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WISCONSIN'S LAKE MICHIGAN SALMONID SPORT FISHERY 1969-85

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ABSTRACT

Wisconsin's Lake Michigan salmonid sport fishery began during 1963-69 with the stocking of rainbow trout (*Oncorhynchus mykiss*), lake trout (*Salvelinus namaycush*), brown trout (*Salmo trutta*), brook trout (*S. fontinalis*), coho salmon (*O. kisutch*), and chinook salmon (*O. tshawytscha*). The fishery grew rapidly during 1969-85 as angler effort increased ten-fold, catch rate doubled, and harvest increased twenty-fold. Stocking and catch were increasingly dominated by chinook salmon -- with coho salmon and lake trout of secondary importance and brown, rainbow, and brook trout of lesser importance. Trolling dominated the fishery -- particularly by launched-boat anglers and, more recently, by moored-boat anglers. Charter trolling grew the most continuously and had the highest catch rates. Chinook and coho salmon and lake trout dominated trolling catch. Pier, shore, and stream anglers fished less overall, but had catch rates similar to those of launched-boat anglers. The catch by pier and shore anglers was spread among chinook and coho salmon, and lake, brown, and rainbow trout. The stream-angling catch was dominated by chinook salmon. The percentage of stocked fish subsequently caught (catch ratio) was highest for fingerling chinook salmon (12.9%). Yearling brook and brown trout, coho salmon, and lake and rainbow trout had intermediate catch ratios (5.1%-9.8%). Fingerling brook, brown, and lake trout had lower catch ratios (2.5%-3.6%). The catch ratio for rainbow trout dropped from 9.8% to 5.1% following conversion to a different strain (the Shasta strain). Fingerling rainbow trout produced the lowest returns (<0.5%). Stocking recommendations were based on catch ratios, and catch objectives were based on 1982-85 average catches.

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INTRODUCTION

Lake Michigan fish populations have changed greatly in recent decades. For more than a century before 1940, Lake Michigan fish populations supported relatively stable sport and commercial fisheries. In the 1940s and '50s, however, exotic sea lamprey (*Petromyzon marinus*), alewife (*Alosa pseudoharengus*), and rainbow smelt (*Osmerus mordax*) invaded; commercial fishing pressure increased; and spawning habitat deteriorated. Many native species, including lake trout (*Salvelinus namaycush*), ciscoes (*Coregonus* spp.), and lake whitefish (*C. clupeaformis*) declined or became extinct.

In the 1960s, state and federal fisheries management agencies around Lake Michigan began intensive efforts to control sea lamprey, through chemical treatment of larval nursery areas, and alewives, through stocking of salmonid predators. Sea lamprey populations subsequently declined, and a sport fishery for trout (*Salmo* spp.), chars (*Salvelinus* spp.), and Pacific salmon (*Oncorhynchus* spp.) developed. This fishery continues and now supports a multi-million dollar tourist industry. Wisconsin's share of the Lake Michigan fishery has been conservatively valued at >$60-million (Bishop 1984).

An annual creel survey of anglers on Wisconsin's Lake Michigan waters has been conducted since 1969 by the Wisconsin Department of Natural Resources (WDNR) to evaluate its management program and to monitor fishery growth. Originally, data were collected from anglers surveyed at boat ramps, piers, breakwaters, streams, and shore sites. The sampling design was expanded in 1976 to include mandatory reporting by charter-boat captains and again in 1982 to include voluntary reporting by anglers who used moored boats.

This report describes salmonid sport fishery development in Wisconsin's Lake Michigan waters -- reviewing stocking history and changes in fishing effort, catch rate, and harvest (from the 17-year creel survey) and analyzing the relationship between stocking and harvest.

STUDY AREA

Lake Michigan is the world's sixth largest lake in both area (22,400 miles^2) and volume (1,170 miles^3). The lake is 307 miles long and 118 miles wide at its maximum, with 1,661 miles of shoreline and a mean depth of 276 feet. Wells and McLain (1973) describe the lake and its history in detail.

Political jurisdiction is shared by Michigan, Wisconsin, Illinois, and Indiana. Wisconsin's share (Fig. 1) -- second only to Michigan's -- encompasses 4.7-million surface acres (32.8%), 495 miles of shoreline (29.8%), and 25 tributaries. Wisconsin's Lake Michigan waters include Green Bay and portions of two distinct lake basins.

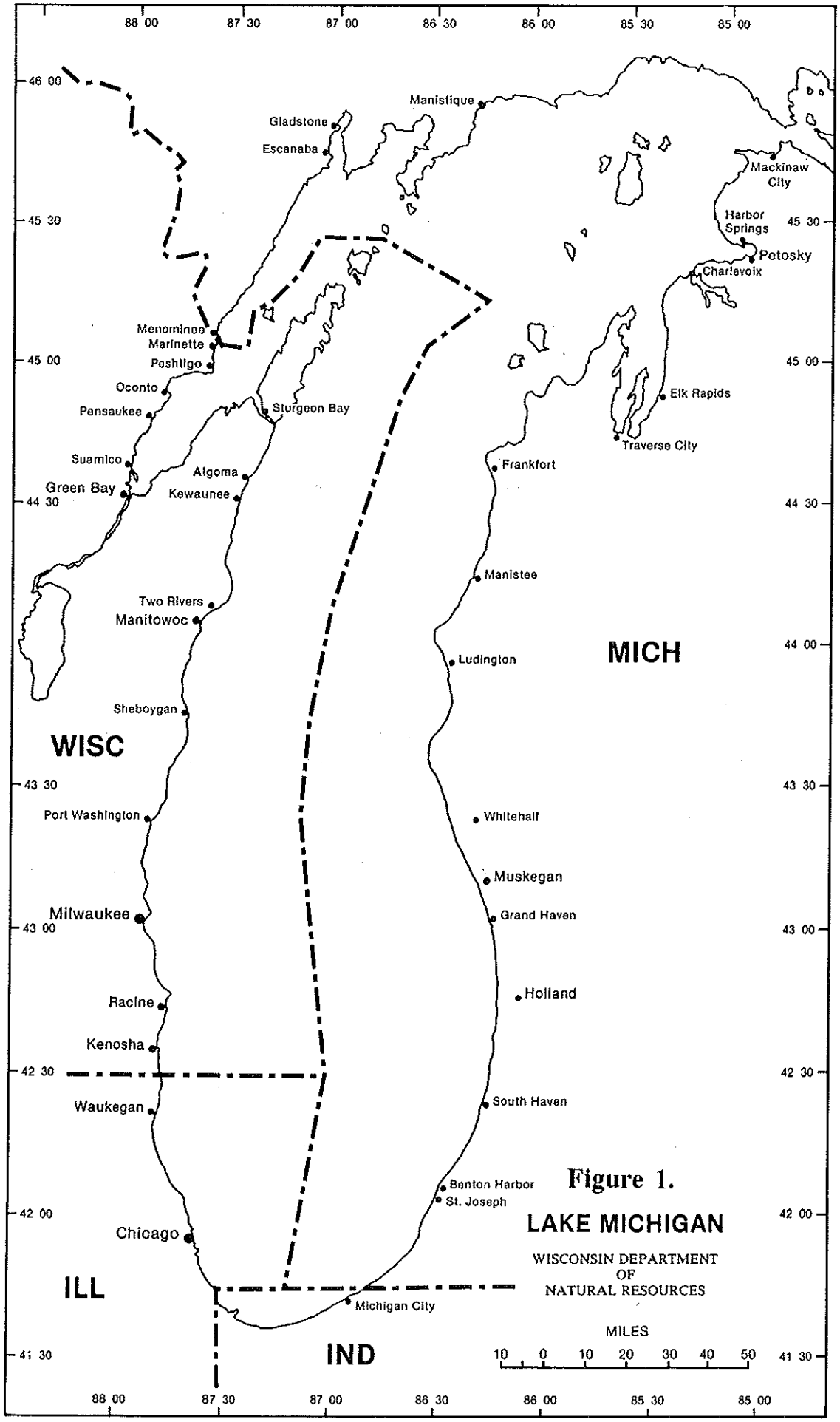


Figure 1.

LAKE MICHIGAN

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Green Bay is northernmost. It is shallower and more eutrophic than the lake proper and commonly yields half of the lake's total annual harvest of commercial fish. Green Bay water temperatures generally limit the salmonid fishery to the upper, northern section of the bay. Major access points are Marinette, Peshtigo, and Oconto on the west shore and numerous small harbors on the east shore. Major tributaries used by anadromous salmonids enter the bay from the west, including the Menominee, Little, Peshtigo, and Oconto rivers.

The northern lake basin extends from the tip of Door County to about midway between Manitowoc and Sheboygan. The shoreline is generally rocky and irregular in the north and sandier and less broken in the south. The lake bottom slopes steeply to a maximum depth of 923 feet. Major access points include Gills Rock, Baileys Harbor, Sturgeon Bay, Algoma, Kewaunee, Two Rivers, and Manitowoc. Many small tributaries are used by anadromous salmonids; major tributaries include the Ahnapee, Kewaunee, East and West Twin, and Manitowoc rivers.

The southern lake basin includes all waters from just north of Sheboygan south. The shoreline is generally unbroken, and the lake bottom slopes gently to a maximum depth of 558 feet. Major access points are Sheboygan, Port Washington, Milwaukee, Racine, and Kenosha. Major tributaries include the Sheboygan, Milwaukee, and Root rivers.

METHODS

Data describing Wisconsin's salmonid stocking program and sport fishery were summarized by year to evaluate annual trends -- and by time period and management area to evaluate temporal trends in geographic zones. The time periods (1963-71, 1972-78, and 1979-85) represent early, middle, and recent years of the salmonid management program, and the management areas represent approximately similar geographic zones. Green Bay (GRB) included all sites from the Wisconsin-Michigan state line to the tip of the Door peninsula, and Washington Island. Eastern Door County (DOR) included all sites along the lake side of the Door peninsula. Algoma-Kewaunee (KEW) included all sites in Kewaunee County, most at the cities of Algoma and Kewaunee. Two Rivers-Manitowoc (MAN) included all sites in Manitowoc County, most at the cities of Two Rivers and Manitowoc. Sheboygan (SHE) included all sites in Sheboygan County, most at the city of Sheboygan. Port Washington (PTW) included all sites in Ozaukee County, most at the city of Port Washington. Milwaukee (MLW) included all sites in Milwaukee County, most at the city of Milwaukee. Racine-Kenosha (RKN) included all sites in Racine and Kenosha counties, most at the cities of Racine and Kenosha.

STOCKING

Before fish leave hatcheries or rearing stations for stocking in Wisconsin waters, fish-planting receipts are prepared that identify: hatchery or rearing station of origin, species, shipment date, county where stocked, age class at stocking (egg, fry, fingerling, yearling, adult), average size (inches), total number stocked, total pounds stocked, waterbody planted, and water temperature in the shipment tank. At the stocking site, the receipt is signed by a fisheries manager and a citizen cooperator to verify the stocking. The original receipt is then filed at the hatchery or rearing station of origin; copies, in files at the local fisheries management office, the district headquarters, and the central office.

Fish-planting receipts for trout and salmon stocked in Wisconsin's Lake Michigan waters were tabulated for 1963-85. Numbers of each species (brook, brown, rainbow, and lake trout; coho and chinook salmon) and life stage (fingerling and yearling) were summarized for all stocking sites in each geographic zone.

GENERAL CREEL SURVEY

Annual creel surveys were conducted from mid-March through mid-November, 1969-85, at boat ramps, piers, breakwaters, and shore and stream sites along Lake Michigan from the Michigan state line at Marinette to the Illinois state line near Kenosha. Survey sites were grouped by geographic proximity, site groups were selected randomly on a daily basis, and survey sites in each group were visited in random order. Saturday, Sunday, and 2 randomly selected weekdays were surveyed weekly. All holidays were surveyed.

Fishing effort was estimated by counts of boat trailers at boat ramps and of anglers at piers, breakwaters, and shore and stream sites. Counts were made at the beginning and end of each site visit and averaged daily. The average number of anglers using boat ramps each month was determined for each day type (weekday, weekend, holiday) by multiplying the average daily number of boat trailers counted times the average number of anglers/boat (from angler interviews). The average number of anglers using pier, breakwater, shore, and stream sites each month was calculated directly from average daily counts. Total monthly fishing effort for each fishery was then estimated by multiplying the average angler counts times an assumed 14 hours of daily fishing opportunity, then totaling day types over all days in the month.

Catch rates were determined from angler interviews at each location. Data collected included party size, trip duration, angler residence, harvest of each species, and the length, weight, and finclips of fish caught. Average monthly catch rates of each species were expanded by the estimated angling effort at each site to estimate the monthly harvest of each species. All calculations were made using a verified computer program.

CHARTER-BOAT CATCH REPORTING

The charter fleet on Lake Michigan that consisted of 4 boats in 1969 (2 each at Algoma and Kewaunee) increased to 98 in 1973, 188 in 1976, and 524 in 1985. A 1974 statute requires charter operators to license their boats and report catch. During 1974-75, however, catch reports received were considered unreliable due to underreporting. Ditton et al. (1975) interviewed 44 charter operators in 1973, who reported harvesting 37,741 fish, and expanded the harvest of interviewed operators to a lakewide harvest estimate of 84,642 fish. In contrast, mandatory reporting the following 2 years indicated a total harvest of 30,220 in 1974 and 25,199 in 1975.

Harvest reporting improved by 1976 through increased enforcement and informational meetings. Report forms that WDNR supplied to charter-boat operators required data on location fished, hours fished, number of lines fished, number of resident (Wisconsin) and non-resident anglers, and harvest of each species. Effort, catch rate, and harvest were then summarized by computer. Charter operators who failed to submit monthly reports were notified of the penalties and, in most cases, reports were received. At informational meetings, managers explained the importance of accurate reporting to improve the fishery. However, we suspect that underreporting continued, biasing the absolute estimates of harvest and effort, but we believe the bias was consistent year-to-year, making relative comparisons among locations, months, and species valid.

MOORED-BOAT SURVEY

Anglers who moored boats, but who were not charter operators, were surveyed beginning in 1982 through a volunteer catch report system. Report forms -- supplied by WDNR to moored-boat owners through sport-fishing clubs -- requested data on port of call, hours fished, number of lines fished, number of resident (Wisconsin) and non-resident anglers, and harvest of each species. The data were then summarized by month and port.

Effort and harvest by all moored-boat anglers were estimated by expanding the effort and harvest of respondents to the estimated number of moored boats at each port of call. These estimates were based on counts of moored fishing boats (excluding charter boats) made at ports of call during bad weather when nearly all boats were docked. We suspect that respondents were better, more interested anglers than average and that the voluntary catch report survey overestimated the actual effort and harvest of moored-boat operators. However, we believe that the relative comparisons among locations, months, and species are probably valid.

CATCH RATIOS

The percentage of stocked fish that are subsequently caught (catch ratio, CR) is the ratio of total number harvested (H) to total number stocked (N):

$$CR = H/N$$

However, the harvest of some species results from separate stockings of fingerlings and yearlings:

$$CR_f = H_f/N_f \text{ and } CR_y = H_y/N_y$$

The relative contributions of stocked fingerlings and yearlings to the Lake Michigan sport fishery harvest are not readily distinguishable, so we adjusted the ratio of total number harvested to total number stocked by the relative survival of yearlings and fingerlings observed in Great Lakes stocking evaluations. The ratio of yearling survival to fingerling survival (SR) is:

$$SR = (R_y/N_y)/(R_f/N_f)$$

where R_y and R_f are the numbers of returns observed from yearling and fingerling stockings, N_y and N_f. Specific SR values used in our analyses were 2.4 for lake trout (Elrod et al. 1988), 2.2 for brown trout (Lychwick 1980), and 23.7 for rainbow trout (Seelbach 1985). No SR value was available for brook trout, so we averaged SR values for brown and lake trout (SR = 2.3) because we thought relative survival of brook trout yearlings and fingerlings was similar to that of lake and brown trout.

Total harvest thus includes fish stocked as fingerlings and yearlings:

$$H = H_f + H_y$$

We assumed that the harvest from each stocking was proportional to the number of adult survivors and that the relative harvest of fish stocked as fingerlings and yearlings was related to the survival ratio and the original number of each group stocked:

$$H_y = [(SR)(N_y/N_f)]H_f$$

Substituting this equation into the fingerling and yearling catch ratio equations, yields equations describing the catch ratios of fingerlings and yearlings:

$$CR_f = H/(N_f + SRN_y) \text{ and } CR_y = H/(N_y + N_f/SR)$$

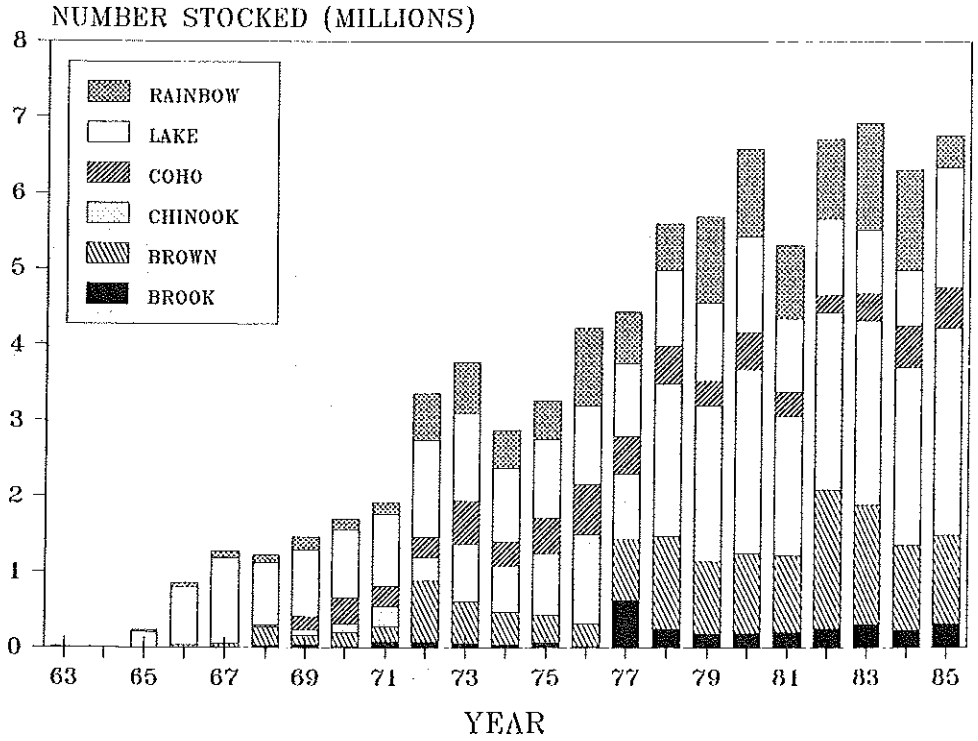
We estimated catch ratios for the 6 salmonid species stocked in Wisconsin's Lake Michigan waters using these equations, assuming appropriate lag times between stocking and subsequent harvest. Lag times used were: 1 year for yearling brook and brown trout (Lychwick 1980), coho salmon (Patriarche 1980, Pfender and Poff 1980a), and rainbow trout (Scholz et al. 1978); 2 years for fingerling brook, brown (Lychwick 1980), and rainbow trout; 3 years for fingerling chinook salmon (Lychwick 1986); 4 years for yearling lake trout (Pfender and Poff 1980b); and 5 years for fingerling lake trout (Pfender and Poff 1980b).

RESULTS

STOCKING

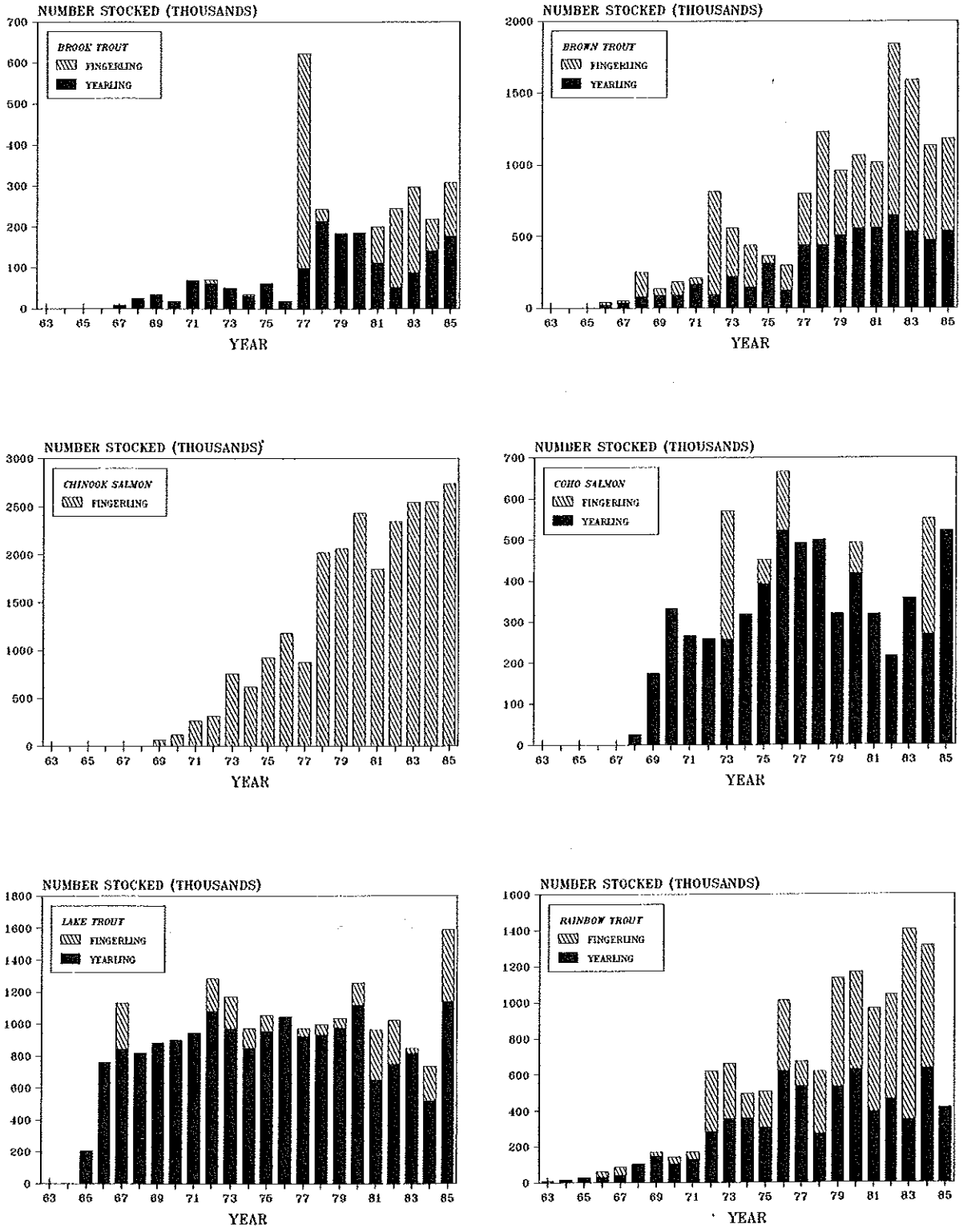
The salmonid stocking program in Wisconsin's Lake Michigan waters (Fig. 2) began in 1963 when WDNR released 9,000 rainbow trout (*O. mykiss*). Then 2 years later, the U.S. government began providing lake trout for stocking, and in consecutive years during 1966-69 WDNR stocked brown trout (*S. trutta*), brook trout (*S. fontinalis*), coho salmon (*O. kisutch*), and chinook salmon (*O. tshawytscha*). As hatchery production of each species increased, annual salmonid stocking surpassed 1.5-million fish in 1969 and 5.7-million fish in 1979, reaching a maximum of 7.3-million fish in 1983. Currently, hatchery production is stable since Hansen (1986) recommended reducing chinook salmon stocking 10% due to coincident declines in the species' condition and in alewife abundance.

Figure 2. Annual stocking of six salmonid species in Wisconsin's Lake Michigan waters, 1963-85.



Species. WDNR has stocked relatively few brook trout in Lake Michigan, altogether 3-million since 1967. Annual brook trout stocking decreased sharply after 1977 (600,000 stocked) and remained relatively consistent during 1978-85 (200,000-300,000 annually) (Fig. 3). The ratio of stocked fingerling to yearling brook trout varied dramatically year-to-year but was about 1:1 over the entire study period with 1.3-million fingerlings and 1.6-million yearlings stocked during 1967-85. Few fingerlings were stocked before 1976 or during 1978-80, whereas >500,000 were stocked in 1977 and large numbers were stocked during 1981-85.

Figure 3. Annual stocking of fingerling and yearling salmonids in Wisconsin's Lake Michigan waters, 1963-85.



Since 1966, WDNR has stocked >14.1-million brown trout in Lake Michigan as fall fingerlings (8.1-million) and as spring or summer yearlings (6.0-million). Annual brown trout stocking has been variable with peaks in 1968, 1972, 1978, and 1982. Nearly twice as many fingerlings as yearlings were stocked during 1982-83, whereas nearly equal numbers of fingerlings and yearlings were planted during 1984-85.

WDNR has stocked chinook salmon since 1969, and annual stockings totaled 23-million through 1985. All were stocked as spring fingerlings. Annual chinook salmon stocking increased from generally <1-million before 1978 to generally >2-million since 1978, peaking in 1985 at >2.7-million.

WDNR has stocked nearly 7-million coho salmon in Lake Michigan since 1968. Coho salmon are usually stocked as spring yearlings, but fall fingerlings were stocked in 1973, '75, '76, '80, and '84. Fingerlings accounted for only 12.8% (876,700) of all coho salmon stocked. Stocking increased gradually during 1968-76, when nearly 672,000 were planted, and has since stabilized at about 450,000 annually.

An essential part of Great Lakes management has been the effort to restore naturally reproducing lake trout populations that were decimated by lamprey predation and overfishing. The U.S. Fish and Wildlife Service began restocking in 1965 and have provided virtually all the lake trout stocked in Wisconsin's Lake Michigan waters since. During 1965-85, 20.6-million lake trout were stocked, increasing sharply from 200,000 in 1965 to >760,000 in 1966. Since 1967, stocking averaged about 1-million annually until 1985, when >1.6-million were stocked. Few (2.5-million) fingerling lake trout have been stocked.

In the early 1970s, accelerated growth fingerling lake trout -- reared in heated water and on special diets -- were stocked along with normal growth fingerlings and yearlings to evaluate relative survival. Researchers thought that production could be increased at lower costs if accelerated growth fingerlings outperformed normal growth fingerlings and yearlings. However, accelerated growth fingerlings showed higher mortality, and the evaluation was discontinued. Since 1978, only normal growth fingerlings have been stocked to complement yearling stocking.

Since 1963, WDNR has stocked 6.1-million fingerling and 6.7-million yearling rainbow trout in Lake Michigan. Both fingerlings and yearlings were stocked annually during 1969-84. In 1985, fingerlings were discontinued. Rainbow trout stocking increased erratically -- from 9,200 in 1963 to >0.5-million in 1972 and to >1-million in 1979 -- peaking in 1983 at nearly 1.5-million.

Geographic Zones. During the early period, 1963-71, of Wisconsin's salmonid stocking program about 8.7-million were stocked in Lake Michigan -- >87% (7.6-million) north of Sheboygan County, including >26% (2.3-million) off eastern Door County alone (Fig. 4). More lake trout were stocked than all other species combined, accounting for 65% (5.6-million) of all stocking (Fig. 5). Coho salmon, brown trout, and rainbow trout each composed 8%-9%; chinook salmon, 5%, and brook trout, 2%.

Figure 4. Salmonid stocking in Wisconsin's Lake Michigan waters by time period and management zone.

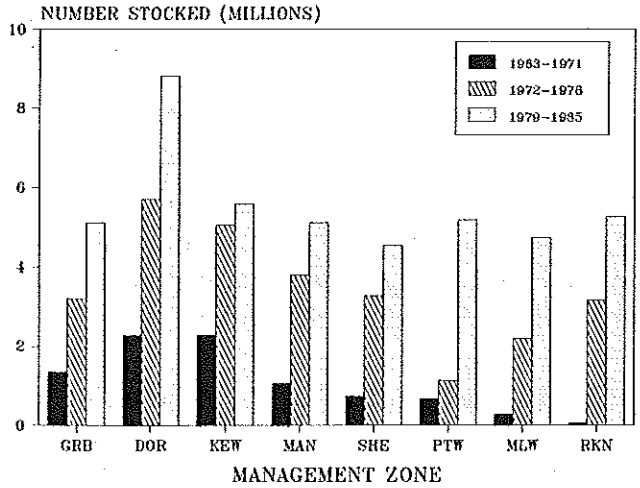
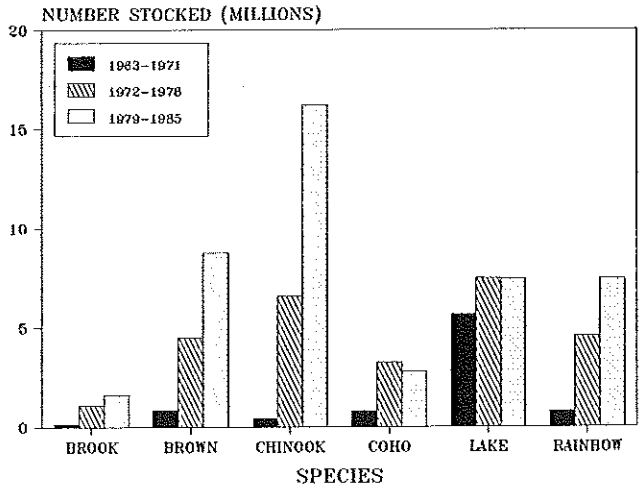


Figure 5. Salmonid stocking in Wisconsin's Lake Michigan waters by time period and species.



During the middle period, 1972-78, salmonid stocking totaled 27.5-million, and it shifted south. Stocking from Milwaukee south, 3% during the early period, increased to nearly 20% of all stocking. This shift reflected the decision to discontinue lake trout stocking north of Sturgeon Bay, in eastern Door County, because of high incidental lake trout mortality in the commercial whitefish gillnet fishery. Lake trout stocking increased during the middle period, but less so than the stocking of other species. Consequently, lake trout composed only 27% of all stocking, whereas chinook salmon composed nearly 24%, brown and rainbow trout each composed 16%-17%, coho salmon composed nearly 12%, and brook trout composed 4%.

During the recent period, 1979-85, salmonid stocking increased to 44-million and was evenly distributed (4- to 5-million/area), except for dramatically heavier stocking in eastern Door County (nearly 9-million). The largest stocking increases were in Ozaukee County, up three-fold to >5-million, and Milwaukee County, more than doubled to nearly 5-million. Stocking increased only 12% in Kewaunee County, decreasing from 18% to 13% of all stocking. The shift from northern to southern counties reflected increased knowledge of fish movements and of fishing patterns. Also, coho salmon stocking, discontinued in counties north of Sheboygan because of high rearing costs compared to chinook salmon, was maintained in southern counties because of their importance in the spring fishery. Chinook salmon stocking increased dramatically, composing nearly 37% of all stocking -- brown trout (20%) and rainbow trout (17%) increased less dramatically, whereas lake trout (17%), coho salmon (6%), and brook trout (4%) decreased slightly.

FISHING EFFORT

Fishing effort in Wisconsin's Lake Michigan waters increased nearly ten-fold during 1969-85 (Fig. 6). Effort increased most during 1969-74; thereafter, effort increased less dramatically and has apparently stabilized since 1982.

Fishery Types. Launched-boat anglers generally fished more than half of all angler hours annually during 1969-85. Pier, shore, stream, charter-boat, and moored-boat anglers composed the remainder of the fishery. Launched-boat anglers effort peaked in 1977 and remained relatively stable thereafter. Pier anglers effort also peaked in 1977, fell somewhat during 1978-81, and rose again during 1981-85. Shore anglers effort rose through 1976 and has fluctuated erratically since. Stream anglers effort rose slowly through 1982 and fell during 1983-85. Charter-boat anglers effort increased steadily during 1976-84, before declining in 1985. This steady rise in fishing effort was not evident for any other angler group in the fishery. Moored-boat anglers effort declined during 1982-84, then increased in 1985.

Geographic Zones. Anglers in Milwaukee County fished >7.9-million hours during 1969-85, >2.5 times the fishing effort spent on Green Bay waters (3.0-million hours) (Fig. 7). Effort increased from Green Bay south to Manitowoc County (6.0-million hours) then decreased south to Ozaukee County (4.4-million hours) before increasing again to lakewide highs in Milwaukee and Racine-Kenosha counties (6.3-million hours).

Figure 6. Sport-fishing effort in Wisconsin's Lake Michigan waters by fishery type, 1969-85.

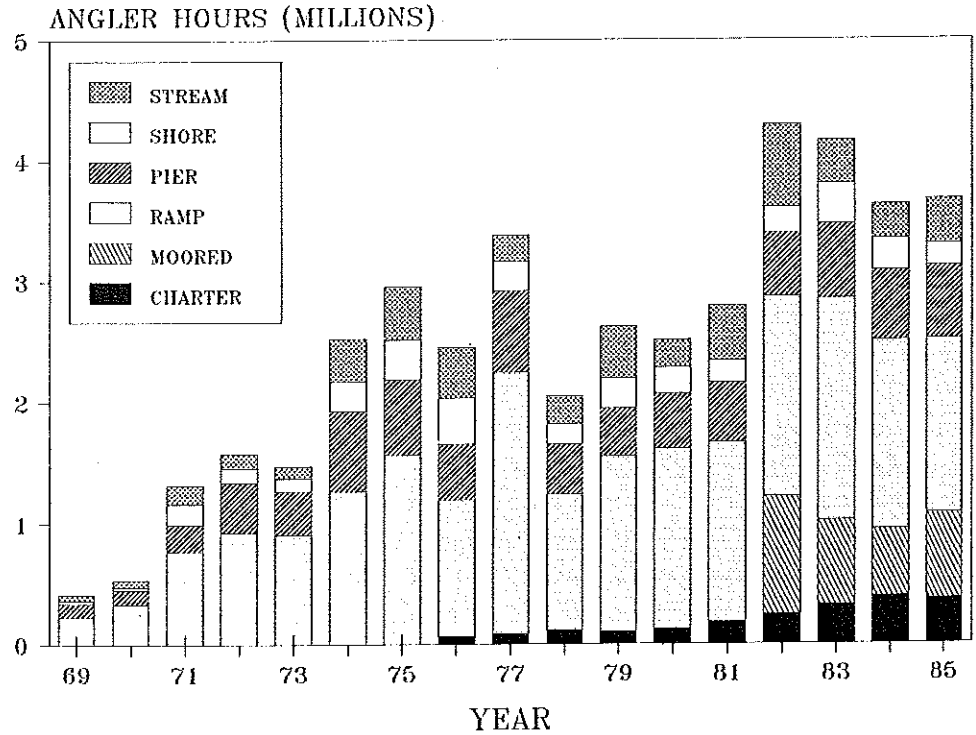
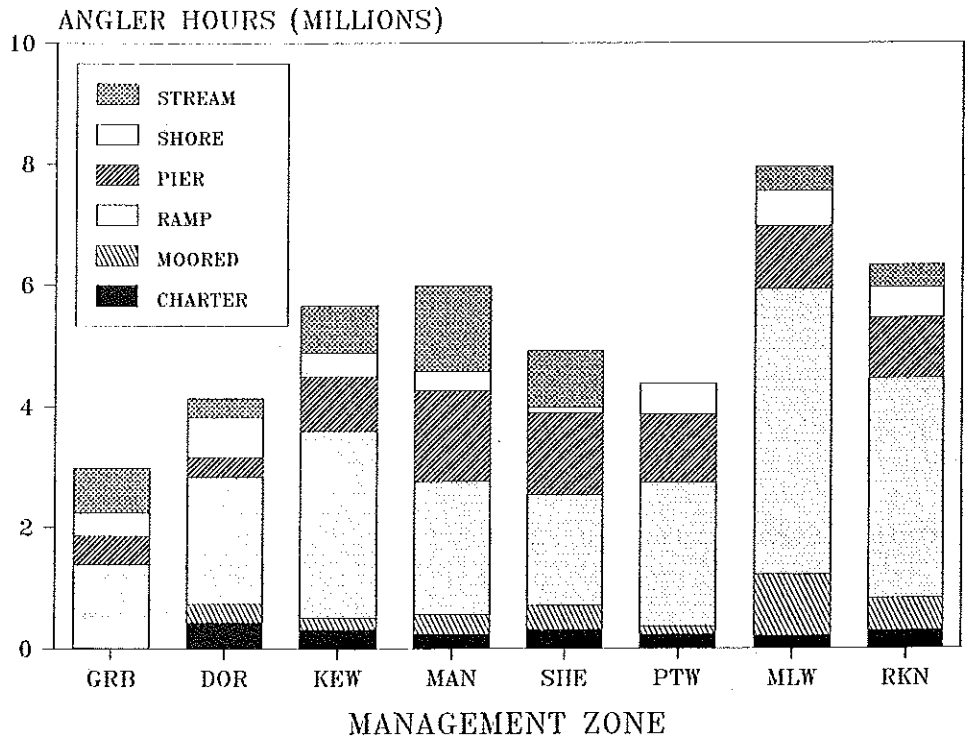


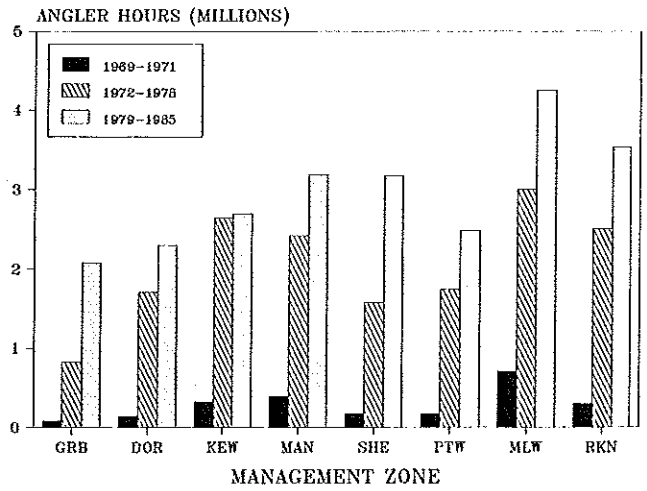
Figure 7. Sport-fishing effort in Wisconsin's Lake Michigan waters by fishery type and management zone.



Fishing effort in Milwaukee County was more strongly dominated by launched- and moored-boat anglers than in other areas. Manitowoc County had the strongest pier and stream fisheries, and Door County had the strongest shore and charter fisheries.

This pattern of fishing effort was similar during early (1969-71), middle (1972-78), and recent (1979-85) time periods, with minor deviations (Fig. 8). During the early years of the fishery, Milwaukee County was established as the busiest area for Lake Michigan fishing, followed by Manitowoc, Kewaunee, and Racine-Kenosha counties. Only Milwaukee County exceeded 0.4-million hours of fishing effort during the early period, increasing to 3.0-million hours during the middle period. Kewaunee County was second busiest during the middle period, followed by Manitowoc and Racine-Kenosha counties. Fishing effort increased in each area from the middle to recent time periods. The greatest increases were in Green Bay, which rose to the level of eastern Door County, and in Sheboygan County, which rose to the level of Manitowoc County. Kewaunee County slipped from second highest to fifth.

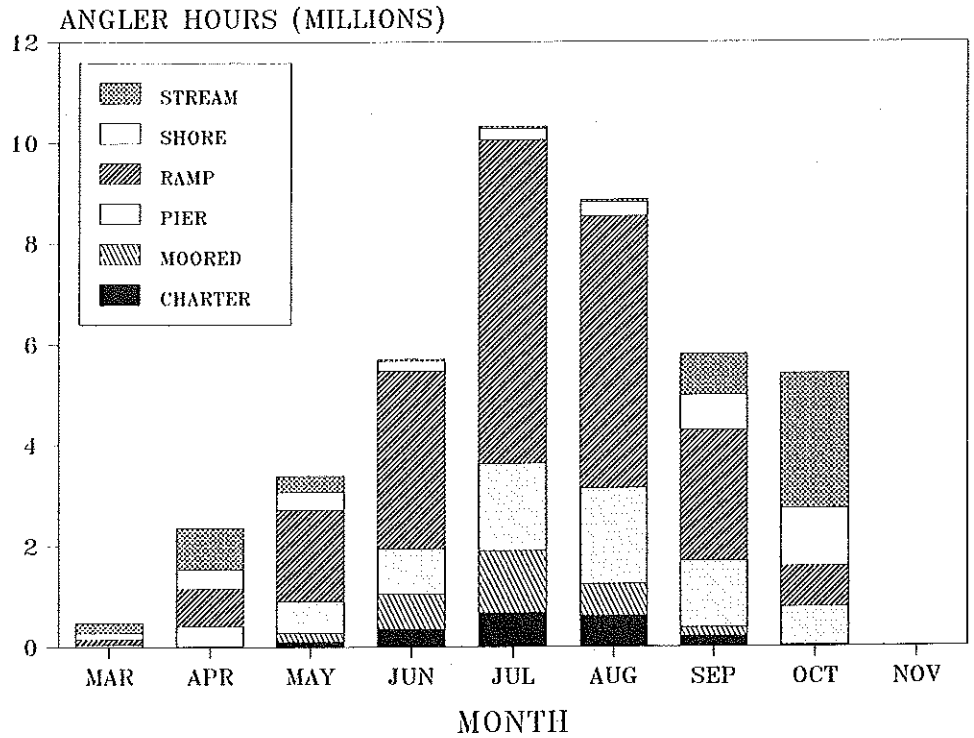
Figure 8. Sport-fishing effort in Wisconsin's Lake Michigan waters by time period and management zone.



Seasons. Summer fishing (June-August) accounted for 59% (24.9-million hours) of the 42.4-million angler hours expended during 1969-85 (Fig. 9) and increased as a portion of seasonal fishing effort from 40% during 1967-71 to 56% during 1972-78 and 63% during 1979-85 (Fig. 10). In contrast, spring fishing (March-May) accounted for 15% (6.2-million hours) of all angler hours and decreased as a portion of seasonal fishing effort from 35% during 1967-71 to 15% during 1972-78 and 13% during 1979-85. Autumn fishing (September-November) accounted for 26% (11.2-million hours) of all angler hours and was relatively stable at 24%-29% of the seasonal effort.

Seasonal fishing effort varied among fishery types. For the trolling fisheries (launched, moored, charter), effort was greatest in summer and increased from 53% of all trolling hours during 1969-71 to 78% during 1979-85. The stream fishery was largely restricted to spring and autumn but shifted from an 80% spring fishery during 1969-71 to a 76% autumn fishery during 1979-85. Pier fishing effort was concentrated in summer, which increased from 40% of pier angler hours during 1969-71 to 63% during 1979-85. Shore fishing effort was concentrated in spring during 1969-71 (65% of shore effort) but shifted to autumn during 1979-85 (61% of shore effort).

Figure 9. Monthly sport-fishing effort in Wisconsin's Lake Michigan waters by fishery type.



CATCH RATE

The catch rate doubled during 1969-85 and tended to follow the same general pattern as fishing effort (Fig. 11). Most of the increase resulted from improved success rates for chinook salmon. The catch rate increased relatively smoothly during 1969-73 and 1978-85, but varied erratically during 1974-77. In particular, 1976 and '77 were unusual in that the catch rate nearly doubled, mostly due to increased success for coho salmon and rainbow trout.

Figure 10. Seasonal sport-fishing effort in Wisconsin's Lake Michigan waters by fishery type and management zone.

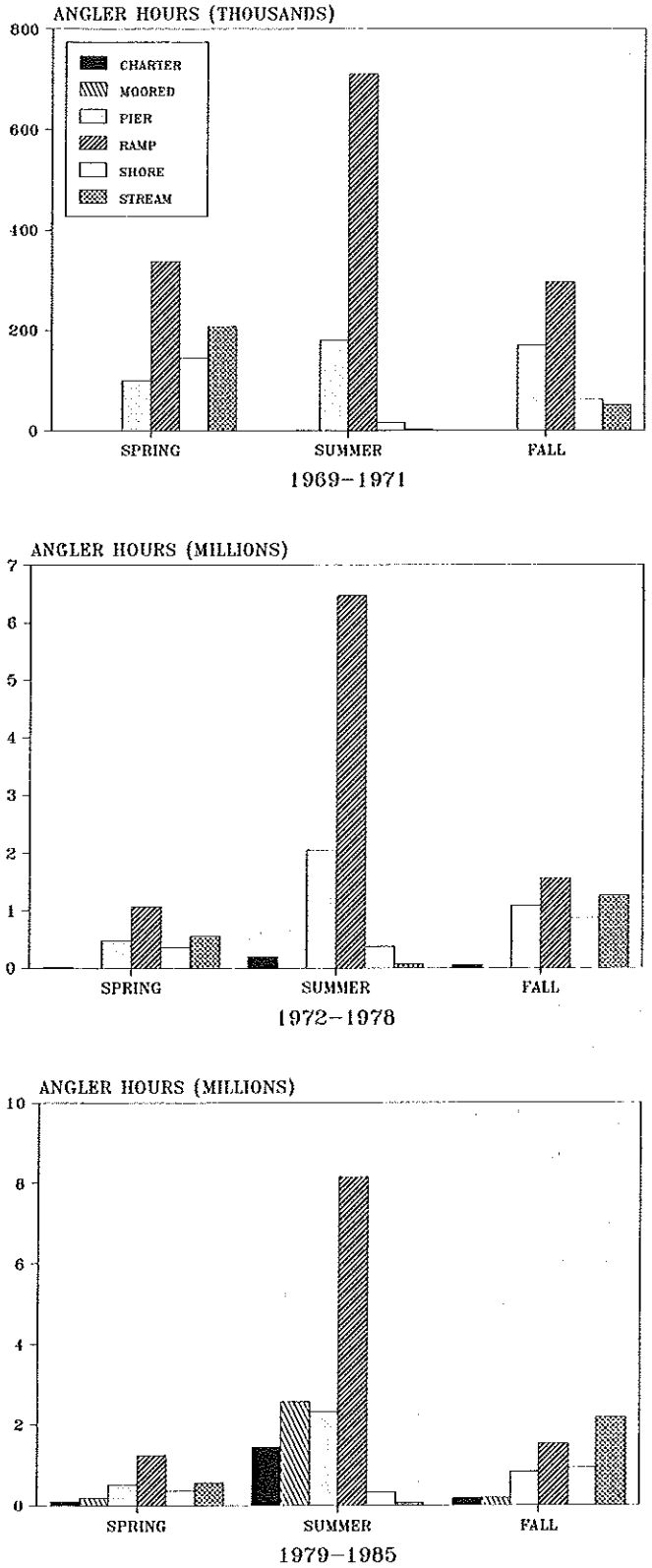
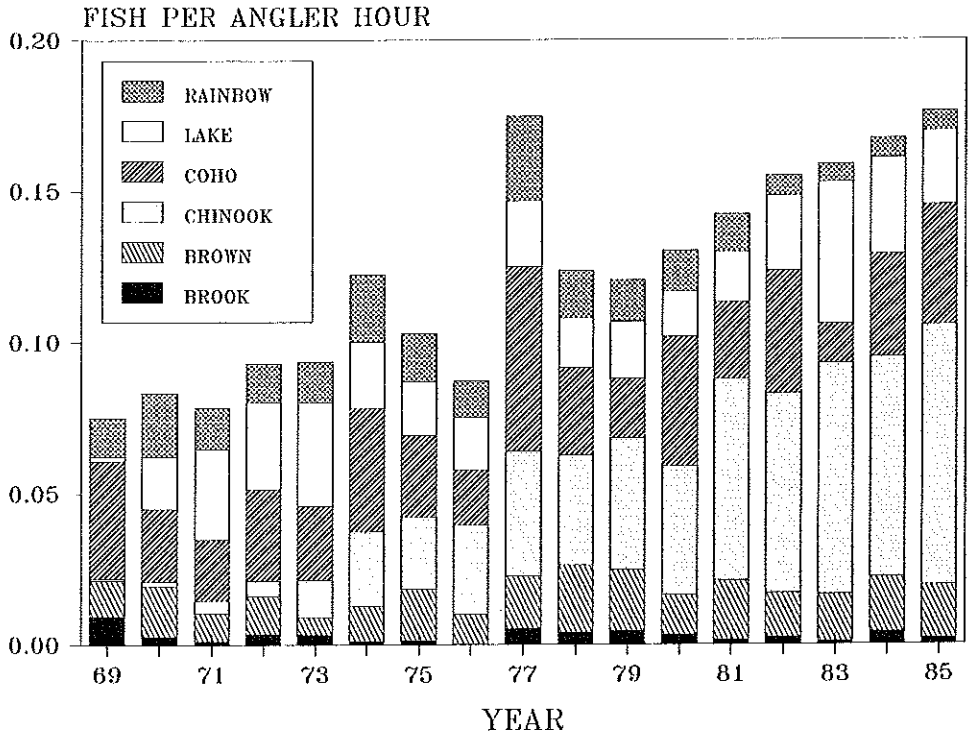


Figure 11. Annual salmonid angling catch rate by species in Wisconsin's Lake Michigan waters, 1969-85.



Fishery Types. The catch rate ranged among fishery types -- pier anglers were least efficient (0.09 fish/hour) and charter-boat anglers were most efficient (0.29 fish/hour). Moored-boat anglers were nearly as efficient (0.25 fish/hour) as charter-boat anglers, whereas launched-boat anglers were much less efficient (0.12 fish/hour). Stream and shore anglers were of intermediate efficiency (0.15 fish/hour and 0.12 fish/hour, respectively).

Angling catch rates in each fishery varied among time periods, increasing from 1969-71 through 1979-85 in the launched-boat and stream fisheries, remaining stable in the pier fishery, and increasing from 1969-71 through 1972-78 in the shore fishery (Fig. 12). The catch rate of launched-boat anglers improved >50% from 1969-71 through 1979-85. The catch rate of stream anglers more than doubled over the same interval. Catch rates of charter-boat anglers rose slightly from 1972-78 through 1979-85 and were only slightly better than moored-boat anglers during 1979-85.

Geographic Zones. The catch rate during 1969-85 did not vary greatly among areas of Lake Michigan -- ranging from 0.11 fish/hour in Milwaukee County to 0.15 fish/hour in Manitowoc County (Fig. 13). The catch rate tended to increase from Green Bay south to Manitowoc County, then decreased south to Milwaukee County before rebounding in Racine-Kenosha counties.

Figure 12. Salmonid angling catch rate in Wisconsin's Lake Michigan waters by time period and fishery type.

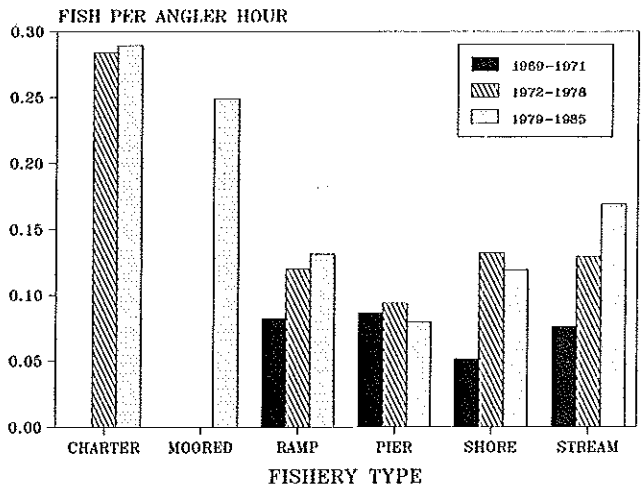
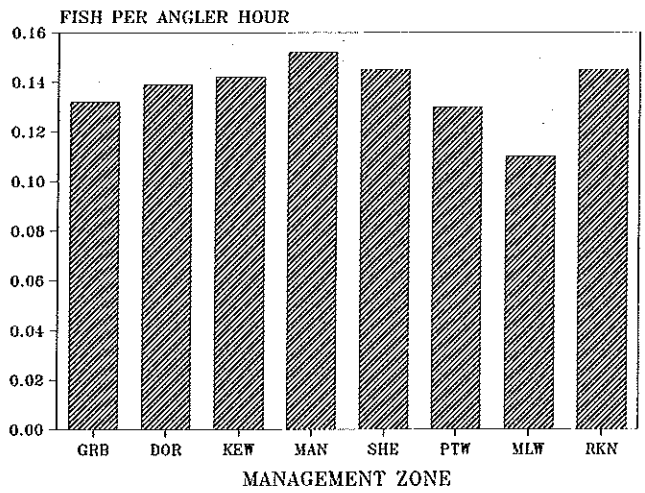


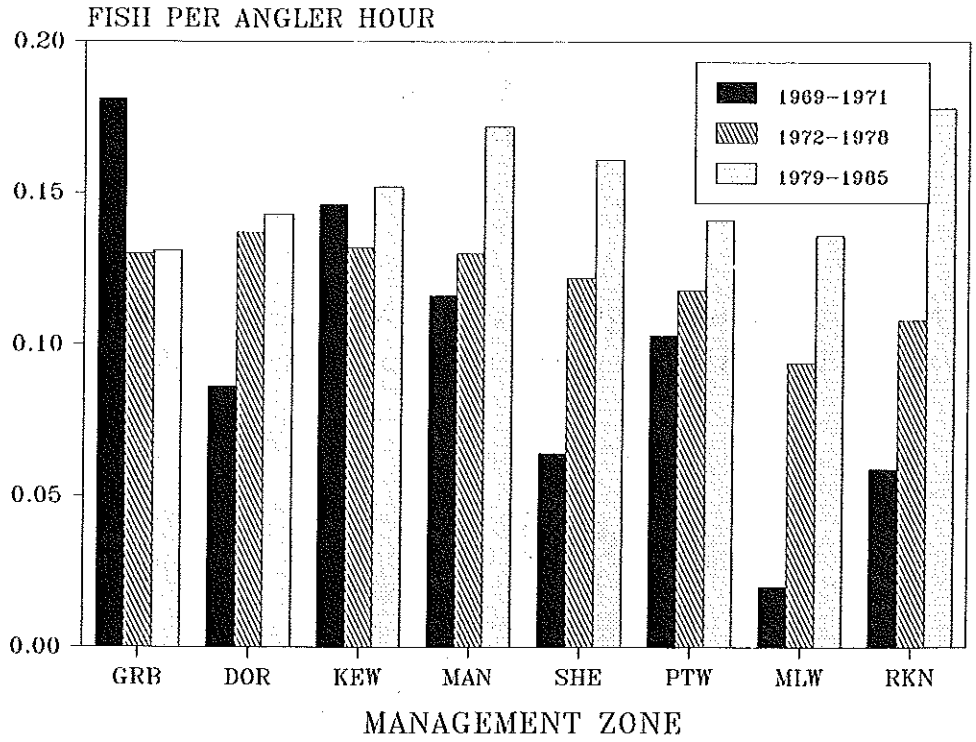
Figure 13. Salmonid angling catch rate in Wisconsin's Lake Michigan waters by management zone.



The catch rate during 1969-71 decreased irregularly from north to south, from a high of 0.18 fish/hour in Green Bay to a low of 0.02 fish/hour in Milwaukee County (Fig. 14). A similar, though less dramatic, north to south decline was evident during 1972-78 as the catch rate decreased from a high of 0.14 fish/hour in Door County to a low of 0.09 fish/hour in Milwaukee County. During 1979-85, no such pattern was evident as the catch rate ranged from 0.13 fish/hour in Green Bay to 0.18 fish/hour in Racine-Kenosha.

The catch rate improved from early to recent periods in all areas of Lake Michigan except for Green Bay and Kewaunee County. The greatest improvement in catch rate occurred at Milwaukee, rising from 0.02 fish/hour during the early years to 0.14 fish/hour during recent years. The greatest decline in catch rate occurred in Green Bay, dropping from 0.18 fish/hour in the early years to 0.13 fish/hour in middle and recent years.

Figure 14. Salmonid angling catch rate in Wisconsin's Lake Michigan waters by time period and management zone.



Seasons. The overall catch rate ranged from a low of 0.09 fish/hour in March to a high of 0.27 fish/hour in November (Fig. 15). The catch rate increased sharply during spring, gradually during summer, and sharply again during autumn.

Catch rates for the different fisheries varied through the seasons, declining from spring to autumn for charter-, moored-, and launched-boat anglers and declining from spring to summer, then peaking in autumn, for pier, shore, and stream anglers (Fig. 16). Catch rates for charter- and moored-boat anglers were 2-2.5 times higher than for other anglers in spring and summer but were similar to those for stream anglers in autumn. Launched-boat anglers had higher catch rates than pier, shore, or stream anglers in spring and summer but had the lowest catch rates in autumn.

Figure 15. Monthly salmonid angling catch rate in Wisconsin's Lake Michigan waters.

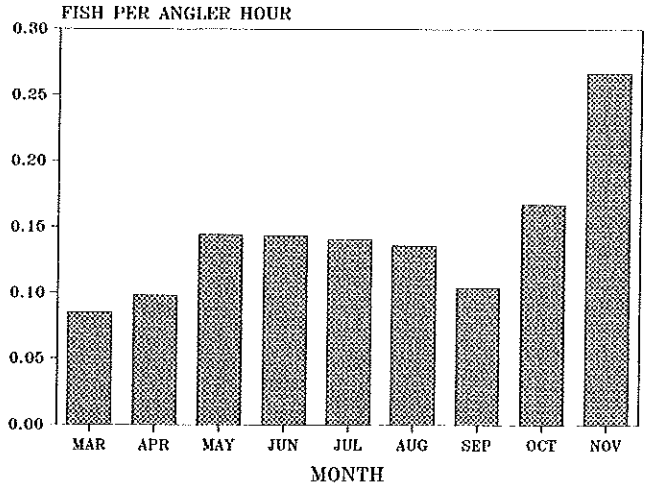
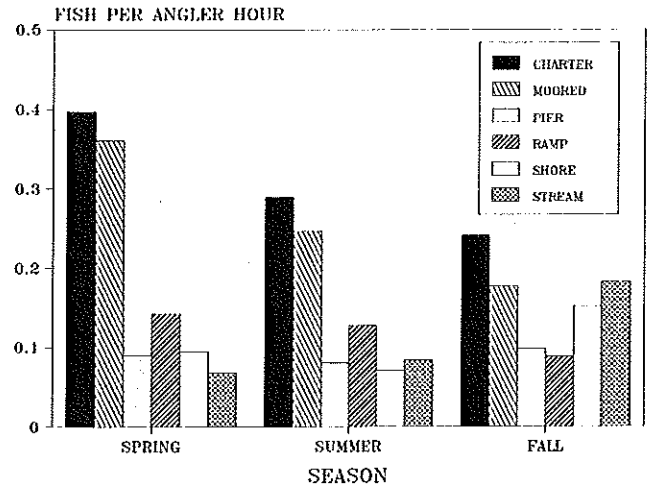
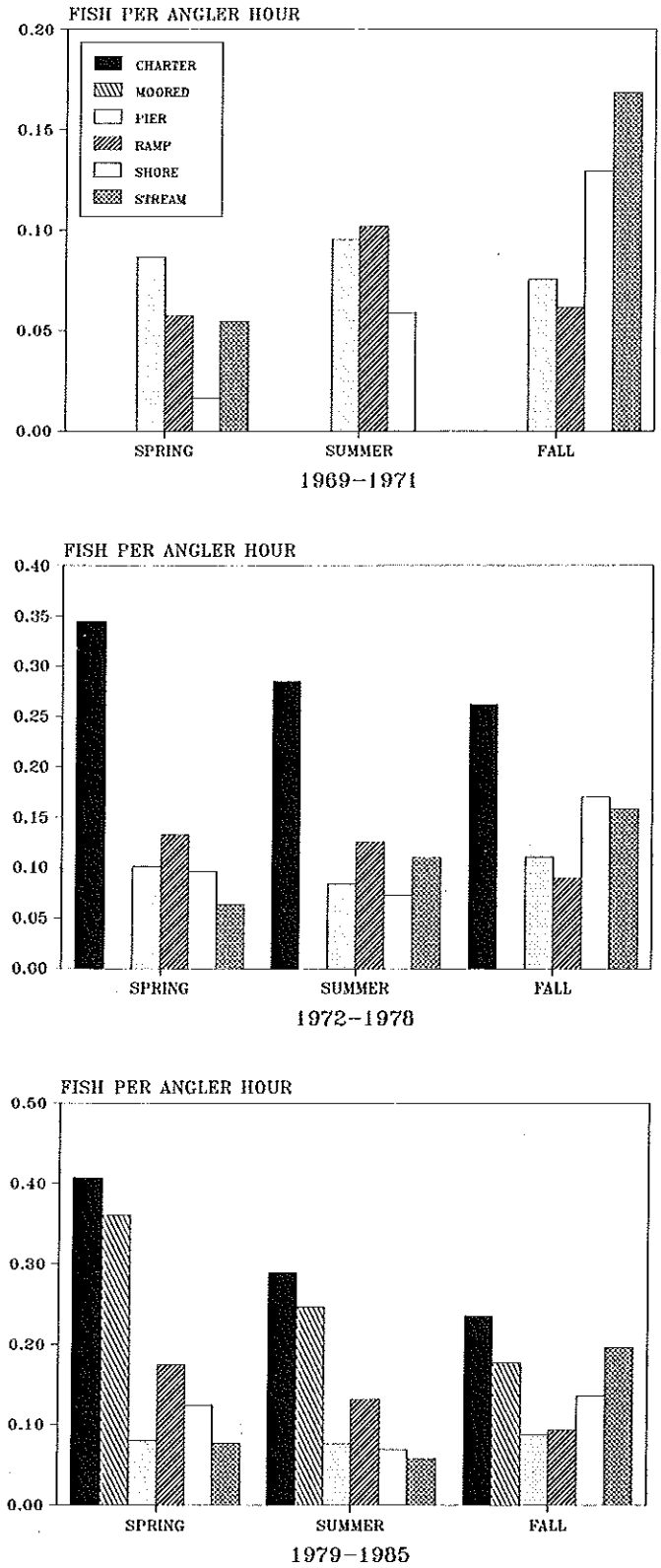


Figure 16. Seasonal salmonid angling catch rate in Wisconsin's Lake Michigan waters by fishery type.



Catch rates for the charter-, moored-, and launched-boat anglers generally declined from spring through autumn during 1972-78 and 1979-85 but were highest for launched-boat anglers in the summer during 1969-71 (Fig. 17). Catch rates for pier anglers varied the least over seasons and time periods but did exhibit different seasonal patterns during each time period. Catch rates for shore and stream anglers were generally highest in autumn and lowest in summer, except that shore anglers during 1969-71 had their lowest catch rate in spring.

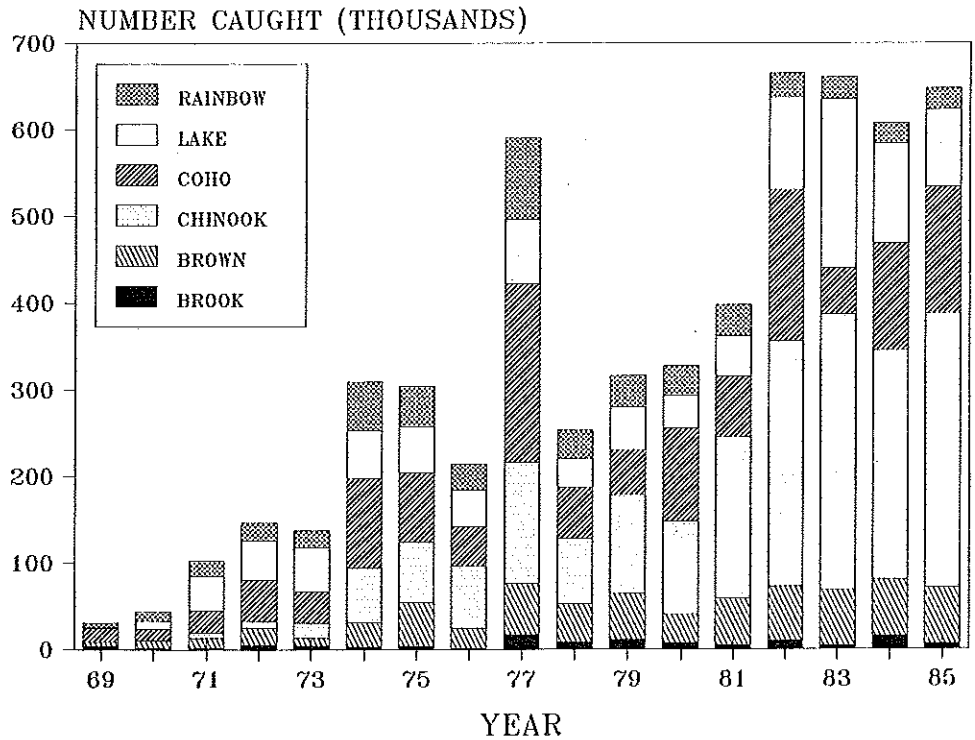
Figure 17. Seasonal salmonid angling catch rate in Wisconsin's Lake Michigan waters by fishery type and time period.



HARVEST

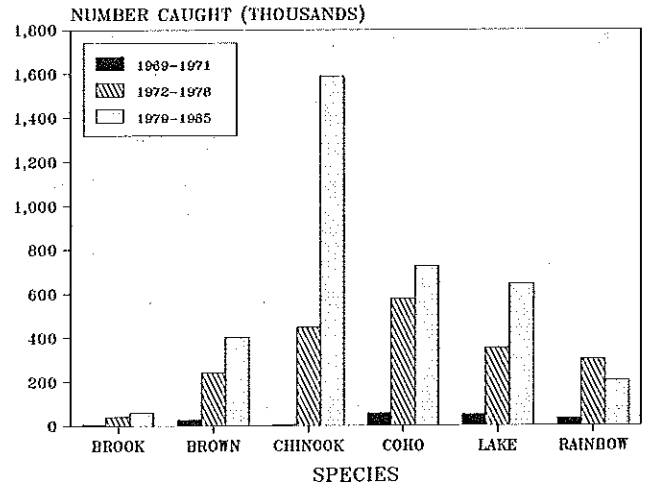
The Lake Michigan trout and salmon harvest increased 20-fold during 1969-85 (Fig. 18). Chinook salmon, with catches increasing from 206 in 1969 to a peak of nearly 318,000 in 1983, dominated the harvest at 35% (2.0-million) of all salmonids caught (5.8-million). The harvest of coho salmon, lake, brown, and brook trout also increased over the years, but the harvest of rainbow trout declined in the 1980s. Coho salmon made up 24% (1.4-million) of the harvest, peaking in 1977 when >206,000 were caught. Lake trout were 18% (1.0-million) of the harvest, and the peak harvest of nearly 196,000 lake trout was in 1983. Brown, rainbow, and brook trout were 12% (0.7-million), 9% (0.5-million), and 2% (0.1-million) of the harvest, respectively, with peak catches in 1984 for brown trout (66,000) and 1977 for rainbow (94,000) and brook trout (17,000).

Figure 18. Annual salmonid angling catch in Wisconsin's Lake Michigan waters by species, 1969-85.



The harvest of all species but rainbow trout increased from early to recent time periods, though none so dramatically as chinook salmon (Fig. 19). Chinook salmon harvest increased from 4% of the total in the early period to 44% of the total in the recent period. Coho salmon, lake, brown, and brook trout also increased from early to recent periods in total numbers caught, yet all declined as a percentage of total harvest. Rainbow trout harvest, on the other hand, declined from middle to recent time periods and decreased as a percentage of total harvest from 19% in the early period to 6% in the recent period.

Figure 19. Salmonid angling catch in Wisconsin's Lake Michigan waters by time period and species.



Seasonal harvest patterns were distinct for each species (Fig. 20). Harvest was concentrated during July-October for chinook salmon, during May-July for coho salmon, and during June-August for lake trout but was evenly distributed over the seasons for brook, brown, and rainbow trout. However, seasonal harvest distributions of each species changed over time (Fig. 21). Spring harvest was increasingly dominated by brown trout and coho salmon, while the relative contribution of other species, particularly rainbow and lake trout, decreased. Summer and autumn harvests were increasingly dominated by chinook salmon, while the relative contribution of other species, particularly lake trout and coho salmon in summer and rainbow trout and coho salmon in autumn, declined.

Figure 20. Monthly salmonid angling catch in Wisconsin's Lake Michigan waters by species.

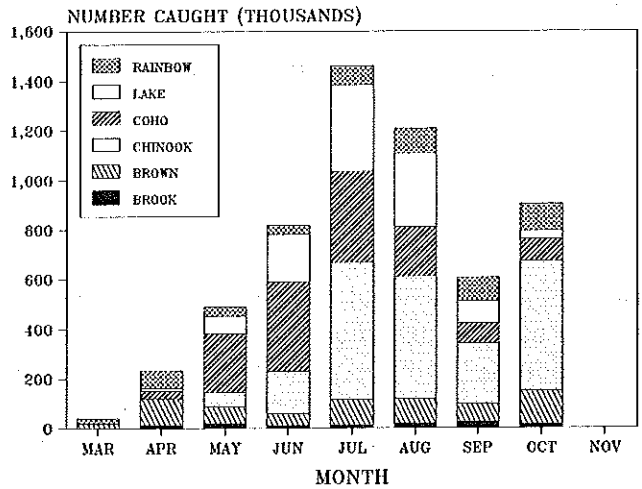
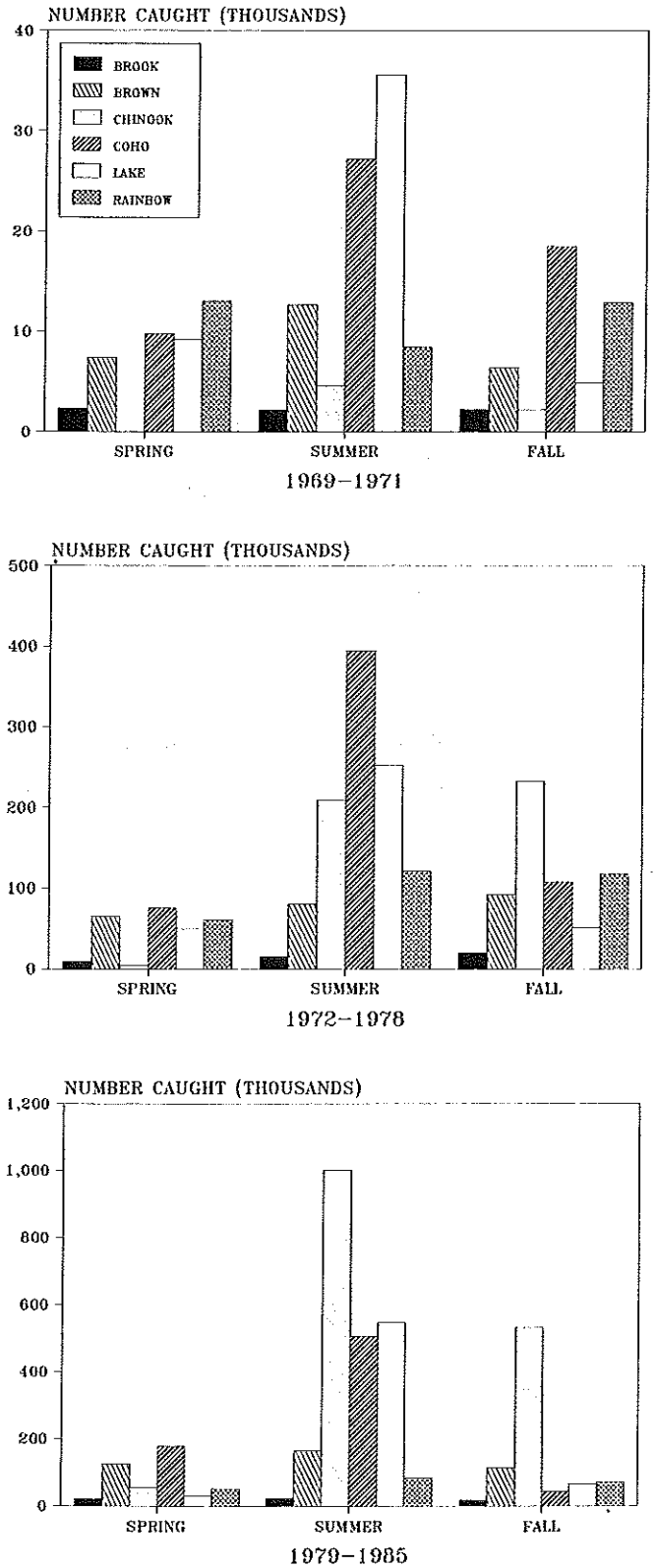


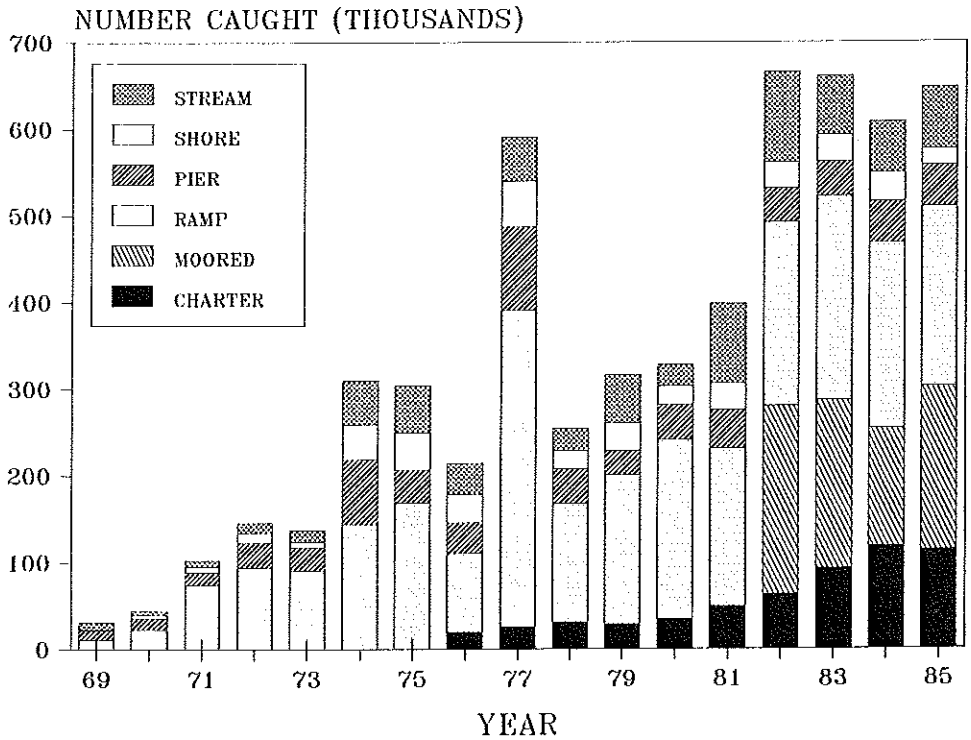
Figure 21. Seasonal salmonid angling catch in Wisconsin's Lake Michigan waters by species and time period.



Fishery Types. Salmonid harvest peaked in 1977 for launched-boat (365,000), pier (96,000), and shore anglers (54,000), while harvest by stream anglers (104,000) peaked in 1982 (Fig. 22). Charter-boater anglers increased their harvest annually during 1976-84 when they harvested 118,000 salmonids. Moored-boat anglers, on the other hand, caught more than twice as many salmonids in 1982 (217,000) as in 1984 (136,000) and intermediate numbers in 1983 (194,000) and 1985 (189,000).

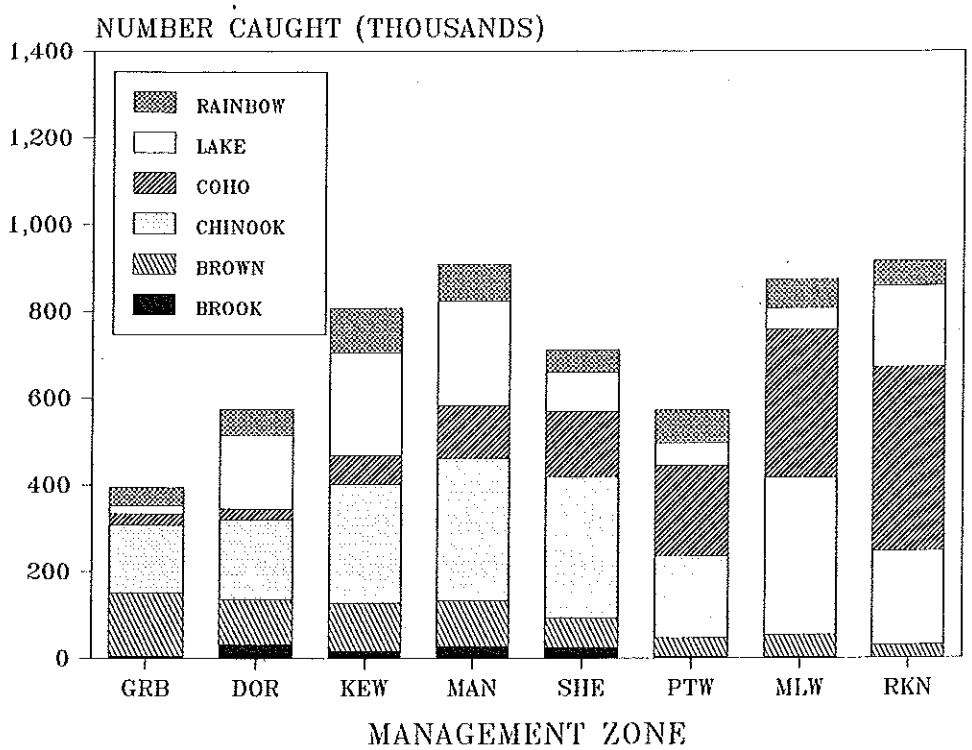
The launched-boat fishery harvested 47% (2.6-million) of all salmonids caught during 1969-85, including 59% (808,000) of all coho salmon, 58% (606,000) of all lake trout, 40% (808,000) of all chinook salmon, and 38% (253,000) of all brown trout. The launched-boat fishery harvest was composed mostly of chinook (31%) and coho (31%) salmon and lake trout (23%). Remaining angler groups each harvested <13% of all salmonids caught. Stream anglers caught >735,000 salmonids; nearly 2/3 were chinook salmon. Pier anglers caught nearly 666,000 salmonids; more evenly divided among coho salmon (26%), rainbow (24%) and brown (23%) trout, and chinook salmon (18%). Also, pier anglers caught more brook trout (41,000) than any of the other angler groups. Shore anglers caught nearly 416,000 salmonids; most were brown (36%) and rainbow (26%) trout and chinook salmon (22%). Moored-boat and charter-boat anglers caught mostly chinook (44% and 40%, respectively) and coho (27% and 18%, respectively) salmon and lake trout (27% and 35%, respectively).

Figure 22. Annual salmonid angling catch in Wisconsin's Lake Michigan waters by fishery type, 1969-85.



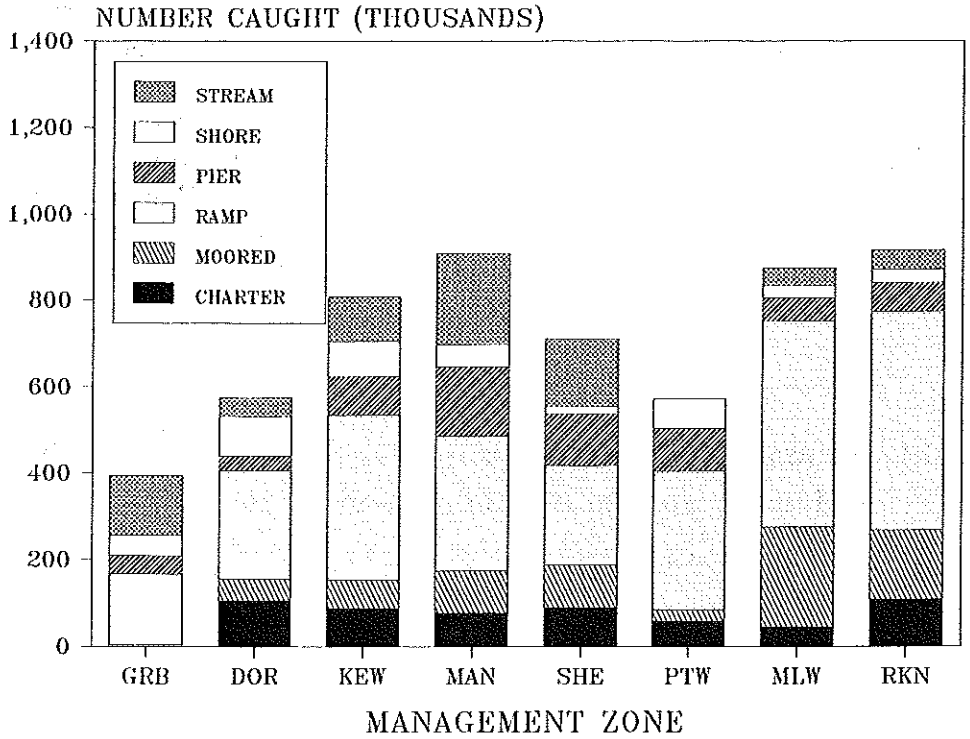
Geographic Zones. Species harvest from different areas in Lake Michigan varied greatly, particularly for lake trout and coho salmon (Fig. 23). Lake trout harvest was concentrated in Door, Kewaunee, Manitowoc, and Racine-Kenosha counties, where nearly 80% of all lake trout were caught. Coho salmon harvest generally increased from north to south, with nearly 83% of the total harvest occurring from Sheboygan south. Brown trout harvest followed a reverse pattern, decreasing from north to south, with nearly 71% of the total catch occurring from Manitowoc north. Except for a small catch from Green Bay, brook trout harvest was similar to that of brown trout, with >90% of the total catch occurring from Door through Sheboygan counties. Rainbow trout and chinook salmon harvests were more evenly distributed, with catches of rainbow trout tending to be greater in the north (54%) and catches of chinook salmon tending to be greater in the south (54%).

Figure 23. Salmonid angling catch in Wisconsin's Lake Michigan waters by species and management zone.



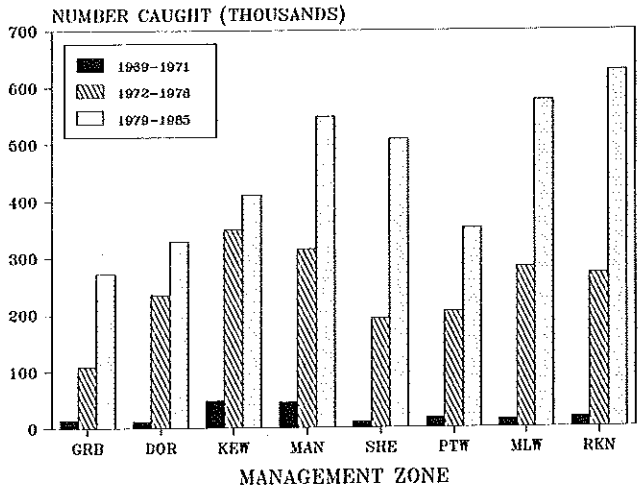
Salmonid harvest from the different fisheries varied greatly among the different zones (Fig. 24). The catch by launched-boat anglers predominated in all areas but was greatest in Milwaukee and Racine-Kenosha counties. The catch by moored-boat anglers was similarly concentrated in Milwaukee and Racine-Kenosha counties. In contrast, the catch by stream anglers was largely concentrated in Manitowoc, Sheboygan, and Kewaunee counties and in Green Bay. Catches by shore and pier anglers were greatest in Door and Manitowoc counties, respectively. Catch by charter-boat anglers was most evenly distributed except in Green Bay where the catch negligible.

Figure 24. Salmonid angling catch in Wisconsin's Lake Michigan waters by fishery type and management zone.



Lake Michigan salmonid harvest has shifted from north to south over the years (Fig. 25). Green Bay's relative catch has remained at 6-8% of the total. The catch from the northern basin declined from 59% during 1969-71 to 46% during 1972-78 and 35% during 1979-85. Conversely, catch from the southern basin increased from 34% during 1969-71 to 48% during 1972-78 and 57% during 1979-85.

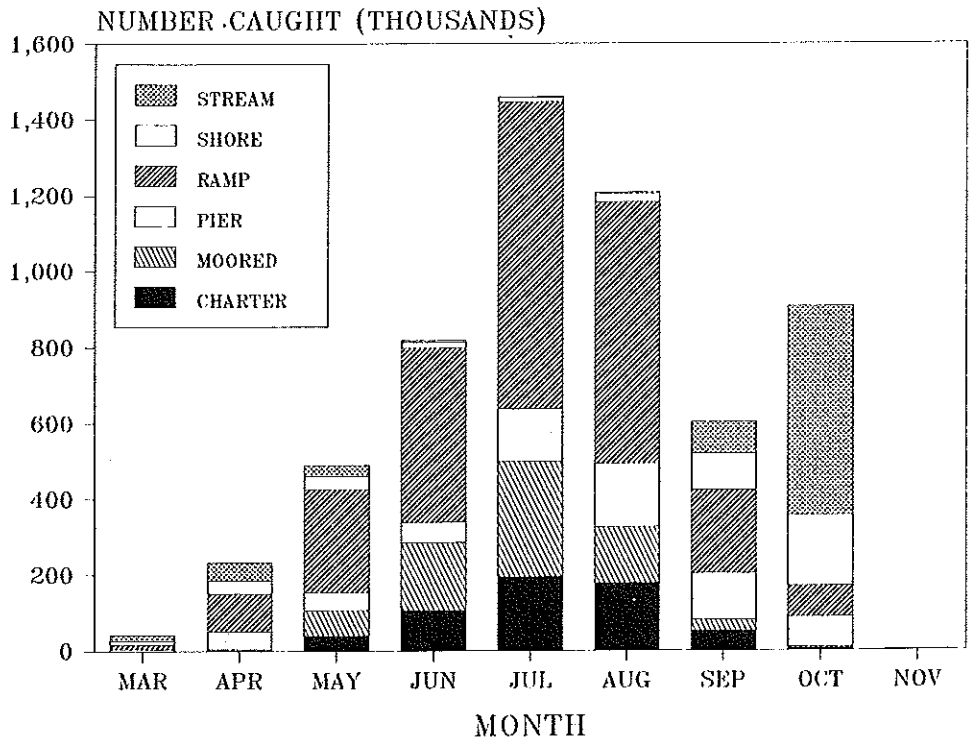
Figure 25. Salmonid angling catch in Wisconsin's Lake Michigan waters by time period and management zone.



Seasons. The seasonal distribution of harvest corresponded to the seasonal distribution of angler effort (Fig. 26). Summer harvest accounted for >60% (3.5-million) of the total harvest and 59% of angler effort. Similarly, spring and autumn harvests accounted for >13% (0.8-million) and 26% (1.5-million) of the total harvest, and 15% and 26% of angler effort, respectively.

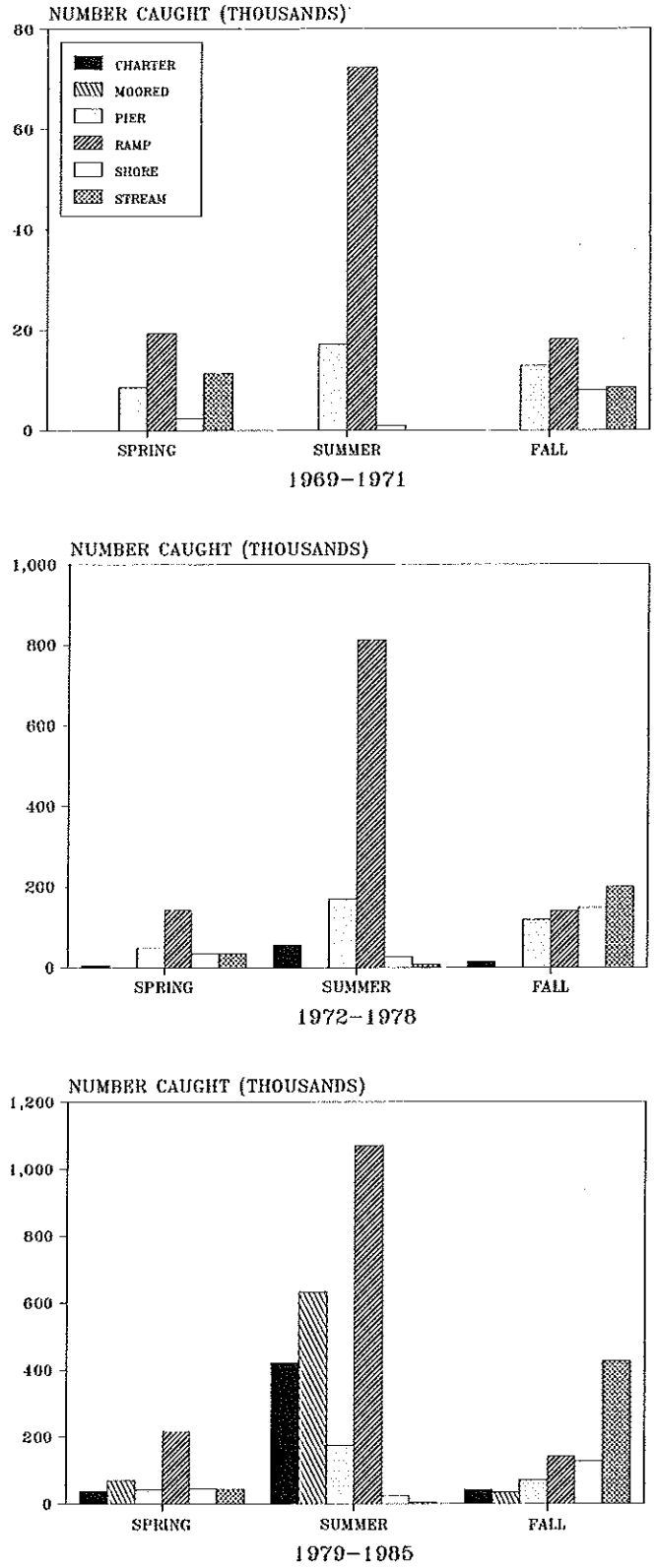
Monthly harvest distribution among anglers also corresponded to angler effort. Total harvest from the trolling fisheries (launched, moored, charter) increased through July, then declined; total harvest from the pier fishery increased through August, then declined. In contrast, total harvest from the shore and stream fisheries was greatest in October, with lesser peaks in April (stream) and May (shore).

Figure 26. Monthly salmonid angling catch in Wisconsin's Lake Michigan waters by fishery type.



Peak harvest occurred during summer in all time periods for charter-boat, moored-boat, launched-boat, and pier anglers but was less disproportionate for pier anglers (Fig. 27). Peak harvest of shore and stream anglers generally occurred during autumn, becoming increasingly disproportionate for stream anglers during 1972-78 and 1979-85.

Figure 26. Seasonal salmonid angling catch in Wisconsin's Lake Michigan waters by fishery type and time period.



CATCH RATIOS

The catch ratio of stocked salmonids was highest for fingerling chinook salmon (12.9%) (Tables 1, 2). Catch ratios for stocked yearling brook and brown trout, coho salmon, and lake and rainbow trout were lower, ranging from 5.1% through 9.8%. Catch ratios for stocked fingerling brook, brown, and lake trout were lower still, ranging from 2.5% through 3.6%. The catch ratio for stocked yearling rainbow trout dropped from 9.8% to 5.1% following conversion to a different strain (the Shasta strain). Fingerling rainbow trout produced the lowest returns (<0.5%).

Table 1. Stock/catch (catch/stock) ratios for salmonid species in Wisconsin's Lake Michigan waters.

Species	Number Stocked / Number Caught					
	Fingerling		Yearling		Pooled	
Brook Trout	39.69	(2.5%)	17.53	(5.7%)	22.98	(4.4%)
Brown Trout	28.63	(3.6%)	12.65	(7.8%)	18.33	(5.5%)
Chinook Salmon	7.75	(12.9%)			7.75	(12.9%)
Coho Salmon			16.94	(5.9%)	16.94	(5.9%)
Lake Trout	35.20	(2.8%)	14.67	(6.8%)	15.35	(6.5%)
Rainbow Trout						
(Shasta strain)	460.21	(0.2%)	19.42	(5.1%)	46.98	(2.1%)
(pre-Shasta strain)	240.83	(0.4%)	10.16	(9.8%)	15.66	(6.4%)

Table 2. Stocking, catch, and yearling/fingerling survival ratios for salmonid species stocked in Wisconsin's Lake Michigan waters.

Species	Number Stocked				Survival		
	Fingerlings	(years)	Yearlings	(years)	Ratio	Harvest	(years)
Brook Trout	1,061,334	(67-83)	1,438,398	(68-84)	2.3	108,792	(69-85)
Brown Trout	6,781,147	(67-83)	5,430,422	(68-84)	2.2	666,232	(69-85)
Chinook Salmon	15,816,403	(69-82)				2,041,091	(69-85)
Coho Salmon			5,432,956	(68-84)		320,737	(69-85)
Lake Trout	1,228,671	(65-80)	14,836,547	(65-81)	2.4	1,046,358	(69-85)
Rainbow Trout							
(Shasta strain)	2,896,941	(80-83)	1,832,487	(81-84)	23.7	100,665	(82-85)
(pre-Shasta strain)	2,472,839	(67-79)	4,354,471	(68-80)	23.7	438,796	(69-81)

DISCUSSION

Salmonid stocking in Wisconsin's Lake Michigan waters should be strongly related to subsequent harvest because natural reproduction is low. Avery (1974) found modest reproduction of rainbow trout and coho salmon in Little Scarboro Creek, a tributary of the Kewaunee River, Wisconsin. Patriarche (1980) found that 9.3% of the total 1979 Lake Michigan coho salmon catch was naturally spawned. Seelbach (1986) found substantial reproduction of steelhead trout in the Little Manistee River, Michigan. However, the combined reproduction of all such populations could not possibly sustain more than a small fraction of the Wisconsin fishery. Most Wisconsin tributaries to Lake Michigan are unfavorable for salmonid reproduction due to a lack of suitable gravel substrate for spawning, cold winter water temperatures, and large water level fluctuations (Avery 1974). In addition, dams on many tributaries block spawners from more suitable habitat upstream.

CATCH RATIOS

Chinook Salmon. Chinook salmon harvest from Wisconsin's Lake Michigan waters was dominated by fish stocked as fingerlings 3 years earlier (Lychwick 1986). The catch ratio of chinook salmon harvested during 1969-85 from fingerlings stocked during 1969-82 was 12.9%. Similar data are not available from other states stocking Lake Michigan, but our results indicate a higher catch ratio than the 0.23% average catch ratio of chinook salmon stocked in Minnesota waters of Lake Superior during 1974-79 (Close et al. 1984). The lower catch ratio for chinook salmon in Minnesota's Lake Superior waters is probably because fishing effort is lower and Minnesota's portion of the lake is relatively small.

Coho Salmon. Lake Michigan coho salmon harvest was dominated by fish stocked as spring yearlings 1 year earlier (Patriarche 1980). Stocking by other agencies and spring weather conditions strongly influence the harvest in Wisconsin waters. Patriarche (1980) found that coho salmon stocked in Wisconsin waters contributed only 23.6% to Wisconsin harvest, while those planted in Michigan waters contributed 64.1%. Also, since the Wisconsin harvest depends largely on spring harvest at southern ports (Pfender and Poff 1980a), the prevailing weather conditions induce high variability in the overall Wisconsin harvest.

The catch ratio for coho salmon caught during 1969-85 (1,359,055) from stockings during 1968-84 (5,432,956) was 25%. However, only 23.6% (320,737) of the Wisconsin harvest likely originated from Wisconsin stockings (Patriarche 1980). This harvest represents 5.9% of the coho salmon stocked in Wisconsin during 1968-84. This catch ratio agrees in general with Pfender and Poff (1980a), who found that the catch ratio from 13 discrete stockings of coho salmon made during 1969-76 averaged 4.4% (range = 0.7%-20.8%) and Patriarche (1980), who found that the catch ratio of 1978 stocking was 7.4%.

Lake Trout. Lake trout harvest from Wisconsin's Lake Michigan waters was dominated by fish stocked as spring yearlings 4 years earlier and fall fingerlings 5 years earlier (Pfender and Poff 1980b). The catch ratio for lake trout harvested during 1969-85 from fingerlings stocked during 1965-80 and yearlings stocked during 1965-81 was 6.5%. The catch ratios we estimated for fingerlings (2.8%) and yearlings (6.8%), assuming a relative survival of 2.4 yearlings/fingerling (Elrod et al. 1988), indicate better survival to harvest than during 1969-77, when Pfender and Poff (1980b) found an average catch ratio of 3.8% from discrete lake trout stockings during 1965-72 (range = 1.2%-6.9%). However, their study was conducted in the early years of the sport fishery when effort was lower than in the late 1970s and early '80s.

Brown Trout. Brown trout harvest from Wisconsin's Lake Michigan waters was dominated by fish stocked as spring yearlings 1 year earlier and fall fingerlings 2 years earlier (Lychwick 1980). Yearlings survived 2.2-6.7 times better than fingerlings after stocking during 1976-78 (Lychwick 1980), though the higher survival ratio (6.7) was likely biased due to excessive fin-clipping mortality of the dorsal-clipped fingerlings.

The catch ratio for brown trout harvested during 1969-85 from fingerings stocked during 1967-83 and yearlings during 1968-84 was 5.5%. We know of no comparable catch ratios from other Lake Michigan jurisdictions, but our catch ratios for fingerling (3.6%) and yearling (7.8%) brown trout, assuming a relative survival of 2.2 yearlings/fingerling (Lychwick 1980), were higher than for lake trout caught in Wisconsin.

Rainbow Trout. Rainbow trout harvest from Wisconsin's Lake Michigan waters was dominated by fish stocked as yearlings 1-2 years earlier (Scholz et al. 1978). Fingerling contribution was small; survival to smolting was 1-3% for fall fingerlings (311-416 fish/lb) vs. 42-48% for large spring yearlings (2-5/lb) in the Little Manistee River, Michigan, during 1981-83 (Seelbach 1985).

The catch ratio of rainbow trout in Wisconsin's Lake Michigan waters changed drastically during 1969-85 as Shasta-strain rainbow trout, initially stocked with the 1980 year-class, performed poorly compared to strains stocked earlier (Wis. Dep. Nat. Resour. 1988). The catch ratio of Shasta-strain rainbow trout during 1982-85 was 5.1% for yearlings and 0.2% for fingerlings, whereas the catch ratio of pre-Shasta strains during 1969-81 was 9.8% for yearlings and 0.4% for fingerlings. The catch ratio was higher for the 1980 year-class of Skamania strain rainbow trout stocked in Indiana in 1981 (201,929 stocked) and caught during 1982-86 (25,835 caught, 12.8% of those stocked) (Braun 1987), whereas the average catch ratio was lower (1.2%) for rainbow trout stocked in Michigan's waters of the Great Lakes during 1955-59 (Hansen and Stauffer 1971).

Brook Trout. We estimated the catch ratio for brook trout (4.4%) from the cumulative harvest during 1969-85 and the cumulative stocking of fingerlings during 1967-83 and yearlings during 1968-84. We also estimated fingerling (2.5%) and yearling (5.7%) catch ratios, assuming the average relative survival of brown and lake trout yearlings/fingerling (2.3). There are no comparable catch ratio estimates for the Great Lakes.

INFLUENCES ON THE FISHERY

Weather. Variable weather conditions apparently have had a significant effect on the Lake Michigan trout and salmon sport fishery. Annual fluctuations in spring fishing conditions have probably substantially affected annual harvests of coho salmon. Extreme weather changes during 1976-78 produced drastic fluctuations in angler effort, catch rate, and the harvest of most species compared to years before and after.

In 1976 and '78, cold inshore summer water temperatures prevailed, holding salmon far offshore and relatively unavailable to anglers. Low catch rates resulted from these poor fishing conditions, leading to reduced angler effort and dramatically reduced harvest of most species. In contrast, nearly optimal summer water temperatures and wind conditions in 1977 resulted in high catch rates, increased angler effort, and greater harvest. Also, some of the fish not harvested in 1976 likely survived and contributed to the higher catch rates in 1977.

Fishing Regulations. Fishing regulation changes on Lake Michigan and Green Bay during 1969-85 produced few detectable effects on effort, catch rate, or harvest. In general, bag, size, and season limits were probably so liberal as to only negligibly affect the fishery.

During 1950-66, Lake Michigan fishing had a 17-inch minimum length limit for all species, a closed season in November, no bag limit, and no licensing requirement. Tributary fishing was regulated under standard inland rules. During 1967-68, as the trout and salmon fishery began to grow, size limits were reduced, bag limits were initiated, and tributary fishing rules were changed to match those for Lake Michigan fishing. By 1969, the aggregate bag limit was 5 trout and salmon (including only 2 rainbow trout from tributaries), the minimum length limit was 10 inches, and the open season was continuous.

These rules continued during 1969-85, except for two minor bag limit changes, several minor changes in tributary-fishing hook-size requirements, the permitting of snagging, and the initiation of a licensing requirement. Of these changes, only snagging produced a possible detectable effect on the fishery.

Snagging was first permitted in 1972, was restricted to specified streams in 1978, and was banned in Brown and Sheboygan counties and on the Manitowoc River during 1984-85. (It was eliminated statewide in 1987.) Legalized snagging in 1972 may have helped fuel dramatic catch rate improvements in the shore and stream fisheries during 1972-78. Then, restricting snagging to streams in 1978 may have hindered shore fishery compared to stream fishery catch rates during 1979-85.

Fishing Methods. Numerous advances in sport-fishing equipment and techniques since 1969 allow anglers to locate productive fishing areas more quickly and to catch fish more effectively. These changes have likely increased angler efficiency in harvesting Lake Michigan trout and salmon.

In 1969, few recreational anglers had more than a flasher unit to measure the water depth. By 1985, fish locators showed graphic, color, liquid crystal video displays of the bottom and fish. Sinkers and lead-core line used in 1969 gave way to electrically operated down-riggers with thermistors to measure water temperature by 1985. Almost all gear and electronics improved, including loran-C for navigation, marine radios for communication, larger and safer boats for fishing farther offshore, and rods, reels, and scientifically designed lures for every fishing condition. Fishing clinics and video programs helped increase the skill of even neophyte anglers in a very short time. Knowledge of fish movements, unknown in 1969, was well known and widely advertised by 1985.

Each of these advancements probably helped improve catch rates of trout and salmon in Lake Michigan during 1969-85. However, since advances in fishing equipment and methods have been continuous, no single advance can be identified as most significant.

COMPARISON TO OTHER GREAT LAKES FISHERIES

Annual creel surveys of Great Lakes anglers by other management agencies have been uncommon, but were conducted by most agencies in 1984, 1985 or 1986. Field methods differed with species. For example, this study was of salmonid anglers only, while others also included perch anglers. Therefore, effort and catch rate comparisons among various surveys are not very meaningful. However, total catch comparisons are likely valid.

Lake Michigan. Based on available surveys of the combined salmonid sport fishery catch (1,722,070 chinook and coho salmon and brown, lake and rainbow trout altogether) -- 35.5% was in Wisconsin (this study), 50.0% was in Michigan (Rakoczy 1987), 11.1% was in Illinois (Horns and Gorden 1986), and 3.1% was in Indiana (Brazo 1986). Of the Lake Michigan shoreline -- 29.8% is in Wisconsin, 63.7% is in Michigan, 3.7% is in Illinois, and 2.7% is in Indiana (Pincus 1962). Wisconsin and Illinois have major urban centers on Lake Michigan and tended to have proportionately greater shares of the lakewide harvest than their proportion of the shoreline.

Lakewide harvest composition was 51.4% chinook salmon, 22.6% coho salmon, 13.4% lake trout, 6.9% brown trout, and 5.6% rainbow trout. Chinook and coho salmon were important to the fisheries in each state; other species were more locally important: lake trout in Michigan and Wisconsin, brown trout in Wisconsin, and rainbow trout in Indiana. The harvest from Michigan waters, for example, was strongly dominated by chinook salmon (59.4%), lake trout (16.5%), and coho salmon (13.0%), while the Wisconsin harvest was less dominated by chinook salmon (48.8%) and lake trout (13.0%) and more dominated by coho salmon (22.9%). In contrast, the Illinois harvest was even more dominated by coho salmon (61.9%) and less by chinook salmon (29.4%), while the Indiana harvest was comprised nearly equally of rainbow trout (36.9%), coho salmon (28.9%), and chinook salmon (28.5%).

Total harvest of all species tended to be taken mostly from Michigan and Wisconsin waters, though significant harvests of coho salmon were taken from Illinois waters and of rainbow trout from Indiana waters. Lakewide total harvests of chinook salmon and lake and brown trout, for example, were largely taken in Michigan (57.7%, 61.6%, and 41.4%, respectively) and Wisconsin (34.1%, 34.8%, and 54.6%, respectively). In contrast, the total harvest of coho salmon was mostly shared by Wisconsin (36.3%), Illinois (31.0%), and Michigan (28.7%), while the harvest of rainbow trout was mostly shared by Michigan (48.3%), Wisconsin (24.2%), and Indiana (20.4%).

Lake Ontario. Management agencies in New York in 1984 (N.Y. Dep. Environ. Conserv. 1987) and Ontario in 1985 (Daniels and Savoie 1986) conducted creel surveys on Lake Ontario waters. The salmonid harvest (brown, lake and rainbow trout, coho and chinook salmon) was quite different between Ontario's north shore fishery and New York's south shore fishery. The north shore harvest (57,303) was greatly dominated by chinook salmon (61.0%), rainbow trout (19.3%), and coho salmon (12.0%), while the south shore harvest (525,096) was more diversified and included chinook salmon (30.0%), brown trout (24.5%), lake trout (18.4%), rainbow trout (15.9%), and coho salmon (11.2%).

Lake Huron. Michigan's Lake Huron waters were surveyed in 1986 (Rakoczy and Rogers 1987), and the harvest of 171,301 salmonids was composed mostly of chinook salmon (53.4%) and lake trout (32.6%), while catches of brown trout (6.8%), coho salmon (4.4%), and rainbow trout (2.7%) were smaller.

Lake Superior. Agencies in Wisconsin (Hulse and Blust 1986) and Minnesota (Morse 1986) conducted complete creel surveys of their Lake Superior waters in 1985, while agencies in Michigan (Peck 1987) and Ontario (MacCallum 1987) conducted partial creel surveys of their waters. The Ontario Ministry of Natural Resources' survey was for the Thunder Bay winter lake trout fishery only, while the Michigan Department of Natural Resources' survey was for the Marquette area only. None of these fisheries were similar to the Lake Michigan fishery, mostly because of the lack of chinook salmon dominance. In Michigan's Lake Superior waters, for example, coho salmon (60.1%) and lake trout (25.2%) dominated, while in Wisconsin waters the major species were lake trout (48.1%) and rainbow trout (22.3%), and in Minnesota waters the lake trout (83.4%) dominated.

Summary. The species composition of Wisconsin's salmonid harvest was somewhat different than that of other states -- both from Lake Michigan waters and from other Great Lakes. Only Michigan's Lake Michigan harvest was larger than Wisconsin's, which yielded no worse than third place among all species harvests compared. Only Michigan's chinook salmon and lake and rainbow trout harvests from Lake Michigan were higher, along with New York's brown, lake, and rainbow trout harvests from Lake Ontario.

MANAGEMENT RECOMMENDATIONS

The Lake Michigan Fisheries Management Plan set a catch objective for 1991 of 650,000 total salmonids (the 1982-85 average; Wis. Dep. Nat. Resour. 1986). Catch objectives for individual species were derived from 1982-85 average catches as follows: 1) increase rainbow trout catch from 25,000 to 50,000, 2) reduce lake trout catch from 127,000 to 82,000, and 3) increase brook and brown trout and chinook and coho salmon catch to complete the total catch objective. The plan does not specify, but we recommend proportional catch increases: from 9,000 to 10,000 for brook trout, from 65,000 to 68,000 for brown trout, from 124,000 to 130,000 for coho salmon, and from 295,000 to 310,000 for chinook salmon.

To achieve these catch objectives, future stocking must be at the appropriate rate. We used catch ratios derived in this study to set future stocking objectives as follows: 175,000 yearling or 400,000 fingerling brook trout, 872,000 yearling or 1,889,000 fingerling brown trout, 2,403,000 chinook salmon, 520,000 coho salmon, 1,206,000 yearling or 2,929,000 fingerling lake trout, and 510,000 yearling rainbow trout. We did not set stocking objectives for fingerling rainbow trout or for the Shasta strain because catch ratios were so low and a management plan for that species already called for production of yearlings from new strains (Wis. Dep. Nat. Resour. 1988).

Brook, brown, and lake trout stocking can be a mixture of fingerlings and yearlings or only fingerlings or yearlings. We agree with Elrod et al. (1988) that stocking objectives for these species should be based on hatchery capabilities to produce yearlings and that fingerlings should be used as necessary. For example, if hatchery space limits yearling brown trout production to 500,000, the stocking objective for fingerling brown trout should be set at 806,000 fish.

The U.S. Fish and Wildlife Service stocks lake trout according to an interagency rehabilitation plan that requires state management agencies to regulate lake trout harvest within agreed-upon levels of total annual mortality and stocking (Krueger and Dehring 1986a). Sport fishery catch is not the primary objective of this stocking program. Stocking rates for yearling lake trout are 1.0-1.5/acre. Stocking of yearlings in Wisconsin's Lake Michigan waters includes 750,000 in the mid-lake reef complex of the southern lake basin and 360,000 in the near-shore reef complex of the northern lake basin. This level of yearling stocking (1,100,000) would require stocking an additional 257,000 fingerlings to reach the 82,000 catch objective.

For salmonid species other than lake trout, stocking distribution in Wisconsin's Lake Michigan waters follows the guidelines of a computer-based stocking rationale (Krueger and Dehring 1986b). The stocking rationale is based on angler preference, historical harvest, fishing accesses and facilities, and catch ratios. The catch ratios used in the program should be updated according to the results of our study.

LITERATURE CITED

Avery, E.L.
1974. Reproduction and recruitment of anadromous salmonids in Wisconsin tributaries of Lake Michigan. Wis. Dep. Nat. Resour. Final Rep. Study No. 108. Dingell-Johnson Proj. F-83-R. 32 pp.

Bishop, R.C.
1984. Wisconsin Great Lakes fisheries: an economic perspective. Pages 8-15 in The Future of Great Lakes Resources. 1982-84 Biennial Rep. Univ. Wis. Sea Grant Inst. WIS-SG-84-145. 59 pp.

Braun, K.
1987. A creel survey of the Indiana waters of Lake Michigan, 1986. unpubl. data filed at Indiana Dep. Nat. Resour., Fish. Sect., Div. Fish and Wildl., 607 State Off. Building, Indianapolis. 30 pp.

Brazo, D.C.
1986. A creel survey of the Indiana waters of Lake Michigan, 1985. unpubl. data filed at Indiana Dep. Nat. Resour., Fish. Sect., Div. Fish and Wildl., 607 State Off. Building, Indianapolis. 31 pp.

Close, T.L., S.E. Colvin, and R.L. Hassinger
1984. Chinook salmon in the Minnesota sport fishery of Lake Superior. Minn. Dep. Nat. Resour. Div. Fish Wildl. Invest. Rep. No. 380. 31 pp.

Ditton, R.B., W.A. Strang, and M.T. Dittrich
1975. Wisconsin Lake Michigan charter fishing industry. Univ. Wis. Sea Grant Coll. Program. Advis. Rep. #11: WIS-SG-75-411. 21 pp.

Daniels, M. and P.J. Savoie
1986. Western Lake Ontario harvest assessment, 1985. Pap. presented at Lake Ont. Comm. meet. Great Lakes Fish. Comm. 4-5 March 1986, Gananoque, Ont. 18 pp.

Elrod, J.H., D.E. Ostergaard, and C.P. Schneider
1988. Comparison of hatchery-reared lake trout stocked as fall fingerlings and as spring yearlings in Lake Ontario. North Am. J. Fish. Manage. 8(4):455-462.

Hansen, M.J. and T.M. Stauffer
1971. Comparative recovery to the creel, movement and growth of rainbow trout stocked in the Great Lakes. Trans. Am. Fish. Soc. 100:336-349.

Hansen, M.J.
1986. Size and condition of trout and salmon from the Wisconsin waters of Lake Michigan, 1969-84. Wis. Dep. Nat. Resour. Fish Manage. Rep. No. 126. 28 pp.

Horns, W.H. and R.W. Gorden
1986. A sport fishing creel survey of the Illinois portion of Lake Michigan: 1 April 1985 through 31 March 1986. Ill. Nat. Hist. Surv. Aquatic Biol. Sect. Tech. Rep. No. 1986(3). 46 pp.

Hulse, S.R. and W.H. Blust
1986. 1985 Lake Superior creel survey. unpubl. data filed at Wis. Dep. Nat. Resour., Box 589, Bayfield. 24 pp.

Krueger, C.C. and T.R. Dehring
1986a. Management recommendations for lake trout stocking and catch in Wisconsin waters of Lake Michigan. Wis. Dep. Nat. Resour. Fish Manage. Rep. No. 128. 16 pp.

Krueger, C.C. and T.R. Dehring
1986b. A procedure to allocate the annual stocking of salmonids in the Wisconsin waters of Lake Michigan. Wis. Dep. Nat. Resour. Fish Manage. Rep. No. 127. 30 pp.

N.Y. Dep. Environ. Conserv.
1987. 1984 New York state Great Lakes angler survey. Vol. I and II. N.Y. Dep. Environ. Conserv., Div. Fish and Wildl., Bur. Fish. DEC Publ. 41 pp.

Lychwick, T.J.
1980. Evaluation of fingerling versus yearling brown trout stocking, Lake Michigan - Door County, 1976 - 1980. Perf. Rep. Anadromous Fish Conserv. Act Proj. AFS-9-6. 3 pp.

Lychwick, T.J.
1986. Status of the chinook salmon coded wire tag recoveries, 1985. Pap. presented at Lake Mich. Comm. meet. Great Lakes Fish. Comm. 18 March 1986, Sault Ste. Marie, Ont. 3 pp.

MacCallum, W.
1987. Thunder Bay winter creel survey summary, 1983 - 1986. unpubl. data filed at Ont. Minist. Nat. Resour., Lake Superior Fish. Unit, Box 5000, Thunder Bay. 4 pp.

Morse, S.D.
1986. Lake Superior annual creel survey, 1985. Minn. Dep. Nat. Resour. Completion Rep. Dingell-Johnson Proj. F-29-R(P)-5. 20 pp.

Patriarche, M.H.
1980. Movement and harvest of coho salmon in Lake Michigan, 1978-1979. Mich. Dep. Nat. Resour. Fish. Res. Rep. No. 1889. 52 pp.

Peck, J.
1987. Highlights of fisheries research and management programs in Michigan's waters of Lake Superior, 1986. Pap. presented at Lake Superior Comm. meet. Great Lakes Fish. Comm. 17 March 1987, Milw., Wis. 6 pp.

Pfender, J. and R.J. Poff
1980a. The contribution of discrete plants of coho salmon (Oncorhynchus kisutch) to Wisconsin Lake Michigan sport fishery. Perf. Rep. Anadromous Fish Conserv. Act Proj. AFS-9. 31 pp.

Pfender, J. and R.J. Poff
1980b. The contribution of discrete plants of lake trout (Salvelinus namaycush) to Wisconsin Lake Michigan sport fishery. Perf. Rep. Anadromous Fish Conserv. Act Proj. AFS-9. 31 pp.

Pincus, H.J., ed.
1962. Great lakes basin. Am. Assoc. Adv. Sci. Publ. No. 71. Washington, D.C. 308 pp.

Rakoczy, G.P.
1987. Lake Michigan sport fishery, 1985-1986. Pap. presented at Lake Mich. Comm. meet. Great Lakes Fish. Comm. 19 March 1987, Milw., Wis. 20 pp.

Rakoczy, G.P. and R.D. Rogers
1987. Sportfishing catch and effort from the Michigan waters of Lakes Michigan, Huron, and Erie, and their important tributary streams, April 1, 1986 - March 31, 1987. Mich. Dep. Nat. Resour. Fish. Div. Tech. Rep. No. 87-6a. 58 pp.

Scholz, A.T., C.K. Gosse, J.C. Cooper, R.M. Horrall, A.D. Hassler, R.I. Daly, and R.J. Poff
1978. Homing of rainbow trout transplanted in Lake Michigan: a comparison of three procedures used for imprinting and stocking. Trans. Am. Fish. Soc. 107:439-443.

Seelbach, P.W.
1985. Smolting success of hatchery-raised steelhead planted in a Michigan tributary of northern Lake Michigan. Mich. Dep. Nat. Resour. Fish. Res. Rep. No. 1934. 23 pp.

Seelbach, P.W.
1986. Population biology of steelhead in the Little Manistee river, Michigan. Univ. Mich., Ann Arbor. Ph.d. Diss. 45 pp.

Wells, L. and A.L. McLain
1973. Lake Michigan: man's effects on native fish stocks and other biota. Great Lakes Fish. Comm. Tech. Rep. No. 20. 55 pp.

Wisconsin Department of Natural Resources
1986. Lake Michigan Fisheries Management Plan. Wis. Dep. Nat. Resour. Fish Manage. Admin. Rep. No. 25. 77 pp.

Wisconsin Department of Natural Resources
1988. Lake Michigan steelhead fishery management plan. Wis. Dep. Nat. Resour. Fish. Manage. Admin. Rep. No. 29. 19 pp.

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APPENDIX TABLE 1. SALMONID STOCKING IN LAKE MICHIGAN MANAGEMENT ZONES

SPECIES: BROOK TROUT

YEAR	AGE	GREEN BAY	E DOOR CO.	ALG-KEW	TWOR-MAN	SHEBOYGAN	PORT WASH	MILWAUKEE	RAC-KEN	TOTAL
1967	FNG	0	0	0	0	0	0	0	0	0
1967	YLG	0	9,000	0	0	0	0	0	0	9,000
1968	FNG	0	0	0	0	0	0	0	0	0
1968	YLG	0	21,530	0	4,000	0	0	0	0	25,530
1969	FNG	0	0	0	0	0	0	0	0	0
1969	YLG	4,348	0	10,000	11,170	3,000	5,000	0	0	33,518
1970	FNG	0	0	0	0	0	0	0	0	0
1970	YLG	0	0	5,000	5,000	0	7,500	0	0	17,500
1971	FNG	0	0	0	0	0	0	0	0	0
1971	YLG	14,000	22,368	0	19,000	13,680	0	0	0	69,048
1972	FNG	0	5,020	4,960	0	0	0	0	0	9,980
1972	YLG	12,500	28,000	0	4,000	5,200	5,000	5,000	0	59,700
1973	FNG	0	0	0	0	0	0	0	0	0
1973	YLG	5,000	15,150	0	10,000	5,000	2,500	2,500	10,000	50,150
1974	FNG	0	0	0	4,000	0	0	0	0	4,000
1974	YLG	600	10,000	0	9,800	9,850	0	0	0	30,250
1975	FNG	0	0	0	0	0	0	0	0	0
1975	YLG	600	28,000	0	13,700	19,000	0	0	0	61,300
1976	FNG	0	0	0	0	0	0	0	0	0
1976	YLG	600	7,200	0	6,900	4,700	0	0	0	19,400
1977	FNG	15,000	499,772	0	0	10,000	0	0	0	524,772
1977	YLG	15,600	49,330	0	31,250	2,300	0	0	0	98,480
1978	FNG	0	0	30,000	0	0	0	0	0	30,000
1978	YLG	20,600	67,625	0	64,700	60,300	0	0	0	213,225
1979	FNG	0	0	0	0	0	0	0	0	0
1979	YLG	13,620	44,200	14,350	66,940	45,600	0	0	0	184,710
1980	FNG	0	0	0	0	0	0	0	0	0
1980	YLG	15,600	86,000	30,000	20,000	33,900	0	0	0	185,500
1981	FNG	0	33,270	0	55,800	0	0	0	0	89,070
1981	YLG	600	25,000	55,800	0	29,997	0	0	0	111,397
1982	FNG	172,000	0	0	0	14,813	6,664	0	0	193,477
1982	YLG	600	3,400	0	0	47,226	0	0	0	51,226
1983	FNG	0	38,366	54,357	38,367	59,250	11,695	8,000	0	210,035
1983	YLG	0	25,000	20,000	20,000	22,403	0	0	0	87,403
1984	FNG	0	9,000	0	0	60,535	0	9,350	0	78,885
1984	YLG	500	94,667	30,000	10,000	4,894	0	0	0	140,061
1985	FNG	0	0	81,723	27,016	0	0	22,000	0	130,739
1985	YLG	0	65,006	31,760	68,840	10,720	0	0	0	176,326
		291,768	1,186,904	367,950	490,483	462,368	38,359	46,850	10,000	2,894,682

APPENDIX TABLE 1. SALMONID STOCKING IN LAKE MICHIGAN MANAGEMENT ZONES

SPECIES: BROWN TROUT

YEAR	AGE	GREEN BAY	E DOOR CO.	ALG-KEW	TWOR-MAN	SHEBOYGAN	PORT WASH	MILWAUKEE	RAC-KEN	TOTAL
1966	FNG	0	12,925	3,375	0	0	0	0	0	16,300
1966	YLG	0	14,600	5,000	2,100	0	0	0	0	21,700
1967	FNG	0	12,540	0	0	0	0	0	0	12,540
1967	YLG	0	21,835	0	9,000	5,100	0	0	0	35,935
1968	FNG	0	84,200	34,200	20,000	10,000	24,000	0	0	172,400
1968	YLG	14,150	22,340	11,000	8,400	7,600	3,200	7,500	5,000	79,190
1969	FNG	25,000	0	10,000	7,200	0	5,000	0	0	47,200
1969	YLG	24,377	0	9,600	17,400	17,000	6,000	0	10,000	84,377
1970	FNG	33,000	20,000	8,000	24,000	8,000	0	0	0	93,000
1970	YLG	0	40,720	9,100	20,000	5,000	0	5,000	10,000	89,820
1971	FNG	22,000	18,000	0	0	5,000	0	0	0	45,000
1971	YLG	34,860	59,820	13,840	34,780	20,000	0	0	0	163,300
1972	FNG	30,000	318,000	143,500	104,000	65,000	14,100	14,600	33,540	722,740
1972	YLG	9,600	27,030	13,700	11,700	7,160	5,000	5,000	9,400	88,590
1973	FNG	72,500	69,200	64,500	53,000	68,000	13,350	0	0	340,550
1973	YLG	32,000	51,030	15,000	20,400	31,000	16,300	16,200	35,300	217,230
1974	FNG	68,000	40,000	15,000	37,000	38,000	28,000	17,000	50,000	293,000
1974	YLG	12,000	35,000	16,000	22,400	20,500	10,320	10,200	15,600	142,020
1975	FNG	10,000	17,500	0	7,500	10,000	0	6,996	0	51,996
1975	YLG	17,500	66,650	32,500	43,940	30,000	22,000	40,905	56,850	310,345
1976	FNG	8,800	89,765	23,607	10,000	25,000	10,887	9,113	0	177,172
1976	YLG	10,000	41,140	15,000	21,300	12,000	0	21,400	0	120,840
1977	FNG	85,000	98,200	43,000	28,000	31,000	15,000	19,300	42,700	362,200
1977	YLG	56,700	124,070	40,000	77,800	52,500	21,370	23,135	40,388	435,963
1978	FNG	193,010	274,696	86,650	87,860	36,393	27,800	44,950	40,350	791,709
1978	YLG	40,075	159,550	30,000	47,800	48,100	23,715	20,390	66,762	436,392
1979	FNG	64,250	104,340	37,500	58,200	55,100	30,200	52,900	47,000	449,490
1979	YLG	49,700	158,700	45,900	82,460	65,180	23,600	28,642	51,170	505,352
1980	FNG	78,565	157,000	68,564	84,600	40,000	20,000	25,000	35,000	508,729
1980	YLG	80,100	173,300	56,080	58,060	67,390	26,800	36,034	56,800	554,564
1981	FNG	113,900	124,050	71,000	50,600	25,000	15,000	25,700	30,000	455,250
1981	YLG	60,490	143,850	58,000	75,500	102,717	25,125	36,025	57,535	559,242
1982	FNG	365,000	302,660	67,500	163,500	115,753	44,789	76,491	62,800	1,198,493
1982	YLG	86,800	185,600	92,315	61,595	79,119	51,192	26,200	60,000	642,821
1983	FNG	141,520	268,500	76,000	108,200	143,760	149,798	63,100	108,800	1,059,678
1983	YLG	72,300	181,800	81,300	85,550	12,667	35,230	10,440	48,900	528,187
1983	FRY	0	0	0	0	0	6,300	0	0	6,300
1984	FNG	82,500	122,200	33,000	27,200	132,286	112,650	75,150	73,775	658,761
1984	YLG	60,450	123,000	107,396	89,900	36,473	13,970	10,800	30,200	472,189
1985	FNG	110,300	147,398	72,000	70,000	83,423	57,824	50,228	54,880	646,053
1985	YLG	67,100	170,125	77,800	78,880	23,394	31,703	43,800	42,015	534,817
		2,231,547	4,081,334	1,586,927	1,809,825	1,534,615	890,223	822,199	1,174,765	14,131,435

APPENDIX TABLE 1. SALMONID STOCKING IN LAKE MICHIGAN MANAGEMENT ZONES

SPECIES: COHO SALMON

YEAR	AGE	GREEN BAY	E DOOR CO.	ALG-KEW	TWOR-MAN	SHEBOYGAN	PORT WASH	MILWAUKEE	RAC-KEN	TOTAL
1968	FNG	0	0	0	0	0	0	0	0	0
1968	YLG	0	0	25,000	0	0	0	0	0	25,000
1969	FNG	0	0	0	0	0	0	0	0	0
1969	YLG	40,000	0	85,780	2,500	46,418	0	0	0	174,698
1970	FNG	0	0	0	0	0	0	0	0	0
1970	YLG	49,344	0	100,000	74,545	57,900	0	50,400	0	332,189
1971	FNG	0	0	0	0	0	0	0	0	0
1971	YLG	40,000	0	80,000	65,000	40,000	0	40,000	0	265,000
1972	FNG	0	0	0	0	0	0	0	0	0
1972	YLG	38,000	0	80,000	62,200	40,000	0	38,200	0	258,400
1973	YLG	36,000	0	78,932	69,610	42,200	0	29,923	0	256,665
1973	FNG	60,000	253,700	0	0	0	0	0	0	313,700
1974	FNG	0	0	0	0	0	0	0	0	0
1974	YLG	40,000	0	89,000	96,000	40,000	0	39,950	13,000	317,950
1975	YLG	48,500	0	60,000	95,200	55,000	0	54,000	80,000	392,700
1975	FNG	0	0	60,000	0	0	0	0	0	60,000
1976	FNG	0	144,600	0	0	0	0	0	0	144,600
1976	YLG	53,000	0	40,584	89,252	60,000	41,000	100,000	138,337	522,173
1977	FNG	0	0	0	0	0	0	0	0	0
1977	YLG	42,000	0	55,916	86,800	50,000	69,200	63,360	125,070	492,346
1978	FNG	0	0	0	0	0	0	0	0	0
1978	YLG	6,500	50,000	0	97,000	60,000	45,000	90,800	150,300	499,600
1979	FNG	0	0	0	0	0	0	0	0	0
1979	YLG	0	0	0	0	88,200	47,000	66,260	118,405	319,865
1980	FNG	0	0	75,000	0	0	0	0	0	75,000
1980	YLG	0	0	0	0	108,807	50,000	103,069	155,000	416,876
1981	FNG	0	0	0	0	0	0	0	0	0
1981	YLG	0	0	0	0	99,800	79,100	60,600	79,000	318,500
1982	FNG	0	0	0	0	0	0	0	0	0
1982	YLG	0	0	0	0	68,400	50,000	44,800	52,840	216,040
1983	FNG	0	0	0	0	0	0	0	0	0
1983	YLG	0	0	0	0	105,360	78,000	99,120	74,380	356,860
1984	YLG	0	0	0	0	98,710	60,466	67,018	41,900	268,094
1984	FNG	100,000	40,400	50,000	93,000	0	0	0	0	283,400
1985	FNG	0	0	0	0	0	0	0	0	0
1985	YLG	0	0	0	0	157,518	148,560	121,713	94,320	522,111
		553,344	488,700	880,212	831,107	1,218,313	668,326	1,069,213	1,122,552	6,831,767

APPENDIX TABLE 1. SALMONID STOCKING IN LAKE MICHIGAN MANAGEMENT ZONES

SPECIES: CHINOOK SALMON

YEAR	AGE	GREEN BAY	E DOOR CO.	ALG-KEW	TWOR-MAN	SHEBOYGAN	PORT WASH	MILWAUKEE	RAC-KEN	TOTAL
1969	FNG	0	65,800	0	0	0	0	0	0	65,800
1969	YLG	0	0	0	0	0	0	0	0	0
1970	FNG	0	118,700	0	0	0	0	0	0	118,700
1970	YLG	0	0	0	0	0	0	0	0	0
1971	FNG	0	130,000	60,000	64,000	10,000	0	0	0	264,000
1971	YLG	0	0	0	0	0	0	0	0	0
1972	FNG	24,000	80,000	60,000	40,000	25,000	0	0	88,000	317,000
1972	YLG	0	0	0	0	0	0	0	0	0
1973	FNG	120,000	106,000	154,000	180,000	85,000	0	0	112,000	757,000
1973	YLG	0	0	0	0	0	0	0	0	0
1974	FNG	40,000	148,000	90,000	118,400	50,000	45,000	45,000	80,000	616,400
1974	YLG	0	0	0	0	0	0	0	0	0
1975	FRY	0	0	0	100,000	0	0	0	0	100,000
1975	FNG	160,000	150,600	100,000	50,000	100,000	65,000	73,000	126,275	824,875
1975	YLG	0	0	0	0	0	0	0	0	0
1976	FNG	202,000	192,000	300,000	200,000	112,000	50,000	111,600	7,900	1,175,500
1976	YLG	0	0	0	0	0	0	0	0	0
1977	FNG	145,000	150,000	125,000	120,000	40,000	90,000	100,000	102,608	872,608
1977	YLG	0	0	0	0	0	0	0	0	0
1978	FNG	210,000	244,000	512,000	350,000	175,000	100,000	230,000	196,149	2,017,149
1978	YLG	0	0	0	0	0	0	0	0	0
1979	FNG	295,000	224,000	300,000	339,200	294,000	125,000	250,000	236,611	2,063,811
1979	YLG	0	0	0	0	0	0	0	0	0
1980	FNG	520,000	363,700	299,800	248,000	150,000	80,000	390,000	378,000	2,429,500
1980	YLG	0	0	0	0	0	0	0	0	0
1981	FNG	325,000	243,800	303,100	254,000	150,000	70,000	197,500	305,660	1,849,060
1981	YLG	0	0	0	0	0	0	0	0	0
1982	FNG	375,000	300,000	373,000	297,300	206,000	183,000	200,000	410,700	2,345,000
1982	YLG	0	0	0	0	0	0	0	0	0
1983	FRY	0	0	0	0	112,000	0	0	0	112,000
1983	FNG	300,000	501,000	432,200	500,000	27,500	139,500	212,000	320,000	2,432,200
1983	YLG	0	0	0	0	0	0	0	0	0
1984	FRY	0	0	0	0	0	0	0	200,000	200,000
1984	FNG	300,000	518,850	507,000	175,000	220,000	210,000	302,000	120,000	2,352,850
1984	YLG	0	0	0	0	0	0	0	0	0
1985	FNG	308,300	539,500	411,000	375,000	221,000	150,000	260,000	476,000	2,740,800
1985	YLG	0	0	0	0	0	0	0	0	0
		3,324,300	4,075,950	4,027,100	3,410,900	1,977,500	1,307,500	2,371,100	3,159,903	23,654,253

APPENDIX TABLE 1. SALMONID STOCKING IN LAKE MICHIGAN

SPECIES: LAKE TROUT

YEAR	AGE	GREEN BAY	E DOOR CO.	ALG-KEW	TWOR-MAN	SHEBOYGAN	OZAUKEE	MILWAUKEE	RAC-KEN	TOTAL
1965	FNG	0	0	0	0	0	0	0	0	0
1965	YLG	0	103,000	101,600	0	0	0	0	0	204,600
1966	FNG	0	0	0	0	0	0	0	0	0
1966	YLG	190,300	248,700	120,400	0	0	201,530*	0	0	760,930
1967	FNG	0	0	0	0	284,600	0	0	0	284,600
1967	YLG	0	642,230	202,280	0	0	0	0	0	844,510
1968	FNG	0	0	0	0	0	0	0	0	0
1968	YLG	193,310	184,250	439,200	0	0	0	0	0	816,760
1969	FNG	0	0	0	0	0	0	0	0	0
1969	YLG	100,165	200,520	193,080	200,750	0	189,430*	0	0	883,945
1970	FNG	0	0	0	0	0	0	0	0	0
1970	YLG	200,000	0	300,000	100,000	100,000	200,000*	0	0	900,000
1971	FNG	0	0	0	0	0	0	0	0	0
1971	YLG	221,000	0	344,000	221,000	0	0	159,000*	0	945,000
1972	FNG	0	0	103,600	0	100,000	0	0	0	203,600
1972	YLG	0	330,000	300,000	150,000	100,000	0	100,000	100,000	1,080,000
1973	FNG	0	0	100,000	0	100,000	0	0	0	200,000
1973	YLG	0	220,000	300,000	150,000	100,000	0	100,000	100,000	970,000
1974	FNG	0	0	125,000	0	0	0	0	0	125,000
1974	YLG	0	216,000	183,000	98,000	98,000	65,000	90,000	96,000	846,000
1975	FNG	100,000	0	0	0	0	0	0	0	100,000
1975	YLG	119,500	98,000	201,000	148,000	100,000	0	96,000	192,000	954,500
1976	FNG	0	0	0	0	0	0	0	0	0
1976	YLG	172,000	102,000	206,000	109,000	381,300A	0	0	75,000	1,045,300
1977	FNG	0	0	47,500	0	0	0	0	0	47,500
1977	YLG	152,500	100,000	208,000	100,000	105,000	50,000	102,600	104,000	922,100
1978	FNG	0	0	65,000	0	0	0	0	0	65,000
1978	YLG	205,800	140,000	185,100	95,000	100,000	38,000	85,000	80,500	929,400
1979	FNG	0	0	57,000	0	0	0	4,171	0	61,171
1979	YLG	209,552	90,850	180,000	181,100	90,000	40,000	90,000	90,000	971,502
1980	FNG	0	0	141,800	0	0	0	0	0	141,800
1980	YLG	0	400,200	96,500	96,700	97,200	242,900B	100,000	80,000	1,113,500
1981	FNG	0	314,300	0	0	0	0	0	0	314,300
1981	YLG	0	212,500	80,000	80,000	50,000	176,000C	0	50,000	648,500
1982	FNG	0	0	0	132,870	0	125,777*	0	16,340	274,987
1982	YLG	0	218,200	85,000	64,800	48,000	280,800	0	50,000	746,800
1983	FNG	0	31,480	0	0	0	0	0	0	31,480
1983	YLG	0	201,700	111,400	0	0	502,300*	0	0	815,400
1984	FNG	0	0	0	0	0	0	216,020	0	216,020
1984	YLG	0	237,440	0	0	0	282,300*	0	0	519,740
1985	FNG	0	0	0	0	0	0	453,274	0	453,274
1985	YLG	0	361,200	0	0	0	774,968*	0	0	1,136,168
		1,864,127	4,652,570	4,476,460	1,927,220	1,854,100	3,169,005	1,596,065	1,033,840	20,573,387

*-ALL OFFSHORE PLANTS (NO POSTSCRIPT-ALL INSHORE)
A-277,300 OFFSHORE AND 104,000 INSHORE B-198,900 OFFSHORE AND 44,000 INSHORE C-126,000 OFFSHORE AND 50,000 INSHORE

APPENDIX TABLE 1. SALMONID STOCKING IN LAKE MICHIGAN MANAGEMENT ZONES

SPECIES: RAINBOW TROUT

YEAR	AGE	GREEN BAY	E DOOR CO.	ALG-KEW	TWOR-MAN	SHEBOYGAN	PORT WASH	MILWAUKEE	RAC-KEN	TOTAL
1963	FNG	0	0	0	0	0	0	0	0	0
1963	YLG	0	9,200	0	0	0	0	0	0	9,200
1964	FNG	0	0	0	0	0	0	0	0	0
1964	YLG	0	13,500	1,500	0	0	0	0	0	15,000
1965	FNG	0	0	0	0	0	0	0	0	0
1965	YLG	0	19,100	3,730	0	2,000	0	0	0	24,830
1966	FNG	0	19,634	11,665	0	0	0	0	0	31,299
1966	YLG	0	21,930	5,600	0	0	0	0	0	27,530
1967	FNG	0	13,530	0	8,500	15,380	6,900	0	0	44,310
1967	YLG	0	33,190	7,040	0	0	0	0	0	40,230
1968	FNG	0	0	0	0	0	0	0	0	0
1968	YLG	10,000	37,901	15,374	14,133	11,500	4,425	6,500	3,700	103,533
1969	FNG	0	0	0	17,200	0	5,000	0	0	22,200
1969	YLG	49,000	0	17,400	40,800	23,900	6,000	0	10,000	147,100
1970	FNG	30,000	0	0	9,950	0	0	0	0	39,950
1970	YLG	0	0	15,230	35,460	33,050	4,300	5,000	10,000	103,040
1971	FNG	15,000	10,000	5,000	5,000	5,000	0	0	0	40,000
1971	YLG	35,550	36,110	32,140	13,700	10,000	0	0	0	127,500
1972	FNG	15,090	111,584	118,400	29,400	34,000	16,500	13,500	0	338,474
1972	YLG	33,540	71,605	28,210	50,020	57,040	5,000	15,000	19,140	279,555
1973	FNG	25,000	15,000	32,600	42,100	87,950	28,800	61,900	11,800	305,150
1973	YLG	63,600	63,000	42,000	46,250	17,500	24,500	17,068	82,405	356,323
1974	FNG	25,000	20,000	17,000	27,000	26,000	1,640	9,140	11,100	136,880
1974	YLG	49,300	42,482	36,200	72,750	51,808	24,100	33,998	47,400	358,038
1975	FNG	12,550	0	30,000	12,500	30,000	19,077	12,481	88,448	205,056
1975	YLG	38,230	73,782	42,800	34,700	32,200	20,200	23,197	38,001	303,110
1976	FNG	82,305	124,313	21,312	20,000	19,500	21,600	26,875	76,764	392,669
1976	YLG	67,235	110,100	50,000	96,850	81,000	16,500	68,900	127,175	617,760
1977	FNG	15,000	15,000	15,000	12,500	12,500	13,125	13,125	42,250	138,500
1977	YLG	30,000	110,750	66,250	90,500	68,500	31,480	26,065	110,607	534,152
1978	FNG	44,000	57,600	130,225	10,000	22,000	10,000	9,400	65,288	348,513
1978	YLG	18,220	34,125	22,500	25,340	17,000	28,600	49,244	72,800	267,829
1979	FNG	100,560	151,940	83,500	47,400	23,700	21,850	82,745	92,374	604,069
1979	YLG	25,400	184,852	68,700	41,000	52,400	40,440	34,160	81,844	528,796
1980	FNG	33,000	94,800	78,340	56,290	73,300	29,200	72,575	101,706	539,211
1980	YLG	54,774	118,979	62,564	128,418	52,500	41,000	60,400	109,100	627,735
1981	FNG	51,900	90,000	75,730	91,850	102,572	30,000	41,900	90,000	573,952
1981	YLG	36,000	82,100	51,000	43,100	41,900	32,500	37,900	67,000	391,500
1982	FNG	67,331	34,315	51,170	35,585	216,414	13,470	35,200	128,320	581,805
1982	YLG	24,100	45,400	28,450	46,830	69,758	67,200	67,000	112,900	461,638
1983	FNG	113,000	144,750	70,000	124,683	141,390	196,774	170,444	98,000	1,059,041
1983	YLG	0	55,160	36,800	49,300	0	50,618	24,000	129,300	345,178
1984	FNG	43,809	110,000	123,300	70,000	78,182	56,136	110,000	90,716	682,143
1984	YLG	126,391	60,000	50,840	93,640	24,650	0	114,600	164,050	634,171
1985	FNG	0	0	0	0	0	0	0	0	0
1985	YLG	75,177	52,000	29,600	40,500	54,850	43,680	41,700	77,584	415,091
		1,410,062	2,287,732	1,577,170	1,583,249	1,589,444	910,615	1,284,017	2,159,772	12,802,061

APPENDIX 2. LAKE MICHIGAN SALMONID CATCH AND ANGLER EFFORT BY YEAR, MANAGEMENT ZONE AND FISHERY

YEAR	SITE	FISHERY	ANGLER HOURS	BROOK	BROWN	CHINOOK	COHO	LAKE TROUT	RAINBOW	TOTAL CATCH
1969	DOR	PIER	3,547	81	156	0	3	0	105	344
1969	DOR	RAMP	9,505	170	296	0	0	14	44	522
1969	DOR	SHORE	336	0	0	0	0	0	0	0
1969	DOR	STREAM	2,481	217	0	0	0	0	149	366
1969	GRB	PIER	0	0	0	0	0	0	0	0
1969	GRB	RAMP	0	0	0	0	0	0	0	0
1969	GRB	SHORE	0	0	0	0	0	0	0	0
1969	GRB	STREAM	0	0	0	0	0	0	0	0
1969	KEW	PIER	8,439	28	168	0	311	0	99	603
1969	KEW	RAMP	3,576	0	101	3	125	98	18	344
1969	KEW	SHORE	420	0	20	0	0	0	0	20
1969	KEW	STREAM	4,346	101	0	0	980	0	101	1,182
1969	MAN	PIER	37,525	292	679	0	3,145	0	1,305	5,416
1969	MAN	RAMP	59,406	79	1,046	0	4,138	371	521	6,160
1969	MAN	SHORE	3,717	414	0	0	116	0	0	530
1969	MAN	STREAM	25,146	2,058	575	0	2,124	0	1,311	6,067
1969	MLW	PIER	9,578	0	0	0	0	0	0	0
1969	MLW	RAMP	52,764	0	0	0	1,108	0	23	1,131
1969	MLW	SHORE	23,058	0	0	0	0	0	0	0
1969	MLW	STREAM	786	0	0	0	0	0	0	0
1969	PTW	PIER	20,520	355	675	0	72	26	802	1,928
1969	PTW	RAMP	20,686	0	251	68	90	23	365	796
1969	RKN	PIER	9,559	0	0	0	0	0	0	0
1969	RKN	RAMP	64,009	0	0	9	1,322	78	28	1,437
1969	SHE	PIER	20,055	36	764	36	1,906	12	73	2,826
1969	SHE	RAMP	19,564	20	222	90	568	0	41	941
1969	SHE	SHORE	2,743	0	0	0	0	0	0	0
1969	SHE	STREAM	13,377	48	0	0	171	0	315	533
1970	DOR	PIER	7,538	45	64	4	55	0	215	381
1970	DOR	RAMP	20,011	46	1,058	0	27	792	64	1,986
1970	DOR	SHORE	12,543	237	304	0	9	4	715	1,267
1970	DOR	STREAM	4,090	28	0	0	0	0	151	179
1970	GRB	PIER	0	0	0	0	0	0	0	0
1970	GRB	RAMP	13,263	0	81	0	0	711	0	792
1970	GRB	SHORE	0	0	0	0	0	0	0	0
1970	GRB	STREAM	0	0	0	0	0	0	0	0
1970	KEW	PIER	11,810	34	185	0	40	26	152	435
1970	KEW	RAMP	44,787	20	268	13	647	3,973	132	5,052
1970	KEW	SHORE	2,809	0	115	0	0	0	67	182
1970	KEW	STREAM	4,407	12	0	0	0	0	108	120
1970	MAN	PIER	27,322	187	2,472	0	399	31	702	3,791
1970	MAN	RAMP	50,678	0	305	171	2,869	3,528	476	7,350
1970	MAN	SHORE	7,902	0	406	0	68	0	2,042	2,516
1970	MAN	STREAM	19,358	192	62	222	1,589	0	918	2,982
1970	MLW	PIER	18,703	0	56	43	1,052	8	153	1,313
1970	MLW	RAMP	118,413	0	343	246	149	26	241	1,005
1970	MLW	SHORE	1,974	0	0	0	0	0	0	0
1970	MLW	STREAM	29,099	0	0	0	578	0	538	1,116
1970	PTW	PIER	24,085	462	2,775	0	250	25	2,681	6,195
1970	PTW	RAMP	32,386	89	528	0	1,594	15	949	3,177
1970	PTW	SHORE	294	0	0	0	0	0	0	0

APPENDIX 2. LAKE MICHIGAN SALMONID CATCH AND ANGLER EFFORT BY YEAR, MANAGEMENT ZONE AND FISHERY

YEAR	SITE	FISHERY	ANGLER HOURS	BROOK	BROWN	CHINOOK	COHO	LAKE TROUT	RAINBOW	TOTAL CATCH
1970	RKN	PIER	10,942	0	11	0	251	0	236	497
1970	RKN	RAMP	30,026	0	8	5	1,755	64	52	1,883
1970	RKN	STREAM	0	0	0	0	0	0	0	0
1970	SHE	PIER	16,182	0	0	0	91	0	380	470
1970	SHE	RAMP	26,183	24	121	134	1,419	134	127	1,959
1970	SHE	SHORE	308	0	0	0	0	0	0	0
1970	SHE	STREAM	3,469	0	0	0	0	0	189	189
1971	DOR	PIER	7,270	29	17	5	0	0	317	368
1971	DOR	RAMP	51,205	45	312	123	753	2,792	473	4,495
1971	DOR	SHORE	15,921	43	313	25	0	196	1,252	1,830
1971	DOR	STREAM	3,557	0	0	0	0	0	130	130
1971	GRB	PIER	7,507	280	205	0	0	0	94	579
1971	GRB	RAMP	47,087	122	39	0	802	11,395	142	12,499
1971	GRB	SHORE	8,220	0	14	0	220	0	0	234
1971	GRB	STREAM	3,962	0	45	0	327	0	22	394
1971	KEW	PIER	42,717	438	5,458	0	40	0	2,449	8,385
1971	KEW	RAMP	195,111	0	1,304	2,441	6,540	19,548	1,431	31,263
1971	KEW	SHORE	4,159	0	58	0	0	0	45	103
1971	KEW	STREAM	6,452	0	0	0	105	0	372	477
1971	MAN	PIER	38,875	74	458	0	33	82	310	955
1971	MAN	RAMP	86,988	37	1,153	314	788	3,619	931	6,841
1971	MAN	SHORE	12,246	37	430	0	142	0	197	806
1971	MAN	STREAM	21,742	194	128	0	437	0	1,221	1,980
1971	MLW	PIER	52,791	28	75	112	669	0	121	1,005
1971	MLW	RAMP	209,160	0	20	1,941	2,513	145	223	4,840
1971	MLW	SHORE	91,573	0	0	0	0	0	0	0
1971	MLW	STREAM	98,519	0	83	0	381	0	3,127	3,589
1971	PTW	PIER	19,803	40	219	0	149	82	967	1,456
1971	PTW	RAMP	29,275	0	220	213	460	450	363	1,706
1971	PTW	SHORE	19,096	0	94	0	110	36	1,616	1,858
1971	RKN	PIER	38,049	0	37	0	739	0	604	1,380
1971	RKN	RAMP	113,313	0	105	177	9,196	165	263	9,905
1971	RKN	SHORE	14,301	0	1,493	0	0	0	353	1,846
1971	RKN	STREAM	11,172	0	0	0	0	0	235	235
1971	SHE	PIER	15,274	20	53	0	0	0	0	73
1971	SHE	RAMP	44,101	0	15	326	1,926	1,183	170	3,619
1971	SHE	SHORE	0	0	0	0	0	0	0	0
1971	SHE	STREAM	8,022	0	0	0	0	0	307	307
1972	DOR	PIER	36,234	662	154	38	10	0	2,560	3,424
1972	DOR	RAMP	112,134	521	1,160	693	187	11,862	147	14,568
1972	DOR	SHORE	57,032	1,044	1,502	1,209	8	8	997	4,764
1972	DOR	STREAM	12,187	24	24	0	0	0	880	927
1972	GRB	PIER	19,732	547	0	0	27	0	724	1,298
1972	GRB	RAMP	43,809	9	894	64	1,606	484	172	3,229
1972	GRB	SHORE	11,281	7	1,258	34	709	0	561	2,573
1972	GRB	STREAM	9,379	0	0	409	0	0	0	409
1972	KEW	PIER	76,788	215	1,712	0	289	0	2,797	5,009
1972	KEW	RAMP	244,616	0	201	1,159	1,323	19,142	858	22,676
1972	KEW	SHORE	12,163	0	3,418	0	0	0	42	3,460
1972	KEW	STREAM	12,345	0	167	0	174	0	1,141	1,482
1972	MAN	PIER	73,967	374	3,505	256	1,122	16	822	6,092

APPENDIX 2. LAKE MICHIGAN SALMONID CATCH AND ANGLER EFFORT BY YEAR, MANAGEMENT ZONE AND FISHERY

YEAR	SITE	FISHERY	ANGLER HOURS	BROOK	BROWN	CHINOOK	COHO	LAKE TROUT	RAINBOW	TOTAL CATCH
1972	MAN	RAMP	110,157	92	489	532	2,516	9,001	776	13,406
1972	MAN	SHORE	24,325	37	220	0	324	48	432	1,061
1972	MAN	STREAM	3,185	0	15	29	337	421	164	966
1972	MLW	PIER	60,403	62	192	284	1,393	31	822	2,784
1972	MLW	RAMP	158,003	0	38	802	9,642	896	455	11,830
1972	MLW	SHORE	0	0	0	0	0	0	0	0
1972	MLW	STREAM	57,552	857	948	0	1,039	0	1,836	4,680
1972	PTW	PIER	46,389	537	314	190	963	271	125	2,403
1972	PTW	RAMP	46,233	0	104	567	3,878	855	835	6,243
1972	RKN	PIER	50,685	0	1,068	489	621	0	1,126	3,300
1972	RKN	RAMP	169,198	12	158	476	17,523	715	346	19,225
1972	RKN	SHORE	13,804	0	276	0	0	0	0	276
1972	SHE	PIER	45,781	489	1,302	191	579	0	809	3,371
1972	SHE	RAMP	48,064	20	287	353	1,435	1,468	451	4,012
1972	SHE	STREAM	20,481	13	649	130	2,083	0	188	3,062
1973	DOR	PIER	40,508	694	93	73	376	0	805	2,040
1973	DOR	RAMP	169,653	319	2,102	1,154	176	14,748	484	18,981
1973	DOR	SHORE	60,192	1,128	708	533	13	12	1,027	3,420
1973	DOR	STREAM	28,493	505	110	0	0	0	2,594	3,209
1973	GRB	PIER	4,900	0	150	0	0	0	83	233
1973	GRB	RAMP	27,855	10	447	13	724	1,093	69	2,356
1973	GRB	SHORE	8,079	0	8	0	100	0	213	321
1973	GRB	STREAM	9,107	9	11	0	1,144	0	401	1,565
1973	KEW	PIER	57,365	0	933	359	2,691	108	896	4,985
1973	KEW	RAMP	188,837	0	206	586	651	21,801	664	23,919
1973	KEW	SHORE	2,164	0	0	0	0	0	0	0
1973	KEW	STREAM	19,488	0	294	0	0	0	1,599	1,893
1973	MAN	PIER	84,025	998	814	4,015	4,419	22	1,072	11,338
1973	MAN	RAMP	82,906	295	320	707	867	6,632	1,128	9,949
1973	MAN	SHORE	3,414	35	29	121	0	0	928	1,113
1973	MAN	STREAM	30,460	85	243	1,651	3,511	0	461	5,952
1973	MLW	PIER	52,562	57	113	452	148	0	471	1,243
1973	MLW	RAMP	180,377	274	917	3,585	6,591	1,809	1,293	14,462
1973	MLW	SHORE	2,520	0	0	0	0	0	0	0
1973	MLW	STREAM	3,824	0	15	0	306	0	46	367
1973	PTW	PIER	34,727	95	116	282	228	0	454	1,173
1973	PTW	RAMP	63,792	33	33	687	1,098	736	1,119	3,706
1973	PTW	SHORE	20,440	27	160	11	0	0	513	710
1973	RKN	PIER	41,884	68	156	513	458	0	695	1,889
1973	RKN	RAMP	138,753	0	95	518	10,333	1,588	655	13,192
1973	RKN	SHORE	8,450	0	213	0	30	0	122	365
1973	SHE	PIER	41,432	172	279	1,986	694	88	538	3,758
1973	SHE	RAMP	59,584	0	69	752	1,101	2,256	973	5,152
1973	SHE	SHORE	2,968	44	0	0	128	0	128	299
1973	SHE	STREAM	8,858	0	95	78	403	13	93	683
1974	DOR	PIER	32,643	205	3,246	41	185	0	2,816	6,486
1974	DOR	RAMP	188,611	52	1,947	2,500	1,084	18,895	1,630	26,107
1974	DOR	SHORE	86,454	0	2,632	5,763	0	87	819	9,304
1974	DOR	STREAM	69,775	0	307	4,547	1,696	0	2,778	9,329
1974	GRB	PIER	12,138	0	0	0	0	0	557	557
1974	GRB	RAMP	21,886	0	410	94	699	0	79	1,281

APPENDIX 2. LAKE MICHIGAN SALMONID CATCH AND ANGLER EFFORT BY YEAR, MANAGEMENT ZONE AND FISHERY

YEAR	SITE	FISHERY	ANGLER HOURS	BROOK	BROWN	CHINOOK	COHO	LAKE TROUT	RAINBOW	TOTAL CATCH
1974	GRB	SHORE	11,172	0	16	0	299	0	78	393
1974	GRB	STREAM	19,114	0	525	1,418	4,199	0	96	6,237
1974	KEW	PIER	87,398	0	2,092	465	1,241	47	3,868	7,716
1974	KEW	RAMP	233,861	0	289	1,697	3,538	20,430	3,122	29,069
1974	KEW	SHORE	52,369	55	5,649	615	784	4,236	9,247	20,586
1974	KEW	STREAM	85,818	251	408	8,115	1,092	0	3,152	13,014
1974	MAN	PIER	166,042	1,288	2,784	1,052	8,108	756	4,305	18,299
1974	MAN	RAMP	124,638	327	1,800	2,497	4,831	3,679	1,762	14,887
1974	MAN	SHORE	33,376	124	832	2,045	196	14	333	3,545
1974	MAN	STREAM	135,848	0	139	13,485	2,116	0	358	16,089
1974	MLW	PIER	82,926	32	1,343	649	3,518	0	1,784	7,328
1974	MLW	RAMP	240,078	47	609	5,937	8,077	2,117	2,241	19,035
1974	MLW	SHORE	2,716	0	0	0	0	0	0	0
1974	MLW	STREAM	1,488	0	0	29	566	0	0	595
1974	PTW	PIER	79,436	0	277	710	11,039	0	1,664	13,690
1974	PTW	RAMP	153,035	0	202	3,558	8,962	2,241	2,962	17,920
1974	PTW	SHORE	31,395	0	1,753	38	0	0	3,956	5,747
1974	RKN	PIER	79,350	0	304	1,349	3,619	14	2,514	7,797
1974	RKN	RAMP	243,401	0	160	1,692	23,712	1,604	2,736	29,902
1974	RKN	SHORE	23,630	0	326	300	37	62	441	1,166
1974	RKN	STREAM	3,385	0	0	521	0	0	0	521
1974	SHE	PIER	119,477	186	357	645	9,671	0	1,428	12,277
1974	SHE	RAMP	67,709	0	443	595	3,408	1,142	845	6,433
1974	SHE	SHORE	0	0	0	0	0	0	0	0
1974	SHE	STREAM	44,426	486	309	2,590	456	0	924	4,763
1975	DOR	PIER	18,707	0	25	235	5	9	139	413
1975	DOR	RAMP	146,766	869	5,627	3,638	191	11,335	669	22,325
1975	DOR	SHORE	48,367	352	2,985	942	117	0	1,695	6,090
1975	DOR	STREAM	41,791	266	80	1,761	321	0	1,082	3,511
1975	GRB	PIER	24,045	0	1,118	0	0	0	1,416	2,534
1975	GRB	RAMP	67,348	0	4,350	610	721	51	466	6,197
1975	GRB	SHORE	18,239	0	408	455	1,249	0	578	2,690
1975	GRB	STREAM	52,605	88	1,095	7,579	1,347	68	439	10,621
1975	KEW	PIER	59,662	24	1,021	423	104	74	1,411	3,058
1975	KEW	RAMP	222,017	0	2,884	1,533	2,824	19,382	312	26,936
1975	KEW	SHORE	57,804	54	4,734	334	484	2,336	2,454	10,397
1975	KEW	STREAM	91,796	23	1,025	7,618	1,017	70	334	10,089
1975	MAN	PIER	130,260	444	3,164	3,083	294	366	1,807	9,160
1975	MAN	RAMP	142,755	76	4,130	2,024	1,892	7,914	2,841	18,867
1975	MAN	SHORE	69,605	68	4,201	569	3,181	871	1,351	10,244
1975	MAN	STREAM	98,414	344	210	7,697	469	0	1,124	9,843
1975	MLW	PIER	67,846	18	546	302	320	0	408	1,592
1975	MLW	RAMP	352,123	0	498	6,052	9,899	1,510	3,362	21,330
1975	MLW	SHORE	43,169	0	348	307	68	39	1,769	2,530
1975	MLW	STREAM	22,151	22	506	418	1,003	0	2,229	4,178
1975	MLW	STREAM	41,605	0	30	1,016	0	0	1,052	2,098
1975	PTW	PIER	131,038	0	1,496	1,921	1,857	164	1,759	7,196
1975	PTW	RAMP	166,828	0	65	5,194	3,648	2,489	2,150	13,554
1975	PTW	SHORE	46,309	35	1,077	44	21	65	2,261	3,504
1975	RKN	PIER	100,471	0	605	1,957	1,652	57	2,525	6,793
1975	RKN	RAMP	302,204	0	274	3,459	34,746	1,460	3,460	43,417

APPENDIX 2. LAKE MICHIGAN SALMONID CATCH AND ANGLER EFFORT BY YEAR, MANAGEMENT ZONE AND FISHERY

YEAR	SITE	FISHERY	ANGLER HOURS	BROOK	BROWN	CHINOOK	COHO	LAKE TROUT	RAINBOW	TOTAL CATCH
1975	RKN	SHORE	26,030	0	0	1,203	361	0	89	1,653
1975	SHE	PIER	91,646	354	2,748	2,029	649	185	1,110	7,075
1975	SHE	RAMP	167,234	84	567	2,749	5,527	4,421	2,973	16,332
1975	SHE	SHORE	20,104	109	4,390	0	0	35	1,264	5,797
1975	SHE	STREAM	90,870	449	882	4,631	6,382	0	2,470	14,814
1976	DOR	CHARTER	16,578	12	214	1,012	140	6,212	128	7,719
1976	DOR	PIER	15,543	0	477	309	0	0	973	1,758
1976	DOR	RAMP	116,086	115	1,295	4,060	213	6,135	623	12,440
1976	DOR	SHORE	42,257	89	976	1,992	22	19	1,172	4,266
1976	DOR	STREAM	27,317	0	0	310	207	0	1,878	2,395
1976	GRB	PIER	39,388	0	1,720	64	143	0	2,161	4,090
1976	GRB	RAMP	54,597	0	1,015	410	594	796	261	3,072
1976	GRB	SHORE	25,600	0	281	1,231	13	77	947	2,549
1976	GRB	STREAM	32,320	72	346	1,957	84	0	207	2,667
1976	KEW	CHARTER	15,268	26	56	495	191	3,204	358	4,329
1976	KEW	PIER	88,634	119	2,028	3,574	2,852	563	3,286	12,419
1976	KEW	RAMP	217,367	117	461	6,244	1,729	14,320	915	23,781
1976	KEW	SHORE	72,619	0	1,817	5,292	120	20	618	7,868
1976	KEW	STREAM	88,287	57	310	5,318	280	0	637	6,606
1976	MAN	CHARTER	7,058	1	58	111	290	1,339	78	1,877
1976	MAN	PIER	95,728	70	1,367	2,589	855	121	1,330	6,331
1976	MAN	RAMP	94,847	8	495	1,940	370	3,017	708	6,537
1976	MAN	SHORE	24,535	204	698	41	14	80	564	1,601
1976	MAN	STREAM	123,598	24	347	10,139	139	26	685	11,355
1976	MLW	CHARTER	10,989	0	37	692	770	171	136	1,805
1976	MLW	PIER	12,949	0	243	0	0	54	0	297
1976	MLW	RAMP	294,279	17	495	3,529	13,227	2,210	1,693	21,169
1976	MLW	SHORE	60,237	0	4,665	1,176	869	0	809	7,519
1976	MLW	STREAM	24,358	0	612	0	1,860	0	276	2,748
1976	PTW	CHARTER	5,469	1	13	144	406	174	174	912
1976	PTW	PIER	82,868	0	674	405	864	46	860	2,847
1976	PTW	RAMP	130,298	0	131	3,537	2,617	2,441	1,088	9,803
1976	PTW	SHORE	39,695	0	426	0	0	0	1,379	1,804
1976	RKN	CHARTER	6,002	1	8	138	676	74	103	1,000
1976	RKN	PIER	38,769	0	89	117	1,484	0	625	2,315
1976	RKN	RAMP	177,184	0	173	2,797	7,271	621	995	11,860
1976	RKN	SHORE	115,153	0	418	3,068	2,158	0	1,743	7,384
1976	RKN	STREAM	34,284	0	0	1,711	24	0	326	2,061
1976	SHE	CHARTER	6,214	6	32	474	509	275	284	1,581
1976	SHE	PIER	87,114	0	1,086	1,818	1,750	28	701	5,382
1976	SHE	RAMP	43,509	0	22	579	1,250	426	432	2,708
1976	SHE	SHORE	1,372	0	0	0	0	0	0	0
1976	SHE	STREAM	85,798	0	807	5,016	1,006	0	288	7,116
1977	DOR	CHARTER	14,175	12	132	1,194	272	4,224	129	5,956
1977	DOR	PIER	18,443	168	1,443	359	0	0	2,717	4,686
1977	DOR	RAMP	97,154	152	3,471	2,674	1,877	4,653	1,512	14,336
1977	DOR	SHORE	41,944	9,043	3,364	1,493	71	23	3,531	17,526
1977	DOR	STREAM	11,569	2,658	2,280	2,280	0	0	863	8,088
1977	GRB	PIER	39,058	0	820	0	21	0	5,841	6,682
1977	GRB	RAMP	49,712	14	2,999	176	596	497	655	4,935
1977	GRB	SHORE	22,104	81	165	379	318	0	663	1,606

APPENDIX 2. LAKE MICHIGAN SALMONID CATCH AND ANGLER EFFORT BY YEAR, MANAGEMENT ZONE AND FISHERY

YEAR	SITE	FISHERY	ANGLER HOURS	BROOK	BROWN	CHINOOK	COHO	LAKE TROUT	RAINBOW	TOTAL CATCH
1977	GRB	STREAM	46,371	482	228	2,600	3,200	0	667	7,177
1977	KEW	CHARTER	11,028	5	49	488	654	1,910	568	3,675
1977	KEW	PIER	91,873	381	5,279	1,371	678	432	8,437	16,574
1977	KEW	RAMP	213,054	72	3,046	7,692	7,016	14,418	7,305	39,538
1977	KEW	SHORE	56,394	228	11,322	403	75	0	4,061	16,088
1977	KEW	STREAM	34,256	0	86	2,107	482	0	900	3,576
1977	MAN	CHARTER	10,230	8	23	349	913	1,935	301	3,527
1977	MAN	PIER	140,450	1,445	6,153	6,011	5,433	136	5,743	24,926
1977	MAN	RAMP	223,390	10	1,826	9,158	10,225	27,960	4,539	53,711
1977	MAN	SHORE	15,055	41	2,251	97	260	95	856	3,602
1977	MAN	STREAM	61,567	1,124	287	7,301	1,804	61	3,740	14,317
1977	MLW	CHARTER	14,825	8	101	1,483	1,540	260	148	3,546
1977	MLW	PIER	35,936	0	854	559	761	37	1,204	3,413
1977	MLW	RAMP	780,081	0	3,098	25,898	73,571	4,430	6,971	113,967
1977	MLW	SHORE	25,346	0	538	277	248	7	465	1,537
1977	MLW	STREAM	8,123	0	21	824	107	0	172	1,123
1977	PTW	CHARTER	11,109	2	23	572	1,175	502	173	2,453
1977	PTW	PIER	131,110	247	1,803	2,943	9,512	739	5,432	20,669
1977	PTW	RAMP	288,125	0	521	14,776	29,004	6,300	4,983	55,580
1977	PTW	SHORE	29,250	61	663	266	614	0	7,742	9,343
1977	RKN	CHARTER	11,271	5	21	511	1,929	282	150	2,900
1977	RKN	PIER	135,632	0	344	4,657	1,544	0	3,002	9,553
1977	RKN	RAMP	325,524	0	261	11,519	38,130	916	2,565	53,413
1977	RKN	SHORE	43,098	0	100	1,399	659	54	808	3,019
1977	RKN	STREAM	26,057	0	0	2,782	41	0	372	3,194
1977	SHE	CHARTER	11,182	12	50	859	1,082	547	517	3,060
1977	SHE	PIER	81,765	873	1,921	3,370	1,452	0	2,194	9,815
1977	SHE	RAMP	187,416	0	579	13,254	9,922	3,053	2,995	29,800
1977	SHE	SHORE	7,347	0	677	0	0	0	418	1,094
1977	SHE	STREAM	32,191	0	2,826	7,793	993	0	1,039	12,644
1978	DOR	CHARTER	30,417	21	394	2,881	468	4,894	378	9,073
1978	DOR	PIER	8,042	28	166	0	0	29	157	380
1978	DOR	RAMP	85,213	143	1,838	1,262	217	3,775	1,233	8,469
1978	DOR	SHORE	22,453	189	153	31	54	0	979	1,406
1978	DOR	STREAM	13,417	0	161	161	0	0	449	771
1978	GRB	PIER	41,281	492	1,148	0	0	0	1,537	3,176
1978	GRB	RAMP	75,371	114	18,768	372	262	58	1,630	21,204
1978	GRB	SHORE	16,520	0	2,641	1,303	51	0	990	4,988
1978	GRB	STREAM	28,040	112	840	1,651	760	0	240	3,602
1978	KEW	CHARTER	19,834	13	47	1,179	435	3,302	802	5,823
1978	KEW	PIER	37,368	57	1,501	255	116	0	1,054	2,980
1978	KEW	RAMP	158,884	20	975	4,445	1,562	8,292	3,290	18,596
1978	KEW	SHORE	11,312	109	1,046	0	0	0	415	1,570
1978	KEW	STREAM	22,684	35	464	332	0	0	482	1,314
1978	MAN	CHARTER	15,246	3	33	1,015	561	1,902	361	3,930
1978	MAN	PIER	67,910	2,501	3,080	485	2,547	21	2,092	10,729
1978	MAN	RAMP	122,317	0	952	5,332	1,776	3,813	1,490	13,366
1978	MAN	SHORE	15,165	330	1,203	30	0	0	829	2,392
1978	MAN	STREAM	90,551	1,191	331	4,279	254	115	232	6,401
1978	MLW	CHARTER	13,596	0	61	1,533	591	335	129	2,706
1978	MLW	PIER	58,857	0	71	321	1,122	79	536	2,129

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YEAR	SITE	FISHERY	ANGLER HOURS	BROOK	BROWN	CHINOOK	COHO	LAKE TROUT	RAINBOW	TOTAL CATCH
1978	MLW	RAMP	259,132	0	1,724	11,225	8,517	768	1,487	23,718
1978	MLW	SHORE	27,103	58	449	54	1,324	122	1,317	3,325
1978	MLW	STREAM	7,491	0	58	76	48	0	226	407
1978	PTW	CHARTER	6,919	0	33	666	604	401	139	1,901
1978	PTW	PIER	86,395	0	2,366	1,071	5,157	14	845	9,455
1978	PTW	RAMP	80,216	0	90	3,908	4,756	1,060	1,007	10,823
1978	PTW	SHORE	27,271	27	586	1,551	581	112	667	3,521
1978	RKN	CHARTER	14,927	5	64	1,136	1,930	615	269	4,072
1978	RKN	PIER	31,252	32	336	85	1,947	0	446	2,845
1978	RKN	RAMP	267,937	0	861	9,346	17,617	1,878	1,870	31,570
1978	RKN	SHORE	48,632	0	321	625	1,113	121	1,021	3,198
1978	RKN	STREAM	29,803	0	126	2,094	0	0	698	2,918
1978	SHE	CHARTER	10,624	3	165	1,028	587	697	444	2,978
1978	SHE	PIER	78,249	1,717	1,818	1,384	1,753	80	1,378	8,134
1978	SHE	RAMP	80,673	0	491	5,080	2,173	1,015	1,049	9,805
1978	SHE	SHORE	3,140	0	0	0	0	0	38	38
1978	SHE	STREAM	36,937	875	488	8,370	327	84	225	10,369
1979	DOR	CHARTER	21,830	7	400	2,466	133	2,777	98	5,597
1979	DOR	PIER	15,872	1,620	53	78	19	0	748	2,514
1979	DOR	RAMP	97,637	307	5,532	2,159	70	3,704	1,047	12,815
1979	DOR	SHORE	27,838	1,431	2,808	521	0	236	661	5,656
1979	DOR	STREAM	32,437	292	1,162	1,880	0	0	1,371	4,706
1979	GRB	PIER	29,866	38	523	44	0	6	204	815
1979	GRB	RAMP	98,517	139	11,092	3,256	427	1,265	199	16,379
1979	GRB	SHORE	43,455	146	1,586	992	105	0	47	2,877
1979	GRB	STREAM	115,689	521	1,185	10,437	842	0	476	13,454
1979	KEW	CHARTER	16,281	2	74	737	157	4,180	320	5,522
1979	KEW	PIER	37,465	313	1,071	514	119	0	1,002	3,019
1979	KEW	RAMP	167,243	355	4,686	3,730	609	9,719	1,473	20,564
1979	KEW	SHORE	21,776	199	2,674	0	0	0	1,069	3,939
1979	KEW	STREAM	64,889	0	545	4,273	61	0	1,601	6,475
1979	MAN	CHARTER	15,531	1	63	615	228	4,250	282	5,492
1979	MAN	PIER	90,360	1,935	2,388	436	1,145	641	2,247	8,799
1979	MAN	RAMP	147,823	0	4,428	4,858	2,264	7,636	570	19,755
1979	MAN	SHORE	13,538	391	2,277	4	2	14	986	3,673
1979	MAN	STREAM	99,075	1,458	440	8,947	1,113	365	1,136	13,461
1979	MLW	CHARTER	15,144	2	160	1,646	543	450	109	2,963
1979	MLW	PIER	46,527	0	271	50	463	0	654	1,439
1979	MLW	RAMP	317,826	0	1,657	14,787	9,812	1,577	4,073	31,907
1979	MLW	SHORE	32,726	0	561	0	36	0	286	883
1979	MLW	STREAM	22,173	0	41	1,504	168	0	762	2,476
1979	PTW	CHARTER	11,168	0	94	1,289	738	814	143	3,130
1979	PTW	PIER	68,206	0	257	1,231	2,649	31	302	4,472
1979	PTW	RAMP	202,519	0	575	11,828	7,167	3,832	1,153	24,546
1979	PTW	SHORE	56,011	0	2,589	996	863	618	4,842	9,900
1979	RKN	CHARTER	10,838	0	48	713	843	649	126	2,402
1979	RKN	PIER	35,542	0	94	172	925	0	279	1,469
1979	RKN	RAMP	278,914	0	1,064	10,928	15,008	2,793	2,490	32,282
1979	RKN	SHORE	46,953	0	396	647	292	26	1,534	2,897
1979	RKN	STREAM	34,790	0	31	1,826	32	0	519	2,408
1979	SHE	CHARTER	13,857	2	148	1,344	529	858	382	3,314

APPENDIX 2. LAKE MICHIGAN SALMONID CATCH AND ANGLER EFFORT BY YEAR, MANAGEMENT ZONE AND FISHERY

YEAR	SITE	FISHERY	ANGLER HOURS	BROOK	BROWN	CHINOOK	COHO	LAKE TROUT	RAINBOW	TOTAL CATCH
1979	SHE	PIER	70,055	1,029	938	908	1,081	461	802	5,221
1979	SHE	RAMP	137,754	61	734	8,378	1,989	1,923	1,216	14,296
1979	SHE	SHORE	9,324	196	103	415	479	0	185	1,377
1979	SHE	STREAM	56,802	855	592	9,545	1,040	785	665	13,470
1980	DOR	CHARTER	36,893	4	866	3,671	385	2,337	163	7,429
1980	DOR	PIER	21,740	643	44	134	74	95	2,147	3,136
1980	DOR	RAMP	112,297	365	2,545	4,814	1,490	2,962	648	12,822
1980	DOR	SHORE	41,554	431	2,419	2,201	61	41	1,084	6,234
1980	DOR	STREAM	1,787	0	0	189	0	0	0	189
1980	GRB	PIER	67,414	49	1,259	16	0	0	448	1,772
1980	GRB	RAMP	152,598	38	6,563	5,980	771	790	202	14,346
1980	GRB	SHORE	34,214	0	1,290	819	0	0	142	2,251
1980	GRB	STREAM	60,766	370	1,745	2,061	724	0	344	5,245
1980	KEW	CHARTER	18,840	13	162	1,761	990	2,968	378	6,264
1980	KEW	PIER	53,734	1,716	1,076	906	126	288	4,337	8,449
1980	KEW	RAMP	167,351	158	694	8,224	2,883	6,993	1,392	20,341
1980	KEW	SHORE	20,598	1,008	2,084	274	0	0	1,696	5,062
1980	KEW	STREAM	52,688	163	593	7,323	98	0	573	8,743
1980	MAN	CHARTER	11,628	3	87	956	929	2,445	213	4,634
1980	MAN	PIER	93,115	556	2,858	2,201	1,309	135	6,027	13,085
1980	MAN	RAMP	139,038	135	552	6,646	5,116	8,385	1,196	22,034
1980	MAN	SHORE	11,927	121	125	0	0	98	441	785
1980	MAN	STREAM	46,137	180	475	1,561	1,199	57	785	4,259
1980	MLW	CHARTER	14,658	2	138	2,023	1,398	135	55	3,756
1980	MLW	PIER	82,642	16	533	1,311	778	16	1,167	3,818
1980	MLW	RAMP	315,106	0	1,139	14,729	23,287	2,054	2,220	43,421
1980	MLW	SHORE	29,286	0	213	335	156	33	147	884
1980	MLW	STREAM	9,053	0	61	377	0	0	38	476
1980	PTW	CHARTER	9,771	0	83	1,135	1,700	224	86	3,234
1980	PTW	PIER	7,938	0	0	0	0	0	0	0
1980	PTW	RAMP	228,776	0	886	8,309	20,569	1,501	965	32,221
1980	PTW	SHORE	29,432	76	887	188	183	110	1,792	3,235
1980	RKN	CHARTER	14,200	1	51	851	1,822	1,340	62	4,132
1980	RKN	PIER	26,042	0	48	438	868	0	487	1,841
1980	RKN	RAMP	243,305	0	318	7,618	27,393	3,356	577	39,260
1980	RKN	SHORE	48,809	31	756	325	299	39	1,367	2,819
1980	RKN	STREAM	36,441	0	266	3,690	40	0	274	4,269
1980	SHE	CHARTER	16,473	13	172	2,232	2,025	451	192	5,077
1980	SHE	PIER	102,016	1,222	1,870	1,911	1,935	434	1,265	8,636
1980	SHE	RAMP	134,902	99	765	11,514	8,037	1,039	673	22,137
1980	SHE	SHORE	588	0	0	0	0	0	0	0
1980	SHE	STREAM	22,232	161	139	292	495	0	155	1,242
1981	DOR	CHARTER	52,390	130	1,091	5,611	354	3,170	206	10,453
1981	DOR	PIER	15,578	332	87	0	0	85	897	1,400
1981	DOR	RAMP	151,500	150	3,806	5,893	275	2,877	628	13,626
1981	DOR	SHORE	33,930	617	1,985	707	79	147	1,979	5,514
1981	DOR	STREAM	13,480	48	370	697	70	0	398	1,582
1981	GRB	PIER	47,559	0	5,376	193	0	524	5,229	11,321
1981	GRB	RAMP	89,854	203	8,154	1,946	324	36	767	11,425
1981	GRB	SHORE	31,556	0	1,963	8,440	0	27	2,429	12,867
1981	GRB	STREAM	49,980	172	2,125	18,933	0	0	242	21,471

APPENDIX 2. LAKE MICHIGAN SALMONID CATCH AND ANGLER EFFORT BY YEAR, MANAGEMENT ZONE AND FISHERY

YEAR	SITE	FISHERY	ANGLER HOURS	BROOK	BROWN	CHINOOK	COHO	LAKE TROUT	RAINBOW	TOTAL CATCH
1981	KEW	CHARTER	28,514	4	164	3,421	514	3,960	318	8,398
1981	KEW	PIER	60,437	340	1,015	1,673	32	0	1,482	4,543
1981	KEW	RAMP	191,886	108	1,374	9,314	445	6,347	460	18,052
1981	KEW	SHORE	17,817	0	1,908	43	0	0	360	2,311
1981	KEW	STREAM	63,594	103	1,365	8,842	74	0	880	11,263
1981	MAN	CHARTER	22,262	4	53	2,020	476	5,430	122	8,122
1981	MAN	PIER	60,891	81	1,880	1,694	251	0	1,148	5,053
1981	MAN	RAMP	101,562	239	2,126	5,798	757	4,675	698	14,291
1981	MAN	SHORE	15,215	42	1,573	44	29	0	914	2,602
1981	MAN	STREAM	153,353	514	2,575	22,445	398	499	1,653	28,084
1981	MLW	CHARTER	18,550	4	210	2,679	1,368	610	175	5,066
1981	MLW	PIER	64,509	29	2,095	364	1,958	35	1,088	5,563
1981	MLW	RAMP	312,767	0	1,602	15,411	10,982	2,185	1,583	31,768
1981	MLW	SHORE	22,049	0	178	26	349	0	280	833
1981	MLW	STREAM	18,785	0	526	2,441	1,616	0	138	4,721
1981	PTW	CHARTER	20,063	2	88	2,388	1,728	1,065	164	5,455
1981	PTW	PIER	79,073	57	697	736	3,842	0	976	6,307
1981	PTW	RAMP	219,009	0	730	17,759	11,770	2,745	1,242	34,245
1981	PTW	SHORE	46,201	41	1,625	473	713	47	1,964	4,861
1981	RKN	CHARTER	17,258	1	30	1,475	2,068	1,976	140	5,708
1981	RKN	PIER	38,648	0	131	88	202	134	668	1,223
1981	RKN	RAMP	260,385	0	706	12,836	20,662	5,415	730	40,350
1981	RKN	SHORE	11,410	0	0	239	96	0	207	542
1981	RKN	STREAM	44,814	0	732	3,802	1,371	208	1,469	7,586
1981	SHE	CHARTER	24,488	2	236	3,158	1,187	1,253	400	6,253
1981	SHE	PIER	123,929	902	3,424	2,991	1,023	196	909	9,449
1981	SHE	RAMP	157,986	51	662	11,751	3,067	1,649	684	17,870
1981	SHE	SHORE	6,727	34	466	0	0	0	71	571
1981	SHE	STREAM	106,531	410	1,782	9,605	2,331	1,405	1,644	17,177
1982	DOR	CHARTER	50,447	43	796	5,706	328	3,124	62	10,059
1982	DOR	MOORED	88,375	0	0	2,940	1,890	9,030	105	13,965
1982	DOR	PIER	22,506	0	945	201	0	69	534	1,748
1982	DOR	RAMP	129,732	172	3,228	4,944	1,555	2,089	145	12,132
1982	DOR	SHORE	12,878	62	213	24	0	52	778	1,128
1982	DOR	STREAM	14,723	0	89	267	0	0	1,725	2,081
1982	GRB	MOORED	1,258	0	114	0	0	72	6	193
1982	GRB	PIER	45,395	0	891	97	0	0	248	1,236
1982	GRB	RAMP	238,951	0	6,453	5,724	0	1,382	233	13,792
1982	GRB	SHORE	47,536	0	1,177	466	0	0	0	1,643
1982	GRB	STREAM	138,777	0	1,731	25,675	0	0	1,421	28,827
1982	KEW	CHARTER	40,817	4	206	4,971	726	2,962	211	9,080
1982	KEW	MOORED	35,455	0	312	8,840	1,456	728	520	11,856
1982	KEW	PIER	25,779	0	808	168	40	0	145	1,162
1982	KEW	RAMP	222,505	0	3,056	13,872	2,106	6,781	367	26,184
1982	KEW	SHORE	23,343	34	4,314	365	0	0	310	5,025
1982	KEW	STREAM	34,170	0	321	1,427	0	0	764	2,512
1982	MAN	CHARTER	21,849	0	25	2,242	407	4,629	114	7,417
1982	MAN	MOORED	74,803	0	0	8,266	1,023	7,887	66	17,242
1982	MAN	PIER	67,168	364	964	1,352	1,283	132	831	4,929
1982	MAN	RAMP	186,049	0	3,507	9,597	2,668	6,684	130	22,596
1982	MAN	SHORE	33,011	147	6,314	2,816	63	113	409	9,859

APPENDIX 2. LAKE MICHIGAN SALMONID CATCH AND ANGLER EFFORT BY YEAR, MANAGEMENT ZONE AND FISHERY

YEAR	SITE	FISHERY	ANGLER HOURS	BROOK	BROWN	CHINOOK	COHO	LAKE TROUT	RAINBOW	TOTAL CATCH
1982	MAN	STREAM	180,271	313	450	14,632	142	826	662	17,013
1982	MLW	CHARTER	23,551	2	229	3,041	1,957	228	58	5,515
1982	MLW	MOORED	452,333	0	3,020	43,488	35,032	4,907	1,510	87,957
1982	MLW	PIER	78,443	0	518	1,029	1,197	0	158	2,901
1982	MLW	RAMP	259,496	0	1,994	11,420	14,288	1,282	1,635	30,614
1982	MLW	SHORE	23,308	0	389	222	147	0	684	1,440
1982	MLW	STREAM	13,384	0	0	890	474	0	976	2,340
1982	PTW	CHARTER	27,452	1	71	3,262	2,195	1,272	97	6,898
1982	PTW	MOORED	28,766	10	96	3,302	2,678	586	106	6,778
1982	PTW	PIER	75,308	121	283	1,071	2,020	96	604	4,196
1982	PTW	RAMP	164,712	0	977	11,990	11,358	2,674	2,411	29,415
1982	PTW	SHORE	38,821	149	1,310	1,461	297	370	2,562	6,151
1982	RKN	CHARTER	38,663	20	79	2,288	6,078	7,154	117	15,736
1982	RKN	MOORED	202,272	542	953	9,815	28,882	19,825	650	60,667
1982	RKN	PIER	100,440	0	646	1,198	2,351	62	377	4,635
1982	RKN	RAMP	296,640	0	661	9,710	34,383	11,632	1,522	57,907
1982	RKN	SHORE	18,225	0	84	202	0	0	20	304
1982	RKN	STREAM	33,254	0	749	2,417	0	0	1,259	4,425
1982	SHE	CHARTER	35,860	6	342	4,683	1,572	1,628	214	8,445
1982	SHE	MOORED	98,485	38	530	11,142	4,351	1,646	378	18,084
1982	SHE	PIER	110,925	2,042	7,497	2,932	3,532	1,388	978	18,351
1982	SHE	RAMP	156,544	96	1,232	10,458	3,899	3,693	173	19,555
1982	SHE	SHORE	13,615	3,126	592	840	0	48	127	4,732
1982	SHE	STREAM	267,478	2,596	5,092	31,710	4,140	1,652	1,815	47,048
1983	DOR	CHARTER	60,919	16	1,466	8,083	113	3,269	79	13,026
1983	DOR	MOORED	55,572	0	0	1,848	1,188	5,676	66	8,778
1983	DOR	PIER	20,619	101	161	229	19	0	185	696
1983	DOR	RAMP	179,082	22	4,189	7,881	325	5,719	239	18,362
1983	DOR	SHORE	46,133	0	329	2,798	57	1,206	0	4,386
1983	DOR	STREAM	2,616	0	13	9	0	0	0	22
1983	GRB	MOORED	745	0	74	36	0	2	4	116
1983	GRB	PIER	26,006	0	1,227	73	0	0	527	1,827
1983	GRB	RAMP	140,472	0	12,656	5,376	0	357	229	18,608
1983	GRB	SHORE	34,274	0	2,970	2,480	0	0	92	5,541
1983	GRB	STREAM	70,854	0	2,979	13,486	156	0	759	17,372
1983	KEW	CHARTER	53,248	2	394	7,570	403	4,219	839	13,427
1983	KEW	MOORED	54,901	0	483	13,685	2,254	1,127	805	18,354
1983	KEW	PIER	61,004	356	1,204	655	81	45	1,602	3,940
1983	KEW	RAMP	256,713	13	1,875	14,225	641	8,796	697	26,238
1983	KEW	SHORE	6,679	0	85	0	0	0	171	256
1983	KEW	STREAM	107,401	106	3,448	10,535	0	2,485	259	16,833
1983	MAN	CHARTER	29,073	1	86	2,780	251	9,222	158	12,498
1983	MAN	MOORED	102,095	23	756	13,328	939	27,686	206	42,937
1983	MAN	PIER	114,928	713	2,366	2,705	1,195	34	1,624	8,632
1983	MAN	RAMP	185,828	3	714	16,182	1,762	12,459	632	31,739
1983	MAN	SHORE	21,252	94	3,073	88	63	32	421	3,770
1983	MAN	STREAM	84,651	544	467	13,247	103	36	1,776	16,170
1983	MLW	CHARTER	27,101	0	183	3,650	362	649	120	4,964
1983	MLW	MOORED	226,269	41	1,681	32,144	5,248	8,938	2,706	50,758
1983	MLW	PIER	95,614	14	1,505	2,597	663	195	223	5,200
1983	MLW	RAMP	378,184	22	2,610	29,329	4,436	4,025	1,299	41,724

APPENDIX 2. LAKE MICHIGAN SALMONID CATCH AND ANGLER EFFORT BY YEAR, MANAGEMENT ZONE AND FISHERY

YEAR	SITE	FISHERY	ANGLER HOURS	BROOK	BROWN	CHINOOK	COHO	LAKE TROUT	RAINBOW	TOTAL CATCH
1983	MLW	SHORE	131,764	0	1,413	1,098	558	69	611	3,750
1983	MLW	STREAM	13,663	0	0	1,023	79	0	216	1,318
1983	PTW	CHARTER	35,080	0	205	4,148	1,288	2,730	116	8,487
1983	PTW	MOORED	54,139	22	424	5,996	2,177	1,943	346	10,910
1983	PTW	PIER	89,934	28	820	2,514	1,641	60	196	5,257
1983	PTW	RAMP	200,569	51	1,134	12,656	5,039	4,370	580	23,834
1983	PTW	SHORE	66,875	19	4,704	1,844	1,370	1,107	1,755	10,797
1983	RKN	CHARTER	61,167	7	197	3,839	1,538	17,991	259	23,831
1983	RKN	MOORED	115,652	0	597	9,631	5,182	20,009	407	35,826
1983	RKN	PIER	83,533	0	1,481	2,021	1,445	522	244	5,712
1983	RKN	RAMP	304,965	0	1,620	14,236	5,857	23,771	1,185	46,680
1983	RKN	SHORE	20,339	0	186	377	62	36	547	1,208
1983	RKN	STREAM	32,025	0	0	4,876	13	0	25	4,914
1983	SHE	CHARTER	54,136	13	580	6,077	1,180	8,650	396	16,896
1983	SHE	MOORED	92,991	30	951	13,579	1,813	9,509	357	26,238
1983	SHE	PIER	121,745	1,113	1,634	4,155	594	493	608	8,597
1983	SHE	RAMP	190,882	87	1,462	14,642	3,120	7,820	1,036	28,164
1983	SHE	SHORE	4,906	37	706	0	0	0	27	770
1983	SHE	STREAM	45,233	475	87	10,117	167	421	277	11,555
1984	DOR	CHARTER	68,047	57	2,519	10,941	622	2,434	206	16,777
1984	DOR	MOORED	88,691	0	0	2,949	1,896	9,058	105	14,009
1984	DOR	PIER	22,846	1,107	833	158	61	8	198	2,362
1984	DOR	RAMP	227,183	461	8,604	10,873	2,708	3,205	214	26,060
1984	DOR	SHORE	80,542	44	2,925	10,453	0	0	77	13,499
1984	DOR	STREAM	10,562	556	782	199	0	0	97	1,633
1984	GRB	MOORED	6,358	1	1,269	162	108	0	0	1,540
1984	GRB	PIER	24,339	162	2,671	287	0	0	84	3,203
1984	GRB	RAMP	121,267	204	7,581	7,462	168	43	172	15,630
1984	GRB	SHORE	40,109	36	733	5,169	0	0	72	6,009
1984	GRB	STREAM	45,205	80	3,522	5,375	0	0	1,247	10,222
1984	KEW	CHARTER	54,842	74	459	9,776	1,183	3,393	954	15,840
1984	KEW	MOORED	63,426	0	558	15,810	2,604	1,302	930	21,204
1984	KEW	PIER	45,279	1,234	1,606	764	245	0	520	4,368
1984	KEW	RAMP	211,641	167	3,443	13,518	3,240	5,802	912	27,069
1984	KEW	SHORE	14,205	0	2,616	373	0	0	373	3,361
1984	KEW	STREAM	37,511	6,246	896	2,229	34	0	540	9,945
1984	MAN	CHARTER	54,383	16	261	4,873	2,195	8,335	432	16,113
1984	MAN	MOORED	78,499	38	113	3,319	1,433	14,181	226	19,310
1984	MAN	PIER	105,623	1,649	3,103	1,568	3,535	45	1,077	10,970
1984	MAN	RAMP	181,017	152	1,520	9,332	3,758	8,832	659	24,239
1984	MAN	SHORE	12,900	50	1,434	102	31	21	549	2,187
1984	MAN	STREAM	69,659	160	1,933	9,567	0	112	494	12,271
1984	MLW	CHARTER	31,251	14	227	4,426	1,359	381	121	6,529
1984	MLW	MOORED	160,163	47	711	22,408	11,465	2,179	758	37,568
1984	MLW	PIER	104,919	31	853	4,330	1,802	415	509	7,938
1984	MLW	RAMP	230,468	69	1,846	14,260	7,770	580	770	25,291
1984	MLW	SHORE	32,161	0	184	537	411	0	51	1,183
1984	MLW	STREAM	19,054	0	217	4,274	261	0	452	5,199
1984	PTW	CHARTER	46,738	115	323	6,814	4,026	1,134	230	12,644
1984	PTW	MOORED	31,127	91	203	3,015	2,115	495	68	5,985
1984	PTW	PIER	79,972	15	831	1,525	2,883	86	0	5,336

APPENDIX 2. LAKE MICHIGAN SALMONID CATCH AND ANGLER EFFORT BY YEAR, MANAGEMENT ZONE AND FISHERY

YEAR	SITE	FISHERY	ANGLER HOURS	BROOK	BROWN	CHINOOK	COHO	LAKE TROUT	RAINBOW	TOTAL CATCH
1984	PTW	RAMP	201,623	0	1,776	14,142	11,094	2,173	565	29,740
1984	PTW	SHORE	36,006	15	819	1,875	456	233	696	4,095
1984	RKN	CHARTER	63,829	17	454	4,644	9,321	12,680	467	27,582
1984	RKN	MOORED	48,658	0	273	2,378	5,084	6,751	465	14,951
1984	RKN	PIER	68,038	0	691	2,575	1,309	486	576	5,635
1984	RKN	RAMP	219,657	0	1,225	9,754	14,408	14,233	300	39,927
1984	RKN	SHORE	41,381	0	293	1,230	442	885	354	3,200
1984	RKN	STREAM	44,808	0	234	5,329	101	0	1,528	7,193
1984	SHE	CHARTER	70,162	15	579	8,138	6,511	6,146	837	22,224
1984	SHE	MOORED	83,158	641	366	10,030	5,771	3,801	1,282	21,892
1984	SHE	PIER	121,971	615	1,087	1,920	4,300	554	214	8,683
1984	SHE	RAMP	169,078	781	1,575	11,552	7,717	3,233	615	25,488
1984	SHE	SHORE	2,470	0	83	48	30	0	253	414
1984	SHE	STREAM	60,777	226	1,382	4,123	370	2,673	2,109	10,872
1985	DOR	CHARTER	75,126	79	2,174	13,780	508	3,490	264	20,295
1985	DOR	MOORED	85,031	0	0	2,828	1,818	8,686	101	13,433
1985	DOR	PIER	18,661	737	781	214	0	0	422	2,152
1985	DOR	RAMP	204,483	192	8,356	18,188	352	2,522	292	29,897
1985	DOR	SHORE	28,689	639	1,599	869	23	0	1,681	4,809
1985	DOR	STREAM	28,061	336	884	2,511	0	0	302	4,032
1985	GRB	MOORED	10,363	0	1,550	700	175	0	0	2,425
1985	GRB	PIER	30,742	44	1,258	350	30	0	213	1,894
1985	GRB	RAMP	141,674	63	11,347	6,773	49	14	178	18,420
1985	GRB	SHORE	34,951	0	206	866	19	0	39	1,130
1985	GRB	STREAM	59,690	0	2,143	2,733	139	0	3,179	8,190
1985	KEW	CHARTER	49,767	18	526	10,927	482	3,070	729	15,752
1985	KEW	MOORED	46,717	0	411	11,645	1,918	959	685	15,618
1985	KEW	PIER	49,309	519	977	816	18	0	331	2,665
1985	KEW	RAMP	157,784	23	1,427	13,248	918	3,343	805	19,761
1985	KEW	SHORE	11,850	0	1,069	119	0	0	74	1,262
1985	KEW	STREAM	49,472	435	969	3,182	0	0	1,035	5,621
1985	MAN	CHARTER	45,700	9	556	5,738	1,145	5,957	307	13,712
1985	MAN	MOORED	75,840	340	0	3,060	510	15,130	170	19,210
1985	MAN	PIER	103,852	690	1,550	2,411	4,826	85	678	10,237
1985	MAN	RAMP	164,532	321	4,881	11,561	2,203	6,550	428	25,939
1985	MAN	SHORE	6,009	33	842	179	151	0	92	1,298
1985	MAN	STREAM	164,369	484	935	41,673	171	181	422	43,863
1985	MLW	CHARTER	29,907	5	559	4,746	2,418	126	78	7,932
1985	MLW	MOORED	182,021	72	1,362	26,373	25,155	1,792	430	55,183
1985	MLW	PIER	110,023	12	596	2,529	2,689	6	367	6,201
1985	MLW	RAMP	260,136	49	1,549	19,812	15,026	913	545	37,899
1985	MLW	SHORE	34,089	0	1,321	169	1,982	7	316	3,791
1985	MLW	STREAM	13,304	0	0	2,621	138	0	542	3,298
1985	PTW	CHARTER	54,582	11	397	7,823	4,464	708	160	13,563
1985	PTW	MOORED	15,759	0	26	1,874	590	154	51	2,695
1985	PTW	PIER	79,211	44	1,537	2,404	2,440	24	265	6,716
1985	PTW	RAMP	154,364	0	1,131	11,470	7,463	1,614	638	22,319
1985	PTW	SHORE	24,268	41	912	781	494	70	974	3,266
1985	RKN	CHARTER	46,249	80	313	3,941	8,094	9,061	291	21,780
1985	RKN	MOORED	174,141	0	2,523	12,051	23,020	10,145	721	48,513
1985	RKN	PIER	103,589	0	1,057	1,138	7,189	37	460	9,887

APPENDIX 2. LAKE MICHIGAN SALMONID CATCH AND ANGLER EFFORT BY YEAR, MANAGEMENT ZONE AND FISHERY

YEAR	SITE	FISHERY	ANGLER HOURS	BROOK	BROWN	CHINOOK	COHO	LAKE TROUT	RAINBOW	TOTAL CATCH
1985	RKN	RAMP	208,946	34	630	10,343	14,137	6,614	322	32,078
1985	RKN	SHORE	21,277	0	404	310	377	0	236	1,327
1985	RKN	STREAM	37,540	0	295	3,231	0	0	1,496	5,022
1985	SHE	CHARTER	65,851	48	1,276	9,964	3,947	4,063	961	20,259
1985	SHE	MOORED	124,284	0	936	23,634	3,978	2,516	819	31,883
1985	SHE	PIER	106,510	435	1,655	2,352	2,977	322	966	8,709
1985	SHE	RAMP	146,122	447	1,484	13,525	3,371	1,761	597	21,192
1985	SHE	SHORE	20,550	36	767	0	225	0	94	1,122
1985	SHE	STREAM	20,026	85	122	766	0	29	428	1,430

APPENDIX 3. LAKE MICHIGAN SALMONID EFFORT BY YEAR, FISHERY, AND MONTH

YEAR	FISHERY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	TOTAL
1969	PIER	6,272	15,049	7,934	13,371	11,721	15,145	28,223	11,508	0	109,223
1969	RAMP	7,369	72,579	32,618	9,450	21,638	64,224	20,607	1,025	0	229,510
1969	SHORE	0	24,877	0	1,176	1,092	735	2,058	336	0	30,274
1969	STREAM	0	26,261	8,064	0	0	0	0	11,811	0	46,136
1970	PIER	2,464	11,756	15,489	12,561	17,068	18,448	23,019	15,777	0	116,582
1970	RAMP	2,622	21,982	31,471	66,881	38,139	72,019	79,191	23,442	0	335,747
1970	SHORE	4,582	3,549	2,884	2,564	2,403	294	4,287	5,267	0	25,830
1970	STREAM	1,898	36,350	1,700	0	0	0	3,725	16,750	0	60,423
1971	PIER	0	15,068	25,212	16,769	29,332	44,962	46,977	43,966	0	222,286
1971	RAMP	12,320	30,560	125,030	111,882	113,446	211,916	120,033	51,053	0	776,240
1971	SHORE	2,643	53,045	53,284	2,520	3,651	1,260	16,149	32,964	0	165,516
1971	STREAM	805	99,734	32,478	0	0	1,932	4,633	13,844	0	153,426
1972	PIER	0	34,449	59,323	40,436	82,974	103,742	68,726	20,329	0	409,979
1972	RAMP	0	28,712	125,238	94,767	266,642	256,509	107,294	53,052	0	932,214
1972	SHORE	1,932	6,524	16,324	9,287	3,627	8,739	23,513	48,659	0	118,605
1972	STREAM	0	35,059	9,764	4,434	3,703	13,527	24,685	23,957	0	115,129
1973	PIER	8,764	6,720	15,489	50,373	84,086	91,549	58,997	41,425	0	357,403
1973	RAMP	22,315	25,033	78,490	222,765	217,493	195,098	107,750	42,813	0	911,757
1973	SHORE	2,562	5,040	8,547	4,030	872	6,012	35,175	45,989	0	108,227
1973	STREAM	12,308	22,581	6,056	7,533	4,803	2,802	24,196	19,951	0	100,230
1974	PIER	7,671	20,822	25,535	72,202	135,559	233,175	109,588	54,858	0	659,410
1974	RAMP	4,200	31,339	98,270	178,570	321,182	386,642	186,573	66,443	0	1,273,219
1974	SHORE	4,620	4,169	9,149	16,618	8,634	17,077	66,141	114,704	0	241,112
1974	STREAM	27,516	51,077	3,863	1,870	0	4,900	81,755	188,873	0	359,854
1975	PIER	14,976	34,852	48,101	50,303	98,846	204,964	95,350	76,283	0	623,675
1975	RAMP	19,004	35,505	115,532	257,540	461,875	448,644	138,496	90,679	0	1,567,275
1975	SHORE	35,840	42,408	21,804	19,389	14,082	23,398	61,223	111,483	0	329,627
1975	STREAM	24,576	86,032	33,448	6,009	739	6,468	92,858	189,102	0	439,232
1976	CHARTER	0	432	5,770	9,376	20,920	18,287	9,537	3,149	107	67,578
1976	PIER	0	24,062	22,272	58,895	79,945	88,600	125,914	61,305	0	460,993
1976	RAMP	3,514	17,734	87,172	183,301	350,254	242,373	171,432	72,387	0	1,128,167
1976	SHORE	11,593	32,995	33,307	20,578	43,328	38,020	87,146	114,501	0	381,468
1976	STREAM	26,586	68,849	23,993	1,701	0	997	120,372	173,464	0	415,962
1977	CHARTER	0	288	4,510	13,226	25,781	24,650	13,685	1,622	58	83,820
1977	PIER	2,072	48,982	41,710	37,611	108,764	160,339	183,385	91,404	0	674,267
1977	RAMP	12,506	73,208	198,415	390,114	721,148	471,545	250,120	47,400	0	2,164,456
1977	SHORE	8,391	25,319	37,991	8,836	19,173	26,702	58,965	55,161	0	240,538
1977	STREAM	10,904	36,070	12,360	2,772	0	1,316	50,573	106,139	0	220,134
1978	CHARTER	0	646	4,801	15,233	31,384	38,677	18,280	2,526	16	111,563
1978	PIER	6,378	12,953	40,176	34,633	88,164	138,167	59,422	29,461	0	409,354
1978	RAMP	6,978	16,730	72,681	136,543	340,622	327,624	168,258	60,307	0	1,129,743
1978	SHORE	16,856	13,763	14,721	12,051	17,772	45,472	23,105	27,856	0	171,596
1978	STREAM	6,050	34,630	21,706	1,236	0	0	35,783	129,518	0	228,923
1979	CHARTER	47	247	3,039	15,438	32,249	35,636	16,153	1,840	0	104,649
1979	PIER	1,008	12,432	40,785	33,021	104,236	88,304	52,102	62,005	0	393,893
1979	RAMP	6,453	51,288	97,505	263,257	448,719	338,566	217,438	25,007	0	1,448,233
1979	SHORE	12,425	38,682	17,160	16,299	20,640	21,342	48,745	76,328	0	251,621
1979	STREAM	27,199	54,908	21,442	2,814	16,744	8,778	39,690	254,280	0	425,855
1980	CHARTER	0	116	3,791	14,972	36,320	48,457	17,648	1,159	0	122,463
1980	PIER	0	28,056	40,046	39,694	45,489	151,998	106,904	42,454	0	454,641
1980	RAMP	0	32,326	161,433	222,172	444,746	421,630	168,609	42,457	0	1,493,373
1980	SHORE	0	19,039	22,414	15,229	10,700	20,099	65,449	63,478	0	216,408
1980	STREAM	0	7,251	21,601	2,280	0	391	48,000	149,581	0	229,104

APPENDIX 3. LAKE MICHIGAN SALMONID EFFORT BY YEAR, FISHERY, AND MONTH

YEAR	FISHERY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	TOTAL
1981	CHARTER	0	264	7,634	21,798	56,554	68,727	27,082	1,466	0	183,525
1981	PIER	0	24,268	42,153	61,866	120,700	128,170	67,766	45,701	0	490,624
1981	RAMP	0	55,847	101,951	220,427	424,612	437,651	187,897	56,564	0	1,484,949
1981	SHORE	0	32,420	31,556	11,486	6,114	2,892	33,149	67,288	0	184,905
1981	STREAM	0	32,937	32,377	462	1,232	0	61,508	322,021	0	450,537
1982	CHARTER	0	464	8,597	34,732	81,928	84,683	26,497	1,738	0	238,639
1982	MOORED	0	0	62,682	284,211	377,872	208,019	43,245	4,006	1,712	981,747
1982	PIER	0	31,143	54,052	70,453	152,104	96,613	64,421	57,178	0	525,964
1982	RAMP	0	52,663	152,206	286,310	511,058	379,524	204,639	68,229	0	1,654,629
1982	SHORE	0	36,711	25,860	15,463	10,825	5,698	35,950	80,230	0	210,737
1982	STREAM	0	90,268	52,098	8,708	3,845	2,294	46,428	478,416	0	682,057
1983	CHARTER	0	111	14,013	53,873	118,244	102,093	30,517	1,873	0	320,724
1983	MOORED	32	2,383	45,358	155,592	280,228	160,620	51,978	5,621	552	702,364
1983	PIER	1,406	41,396	51,980	121,809	204,300	73,434	93,012	26,046	0	613,383
1983	RAMP	2,905	53,898	94,464	351,716	644,905	451,425	182,810	54,572	0	1,836,695
1983	SHORE	14,070	34,206	23,902	26,483	35,091	30,775	59,529	108,166	0	332,222
1983	STREAM	17,517	34,518	12,452	224	0	0	46,840	244,892	0	356,443
1984	CHARTER	0	694	20,714	90,465	151,037	100,021	24,470	1,851	0	389,252
1984	MOORED	0	0	25,533	123,163	261,968	118,368	28,032	3,016	0	560,080
1984	PIER	0	36,516	50,304	88,391	189,910	99,254	64,714	43,898	0	572,987
1984	RAMP	5,341	79,399	125,481	307,817	616,631	294,099	107,742	25,424	0	1,561,934
1984	SHORE	6,284	7,543	15,234	8,511	28,421	6,490	33,268	154,023	0	259,774
1984	STREAM	23,332	49,341	13,446	315	0	4,186	69,197	127,759	0	287,576
1985	CHARTER	0	1,980	29,907	85,148	127,833	93,707	28,041	566	0	367,182
1985	MOORED	0	6,684	51,447	146,750	310,157	144,528	51,108	3,482	0	714,156
1985	PIER	210	15,876	47,566	88,443	171,798	176,325	73,318	27,913	448	601,897
1985	RAMP	1,004	57,837	113,342	215,794	476,753	382,225	171,528	19,404	154	1,438,041
1985	SHORE	4,562	12,905	15,390	11,952	11,479	18,836	43,947	61,184	1,428	181,683
1985	STREAM	23,522	42,529	11,713	5,447	1,946	154	57,467	224,458	5,226	372,462
		486,404	2,366,939	3,395,310	5,722,391	10,328,250	8,862,962	5,804,037	5,428,117	9,701	42,404,111

APPENDIX 4. LAKE MICHIGAN SALMONID CATCH BY YEAR FISHERY, AND MONTH

YEAR	FISHERY	SPECIES	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	TOTAL
1969	PIER	BRK	0	0	8	101	9	373	242	59	0	792
1969	PIER	BRN	0	205	155	545	32	1,005	210	290	0	2,442
1969	PIER	CHN	0	0	0	0	0	36	0	0	0	36
1969	PIER	COH	0	0	15	4	0	859	4,020	539	0	5,437
1969	PIER	LKT	0	0	0	0	0	12	26	0	0	38
1969	PIER	RNB	0	73	610	276	118	405	549	353	0	2,384
1969	RAMP	BRK	0	60	2	19	8	75	0	105	0	269
1969	RAMP	BRN	212	85	26	9	41	1,276	224	43	0	1,916
1969	RAMP	CHN	0	0	0	0	38	107	25	0	0	170
1969	RAMP	COH	0	1,480	726	0	119	4,326	700	0	0	7,351
1969	RAMP	LKT	0	0	60	63	95	348	18	0	0	584
1969	RAMP	RNB	0	0	16	3	149	533	316	23	0	1,040
1969	SHORE	BRK	0	0	0	0	181	0	233	0	0	414
1969	SHORE	BRN	0	0	0	0	20	0	0	0	0	20
1969	SHORE	CHN	0	0	0	0	0	0	0	0	0	0
1969	SHORE	COH	0	0	0	0	0	0	116	0	0	116
1969	SHORE	LKT	0	0	0	0	0	0	0	0	0	0
1969	SHORE	RNB	0	0	0	0	0	0	0	0	0	0
1969	STREAM	BRK	0	1,173	116	0	0	0	0	1,135	0	2,424
1969	STREAM	BRN	0	68	53	0	0	0	0	454	0	575
1969	STREAM	CHN	0	0	0	0	0	0	0	0	0	0
1969	STREAM	COH	0	171	0	0	0	0	0	3,104	0	3,275
1969	STREAM	LKT	0	0	0	0	0	0	0	0	0	0
1969	STREAM	RNB	0	1,530	241	0	0	0	0	105	0	1,876
1970	PIER	BRK	103	14	0	60	8	315	218	10	0	728
1970	PIER	BRN	623	1,302	824	927	856	19	816	196	0	5,563
1970	PIER	CHN	0	0	0	0	0	28	19	0	0	47
1970	PIER	COH	0	473	780	0	16	330	173	366	0	2,138
1970	PIER	LKT	0	0	8	0	6	51	0	25	0	90
1970	PIER	RNB	330	817	50	329	1,014	425	699	855	0	4,519
1970	RAMP	BRK	18	0	6	20	22	113	0	0	0	179
1970	RAMP	BRN	174	467	142	294	232	829	558	16	0	2,712
1970	RAMP	CHN	0	0	0	0	5	351	213	0	0	569
1970	RAMP	COH	0	27	957	1,402	735	1,844	2,978	517	0	8,460
1970	RAMP	LKT	0	7	1,328	398	1,295	3,966	1,725	524	0	9,243
1970	RAMP	RNB	0	60	69	612	22	731	339	208	0	2,041
1970	SHORE	BRK	160	16	0	37	20	0	4	0	0	237
1970	SHORE	BRN	30	0	85	161	32	0	363	154	0	825
1970	SHORE	CHN	0	0	0	0	0	0	0	0	0	0
1970	SHORE	COH	0	0	0	0	0	0	68	9	0	77
1970	SHORE	LKT	0	0	0	0	0	0	0	4	0	4
1970	SHORE	RNB	473	129	171	29	0	0	1,244	778	0	2,824
1970	STREAM	BRK	37	145	50	0	0	0	0	0	0	232
1970	STREAM	BRN	37	0	25	0	0	0	0	0	0	62
1970	STREAM	CHN	0	0	0	0	0	0	0	222	0	222
1970	STREAM	COH	0	0	69	0	0	0	654	1,444	0	2,167
1970	STREAM	LKT	0	0	0	0	0	0	0	0	0	0
1970	STREAM	RNB	148	1,411	262	0	0	0	0	83	0	1,904
1971	PIER	BRK	0	86	40	20	28	718	0	17	0	909
1971	PIER	BRN	0	147	313	0	4,701	971	373	17	0	6,522
1971	PIER	CHN	0	0	0	0	0	112	5	0	0	117
1971	PIER	COH	0	53	1,235	0	33	0	0	309	0	1,630
1971	PIER	LKT	0	0	0	82	0	82	0	0	0	164

APPENDIX 4. LAKE MICHIGAN SALMONID CATCH BY YEAR FISHERY, AND MONTH

YEAR	FISHERY	SPECIES	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	TOTAL
1971	PIER	RNB	0	323	4	110	0	2,044	915	1,466	0	4,862
1971	RAMP	BRK	0	167	0	0	0	0	0	37	0	204
1971	RAMP	BRN	0	233	1,624	61	58	323	555	314	0	3,168
1971	RAMP	CHN	0	0	0	0	493	3,386	1,533	123	0	5,535
1971	RAMP	COH	0	161	3,223	4,771	5,201	7,486	1,992	144	0	22,978
1971	RAMP	LKT	0	18	7,765	1,310	6,066	21,579	2,444	115	0	39,297
1971	RAMP	RNB	0	41	174	444	204	981	1,629	523	0	3,996
1971	SHORE	BRK	37	0	0	0	0	0	0	43	0	80
1971	SHORE	BRN	18	11	455	58	0	186	131	1,543	0	2,402
1971	SHORE	CHN	0	0	0	0	0	0	0	25	0	25
1971	SHORE	COH	0	0	0	0	0	0	137	335	0	472
1971	SHORE	LKT	0	0	0	0	196	0	0	36	0	232
1971	SHORE	RNB	593	109	78	0	0	0	582	2,101	0	3,463
1971	STREAM	BRK	0	0	91	0	0	0	0	103	0	194
1971	STREAM	BRN	0	83	0	0	0	0	0	173	0	256
1971	STREAM	CHN	0	0	0	0	0	0	0	0	0	0
1971	STREAM	COH	0	83	298	0	0	0	0	869	0	1,250
1971	STREAM	LKT	0	0	0	0	0	0	0	0	0	0
1971	STREAM	RNB	0	3,901	1,386	0	0	0	0	127	0	5,414
1972	PIER	BRK	0	0	140	188	703	1,149	706	0	0	2,886
1972	PIER	BRN	0	86	976	534	1,435	1,767	801	2,648	0	8,247
1972	PIER	CHN	0	0	0	0	497	897	54	0	0	1,448
1972	PIER	COH	0	0	669	242	1,191	978	745	1,179	0	5,004
1972	PIER	LKT	0	0	0	31	16	271	0	0	0	318
1972	PIER	RNB	0	3,770	868	211	1,157	1,239	1,802	738	0	9,785
1972	RAMP	BRK	0	341	0	67	32	133	70	11	0	654
1972	RAMP	BRN	0	170	798	282	359	1,311	218	193	0	3,331
1972	RAMP	CHN	0	0	44	12	1,326	2,124	816	324	0	4,646
1972	RAMP	COH	0	448	3,184	4,761	17,440	8,073	2,230	1,974	0	38,110
1972	RAMP	LKT	0	320	6,297	2,895	15,086	16,931	2,105	789	0	44,423
1972	RAMP	RNB	0	0	240	131	712	1,421	571	965	0	4,040
1972	SHORE	BRK	0	0	0	671	0	36	365	16	0	1,088
1972	SHORE	BRN	0	0	40	983	42	99	1,248	4,262	0	6,674
1972	SHORE	CHN	0	0	0	0	0	0	545	698	0	1,243
1972	SHORE	COH	0	0	0	8	19	0	132	882	0	1,041
1972	SHORE	LKT	0	0	0	0	9	0	39	8	0	56
1972	SHORE	RNB	0	0	198	31	54	113	616	1,020	0	2,032
1972	STREAM	BRK	0	488	0	0	0	122	215	69	0	894
1972	STREAM	BRN	0	29	0	0	0	332	603	839	0	1,803
1972	STREAM	CHN	0	0	0	0	0	0	409	159	0	568
1972	STREAM	COH	0	0	0	0	0	0	918	2,715	0	3,633
1972	STREAM	LKT	0	0	0	0	0	421	0	0	0	421
1972	STREAM	RNB	0	1,520	201	880	0	166	583	859	0	4,209
1973	PIER	BRK	38	0	0	146	151	1,458	234	57	0	2,084
1973	PIER	BRN	38	0	108	190	822	660	538	298	0	2,654
1973	PIER	CHN	0	0	0	373	3,565	2,975	767	0	0	7,680
1973	PIER	COH	0	0	32	427	1,329	2,200	2,957	2,069	0	9,014
1973	PIER	LKT	0	0	0	44	88	0	86	0	0	218
1973	PIER	RNB	458	80	65	604	562	1,313	1,069	863	0	5,014
1973	RAMP	BRK	153	70	370	295	10	0	0	33	0	931
1973	RAMP	BRN	1,083	564	990	344	399	312	329	168	0	4,189
1973	RAMP	CHN	0	0	1,553	618	1,926	2,286	1,229	390	0	8,002
1973	RAMP	COH	0	106	2,729	8,680	5,136	2,810	1,313	767	0	21,541

APPENDIX 4. LAKE MICHIGAN SALMONID CATCH BY YEAR FISHERY, AND MONTH

YEAR	FISHERY	SPECIES	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	TOTAL
1973	RAMP	LKT	286	1,317	7,504	14,291	14,312	8,202	4,245	506	0	50,663
1973	RAMP	RNB	23	201	333	886	1,522	2,322	640	458	0	6,385
1973	SHORE	BRK	0	0	44	96	0	0	1,067	27	0	1,234
1973	SHORE	BRN	0	160	136	24	29	0	356	413	0	1,118
1973	SHORE	CHN	0	0	0	0	0	0	654	11	0	665
1973	SHORE	COH	0	0	0	0	0	0	203	68	0	271
1973	SHORE	LKT	0	0	0	12	0	0	0	0	0	12
1973	SHORE	RNB	94	0	899	0	27	462	935	514	0	2,931
1973	STREAM	BRK	0	9	85	505	0	0	0	0	0	599
1973	STREAM	BRN	0	42	0	362	0	0	294	70	0	768
1973	STREAM	CHN	0	0	0	0	0	0	930	799	0	1,729
1973	STREAM	COH	0	0	0	0	0	0	2,316	3,048	0	5,364
1973	STREAM	LKT	0	0	0	0	0	0	0	13	0	13
1973	STREAM	RNB	472	1,349	1,021	614	719	0	837	182	0	5,194
1974	PIER	BRK	254	0	66	65	864	194	159	109	0	1,711
1974	PIER	BRN	614	237	2,447	365	1,318	904	635	3,883	0	10,403
1974	PIER	CHN	0	0	0	36	193	3,132	1,415	135	0	4,911
1974	PIER	COH	0	0	411	3,132	13,450	8,064	11,996	328	0	37,381
1974	PIER	LKT	0	0	0	0	61	78	625	53	0	817
1974	PIER	RNB	71	1,176	612	1,087	1,933	6,400	4,017	3,640	0	18,936
1974	RAMP	BRK	0	52	259	12	56	47	0	0	0	426
1974	RAMP	BRN	0	833	2,021	601	760	1,243	322	80	0	5,860
1974	RAMP	CHN	0	0	0	304	2,227	9,565	3,347	3,127	0	18,570
1974	RAMP	COH	0	0	9,705	9,072	15,375	12,499	7,358	302	0	54,311
1974	RAMP	LKT	0	356	6,770	7,894	18,465	12,178	4,108	337	0	50,108
1974	RAMP	RNB	0	0	759	1,311	3,736	7,870	1,539	162	0	15,377
1974	SHORE	BRK	0	0	124	0	0	0	55	0	0	179
1974	SHORE	BRN	153	0	632	1,453	48	604	2,278	6,040	0	11,208
1974	SHORE	CHN	0	0	0	0	0	499	3,512	4,750	0	8,761
1974	SHORE	COH	0	0	0	0	0	221	391	704	0	1,316
1974	SHORE	LKT	0	0	0	0	0	14	3,166	1,219	0	4,399
1974	SHORE	RNB	51	45	0	0	0	873	4,312	9,593	0	14,874
1974	STREAM	BRK	0	251	430	0	0	0	0	56	0	737
1974	STREAM	BRN	17	81	0	0	0	65	187	1,338	0	1,688
1974	STREAM	CHN	0	0	0	0	0	0	10,974	19,731	0	30,705
1974	STREAM	COH	0	0	0	0	0	0	2,948	7,177	0	10,125
1974	STREAM	LKT	0	0	0	0	0	0	0	0	0	0
1974	STREAM	RNB	2,436	4,304	143	0	0	129	135	161	0	7,308
1975	PIER	BRK	0	102	263	76	48	158	193	0	0	840
1975	PIER	BRN	192	1,065	623	696	1,688	2,534	1,686	2,239	0	10,723
1975	PIER	CHN	0	0	198	0	2,552	4,912	1,193	1,095	0	9,950
1975	PIER	COH	38	104	350	154	699	2,538	395	603	0	4,881
1975	PIER	LKT	0	0	293	74	179	120	75	114	0	855
1975	PIER	RNB	896	591	344	218	468	2,550	2,778	2,730	0	10,575
1975	RAMP	BRK	58	0	18	0	51	869	0	33	0	1,029
1975	RAMP	BRN	1,071	6,194	1,047	2,451	3,759	1,872	774	1,227	0	18,395
1975	RAMP	CHN	0	0	30	1,196	5,010	13,392	1,899	3,732	0	25,259
1975	RAMP	COH	0	184	3,311	14,772	22,526	14,328	1,286	3,041	0	59,448
1975	RAMP	LKT	0	1,087	6,252	5,539	15,373	15,778	4,102	431	0	48,562
1975	RAMP	RNB	512	571	133	2,869	6,406	4,319	990	433	0	16,233
1975	SHORE	BRK	66	0	0	91	189	109	74	89	0	618
1975	SHORE	BRN	2,230	2,894	181	546	514	211	3,204	8,363	0	18,143
1975	SHORE	CHN	0	0	0	0	62	245	454	3,093	0	3,854

APPENDIX 4. LAKE MICHIGAN SALMONID CATCH BY YEAR FISHERY, AND MONTH

YEAR	FISHERY	SPECIES	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	TOTAL
1975	SHORE	COH	38	184	361	0	68	0	118	4,712	0	5,481
1975	SHORE	LKT	0	0	0	11	0	0	2,389	946	0	3,346
1975	SHORE	RNB	1,548	1,052	202	364	346	336	2,557	5,056	0	11,461
1975	STREAM	BRK	0	289	555	107	0	0	200	41	0	1,192
1975	STREAM	BRN	0	0	1,362	291	0	45	506	1,624	0	3,828
1975	STREAM	CHN	0	0	0	0	0	90	5,956	24,674	0	30,720
1975	STREAM	COH	0	0	0	0	0	0	1,280	9,259	0	10,539
1975	STREAM	LKT	0	0	0	0	0	0	68	70	0	138
1975	STREAM	RNB	1,028	3,462	2,787	271	0	45	301	836	0	8,730
1976	CHARTER	BRK	0	0	0	0	2	29	13	3	0	47
1976	CHARTER	BRN	0	0	17	17	57	113	170	44	0	418
1976	CHARTER	CHN	0	0	2	90	919	1,096	676	279	4	3,066
1976	CHARTER	COH	0	0	216	699	1,016	563	347	141	0	2,982
1976	CHARTER	LKT	0	172	1,571	1,349	3,670	3,126	883	657	21	11,449
1976	CHARTER	RNB	0	0	4	128	482	434	186	27	0	1,261
1976	PIER	BRK	0	0	9	0	119	0	61	0	0	189
1976	PIER	BRN	0	2,000	1,046	343	527	867	2,013	888	0	7,684
1976	PIER	CHN	0	0	0	102	2,611	1,636	2,134	2,393	0	8,876
1976	PIER	COH	0	0	84	1,420	3,680	768	1,354	642	0	7,948
1976	PIER	LKT	0	0	28	265	150	38	121	210	0	812
1976	PIER	RNB	0	0	212	445	329	1,664	5,478	1,808	0	9,936
1976	RAMP	BRK	115	0	0	0	25	0	0	117	0	257
1976	RAMP	BRN	202	1,147	449	459	188	589	616	437	0	4,087
1976	RAMP	CHN	0	0	9	724	4,590	6,600	4,698	6,475	0	23,096
1976	RAMP	COH	0	130	3,996	10,135	8,901	1,814	1,267	1,028	0	27,271
1976	RAMP	LKT	0	665	4,535	4,524	10,780	6,912	1,736	814	0	29,966
1976	RAMP	RNB	0	130	126	520	2,840	1,800	1,211	88	0	6,715
1976	SHORE	BRK	0	9	25	154	0	0	64	41	0	293
1976	SHORE	BRN	162	975	1,037	80	221	0	921	5,885	0	9,281
1976	SHORE	CHN	0	0	0	0	246	98	5,807	6,649	0	12,800
1976	SHORE	COH	0	0	441	755	940	0	22	1,038	0	3,196
1976	SHORE	LKT	0	0	0	77	0	0	0	119	0	196
1976	SHORE	RNB	118	17	89	644	185	638	1,874	3,667	0	7,232
1976	STREAM	BRK	0	57	96	0	0	0	0	0	0	153
1976	STREAM	BRN	0	82	294	0	0	0	584	1,462	0	2,422
1976	STREAM	CHN	0	0	0	0	0	0	6,935	17,516	0	24,451
1976	STREAM	COH	0	0	0	0	0	0	167	3,433	0	3,600
1976	STREAM	LKT	0	0	0	0	0	0	0	26	0	26
1976	STREAM	RNB	461	2,548	891	0	0	0	137	260	0	4,297
1977	CHARTER	BRK	0	1	0	2	7	20	22	0	0	52
1977	CHARTER	BRN	0	2	23	16	95	114	114	35	0	399
1977	CHARTER	CHN	0	68	44	338	1,636	2,246	1,047	75	2	5,456
1977	CHARTER	COH	0	92	780	2,247	2,152	1,657	603	34	0	7,565
1977	CHARTER	LKT	0	172	454	906	2,493	3,422	1,913	265	35	9,660
1977	CHARTER	RNB	0	31	59	184	773	738	176	25	0	1,986
1977	PIER	BRK	0	0	173	482	525	673	977	284	0	3,114
1977	PIER	BRN	0	1,267	1,187	1,050	1,642	6,568	5,450	1,453	0	18,617
1977	PIER	CHN	0	90	0	114	3,576	7,925	3,770	3,795	0	19,270
1977	PIER	COH	0	6,806	252	336	3,363	4,773	2,369	1,502	0	19,401
1977	PIER	LKT	0	224	523	0	472	0	125	0	0	1,344
1977	PIER	RNB	0	2,852	1,573	1,316	2,856	8,216	12,594	5,163	0	34,570
1977	RAMP	BRK	0	0	0	0	57	39	26	126	0	248
1977	RAMP	BRN	345	6,338	215	1,053	2,218	2,374	2,321	937	0	15,801

APPENDIX 4. LAKE MICHIGAN SALMONID CATCH BY YEAR FISHERY, AND MONTH

YEAR	FISHERY	SPECIES	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	TOTAL
1977	RAMP	CHN	0	120	1,717	5,760	28,489	35,230	11,421	2,410	0	85,147
1977	RAMP	COH	22	2,192	26,578	56,557	58,581	20,988	4,108	1,315	0	170,341
1977	RAMP	LKT	22	4,054	4,006	7,176	15,651	17,154	14,038	126	0	62,227
1977	RAMP	RNB	0	1,147	1,797	2,854	8,117	9,312	4,292	4,006	0	31,525
1977	SHORE	BRK	37	109	159	59	17	0	8,047	1,026	0	9,454
1977	SHORE	BRN	494	2,079	7,198	43	332	1,586	4,354	2,994	0	19,080
1977	SHORE	CHN	0	0	0	0	35	283	1,851	2,145	0	4,314
1977	SHORE	COH	40	295	235	49	346	474	293	513	0	2,245
1977	SHORE	LKT	0	17	0	55	0	0	84	23	0	179
1977	SHORE	RNB	943	1,452	1,929	296	157	968	3,754	9,045	0	18,544
1977	STREAM	BRK	74	38	237	0	0	564	762	2,589	0	4,264
1977	STREAM	BRN	0	0	0	0	0	0	2,797	2,931	0	5,728
1977	STREAM	CHN	0	0	0	0	0	188	5,498	20,001	0	25,687
1977	STREAM	COH	74	0	0	0	0	0	2,901	3,652	0	6,627
1977	STREAM	LKT	0	0	0	0	0	0	42	19	0	61
1977	STREAM	RNB	925	2,788	347	0	0	1,128	831	1,734	0	7,753
1978	CHARTER	BRK	0	6	0	6	10	16	7	0	0	45
1978	CHARTER	BRN	0	10	23	30	233	299	174	27	1	797
1978	CHARTER	CHN	0	0	58	866	3,005	3,752	1,612	145	0	9,438
1978	CHARTER	COH	0	69	844	1,677	1,295	989	275	24	3	5,176
1978	CHARTER	LKT	0	136	792	1,874	3,485	3,685	1,880	294	0	12,146
1978	CHARTER	RNB	0	6	15	283	959	1,038	190	31	0	2,522
1978	PIER	BRK	0	0	1,391	1,628	480	994	231	103	0	4,827
1978	PIER	BRN	570	1,899	2,078	466	1,000	2,372	955	1,146	0	10,486
1978	PIER	CHN	0	0	0	470	997	1,637	444	53	0	3,601
1978	PIER	COH	0	1,328	3,246	615	3,080	3,589	631	153	0	12,642
1978	PIER	LKT	0	0	0	17	65	21	0	120	0	223
1978	PIER	RNB	0	663	467	579	1,835	1,342	1,339	1,820	0	8,045
1978	RAMP	BRK	20	122	47	5	42	21	0	20	0	277
1978	RAMP	BRN	879	1,711	800	714	5,319	15,330	610	336	0	25,699
1978	RAMP	CHN	0	0	304	4,753	10,649	16,427	6,834	2,003	0	40,970
1978	RAMP	COH	0	439	5,239	8,769	11,132	8,726	2,383	192	0	36,880
1978	RAMP	LKT	335	218	953	3,380	8,013	5,311	2,149	300	0	20,659
1978	RAMP	RNB	127	216	203	1,043	4,578	4,049	2,073	767	0	13,056
1978	SHORE	BRK	79	239	0	190	161	0	0	44	0	713
1978	SHORE	BRN	649	1,006	340	430	494	809	340	2,331	0	6,399
1978	SHORE	CHN	0	0	0	0	0	2,010	251	1,333	0	3,594
1978	SHORE	COH	0	17	351	523	332	1,659	150	91	0	3,123
1978	SHORE	LKT	29	93	0	0	0	180	0	53	0	355
1978	SHORE	RNB	921	882	349	230	462	685	1,291	1,436	0	6,256
1978	STREAM	BRK	44	89	1,170	0	0	0	55	855	0	2,213
1978	STREAM	BRN	37	0	215	80	0	0	221	1,915	0	2,468
1978	STREAM	CHN	11	0	0	0	0	0	2,522	14,430	0	16,963
1978	STREAM	COH	0	0	0	0	0	0	79	1,310	0	1,389
1978	STREAM	LKT	0	0	0	0	0	0	0	199	0	199
1978	STREAM	RNB	96	1,866	312	0	0	0	7	271	0	2,552
1979	CHARTER	BRK	0	0	0	0	7	6	1	0	0	14
1979	CHARTER	BRN	77	34	28	44	265	372	147	20	0	987
1979	CHARTER	CHN	0	1	69	1,462	2,695	3,219	1,253	111	0	8,810
1979	CHARTER	COH	0	1	151	854	996	899	252	18	0	3,171
1979	CHARTER	LKT	0	63	450	1,701	5,120	3,929	2,302	413	0	13,978
1979	CHARTER	RNB	0	0	26	153	627	494	139	21	0	1,460
1979	PIER	BRK	0	558	303	77	1,596	1,300	757	344	0	4,935

APPENDIX 4. LAKE MICHIGAN SALMONID CATCH BY YEAR FISHERY, AND MONTH

YEAR	FISHERY	SPECIES	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	TOTAL
1979	PIER	BRN	0	582	532	304	910	1,115	729	1,423	0	5,595
1979	PIER	CHN	0	0	0	792	741	849	750	301	0	3,433
1979	PIER	COH	14	0	199	486	1,894	2,844	399	565	0	6,401
1979	PIER	LKT	0	43	0	31	53	39	18	955	0	1,139
1979	PIER	RNB	0	345	229	70	1,142	1,055	1,027	2,370	0	6,238
1979	RAMP	BRK	0	599	98	43	35	24	63	0	0	862
1979	RAMP	BRN	3,211	10,823	5,492	1,714	3,506	3,268	1,315	439	0	29,768
1979	RAMP	CHN	0	69	2,947	12,536	19,328	16,947	7,610	487	0	59,924
1979	RAMP	COH	0	490	4,660	11,778	10,083	8,731	1,404	200	0	37,346
1979	RAMP	LKT	52	454	1,070	7,199	14,190	5,742	3,480	262	0	32,449
1979	RAMP	RNB	0	434	797	1,610	4,871	1,727	869	1,913	0	12,221
1979	SHORE	BRK	93	166	26	42	318	599	930	190	0	2,364
1979	SHORE	BRN	366	2,149	3,757	293	256	58	1,857	4,258	0	12,994
1979	SHORE	CHN	0	0	0	0	0	214	754	2,607	0	3,575
1979	SHORE	COH	0	85	0	81	91	479	34	1,007	0	1,777
1979	SHORE	LKT	0	0	0	0	0	0	530	364	0	894
1979	SHORE	RNB	301	1,291	193	393	525	411	1,365	5,130	0	9,609
1979	STREAM	BRK	358	949	794	0	0	0	439	586	0	3,126
1979	STREAM	BRN	0	98	191	0	0	0	204	3,503	0	3,996
1979	STREAM	CHN	0	6	0	0	0	0	3,059	35,347	0	38,412
1979	STREAM	COH	0	0	0	0	0	0	55	3,201	0	3,256
1979	STREAM	LKT	0	0	0	0	0	0	0	1,150	0	1,150
1979	STREAM	RNB	1,075	3,146	1,479	81	0	0	37	712	0	6,530
1980	CHARTER	BRK	0	0	1	0	6	13	16	0	0	36
1980	CHARTER	BRN	0	4	11	78	188	981	273	24	0	1,559
1980	CHARTER	CHN	0	0	62	464	2,572	7,232	2,206	93	0	12,629
1980	CHARTER	COH	0	4	1,058	2,216	2,774	2,715	456	26	0	9,249
1980	CHARTER	LKT	0	40	421	1,443	3,263	3,062	1,527	144	0	9,900
1980	CHARTER	RNB	0	0	21	60	279	635	143	11	0	1,149
1980	PIER	BRK	0	49	388	363	656	893	1,524	329	0	4,202
1980	PIER	BRN	0	197	924	1,701	493	1,060	1,540	1,773	0	7,688
1980	PIER	CHN	0	0	0	0	19	4,767	1,798	333	0	6,917
1980	PIER	COH	0	0	567	406	38	3,230	418	431	0	5,090
1980	PIER	LKT	0	0	288	0	0	45	154	481	0	968
1980	PIER	RNB	0	49	216	146	926	6,327	5,520	2,694	0	15,878
1980	RAMP	BRK	0	154	16	25	0	242	262	96	0	795
1980	RAMP	BRN	0	3,280	1,002	793	1,313	5,411	1,173	490	0	13,462
1980	RAMP	CHN	0	0	1,976	2,207	9,730	42,718	8,381	2,822	0	67,834
1980	RAMP	COH	0	0	27,854	21,207	25,752	12,431	1,451	851	0	89,546
1980	RAMP	LKT	0	0	3,227	5,822	9,635	4,971	2,167	1,258	0	27,080
1980	RAMP	RNB	0	242	727	412	1,311	3,033	1,352	796	0	7,873
1980	SHORE	BRK	0	104	148	0	33	0	1,040	342	0	1,667
1980	SHORE	BRN	0	220	1,649	32	0	428	1,912	3,533	0	7,774
1980	SHORE	CHN	0	0	353	0	0	62	821	2,906	0	4,142
1980	SHORE	COH	0	0	254	100	0	0	307	38	0	699
1980	SHORE	LKT	0	0	0	0	0	98	143	80	0	321
1980	SHORE	RNB	0	1,263	311	303	146	1,163	1,498	1,985	0	6,669
1980	STREAM	BRK	0	28	291	0	0	0	21	534	0	874
1980	STREAM	BRN	0	28	58	0	0	28	255	2,910	0	3,279
1980	STREAM	CHN	0	0	0	0	0	0	1,236	14,257	0	15,493
1980	STREAM	COH	0	0	0	0	0	0	96	2,460	0	2,556
1980	STREAM	LKT	0	0	0	0	0	0	0	57	0	57
1980	STREAM	RNB	0	84	242	221	0	0	432	1,190	0	2,169

APPENDIX 4. LAKE MICHIGAN SALMONID CATCH BY YEAR FISHERY, AND MONTH

YEAR	FISHERY	SPECIES	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	TOTAL
1981	CHARTER	BRK	0	0	0	0	3	136	1	7	0	147
1981	CHARTER	BRN	0	0	9	116	686	857	194	10	0	1,872
1981	CHARTER	CHN	0	0	267	903	6,223	10,199	3,003	147	10	20,752
1981	CHARTER	COH	0	0	1,657	1,581	1,756	2,340	331	30	0	7,695
1981	CHARTER	LKT	0	126	624	2,511	5,808	5,870	2,395	100	30	17,464
1981	CHARTER	RNB	0	0	13	98	554	703	146	11	0	1,525
1981	PIER	BRK	0	254	154	431	418	285	146	53	0	1,741
1981	PIER	BRN	0	2,707	1,608	2,096	2,789	3,585	1,326	594	0	14,705
1981	PIER	CHN	0	0	45	66	2,383	2,483	1,676	1,086	0	7,739
1981	PIER	COH	0	1,577	3,724	157	649	770	173	258	0	7,308
1981	PIER	LKT	0	609	55	83	31	125	0	71	0	974
1981	PIER	RNB	0	2,734	213	245	910	4,643	3,125	527	0	12,397
1981	RAMP	BRK	0	480	30	47	9	70	115	0	0	751
1981	RAMP	BRN	0	6,440	972	1,458	6,069	3,089	683	449	0	19,160
1981	RAMP	CHN	0	528	2,092	4,205	23,582	37,834	10,968	1,499	0	80,708
1981	RAMP	COH	0	731	10,664	13,115	10,938	10,513	1,874	447	0	48,282
1981	RAMP	LKT	0	998	1,592	6,886	7,289	6,809	1,199	1,156	0	25,929
1981	RAMP	RNB	0	566	65	310	1,935	2,601	1,077	238	0	6,792
1981	SHORE	BRK	0	679	0	0	0	0	0	55	0	734
1981	SHORE	BRN	0	2,970	1,124	241	0	0	2,300	3,063	0	9,698
1981	SHORE	CHN	0	0	0	0	0	0	773	9,199	0	9,972
1981	SHORE	COH	0	68	328	0	0	0	365	505	0	1,266
1981	SHORE	LKT	0	0	13	0	0	0	0	208	0	221
1981	SHORE	RNB	0	1,893	362	64	105	159	2,541	3,080	0	8,204
1981	STREAM	BRK	0	333	433	103	0	0	0	378	0	1,247
1981	STREAM	BRN	0	34	114	205	274	0	56	8,792	0	9,475
1981	STREAM	CHN	0	0	462	0	0	0	5,128	61,175	0	66,765
1981	STREAM	COH	0	0	336	0	0	0	97	5,427	0	5,860
1981	STREAM	LKT	0	0	0	0	0	0	0	2,112	0	2,112
1981	STREAM	RNB	0	1,573	857	0	0	0	212	3,782	0	6,424
1982	CHARTER	BRK	0	1	4	4	19	5	39	4	0	76
1982	CHARTER	BRN	0	100	70	136	679	640	115	8	0	1,748
1982	CHARTER	CHN	0	4	295	3,319	10,294	9,072	3,047	162	0	26,193
1982	CHARTER	COH	0	74	3,642	5,259	2,325	1,619	273	71	0	13,263
1982	CHARTER	LKT	0	42	457	2,879	5,645	9,333	2,507	134	0	20,997
1982	CHARTER	RNB	0	2	22	115	458	192	63	21	0	873
1982	MOORED	BRK	0	0	0	69	22	499	0	0	0	590
1982	MOORED	BRN	0	0	211	681	1,910	2,202	21	0	0	5,025
1982	MOORED	CHN	0	0	1,755	21,575	38,726	21,700	3,872	165	0	87,793
1982	MOORED	COH	0	0	21,979	35,727	13,736	2,974	660	236	0	75,312
1982	MOORED	LKT	0	0	466	10,611	19,566	10,742	2,362	257	677	44,681
1982	MOORED	RNB	0	0	318	526	1,686	632	94	0	85	3,341
1982	PIER	BRK	0	211	780	230	464	356	486	0	0	2,527
1982	PIER	BRN	0	1,611	1,267	756	2,834	4,274	608	1,202	0	12,552
1982	PIER	CHN	0	0	34	737	3,075	2,057	1,061	1,084	0	8,048
1982	PIER	COH	0	166	1,030	872	4,643	3,035	243	434	0	10,423
1982	PIER	LKT	0	0	85	78	758	0	45	781	0	1,747
1982	PIER	RNB	0	71	193	358	510	740	614	1,389	0	3,875
1982	RAMP	BRK	0	32	53	0	0	140	0	43	0	268
1982	RAMP	BRN	0	6,052	3,049	535	6,802	3,717	402	551	0	21,108
1982	RAMP	CHN	0	0	2,418	11,137	33,470	20,539	7,286	2,865	0	77,715
1982	RAMP	COH	0	132	18,969	31,730	12,851	4,333	1,395	847	0	70,257
1982	RAMP	LKT	0	707	1,801	5,561	12,380	9,000	6,090	678	0	36,217

APPENDIX 4. LAKE MICHIGAN SALMONID CATCH BY YEAR FISHERY, AND MONTH

YEAR	FISHERY	SPECIES	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	TOTAL
1982	RAMP	RNB	0	254	380	1,184	1,715	211	81	2,791	0	6,616
1982	SHORE	BRK	0	330	1,106	1,180	62	0	840	0	0	3,518
1982	SHORE	BRN	0	5,146	2,267	490	692	2,390	33	3,375	0	14,393
1982	SHORE	CHN	0	0	0	0	0	399	2,914	3,083	0	6,396
1982	SHORE	COH	0	0	0	80	0	0	0	427	0	507
1982	SHORE	LKT	0	14	147	0	0	0	40	382	0	583
1982	SHORE	RNB	0	436	502	207	0	319	782	2,644	0	4,890
1982	STREAM	BRK	0	539	1,243	0	0	0	26	1,101	0	2,909
1982	STREAM	BRN	0	492	404	0	0	0	924	6,612	0	8,432
1982	STREAM	CHN	0	0	0	0	0	0	1,826	75,192	0	77,018
1982	STREAM	COH	0	30	0	0	0	0	0	4,726	0	4,756
1982	STREAM	LKT	0	0	0	0	0	0	0	2,478	0	2,478
1982	STREAM	RNB	0	5,313	1,087	0	0	53	278	1,891	0	8,622
1983	CHARTER	BRK	0	0	0	0	13	16	10	0	0	39
1983	CHARTER	BRN	0	9	66	367	1,577	880	189	23	0	3,111
1983	CHARTER	CHN	0	5	1,412	5,044	16,038	10,326	3,110	212	0	36,147
1983	CHARTER	COH	0	0	1,240	1,622	1,248	675	341	9	0	5,135
1983	CHARTER	LKT	0	16	2,105	7,774	16,347	18,263	2,054	171	0	46,730
1983	CHARTER	RNB	0	0	46	319	522	690	373	17	0	1,967
1983	MOORED	BRK	0	0	0	41	45	30	0	0	0	116
1983	MOORED	BRN	2	30	138	523	2,497	1,518	228	30	0	4,966
1983	MOORED	CHN	0	235	6,819	15,347	43,059	16,994	7,277	476	41	90,248
1983	MOORED	COH	0	665	4,456	3,869	6,967	1,956	802	86	0	18,801
1983	MOORED	LKT	0	189	2,103	17,369	27,011	24,738	2,936	410	133	74,889
1983	MOORED	RNB	0	0	152	656	1,335	1,493	1,197	41	23	4,897
1983	PIER	BRK	0	35	130	602	478	674	406	0	0	2,325
1983	PIER	BRN	0	3,591	698	2,133	2,302	595	980	99	0	10,398
1983	PIER	CHN	0	35	1,643	2,573	6,900	743	2,722	333	0	14,949
1983	PIER	COH	0	232	638	936	3,131	197	449	55	0	5,638
1983	PIER	LKT	0	196	111	171	225	32	570	44	0	1,349
1983	PIER	RNB	1,076	437	128	250	1,263	827	311	917	0	5,209
1983	RAMP	BRK	0	35	24	33	79	0	27	0	0	198
1983	RAMP	BRN	42	7,323	899	2,045	6,230	2,570	931	6,220	0	26,260
1983	RAMP	CHN	0	153	5,940	13,392	60,656	25,323	7,436	1,627	0	114,527
1983	RAMP	COH	0	0	3,763	7,587	7,076	1,826	843	85	0	21,180
1983	RAMP	LKT	0	346	2,188	17,886	22,226	21,064	3,508	99	0	67,317
1983	RAMP	RNB	42	237	167	992	1,866	1,288	737	568	0	5,897
1983	SHORE	BRK	19	10	0	27	0	0	94	0	0	150
1983	SHORE	BRN	777	2,775	1,602	900	1,239	0	5,307	866	0	13,466
1983	SHORE	CHN	0	0	0	47	908	37	1,723	5,970	0	8,685
1983	SHORE	COH	19	0	269	70	254	13	1,142	343	0	2,110
1983	SHORE	LKT	0	32	23	35	13	0	502	1,845	0	2,450
1983	SHORE	RNB	243	310	319	393	247	0	482	1,630	0	3,624
1983	STREAM	BRK	118	316	348	0	0	0	99	244	0	1,125
1983	STREAM	BRN	9	239	221	0	0	0	551	5,974	0	6,994
1983	STREAM	CHN	0	0	0	0	0	0	1,568	51,725	0	53,293
1983	STREAM	COH	0	13	0	0	0	0	42	463	0	518
1983	STREAM	LKT	0	0	0	0	0	0	190	2,752	0	2,942
1983	STREAM	RNB	1,226	701	226	0	0	0	199	960	0	3,312
1984	CHARTER	BRK	0	0	2	10	11	260	13	12	0	308
1984	CHARTER	BRN	0	173	267	835	1,738	1,266	340	203	0	4,822
1984	CHARTER	CHN	0	6	2,495	8,330	19,987	14,451	4,058	285	0	49,612
1984	CHARTER	COH	0	23	6,400	11,627	5,461	1,336	360	10	0	25,217

APPENDIX 4. LAKE MICHIGAN SALMONID CATCH BY YEAR FISHERY, AND MONTH

YEAR	FISHERY	SPECIES	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	TOTAL
1984	CHARTER	LKT	0	6	920	7,214	13,724	11,508	991	140	0	34,503
1984	CHARTER	RNB	0	0	156	849	1,463	596	163	20	0	3,247
1984	MOORED	BRK	0	0	0	91	406	320	0	0	0	817
1984	MOORED	BRN	0	0	121	644	2,082	491	155	0	0	3,493
1984	MOORED	CHN	0	0	3,260	9,143	31,943	12,764	2,205	756	0	60,071
1984	MOORED	COH	0	0	3,755	12,410	12,618	1,497	195	0	0	30,475
1984	MOORED	LKT	0	0	1,105	11,170	17,711	7,635	148	0	0	37,769
1984	MOORED	RNB	0	0	623	908	1,781	452	70	0	0	3,834
1984	PIER	BRK	0	46	148	988	920	1,577	283	851	0	4,813
1984	PIER	BRN	0	403	1,451	1,852	4,530	891	1,229	1,319	0	11,675
1984	PIER	CHN	0	20	382	1,600	2,758	1,613	5,155	1,599	0	13,127
1984	PIER	COH	0	238	559	1,288	7,111	4,255	457	227	0	14,135
1984	PIER	LKT	0	0	292	38	87	128	711	338	0	1,594
1984	PIER	RNB	0	0	331	141	424	288	256	1,738	0	3,178
1984	RAMP	BRK	59	424	12	73	236	931	99	0	0	1,834
1984	RAMP	BRN	530	8,510	1,642	3,496	7,470	3,169	1,606	1,147	0	27,570
1984	RAMP	CHN	0	11	8,105	16,101	37,799	17,695	9,326	1,856	0	90,893
1984	RAMP	COH	0	462	10,593	19,617	16,893	2,953	322	23	0	50,863
1984	RAMP	LKT	10	829	1,845	8,509	16,859	8,129	1,656	264	0	38,101
1984	RAMP	RNB	78	6	259	874	2,257	494	43	196	0	4,207
1984	SHORE	BRK	11	0	0	50	0	0	84	0	0	145
1984	SHORE	BRN	835	237	1,322	154	338	269	2,437	3,495	0	9,087
1984	SHORE	CHN	0	0	0	0	189	4	1,815	17,779	0	19,787
1984	SHORE	COH	0	22	0	41	653	0	116	538	0	1,370
1984	SHORE	LKT	0	0	58	0	0	0	45	1,036	0	1,139
1984	SHORE	RNB	173	450	0	364	75	295	135	933	0	2,425
1984	STREAM	BRK	112	395	5,393	0	0	0	639	729	0	7,268
1984	STREAM	BRN	155	166	243	45	0	0	916	7,441	0	8,966
1984	STREAM	CHN	0	0	0	0	0	414	4,851	25,831	0	31,096
1984	STREAM	COH	63	0	0	0	0	0	81	622	0	766
1984	STREAM	LKT	0	0	0	0	0	0	22	2,763	0	2,785
1984	STREAM	RNB	1,496	2,797	588	0	0	0	822	764	0	6,467
1985	CHARTER	BRK	0	14	54	101	15	53	13	0	0	250
1985	CHARTER	BRN	0	278	512	1,151	2,134	1,455	263	8	0	5,801
1985	CHARTER	CHN	0	117	2,893	7,344	22,838	18,918	4,597	212	0	56,919
1985	CHARTER	COH	0	532	5,893	8,081	4,455	1,692	396	9	0	21,058
1985	CHARTER	LKT	0	86	1,390	8,000	9,898	5,978	1,095	28	0	26,475
1985	CHARTER	RNB	0	4	165	740	941	644	282	14	0	2,790
1985	MOORED	BRK	0	0	0	0	170	170	72	0	0	412
1985	MOORED	BRN	0	725	397	864	3,605	1,022	195	0	0	6,808
1985	MOORED	CHN	0	168	2,326	6,784	43,294	22,979	5,801	813	0	82,165
1985	MOORED	COH	0	1,030	16,453	19,488	17,340	2,236	500	117	0	57,164
1985	MOORED	LKT	0	51	312	10,784	14,829	12,876	470	59	0	39,381
1985	MOORED	RNB	0	0	155	468	1,769	168	359	59	0	2,978
1985	PIER	BRK	0	177	150	263	625	773	106	387	0	2,481
1985	PIER	BRN	18	720	747	1,906	2,041	2,221	737	1,021	0	9,411
1985	PIER	CHN	0	0	626	2,252	2,365	4,703	1,617	651	0	12,214
1985	PIER	COH	0	207	1,410	4,427	8,559	4,612	113	841	0	20,169
1985	PIER	LKT	0	0	39	23	72	88	0	252	0	474
1985	PIER	RNB	0	0	289	280	661	789	547	1,136	0	3,702
1985	RAMP	BRK	0	45	129	493	125	138	0	199	0	1,129
1985	RAMP	BRN	50	7,699	3,801	3,245	8,068	4,982	1,903	1,057	0	30,805
1985	RAMP	CHN	0	352	4,293	7,455	35,453	40,897	13,576	2,855	39	104,920

APPENDIX 4. LAKE MICHIGAN SALMONID CATCH BY YEAR FISHERY, AND MONTH

YEAR	FISHERY	SPECIES	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	TOTAL
1985	RAMP	COH	0	4,664	10,527	13,406	9,452	4,856	470	144	0	43,519
1985	RAMP	LKT	0	47	2,353	5,286	8,716	6,129	752	48	0	23,331
1985	RAMP	RNB	0	224	327	364	1,221	1,046	316	307	0	3,805
1985	SHORE	BRK	0	0	0	58	277	235	80	88	11	749
1985	SHORE	BRN	629	1,128	691	800	464	228	1,779	1,319	82	7,120
1985	SHORE	CHN	0	0	103	0	49	438	627	2,008	68	3,293
1985	SHORE	COH	0	786	1,276	138	122	688	209	52	0	3,271
1985	SHORE	LKT	0	18	0	0	0	7	0	52	0	77
1985	SHORE	RNB	145	285	1,478	218	16	291	727	262	84	3,506
1985	STREAM	BRK	115	147	21	0	0	0	570	423	64	1,340
1985	STREAM	BRN	36	63	426	583	0	62	810	3,335	33	5,348
1985	STREAM	CHN	842	0	0	0	0	0	4,216	50,935	724	56,717
1985	STREAM	COH	0	0	0	0	0	0	0	448	0	448
1985	STREAM	LKT	0	0	0	0	0	0	18	192	0	210
1985	STREAM	RNB	2,030	1,817	1,609	1,023	333	0	322	207	63	7,404
			========	========	========	========	========	========	========	========	========	========
			41,249	232,458	490,062	818,282	1460145	1208137	606,061	902,362	2,233	5760989