WISCONSIN DEPARTMENT OF NATURAL RESOURCES

# MINONG FLOWAGE

## 2023 – 2024 CREEL SURVEY REPORT

WASHBURN/DOUGLAS COUNTIES

Treaty Fisheries Publication

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# 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.

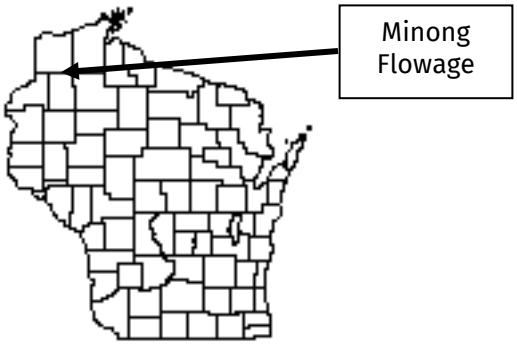
You may have encountered a DNR creel survey clerk on a recent fishing trip. We appreciate your cooperation during an interview. The survey only takes a few minutes of your time, and it gives the DNR valuable information needed for management of the fishery.

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

Minong Flowage is located in Washburn and Douglas Counties near the town of Minong.

## PHYSICAL CHARACTERISTICS

Minong Flowage is a 1,564-acre drainage impoundment with a maximum depth of 21 feet. Littoral substrate consists primarily of sand, with lesser amounts of muck, and gravel. Minong Flowage contains soft, slightly acidic, stained water of moderate transparency.

## SEASONS SURVEYED

The open-water creel survey ran from May 6 through Oct. 31, 2023, and the ice fishing creel survey ran from Dec. 1, 2023 through March 3, 2024.

## WEATHER

Ice-out on Minong Flowage was around April 18, 2023. Fishable ice formed early December.

## 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/ 6-3/ 3 | 5 | 14" |
| Smallmouth Bass | 6/ 17-3/ 3 | 5 | 14" |
| Largemouth and Smallmouth Bass Catch and release only all other times of year | | | |
| Musky | 5/ 27-12/ 31 | 1 | 40" |
| Northern Pike | 5/ 6-3/ 3 | 5 | none |
| Walleye | 5/ 6-3/ 3 | 3 | none |
| | Only 1>14" | | |
| Panfish | year round | 25 | none |

# SPECIES CATCH AND HARVEST INFORMATION

Summaries of angling effort, catch and harvest information for each species are in Table 2 and Figures 1-9, 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 17,984 hours, or 11.5 hours per acre, fishing Minong Flowage during the 2023-24 season (Table 1). That was less than the Washburn County average of 28.3 hours per acre. May was the most heavily fished month (6,390 hours), and fishing effort was lightest in December (126 hours). The creel clerks were able to conduct 483 interviews throughout the survey.

## RESULTS BY SPECIES

**WALLEYE** (Table 2, Figure 1)
Walleye received 47.7 percent of the fishing effort during the season. Anglers spent 11,936 hours targeting Walleye. The greatest fishing effort for Walleye was in May (4,124 hours). December had the least amount of Walleye fishing effort (100 hours).

Total catch of Walleye was 5,318 fish, with a harvest of 2,367. Highest catch (1,962 fish) occurred in May, and highest harvest (1,044 fish) occurred in May. Anglers fished an average of 2.3 hours to catch and 5.3 hours to harvest a Walleye during the survey. The mean length of harvested Walleye was 13.8 inches, and the largest measured was a 22.5-inch fish.

**NORTHERN PIKE** (Table 2, Figure 2)
Fishing effort directed at Northern Pike was 1,477 hours during the season. Northern Pike fishing effort was greatest in June (445 hours). Total catch of Northern Pike was 3,608 fish, with a harvest of 160. Anglers fished an average of 3.5 hours to catch a Northern Pike during the survey. The mean length of harvested Northern Pike was 21.2 inches, and the largest measured was a 30.3-inch fish.

**MUSKELLUNGE** (Table 2, Figure 3)
Anglers spent 76 hours targeting Muskellunge during the season. Muskellunge fishing effort was greatest in August (41 hours). Total catch of Muskellunge was 5 fish, and the highest catch (5 fish) occurred in May. There was no documented harvest during the survey.

**SMALLMOUTH BASS** (Table 2, Figure 4)
Fishing effort targeted at Smallmouth Bass was 1,193 hours during the season. Smallmouth Bass fishing effort was greatest in June (553 hours). Total catch of Smallmouth Bass was 1,645 fish, with 22 harvested. Highest catch (742 fish) occurred in June. Anglers fished an average of 9.3 hours to catch a Smallmouth Bass during the survey.

**LARGEMOUTH BASS** (Table 2, Figure 5)
Fishing effort directed at Largemouth Bass was 1,289 hours during the season. Largemouth Bass fishing effort was greatest in June (553 hours). Total catch of Largemouth Bass was 441 fish, with a harvest of 88. Highest catch (180 fish) occurred in June. Anglers fished an average of 5.3 hours to catch a Largemouth Bass during the survey.

**PANFISH** (Table 2, Figures 6-9)
**YELLOW PERCH** received 209 hours of directed fishing effort. Total catch of Yellow Perch was 145 fish, with 61 harvested. The mean length of harvested fish was 9.6 inches.

**BLUEGILL** received 3,549 hours of directed fishing effort. Total catch of Bluegill was 6,081 fish, with 3,189 harvested. The mean length of harvested fish was 8.2 inches.

**BLACK CRAPPIE** received 5,075 hours of directed fishing effort. Anglers caught 3,937 Black Crappie and harvested 2,388. The mean length of harvested fish was 10.7 inches.

**PUMPKINSEED** received 229 hours of directed fishing effort. Anglers caught 448 Pumpkinseed and harvested 170. The mean length of harvested fish was 7.5 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, Harlan Johnson, who generously allowed the DNR to keep a boat on their property during this survey.

Completion of this survey was possible because of the efforts of the following fisheries management and treaty fisheries staff: Angelena Sikora, Gene Hatzenbeler, Craig Roberts, Todd Brecka, Misty Rood, Kent Bass, Brianna Becher, Bill Sobaski and Matthew Kufahl. Creel clerk during the survey period was Chris Coffin.

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, Minong Flowage, 2023-24 season; compared to Washburn County averages, and Ceded Territory averages.**

| Month | Number of Angler Party Interviews | Total Angler Hours | Total Angler Hours/Acre | Washburn County Average Hours/Acre | Ceded Territory Average Hours/Acre |
|---|---|---|---|---|---|
| May | 153 | 6,390 | 4.1 | 4.0 | 4.8 |
| June | 97 | 3,903 | 2.5 | 5.9 | 6.2 |
| July | 58 | 2,495 | 1.6 | 6.1 | 6.6 |
| August | 49 | 1,941 | 1.2 | 4.1 | 5.2 |
| September | 40 | 1,202 | 0.8 | 2.6 | 3.2 |
| October | 51 | 668 | 0.4 | 0.7 | 1.4 |
| December | 7 | 126 | 0.1 | 1.2 | 1.1 |
| January | 8 | 511 | 0.3 | 2.0 | 1.7 |
| February | 20 | 742 | 0.5 | 1.6 | 1.6 |
| March | 0 | 6 | 0.004 | 0.1 | 0.2 |
| Summer Total | 448 | 16,599 | 10.6 | 23.3 | 27.4 |
| Winter Total | 35 | 1,385 | 0.9 | 5.0 | 4.6 |
| Grand Total | 483 | 17,984 | 11.5 | 28.3 | 32.0 |

Note: Summer is May-October; Winter is December-March

**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 Minong 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 Minong Flowage to other lakes.

**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 Minong Flowage to other lakes in northern Wisconsin.

**Table 2. Creel survey synopsis, Minong Flowage, 2023-24.**

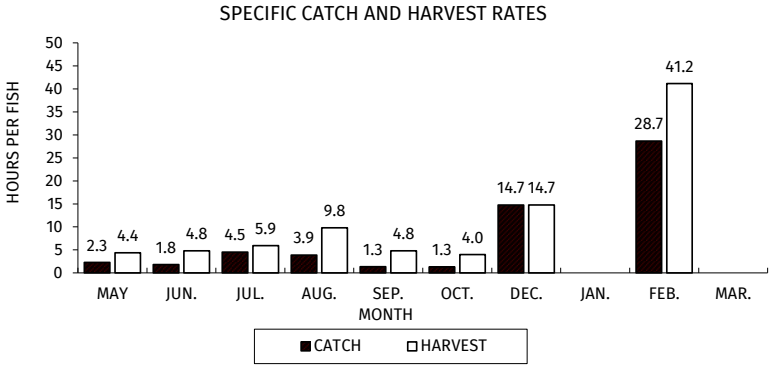
**CREEL YEAR: 2023-2024**

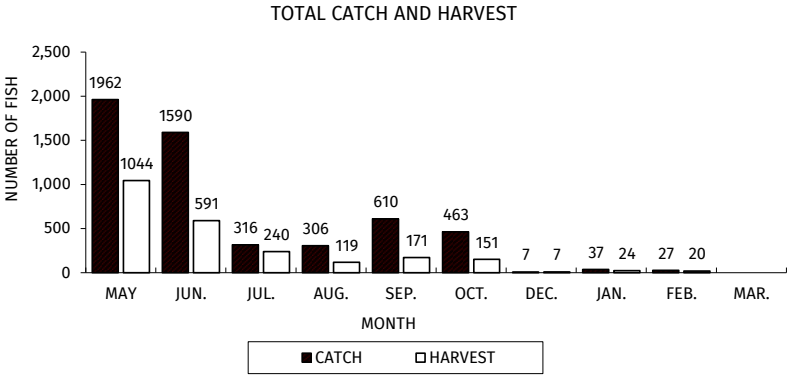
| SPECIES | DIRECTED EFFORT (Hours) | PERCENT OF TOTAL | TOTAL CATCH | SPECIFIC CATCH RATE (Hrs/Fish) | TOTAL HARVEST | SPECIFIC HARVEST RATE (Hrs/Fish) | MEAN LENGTH OF HARVESTED FISH |
|---|---|---|---|---|---|---|---|
| Walleye | 11,936 | 47.7% | 5,318 | 2.3 | 2,367 | 5.3 | 13.8 |
| Northern Pike | 1,477 | 5.9% | 3,608 | 3.5 | 160 | 83.3 | 21.2 |
| Muskellunge | 76 | 0.3% | 5 | * | 0 | * | ** |
| Smallmouth Bass | 1,193 | 4.8% | 1,645 | 9.3 | 22 | * | 14.1 |
| Largemouth Bass | 1,289 | 5.1% | 441 | 5.3 | 88 | 19.6 | 15.8 |
| Yellow Perch | 209 | 0.8% | 145 | 23.3 | 61 | * | 9.6 |
| Bluegill | 3,549 | 14.2% | 6,081 | 0.8 | 3,189 | 1.6 | 8.2 |
| Black Crappie | 5,075 | 20.3% | 3,937 | 1.8 | 2,388 | 3.2 | 10.7 |
| Pumpkinseed | 229 | 0.9% | 448 | 0.6 | 170 | 2.5 | 7.5 |
| White Sucker | 13 | 0.1% | 55 | 2.6 | 5 | 2.6 | 16.8 |
| Rock Bass | 0 | 0.0% | 152 | * | 5 | * | ** |
| Bowfin | 0 | 0.0% | 6 | * | 0 | * | ** |
| Common Carp | 0 | 0.0% | 10 | * | 0 | * | ** |
| Freshwater Drum | 0 | 0.0% | 6 | * | 0 | * | ** |
| Shorthead Redhorse | 0 | 0.0% | 35 | * | 0 | * | ** |

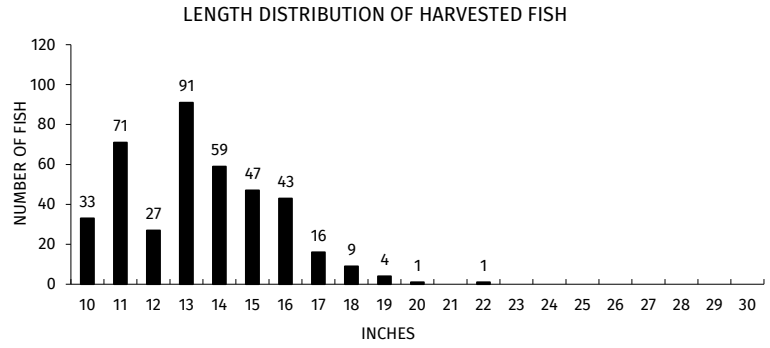
Note: If a species is not shown in a table, no data was collected by the creel clerks for that species.
* Indicates that no fish of this species were caught or harvested (depending on the column) by anglers who specifically targeted this species.
** Indicates that no fish were measured by the creel clerks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

# WALLEYE



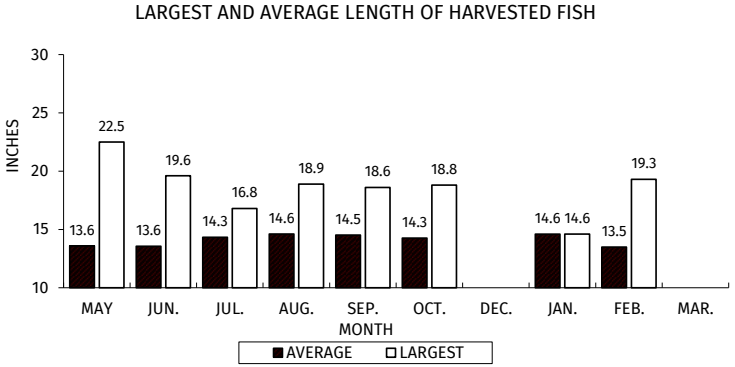




**Figure 1. Walleye sportfishing effort, catch, harvest, and length distribution, Minong Flowage, during 2023-24.**

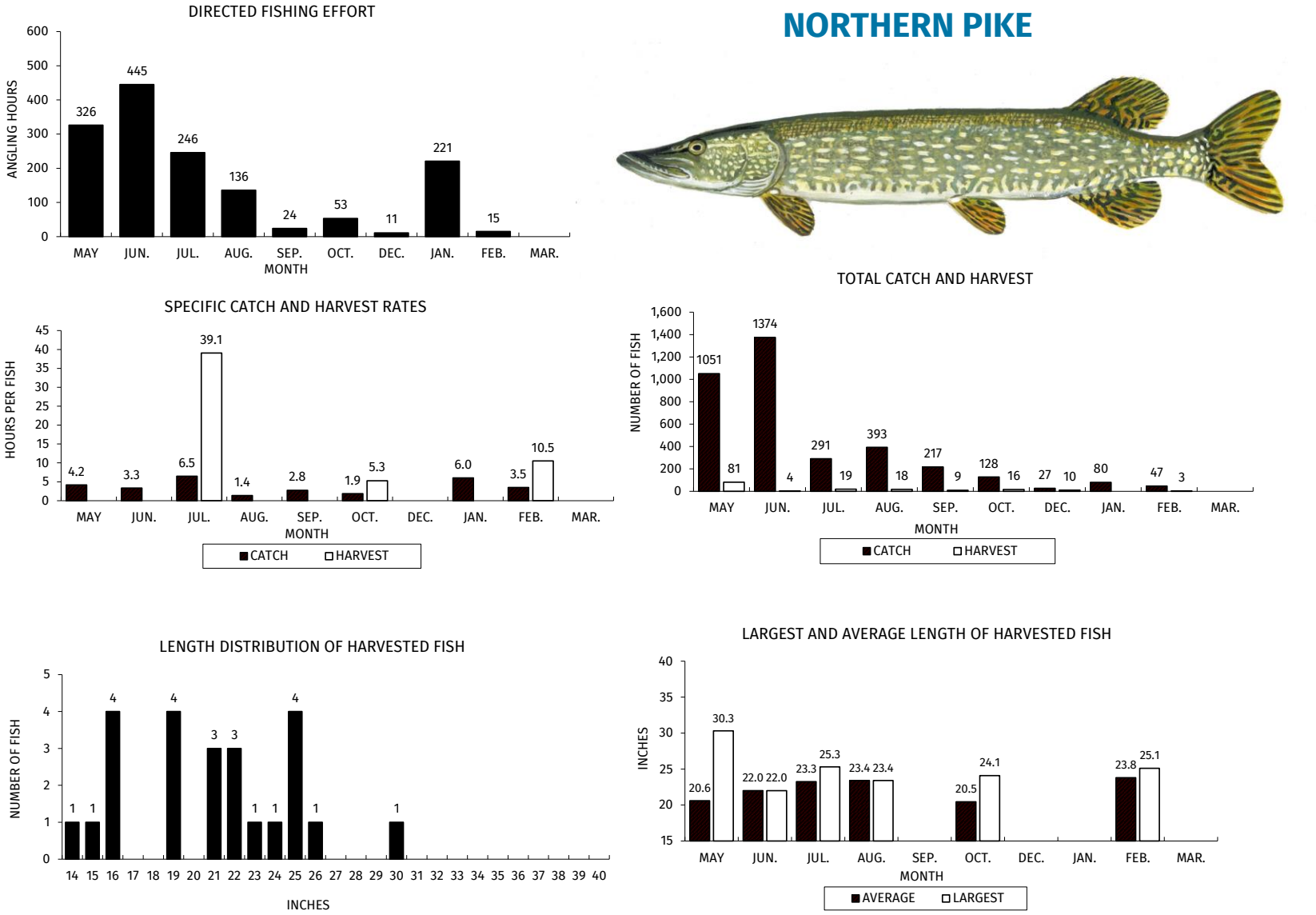



**Figure 2. Northern Pike sportfishing effort, catch, harvest, and length distribution, Minong Flowage, during 2023-24.**

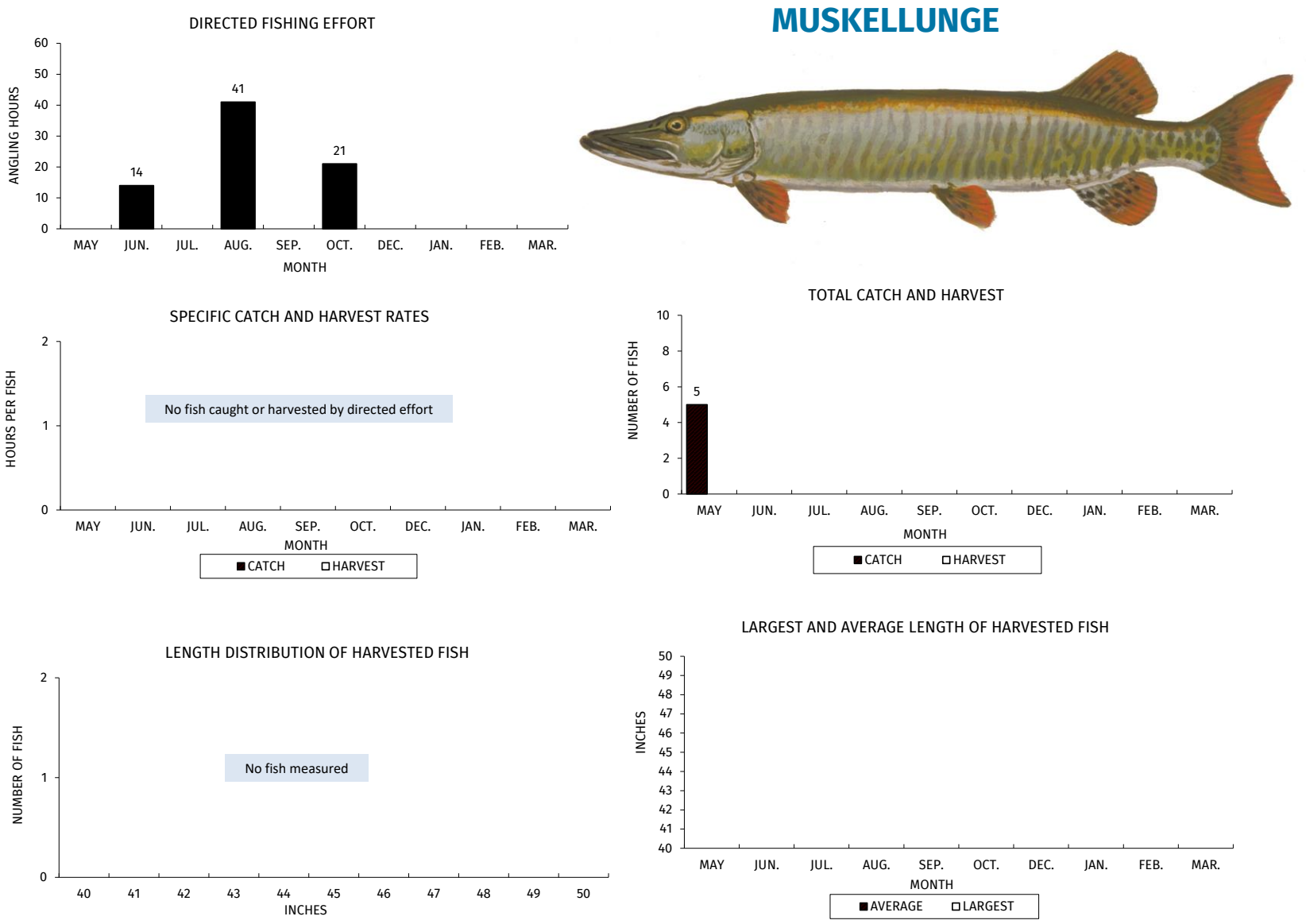
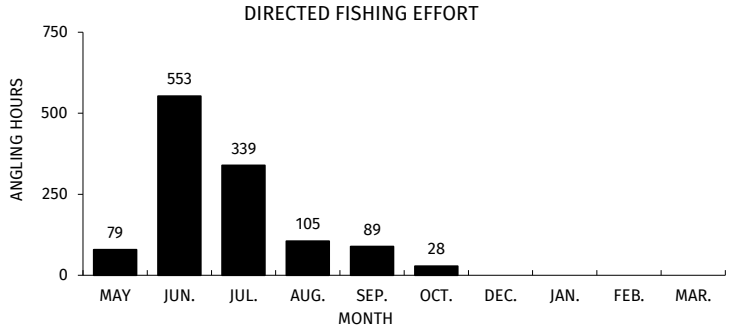
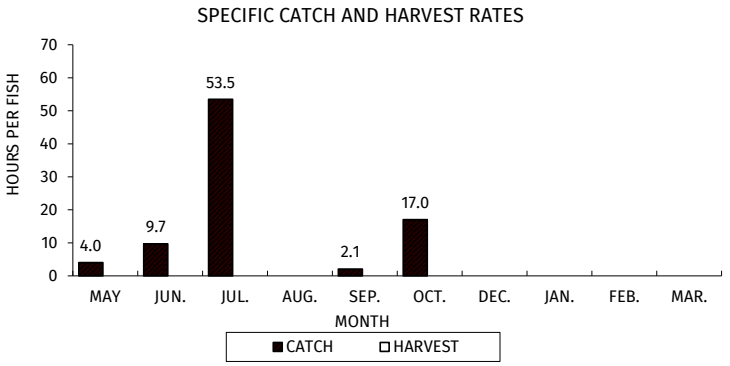
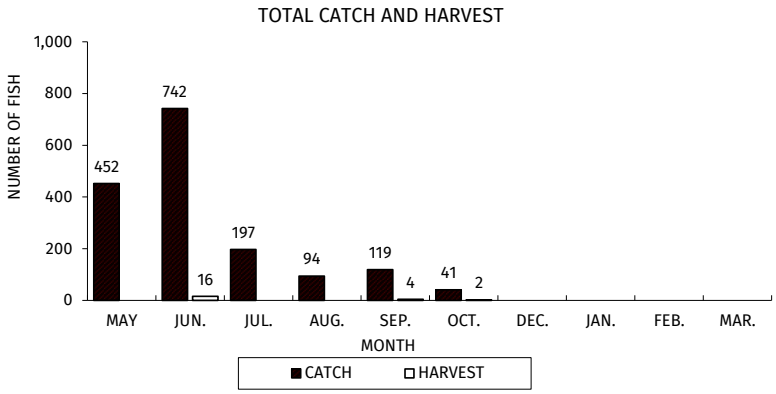


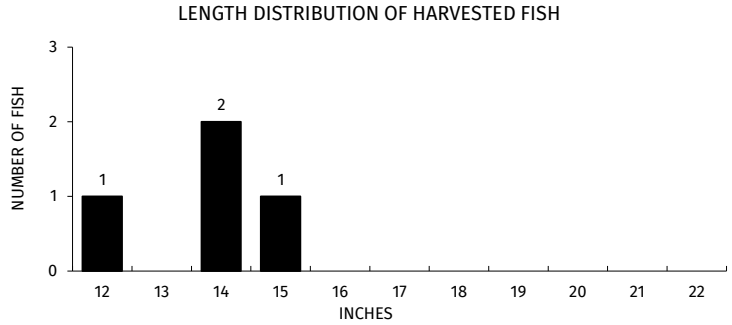

**Figure 3. Muskellunge sportfishing effort, catch, harvest, and length distribution, Minong Flowage, during 2023-24.**

# SMALLMOUTH BASS



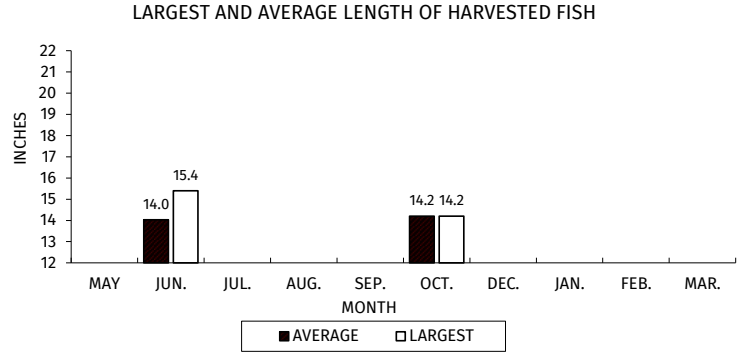
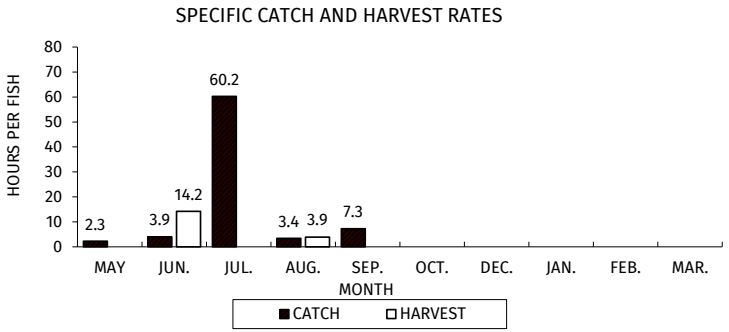
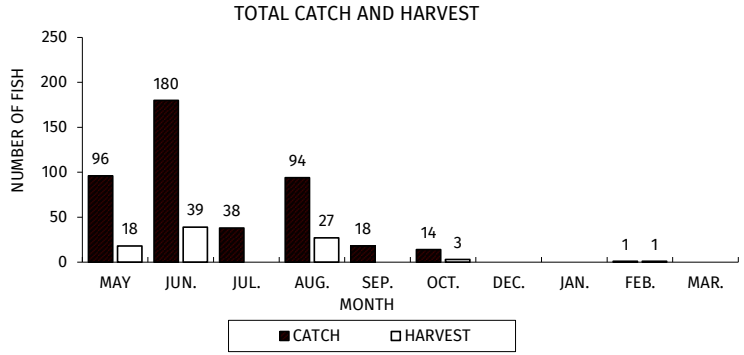
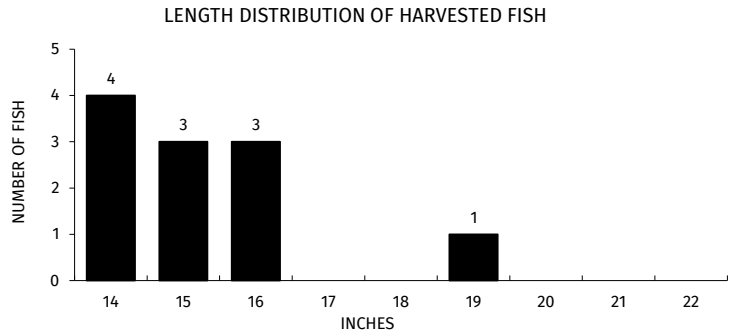




**Figure 4. Smallmouth Bass sportfishing effort, catch, harvest, and length distribution, Minong Flowage, during 2023-24.**

# LARGEMOUTH BASS

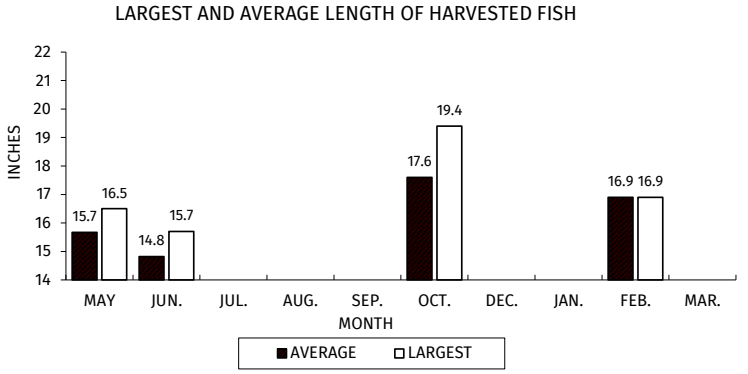




**Figure 5. Largemouth Bass sportfishing effort, catch, harvest, and length distribution, Minong Flowage, during 2023-24.**

# YELLOW PERCH

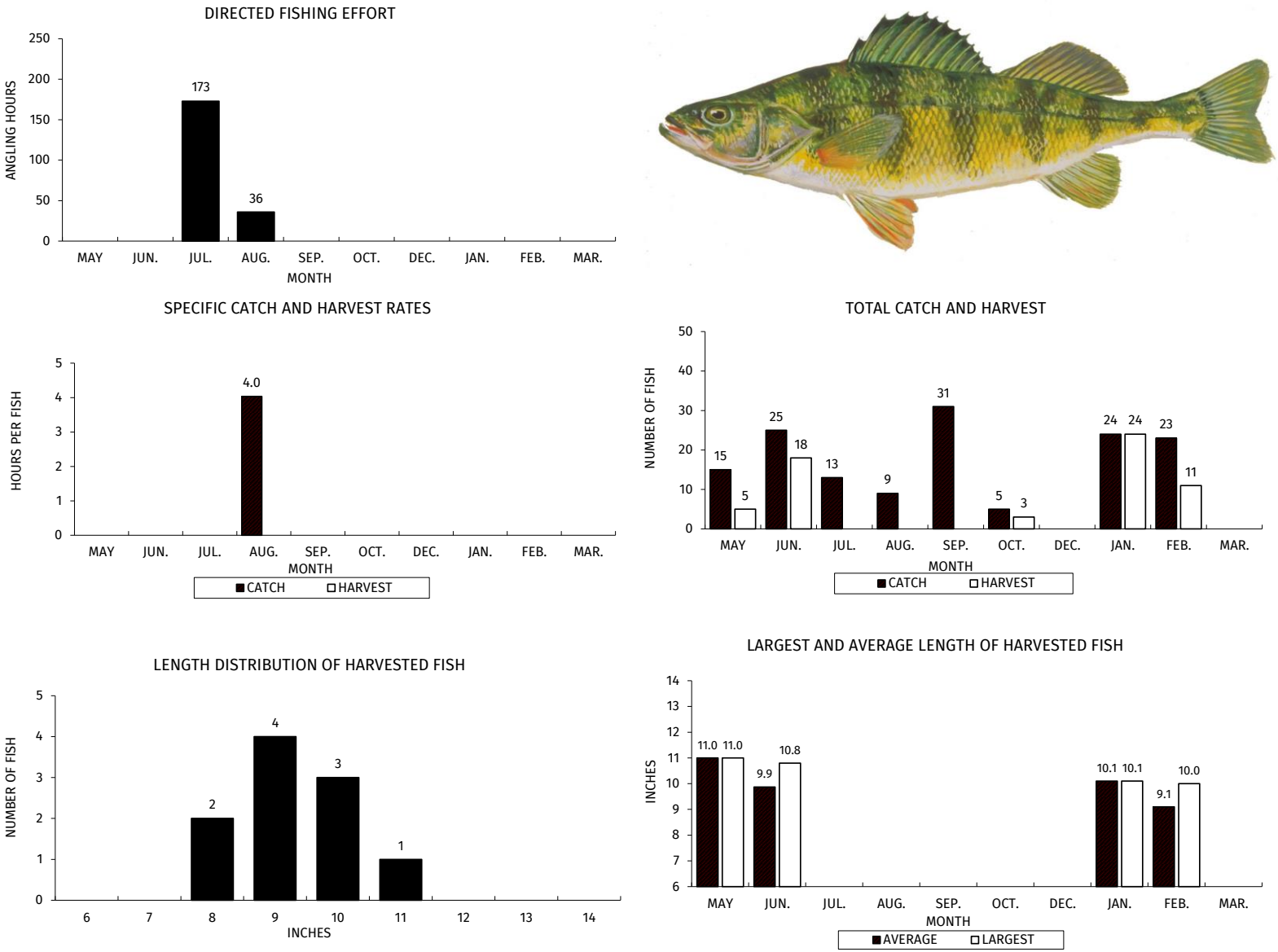
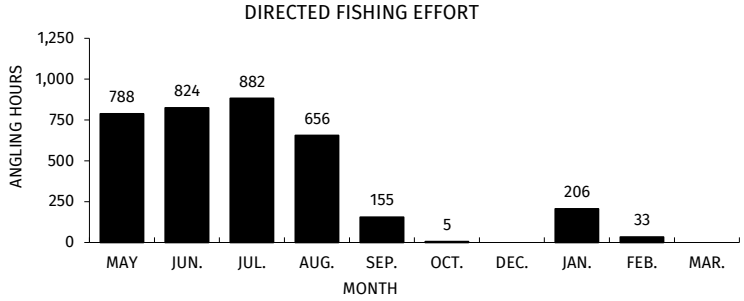
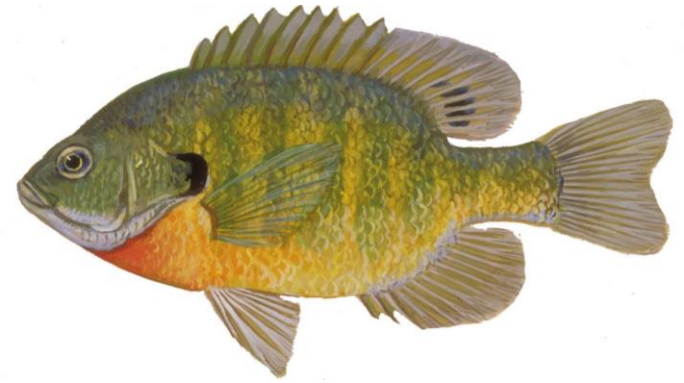
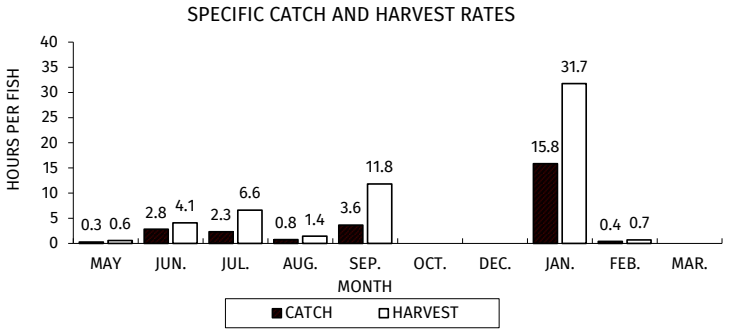


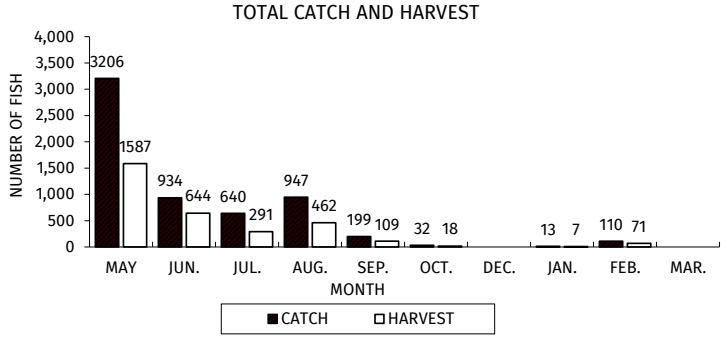

**Figure 6. Yellow Perch sportfishing effort, catch, harvest, and length distribution, Minong Flowage, during 2023-24.**

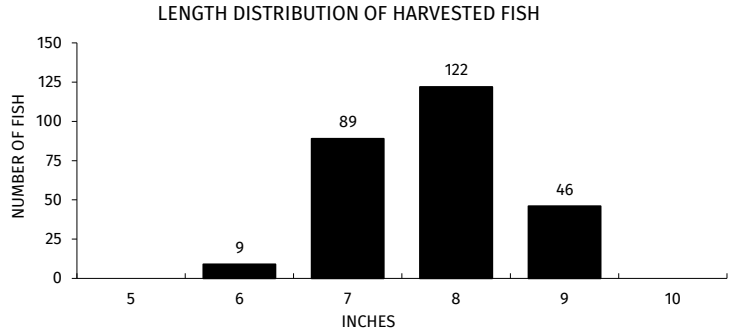
# BLUEGILL





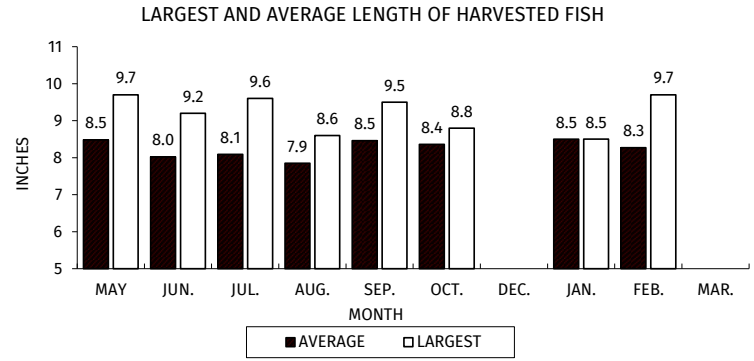
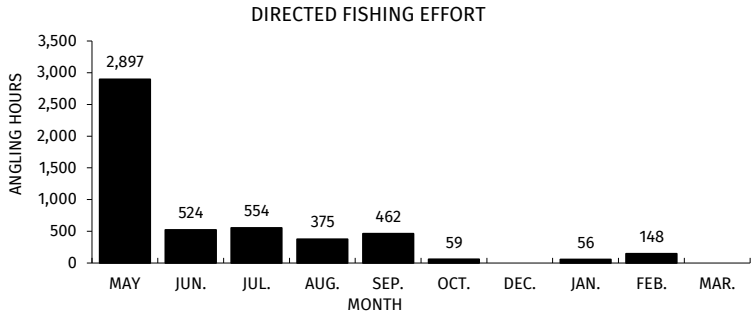
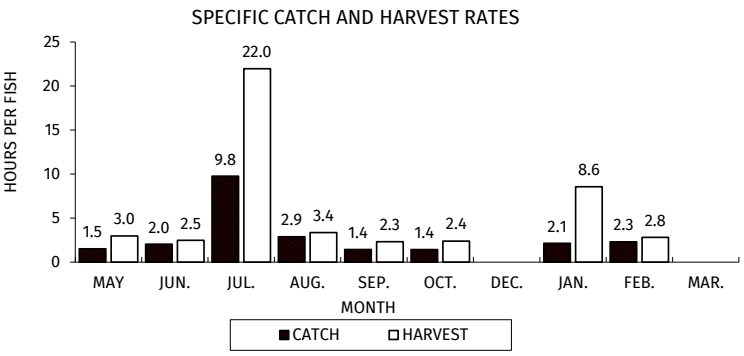
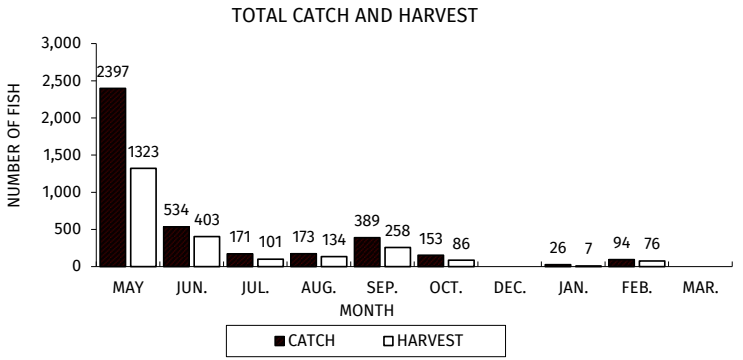



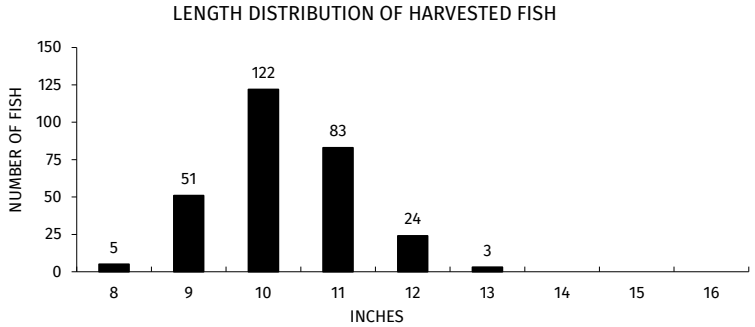

**Figure 7. Bluegill sportfishing effort, catch, harvest, and length distribution, Minong Flowage, during 2023-24.**

# BLACK CRAPPIE



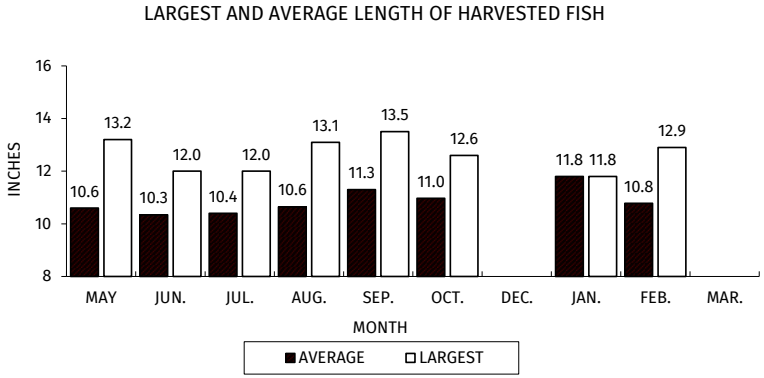
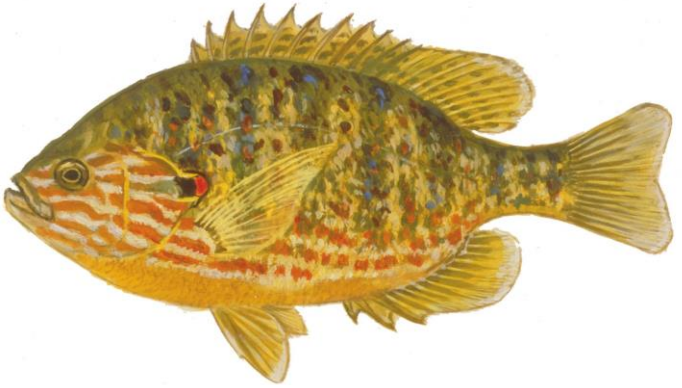
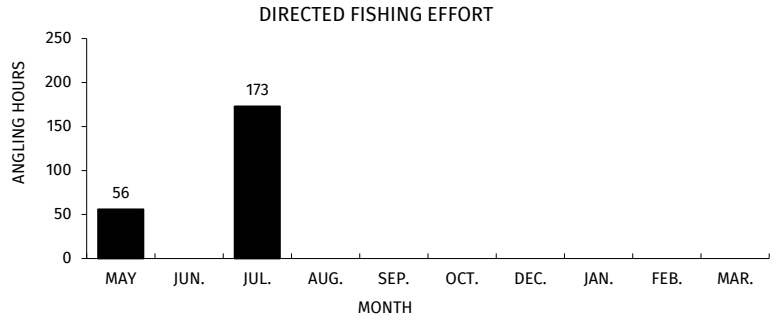
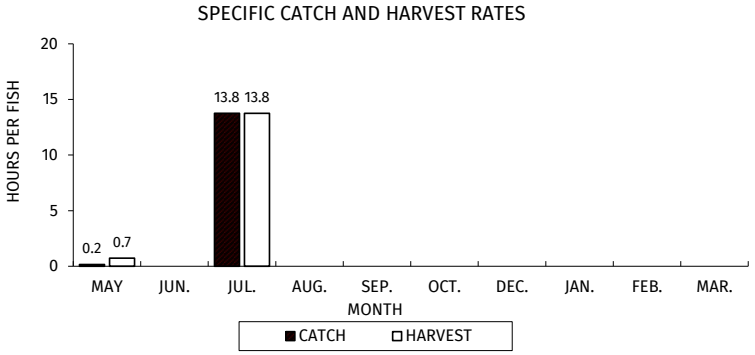



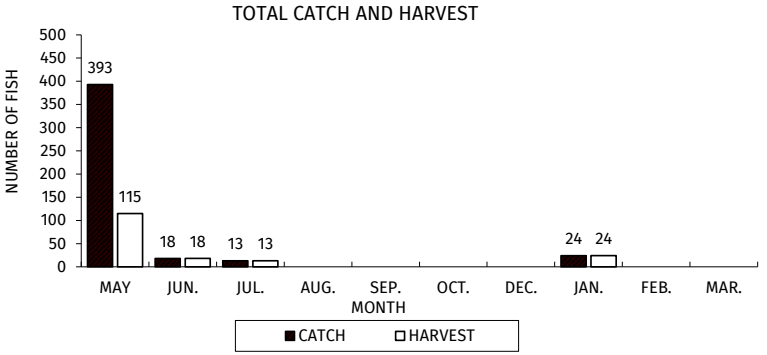

**Figure 8. Black Crappie sportfishing effort, catch, harvest, and length distribution, Minong Flowage, during 2023-24.**

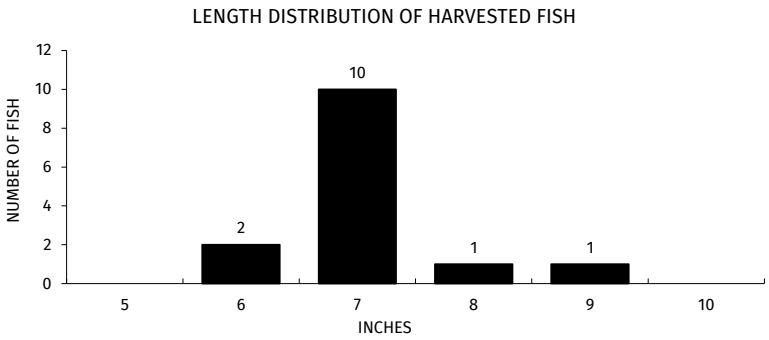
# PUMPKINSEED





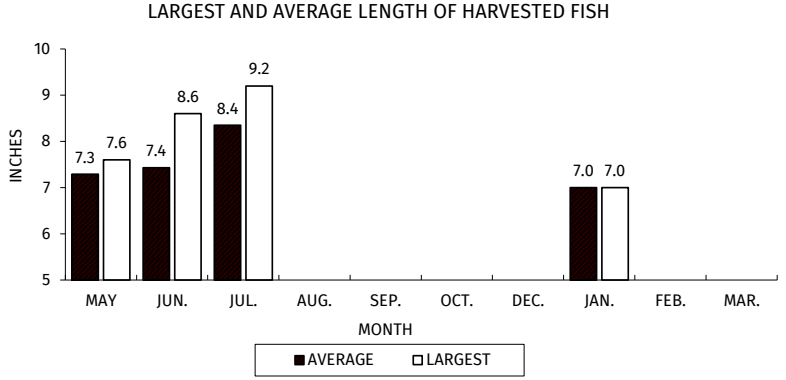




**Figure 9. Pumpkinseed sportfishing effort, catch, harvest, and length distribution, Minong Flowage, during 2023-24.**