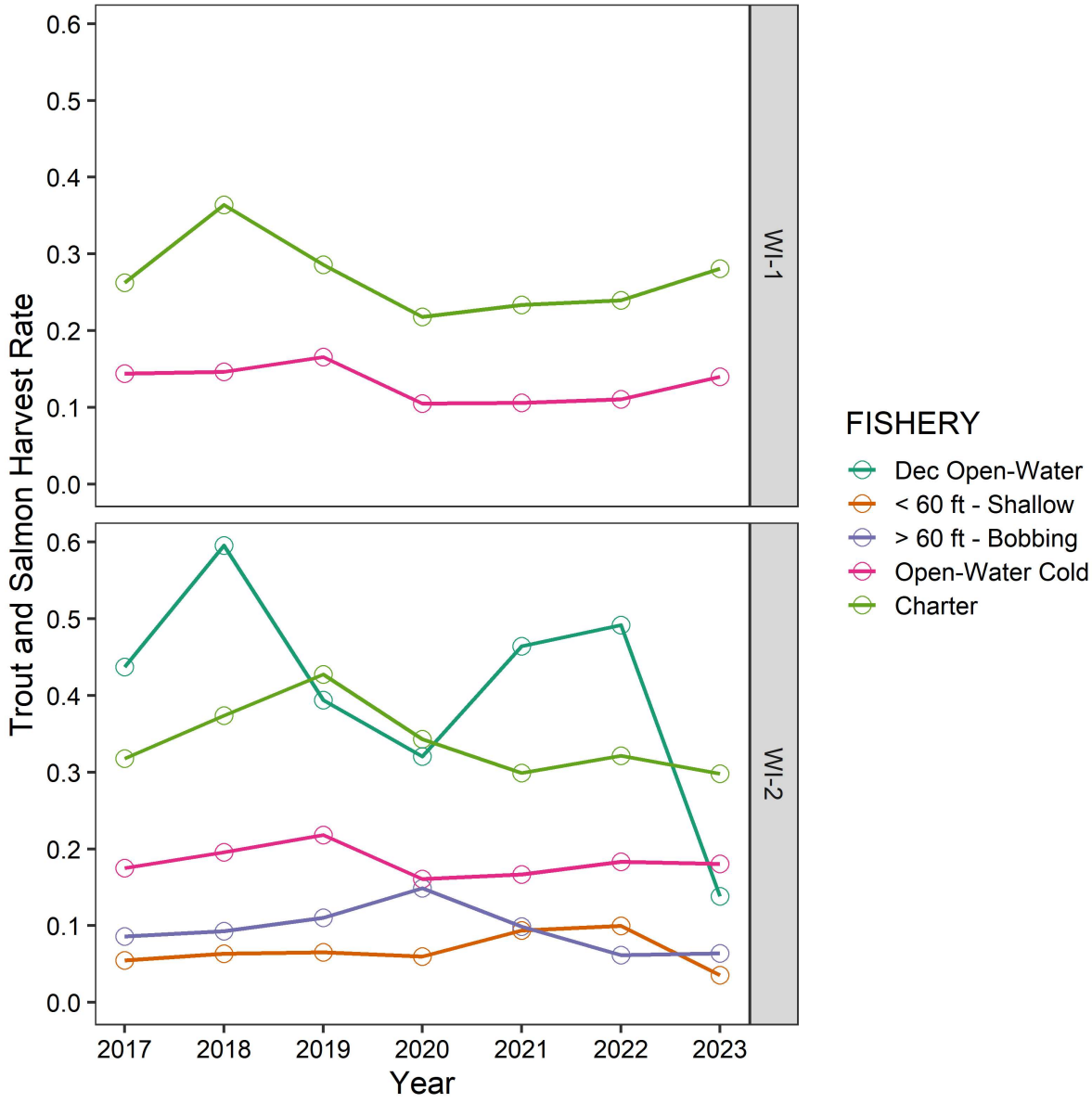

Figure 5. Estimated harvest rate (fish per angler hour) of all trout and salmon from each fishery sampled in the DNR Lake Superior Creel Survey within each management unit (WI-1 and WI-2) from 2017 to 2023.

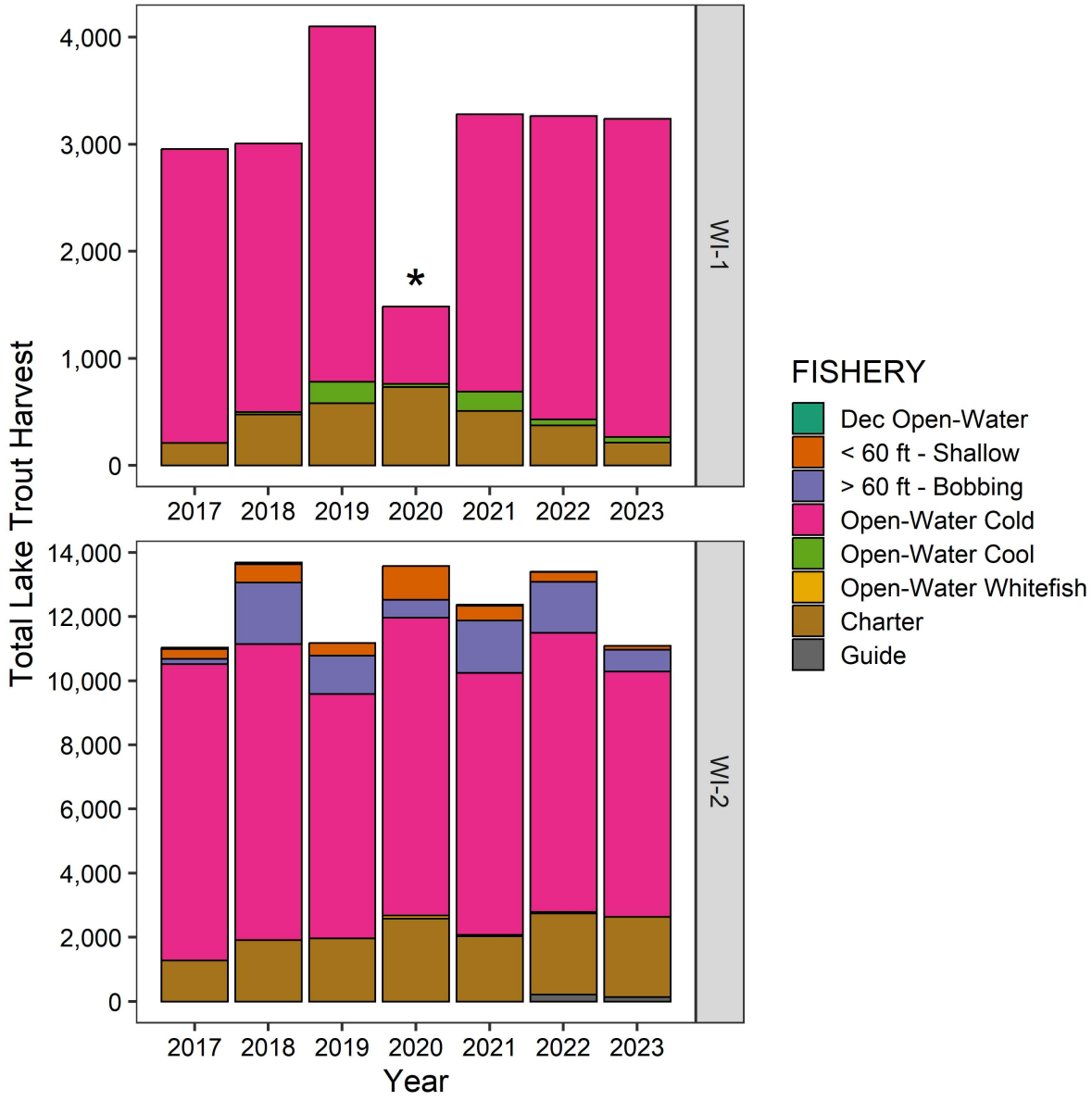

Figure 6. Total estimated harvest of lake trout by each fishery sampled in the DNR Lake Superior Creel Survey within each management unit (WI-1 and WI-2) from 2017 to 2023.
Note: In WI-1, the Superior creel route was not completed in 2020.

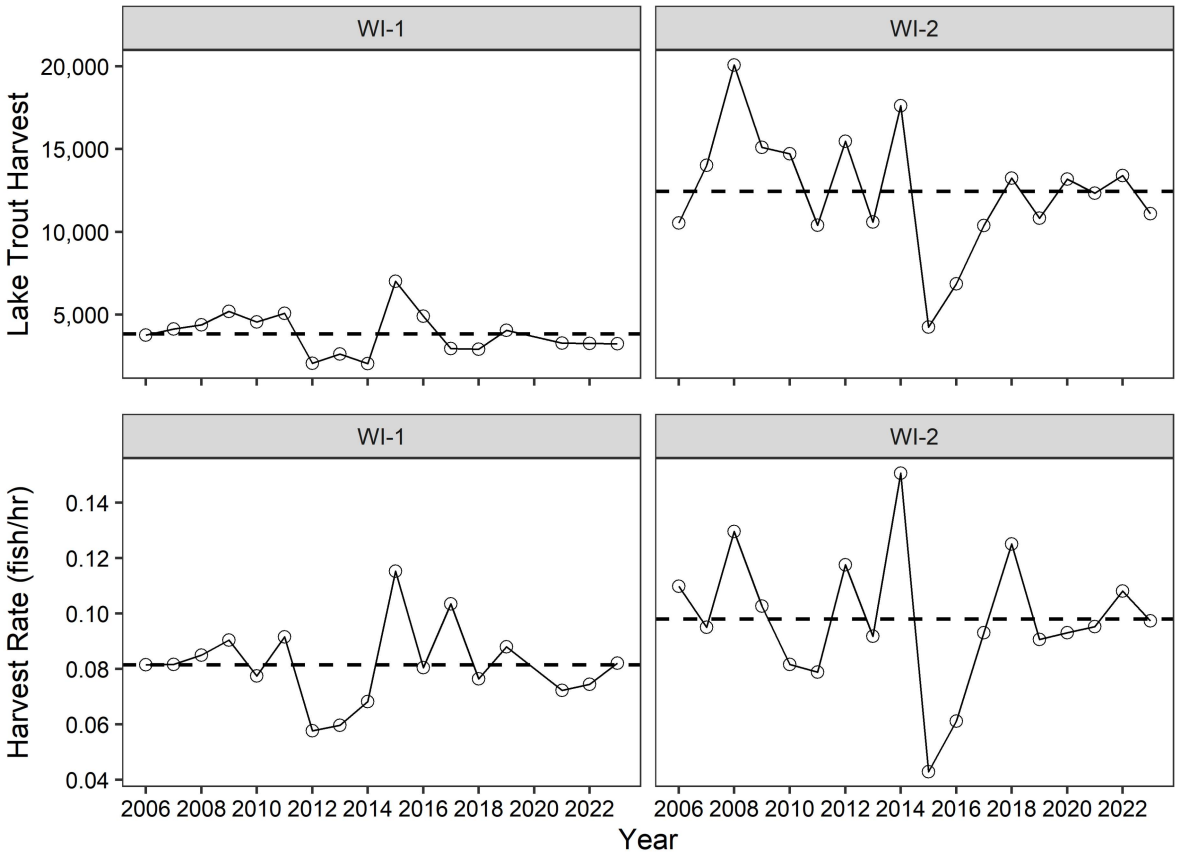

Figure 7. Estimated lake trout harvest (top) and harvest rate (bottom; fish per angler hour) in management unit WI-1 (left) and WI-2 (right) from 2006 to 2023. Total harvest is from all fisheries sampled in the DNR Lake Superior Creel Survey, and the harvest rate is from the Open-Water Cold fishery. Dashed lines are average values from throughout the time series.

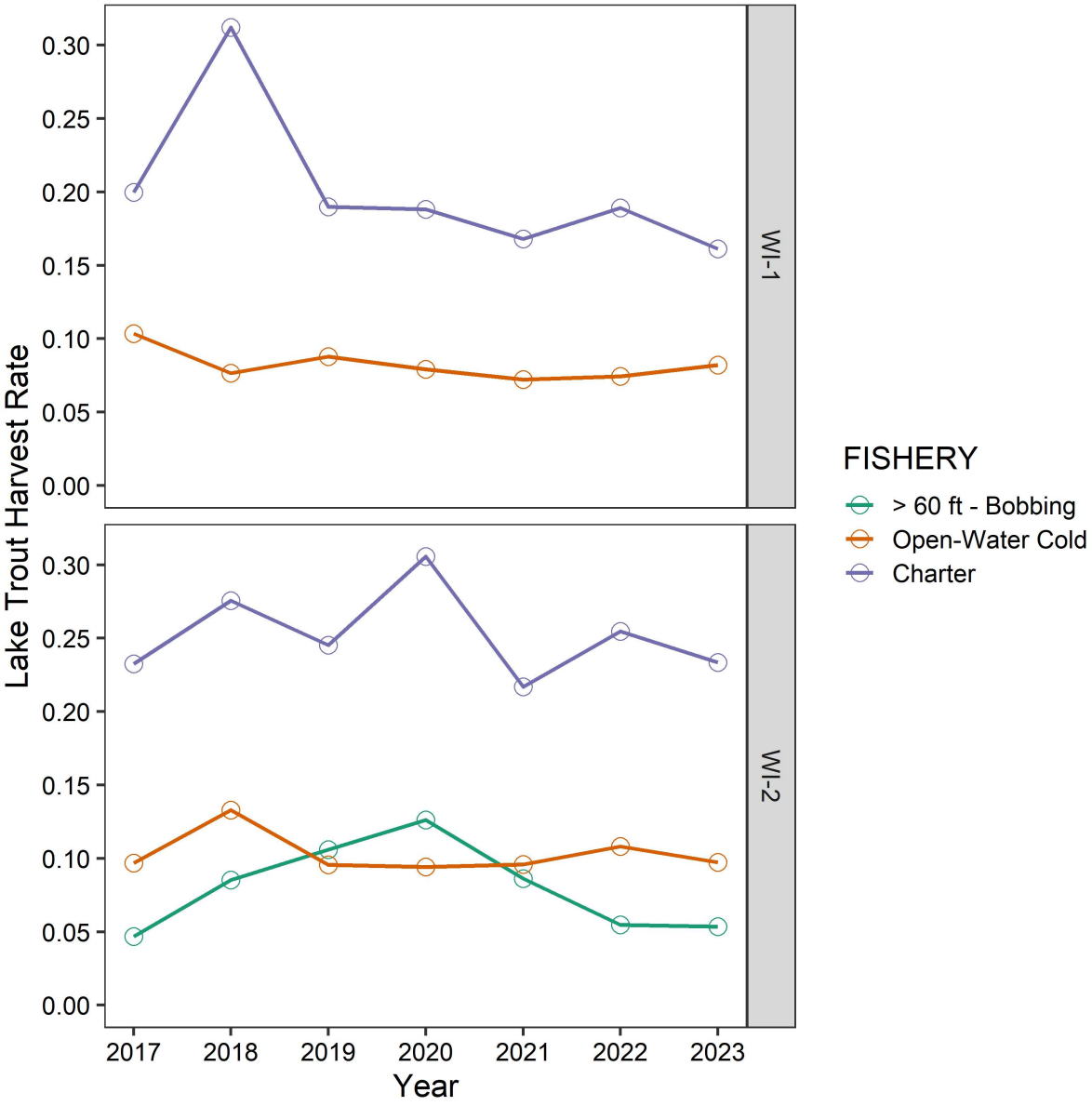

Figure 8. Estimated harvest rate (fish per angler hour) of lake trout by fishery sampled in the DNR Lake Superior Creel Survey within each management unit (WI-1 and WI-2) from 2017 to 2023.