WISCONSIN DEPARTMENT OF NATURAL RESOURCES

# LAKE CHIPPEWA (CHIPPEWA FLOWAGE)

## 2022 CREEL SURVEY REPORT

SAWYER COUNTY

Treaty Fisheries Publication

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# CONTENTS





*Cover Art: Steve Hilt, Portland, OR*
*Fish Graphics: Virgil Beck, Stevens Point, WI*

# INTRODUCTION

Fish populations can fluctuate due to a variety of factors including natural forces like climate, reproductive success, predation, and competition. Human activities such as fish harvest, stocking, habitat change, and invasive species introduction can also have significant impacts. Wisconsin Department of Natural Resources (DNR) fisheries crews regularly conduct fishery surveys on lakes and reservoirs to gather the information needed to monitor changes, identify concerns, evaluate past management actions, and to prescribe fishery management strategies. Netting and electrofishing surveys are used to gather data on the status of fish populations and communities, measuring such parameters as species composition, population size, reproductive success, size and age distribution and growth rates.

The other key component of the fishery that we often need to measure is angler harvest to assess its impact on the fishery.

On many lakes in the Ceded Territory of northern Wisconsin, the harvest of fish is divided between sport anglers and the six Ojibwe tribes who harvest fish under rights granted by federal treaties. The tribes harvest fish mostly using a highly efficient method, spearing, during a relatively short time period in the spring. Every fish in the spear harvest is counted – a complete "census" of the harvest.

It would be highly impractical and very costly to conduct a complete census of every angler who fishes on a lake. Therefore, we conduct creel surveys.

A creel survey is an assessment tool used to sample the fishing activities of anglers on a body of water and make projections, or estimates, of harvest and other fishery parameters. Creel survey clerks work on randomly selected days and shifts, forty hours per week. The survey is conducted during the open season for gamefish from the first Saturday in May through the first Sunday in March. Creel surveys are generally not conducted in November when fishing effort is low and ice conditions are often unsafe. The survey is run during daylight hours, and shift times change from month to month as day length changes.

Creel survey clerks travel their lakes using a boat or snowmobile to count the number of anglers at predetermined times, and to interview anglers who have completed their fishing trip. Data are collected on what species they fished for, catch, harvest, lengths of fish harvested, marks (fin clips or tags), and hours of fishing effort. Collecting information at the end of a fishing trip provides the most accurate assessment of angling activities, and it avoids the need to disturb anglers while they are fishing.

A computer program is used to estimate catch and harvest of each species, catch and harvest rates, and fishing effort by month, as well as for the year in total. Accurate estimates require that we sample a sufficient and representative portion of the angling activity on a lake. The accuracy of creel survey results depends on good cooperation and truthful responses by anglers when a creel clerk interviews them.

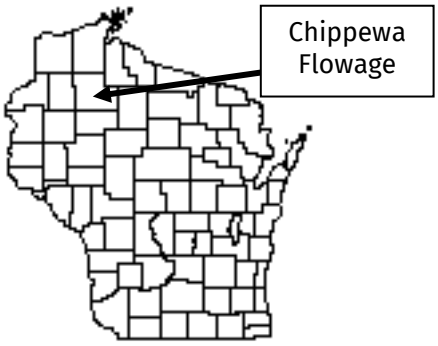
You may have encountered a DNR creel survey clerk on a recent fishing trip. We appreciate your cooperation during an interview. The survey only takes a few minutes of your time, and it gives the DNR valuable information needed for management of the fishery.

This report provides estimates of:

1. Overall fishing effort (pressure)
2. Fishing effort directed at each species
3. Numbers of fish caught and harvested
4. Catch and harvest rates

Also included are a physical description of the lake, discussion of results of the survey, and detailed summaries of fishing effort, catch and harvest.

# GENERAL LAKE INFORMATION




## LOCATION

Lake Chippewa (Chippewa Flowage) is located in Sawyer County near the city of Hayward.

## PHYSICAL CHARACTERISTICS

Lake Chippewa is a 15,300-acre drainage impoundment on the Chippewa River, with a maximum depth of 93 feet. Littoral substrate consists primarily of sand, with lesser amounts of muck, gravel, and rock.

## SEASONS SURVEYED

The open-water creel survey ran from May 7 through Oct. 31, 2022.

## WEATHER

Ice-out occurred on Lake Chippewa during the last week of April in 2022.

## FISHING REGULATIONS

The following seasons, daily bag limits, and length limits were in place during the surveyed season:

| SPECIES | SEASON | BAG LIMIT | MIN. SIZE |
|---|---|---|---|
| Largemouth Bass | 5/7-3/5 | 5 | none |
| Smallmouth Bass | 6/18-3/5 | 5 | 14" |
| Largemouth and Smallmouth Bass Catch and release only all other times of year | | | |
| Muskellunge | 5/28-12/31 | 1 | 50" |
| Northern Pike | 5/7-3/5 | 5 | none |
| Walleye | 5/7-11/30 | 3 | 15" |
| | 20-24" Protected Slot, 1>24" | | |
| Panfish | year round | 10 | none |
| Rock Bass | year round | none | none |

# SPECIES CATCH AND HARVEST INFORMATION

Summaries of angling effort, catch and harvest information for each species are in Table 2 and Figures 1-10, along with a comparison of these statistics with the previous creel survey in Table 2, if available. Information about species with fishing seasons extending beyond the season surveyed should be considered minimum estimates. Each species page has up to five graphs depicting the following:

1. **ESTIMATED FISHING EFFORT**
   The estimated number of hours during each month that anglers spent fishing for a species.

2. **ESTIMATED CATCH AND HARVEST**
   The estimated number of fish of the indicated species caught or harvested by all anglers, regardless of targeted species.

3. **ESTIMATED SPECIFIC CATCH AND HARVEST RATES**
   The estimated number of hours it takes an angler to catch or harvest a fish of the indicated species. Only information from anglers who were specifically targeting that species is reported.

4. **LENGTH DISTRIBUTION OF HARVESTED FISH**
   All fish of a species that were measured by the clerk during the entire creel survey season.

5. **LARGEST AND AVERAGE LENGTH OF HARVESTED FISH**
   The largest and average length of a species of fish harvested that month. Only fish measured by the creel survey clerk are reported.

# CREEL SURVEY RESULTS AND DISCUSSION

## SURVEY LOGISTICS

We encountered no unusual problems conducting the survey or calculating the projections contained in the report.

## GENERAL ANGLER INFORMATION

Anglers spent 364,795 hours, or 23.8 hours per acre, fishing Lake Chippewa (Chippewa Flowage) during the 2022 season (Table 1). That was slightly less than the Sawyer County average of 25.9 hours per acre, and less than the fishing effort documented during the 2011 creel survey (31.1 hours per acre). June was the most heavily fished month (96,928 hours), and fishing effort was lightest in October (27,857 hours). The creel clerks were able to conduct 1,113 interviews throughout the survey.

## RESULTS BY SPECIES

**WALLEYE** (Table 2, Figure 1)
Walleye received 17.5 percent of the fishing effort during the season. Anglers spent 84,684 hours targeting Walleye. The greatest fishing effort for Walleye was in May (27,807 hours). October had the least amount of Walleye fishing effort (4,593 hours).

Total catch of Walleye was 31,902 fish, with a harvest of 5,766. Highest catch (13,226 fish) occurred in May, and highest harvest (2,436 fish) occurred in May. Anglers fished an average of 2.9 hours to catch and 15.5 hours to harvest a Walleye during the survey. The mean length of harvested Walleye was 16.1 inches, and the largest measured was a 19.2-inch fish.

**NORTHERN PIKE** (Table 2, Figure 2)
Fishing effort directed at Northern Pike was 37,816 hours during the season. Northern Pike fishing effort was greatest in June (12,167 hours). Total catch of Northern Pike was 34,211 fish, with a harvest of 6,893. Anglers fished an average of 2.1 hours to catch a Northern Pike during the survey. The mean length of harvested Northern Pike was 20.8 inches, and the largest measured was a 30.5-inch fish.

**MUSKELLUNGE** (Table 2, Figure 3)
Anglers spent 77,024 hours targeting Muskellunge during the season. Muskellunge fishing effort was greatest in September (28,700 hours). Total catch of Muskellunge was 1,787 fish, and the highest catch (692 fish) occurred in September. Anglers fished 56.5 hours to catch a Muskellunge, and there was no documented harvest during the survey.

**SMALLMOUTH BASS** (Table 2, Figure 4)
Fishing effort targeted at Smallmouth Bass was 30,833 hours during the season. Smallmouth Bass fishing effort was greatest in August (13,831 hours). Total catch of Smallmouth Bass was 14,107 fish, with 177 harvested. Highest catch (4,274 fish) occurred in August. Anglers fished an average of 3.5 hours to catch a Smallmouth Bass during the survey.

**LARGEMOUTH BASS** (Table 2, Figure 5)
Fishing effort directed at Largemouth Bass was 46,416 hours during the season. Largemouth Bass fishing effort was greatest in August (13,696 hours). Total catch of Largemouth Bass was 27,943 fish, with a harvest of 1,737. Highest catch (7,633 fish) occurred in August. Anglers fished an average of 2.5 hours to catch a Largemouth Bass during the survey.

**PANFISH** (Table 2, Figures 6-10)
**YELLOW PERCH** received 12,726 hours of directed fishing effort. Total catch of Yellow Perch was 29,688 fish, with 5,369 harvested. The mean length of harvested fish was 9.0 inches.

**BLUEGILL** received 100,378 hours of directed fishing effort. Total catch of Bluegill was 363,993 fish, with 87,669 harvested. The mean length of harvested fish was 7.7 inches.

**BLACK CRAPPIE** received 95,082 hours of directed fishing effort. Anglers caught 146,557 Black Crappie and harvested 58,142. The mean length of harvested fish was 9.9 inches.

**PUMPKINSEED** received 115 hours of directed fishing effort. Anglers caught 6,088 Pumpkinseed and harvested 636. The mean length of harvested fish was 6.8 inches.

**ROCK BASS** were not specifically targeted by anglers during the survey. However, anglers caught 1,757 Rock Bass and harvested 161. The mean length of harvested fish was 7.3 inches.

## ACKNOWLEDGMENTS

The DNR would like to thank all the anglers who took the time to offer information about their fishing trip to the survey clerk. Without their cooperation, the survey would not have been possible.

We also thank our cooperator, The Landing Resort LCO, who generously allowed the DNR to keep two boats on their property during this survey.

Completion of this survey was possible because of the efforts of the fisheries management and treaty fisheries staff. Creel clerks during the survey period were Marty Kangas, Matthew Kufahl, Reed Miller, and Bill Sobaski.

This creel report was reviewed by Angelena Sikora and Gene Hatzenbeler.

Additional copies of this report, and those covering other local lakes, can be obtained online at:
http://dnr.wi.gov/topic/Fishing/north/trtycrlsrvys.html

**Table 1. Sportfishing effort summary, Lake Chippewa (Chippewa Flowage), 2022 season; compared to 2011 creel results, Sawyer County averages, and Ceded Territory averages.**

| Month | Number of Angler Party Interviews | Total Angler Hours | Total Angler Hours/Acre | 2011 Total Angler Hours/Acre | Sawyer County Average Hours/Acre | Ceded Territory Average Hours/Acre |
|---|---|---|---|---|---|---|
| May | 250 | 63,048 | 4.1 | 6.1 | 4.3 | 4.8 |
| June | 171 | 96,928 | 6.3 | 7.8 | 5.5 | 6.2 |
| July | 165 | 60,913 | 4.0 | 5.9 | 5.6 | 6.6 |
| August | 186 | 54,351 | 3.6 | 4.9 | 4.8 | 5.2 |
| September | 166 | 61,697 | 4.0 | 4.0 | 3.9 | 3.2 |
| October | 175 | 27,857 | 1.8 | 2.4 | 1.8 | 1.4 |
| Summer Total | 1,113 | 364,794 | 23.8 | 31.1 | 25.9 | 27.4 |
| Grand Total | 1,113 | 364,794 | 23.8 | 31.1 | 28.0 | 32.0 |

Note: Summer is May-October

**Number of Angler Party Interviews** is the number of groups of anglers interviewed by the creel clerk. A party is considered the members of a group who fish together in the same boat, ice shanty or from shore. The clerk fills out one interview form for each group of anglers. The number of individual anglers actually contacted by the clerk is usually much greater than the number of groups listed in this table since most groups consist of more than one angler.

**Total Angler Hours** is the estimated total number of hours that anglers spent fishing on Lake Chippewa (Chippewa Flowage) during each month surveyed.

**Total Angler Hours/Acre** is the total angler hours divided by the area of the lake in acres. This is useful in order to compare effort on Lake Chippewa (Chippewa Flowage) to other lakes.

**2011 Total Angler Hours/Acre** is the total angler hours divided by the area of the lake in acres. This is from the previous creel survey that took place on Lake Chippewa (Chippewa Flowage).

**County Average Hours/Acre** is the average angler effort in hours per acre for county lakes that have been surveyed since 1990. This value is useful for fishing pressure comparisons with other waters.

**Ceded Territory Average Hours/Acre** is the average angler effort in hours per acre for inland lakes in the Ceded Territory that have been surveyed since 1990. This value can be used to compare Lake Chippewa (Chippewa Flowage) to other lakes in northern Wisconsin.

**Table 2. Comparison of creel survey synopses, Lake Chippewa (Chippewa Flowage), 2022 and 2011 fishing seasons.**

**CREEL YEAR: 2022**

| SPECIES | DIRECTED EFFORT (Hours) | PERCENT OF TOTAL | TOTAL CATCH | SPECIFIC CATCH RATE (Hrs/Fish) | TOTAL HARVEST | SPECIFIC HARVEST RATE (Hrs/Fish) | MEAN LENGTH OF HARVESTED FISH |
|---|---|---|---|---|---|---|---|
| Walleye | 84,684 | 17.5% | 31,902 | 2.9 | 5,766 | 15.5 | 16.1 |
| Northern Pike | 37,816 | 7.8% | 34,211 | 2.1 | 6,893 | 7.3 | 20.8 |
| Muskellunge | 77,024 | 15.9% | 1,787 | 56.5 | 0 | * | ** |
| Smallmouth Bass | 30,833 | 6.4% | 14,107 | 3.5 | 177 | 238.1 | 16.2 |
| Largemouth Bass | 46,416 | 9.6% | 27,943 | 2.5 | 1,737 | 50.5 | 12.6 |
| Yellow Perch | 12,726 | 2.6% | 29,688 | 0.7 | 5,369 | 3.7 | 9.0 |
| Bluegill | 100,378 | 20.7% | 363,993 | 0.3 | 87,669 | 1.2 | 7.7 |
| Black Crappie | 95,082 | 19.6% | 146,557 | 0.7 | 58,142 | 1.7 | 9.9 |
| Pumpkinseed | 115 | 0.02% | 6,088 | 0.5 | 636 | 1.3 | 6.8 |
| Rock Bass | 0 | 0.0% | 1,757 | * | 161 | * | 7.3 |
| Warmouth | 0 | 0.0% | 26 | * | 26 | * | 7.2 |

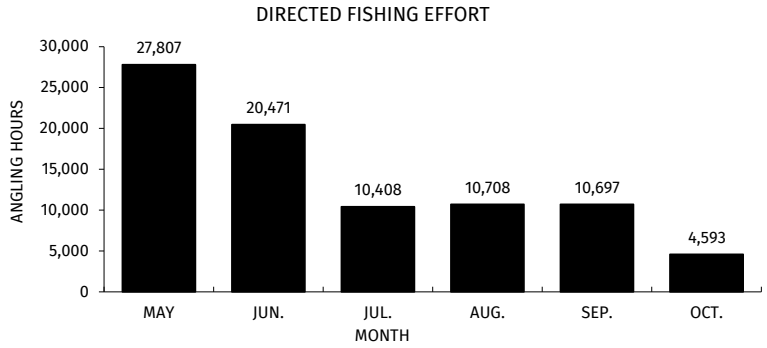


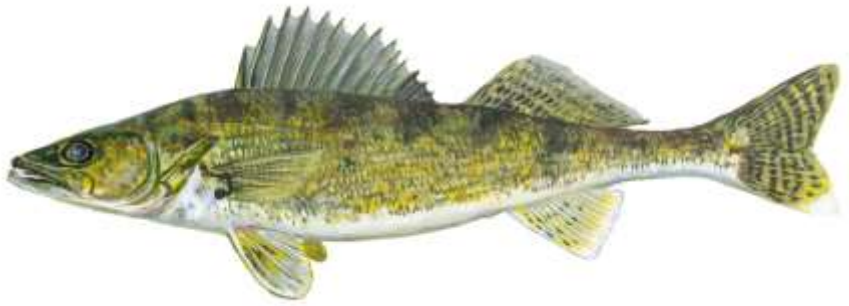
**CREEL YEAR: 2011**

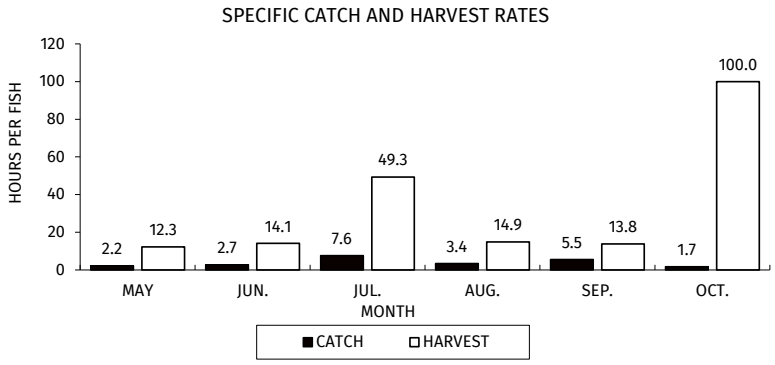
| SPECIES | DIRECTED EFFORT (Hours) | PERCENT OF TOTAL | TOTAL CATCH | SPECIFIC CATCH RATE (Hrs/Fish) | TOTAL HARVEST | SPECIFIC HARVEST RATE (Hrs/Fish) | MEAN LENGTH OF HARVESTED FISH |
|---|---|---|---|---|---|---|---|
| Walleye | 88,392 | 12.4% | 12,398 | 8.3 | 7,456 | 14.3 | 14.9 |
| Northern Pike | 44,028 | 6.2% | 32,427 | 3.6 | 4,634 | 16.7 | 22.1 |
| Muskellunge | 92,367 | 13.0% | 1,707 | 100.0 | 0 | * | ** |
| Smallmouth Bass | 47,691 | 6.7% | 27,123 | 3.3 | 788 | 100.0 | 15.1 |
| Largemouth Bass | 57,683 | 8.1% | 50,175 | 2.2 | 3,670 | 20.0 | 13.1 |
| Yellow Perch | 15,187 | 2.1% | 52,995 | 1.4 | 10,747 | 5.3 | 8.8 |
| Bluegill | 161,336 | 22.7% | 738,843 | 0.2 | 197,378 | 0.9 | 7.5 |
| Black Crappie | 186,484 | 26.2% | 296,478 | 0.7 | 156,134 | 1.3 | 9.7 |
| Pumpkinseed | 17,296 | 2.4% | 14,212 | 2.2 | 3,357 | 11.1 | 7.1 |

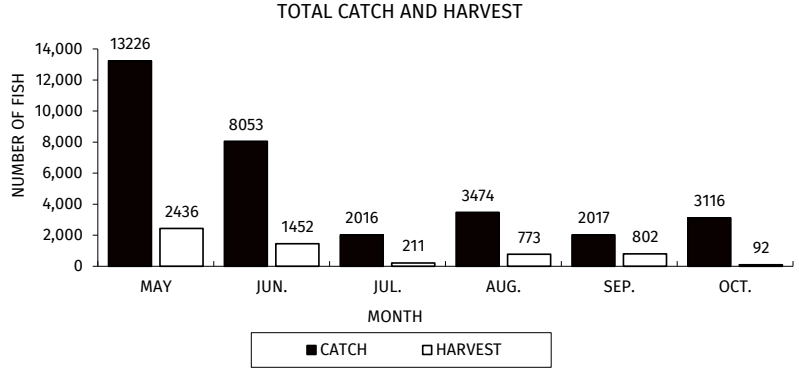
Note: If a species is not shown in a table, no data was collected by the creel clerks for that species.
* Indicates that no fish of this species were caught or harvested (depending on the column) by anglers who specifically targeted this species.
** Indicates that no fish were measured by the creel clerks for this species

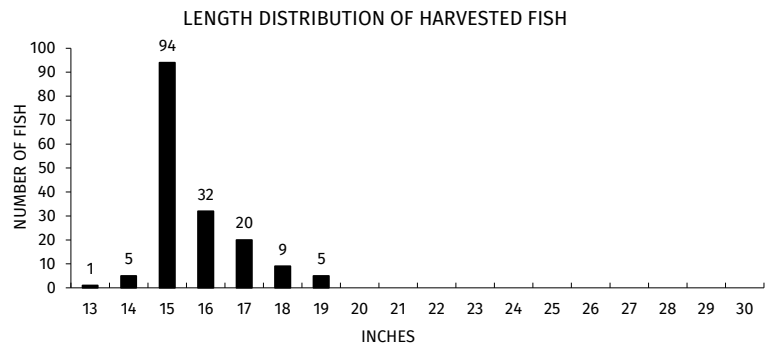
# WALLEYE





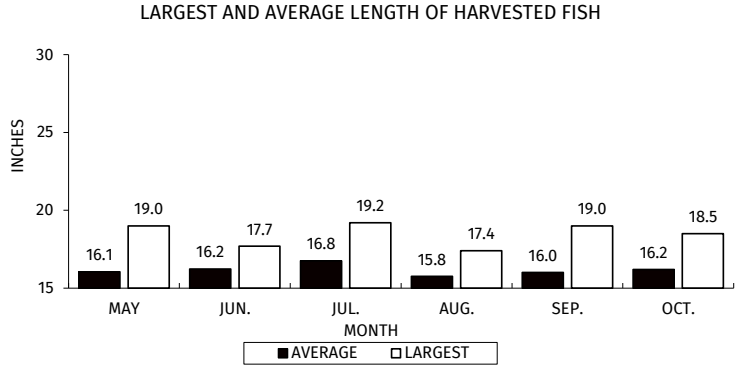
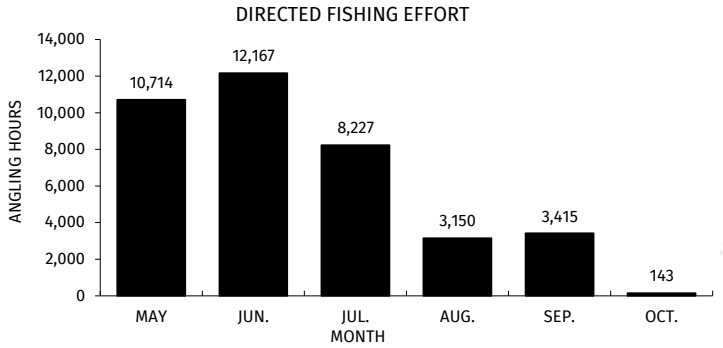
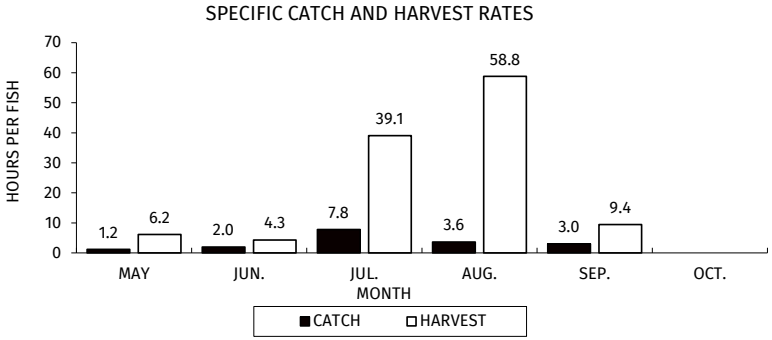
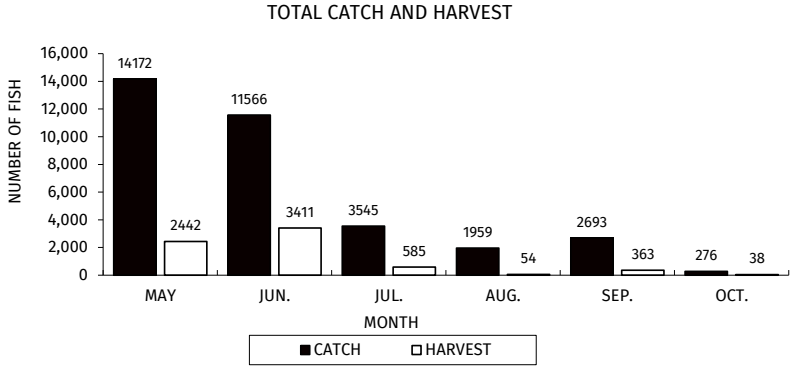



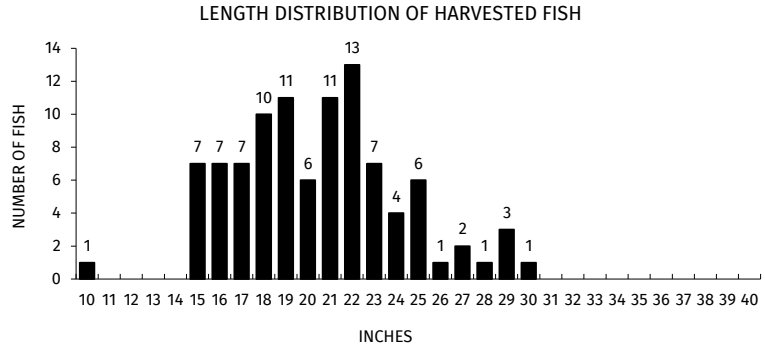

**Figure 1. Walleye sportfishing effort, catch, harvest, and length distribution, Lake Chippewa (Chippewa Flowage), during 2022.**




## NORTHERN PIKE



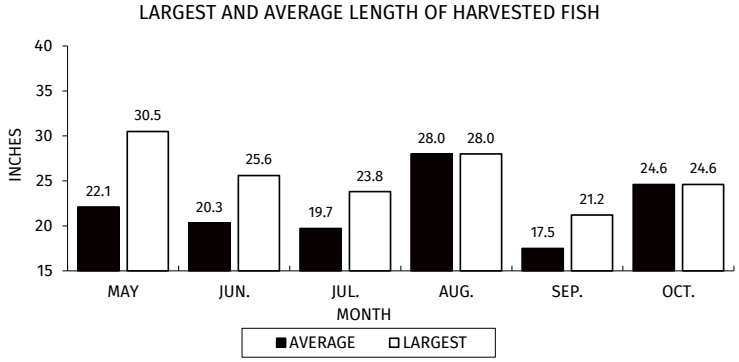




**Figure 2. Northern Pike sportfishing effort, catch, harvest, and length distribution, Lake Chippewa (Chippewa Flowage), during 2022.**

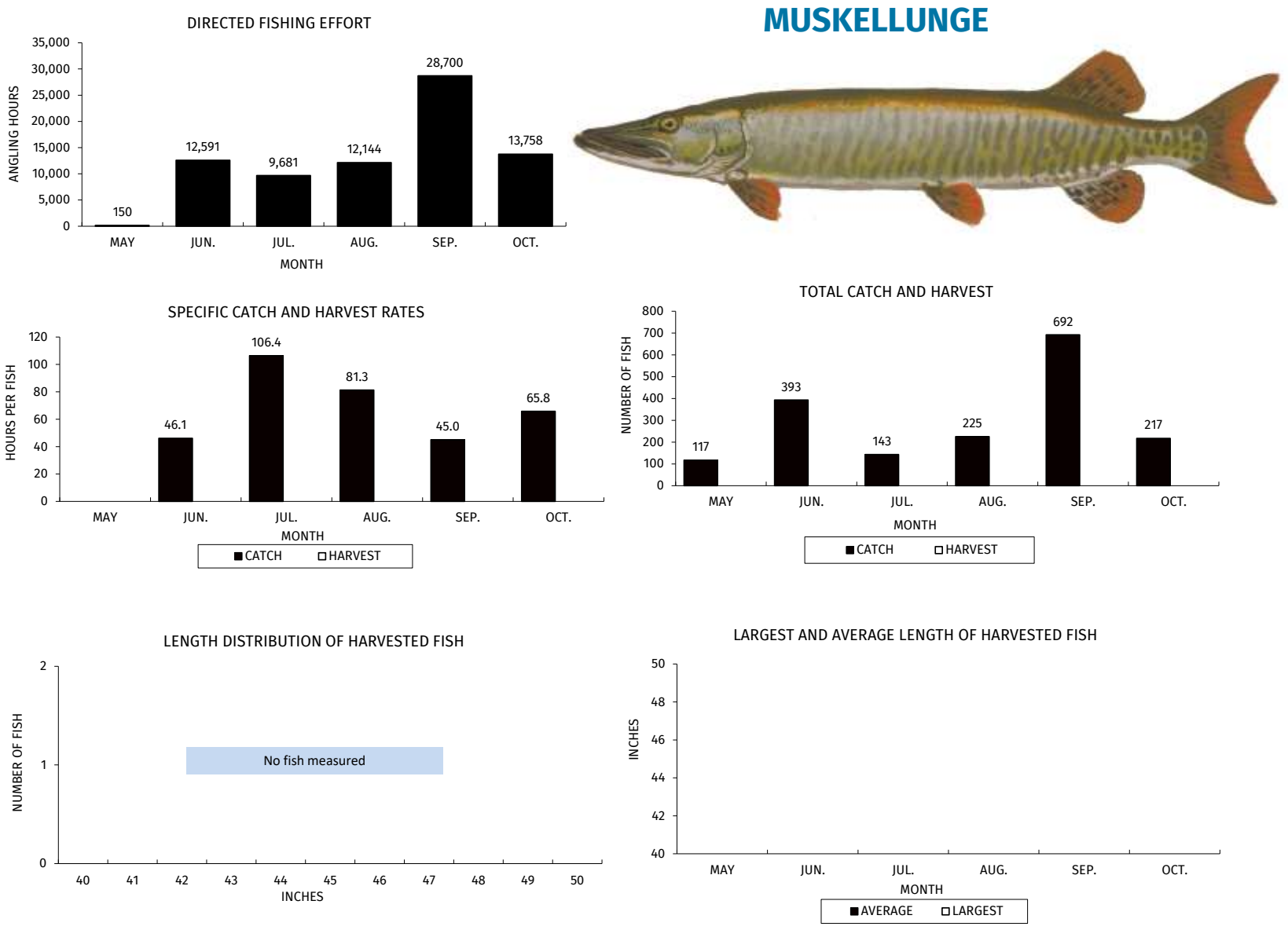
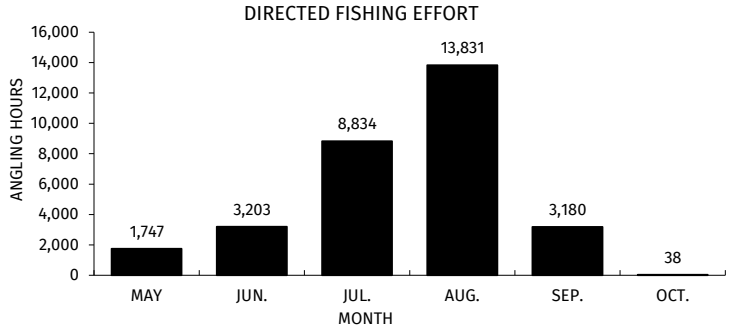
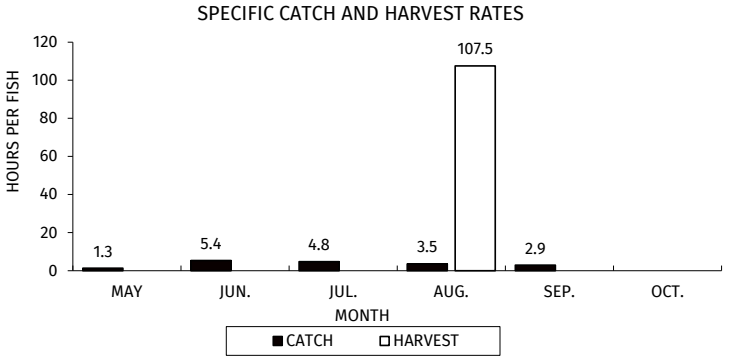
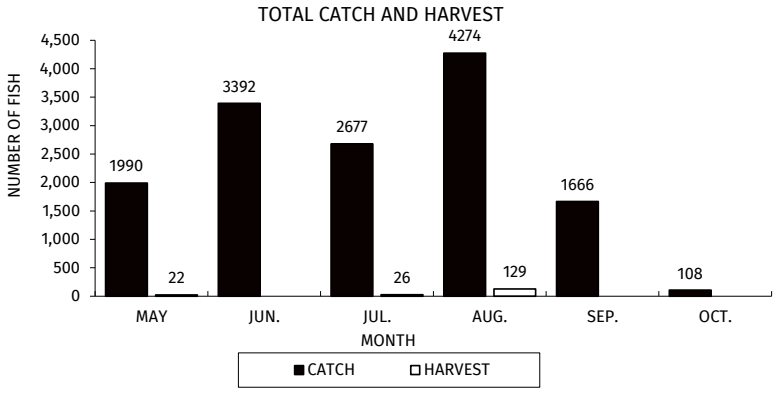


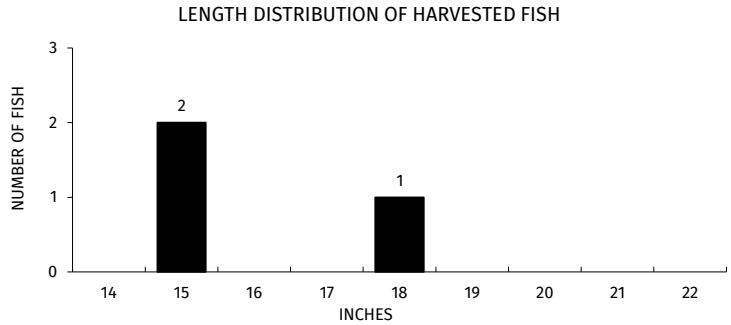

**Figure 3. Muskellunge sportfishing effort, catch, harvest, and length distribution, Lake Chippewa (Chippewa Flowage), during 2022.**

## SMALLMOUTH BASS



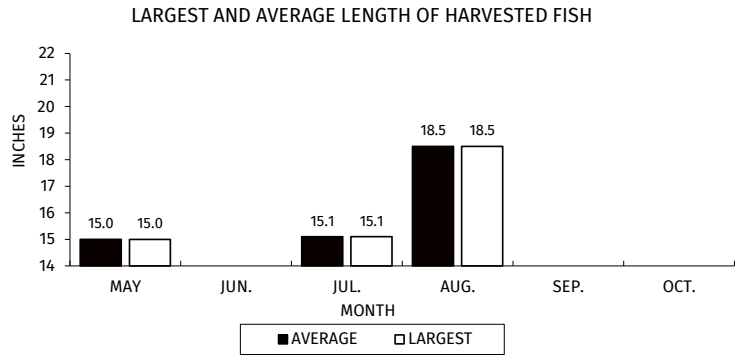
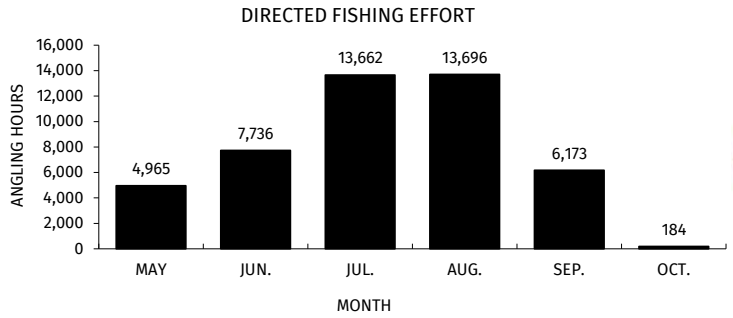
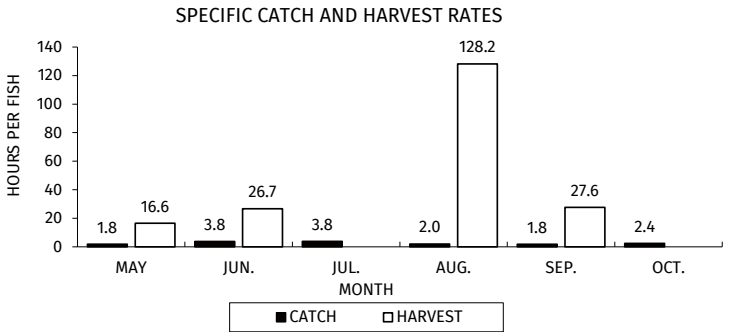
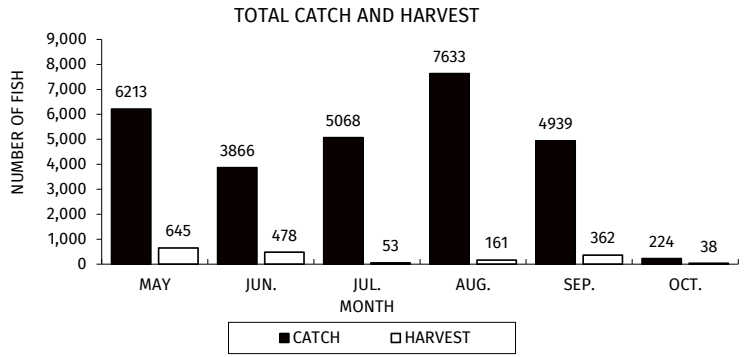



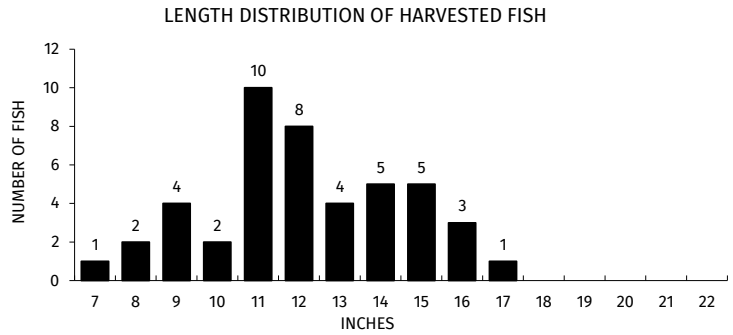

**Figure 4. Smallmouth Bass sportfishing effort, catch, harvest, and length distribution, Lake Chippewa (Chippewa Flowage), during 2022.**

# LARGEMOUTH BASS



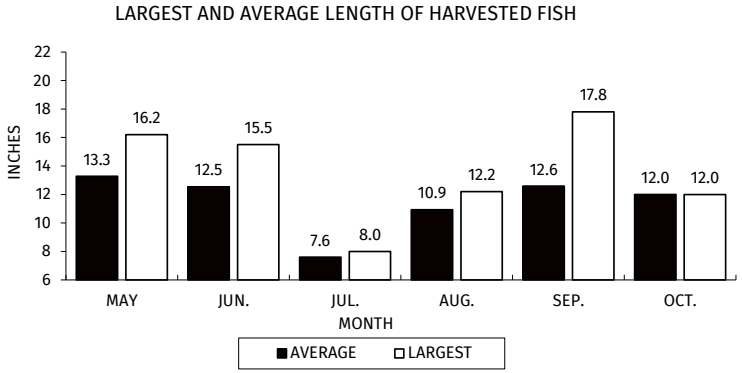
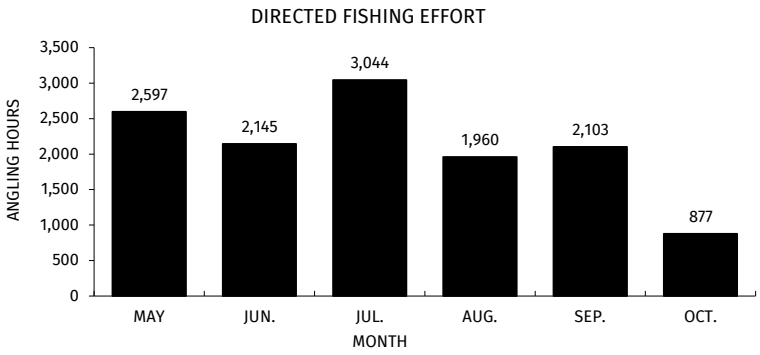
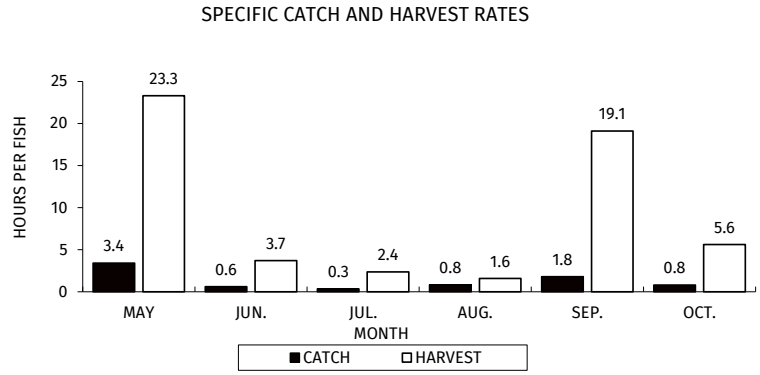
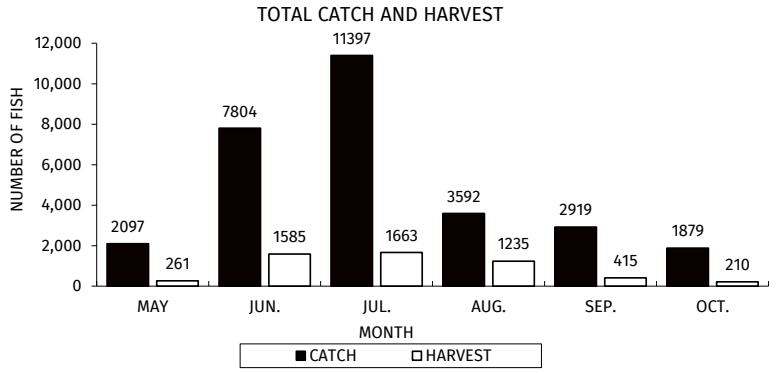



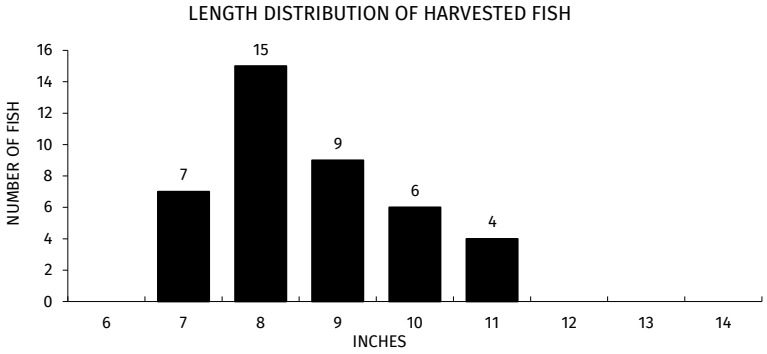

**Figure 5. Largemouth Bass sportfishing effort, catch, harvest, and length distribution, Lake Chippewa (Chippewa Flowage), during 2022.**

# YELLOW PERCH



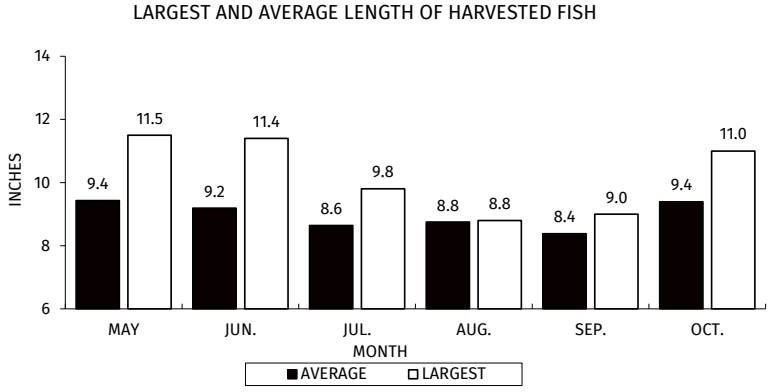
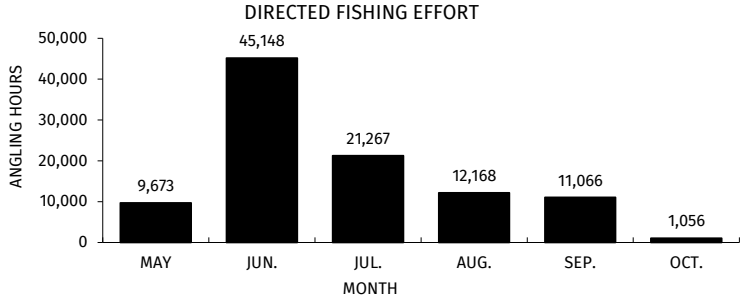
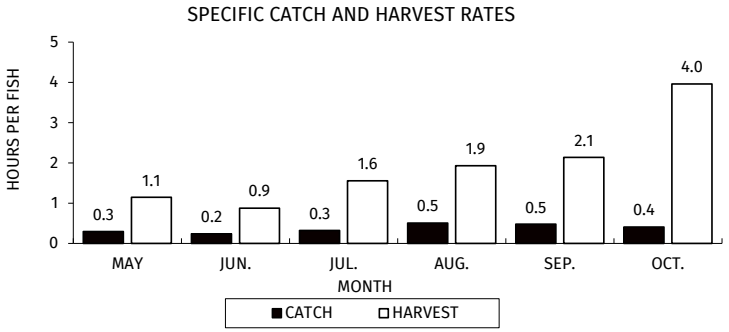
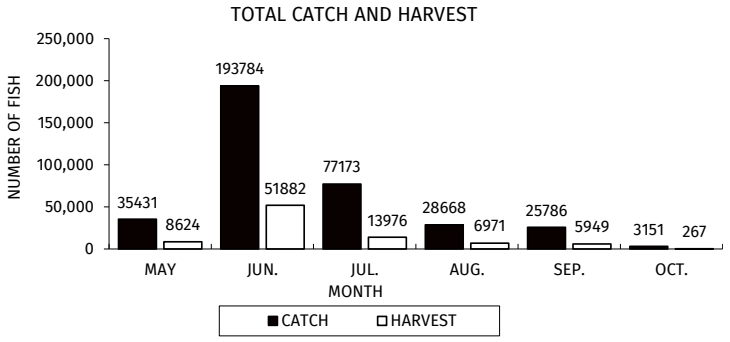



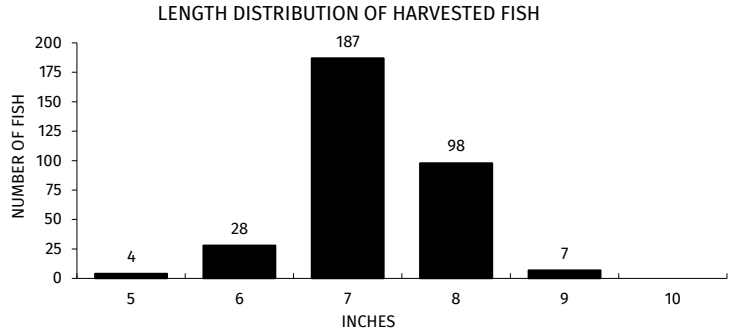

**Figure 6. Yellow Perch sportfishing effort, catch, harvest, and length distribution, Lake Chippewa (Chippewa Flowage), during 2022.**

# BLUEGILL



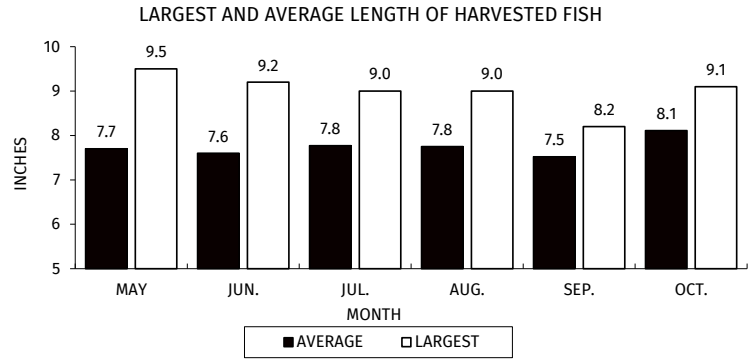
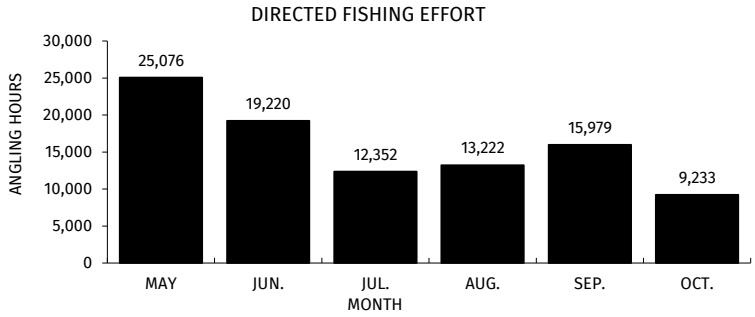
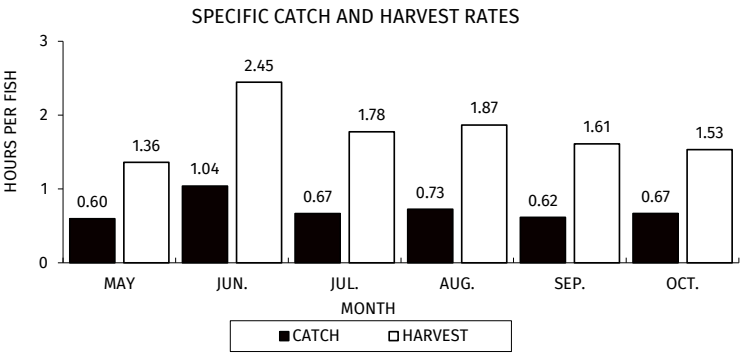
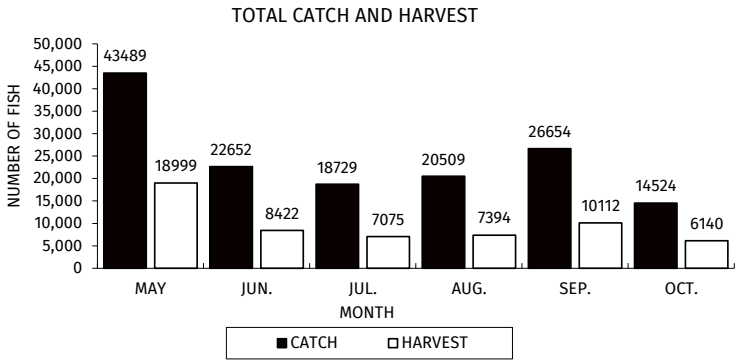



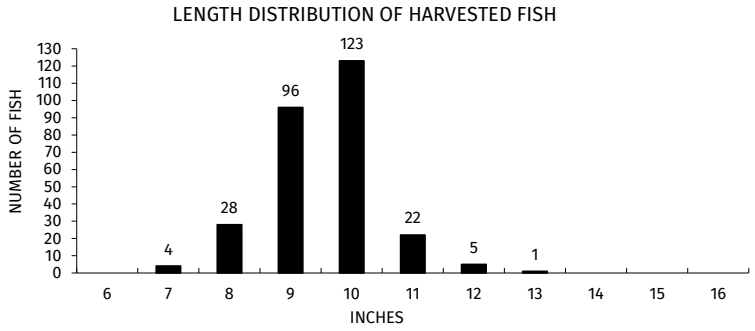

**Figure 7. Bluegill sportfishing effort, catch, harvest, and length distribution, Lake Chippewa (Chippewa Flowage), during 2022.**

# BLACK CRAPPIE



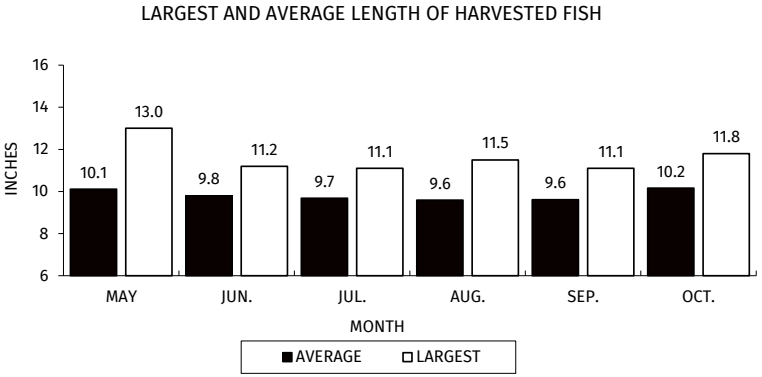
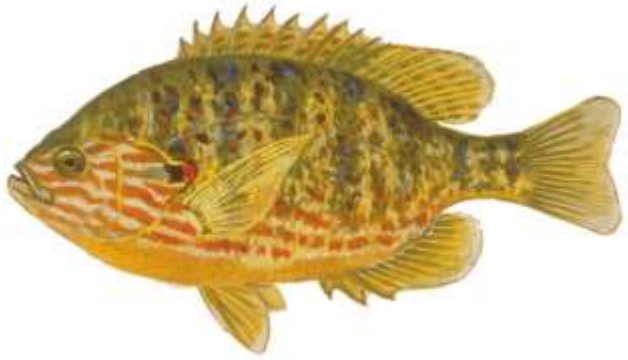
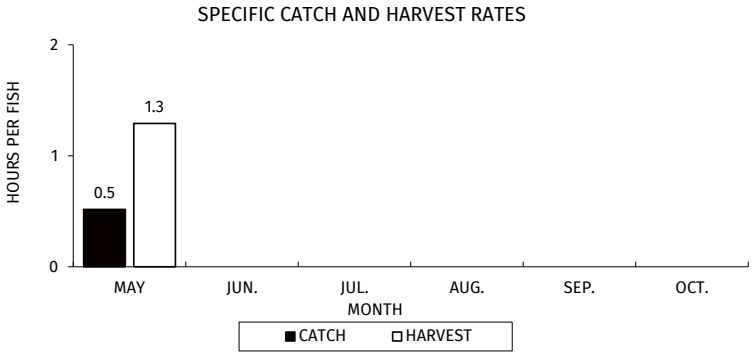
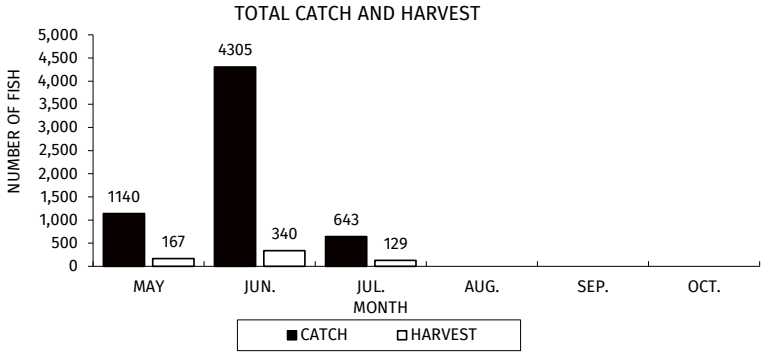



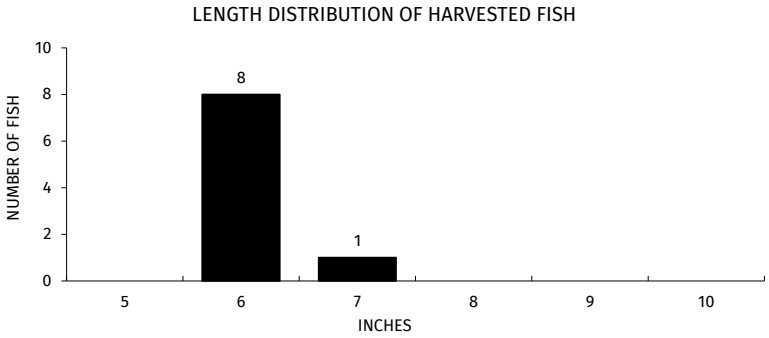

**Figure 8. Black Crappie sportfishing effort, catch, harvest, and length distribution, Lake Chippewa (Chippewa Flowage), during 2022.**

# PUMPKINSEED



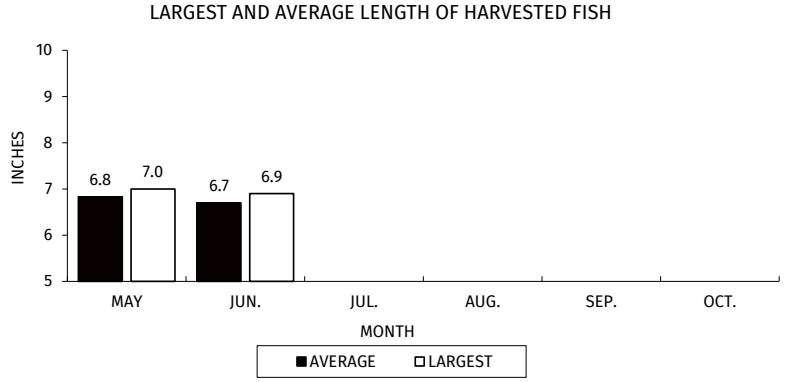
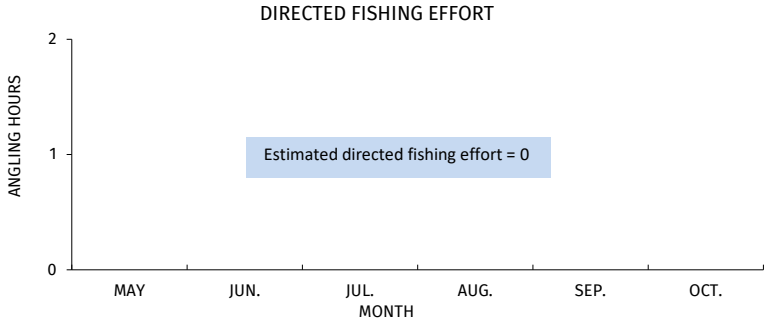
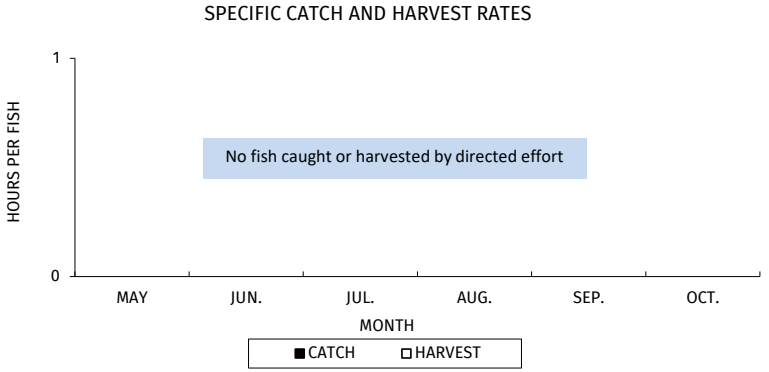
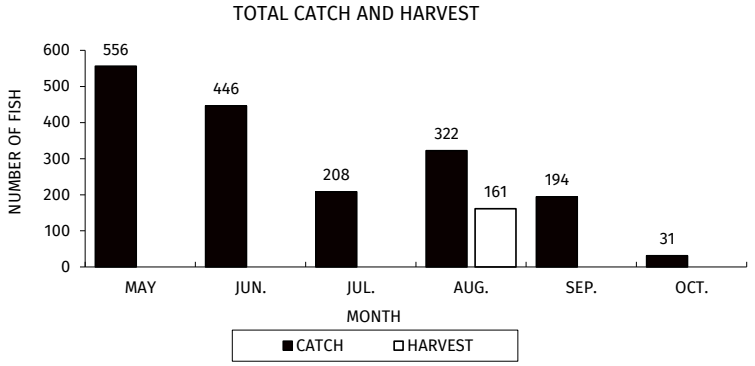



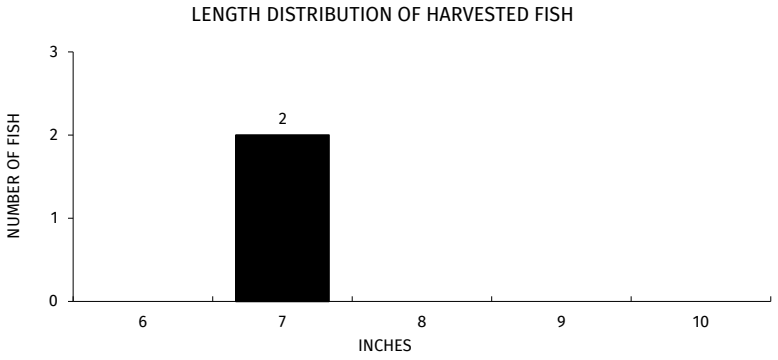

**Figure 9. Pumpkinseed sportfishing effort, catch, harvest, and length distribution, Lake Chippewa (Chippewa Flowage), during 2022.**

# ROCK BASS



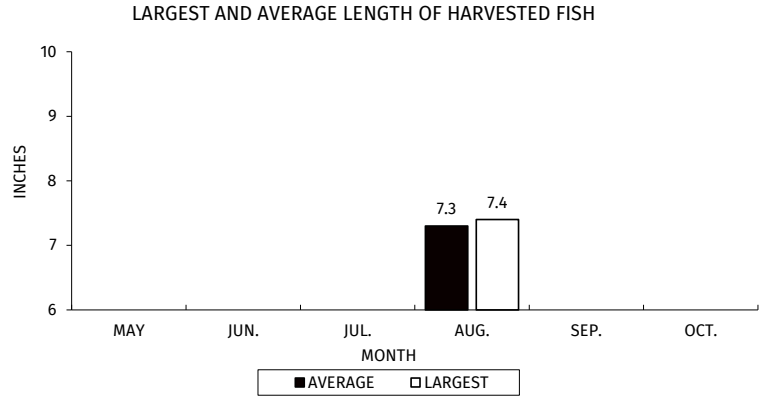




**Figure 10. Rock Bass sportfishing effort, catch, harvest, and length distribution, Lake Chippewa (Chippewa Flowage), during 2022.**