# WISCONSIN DEPARTMENT OF NATURAL RESOURCES

# Open Water Creel Survey Report
# Fay Lake, 2024-2025

Florence County

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. The 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. Harvest is another key component of fisheries that we need to measure.

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

We also measure the sport angler harvest to assess its impact on the fishery. It would be highly impractical and very costly to conduct a complete census of every angler who fishes on a lake, so we conduct creel surveys instead.

A creel survey is an assessment tool used to sample the fishing activities of anglers on a body of water to make 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 daylight hours throughout the open season for gamefish from the first Saturday in May through the first Sunday in March. Creel surveys are not conducted in November when fishing effort is low and ice conditions are often unsafe.

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 completed-trip data 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. Keep in mind that these are estimates based on the best information available and not a complete accounting of effort, catch and harvest. 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.

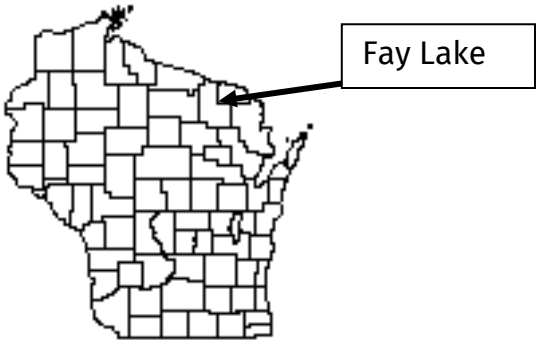
You may have encountered a DNR creel survey clerk on a recent fishing trip. We appreciate your cooperation during an interview. The survey only takes a few minutes of your time and it gives the DNR valuable information needed for management of the fishery.

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 Fay Lake, discussion of results of the survey and detailed summaries by species of fishing effort, catch and harvest.

# General Lake Information




## LOCATION

Fay Lake is located on the western edge of Florence County 24 miles southwest of the town of Florence.

## PHYSICAL CHARACTERISTICS

Fay Lake is a 282-acre drainage lake with a maximum depth of 10 feet. Littoral substrate consists primarily of rubble and gravel, with lesser amounts of silt and sand. Fay Lake contains medium-hard, neutral, clear water of moderate transparency.

## SEASONS SURVEYED

The period referred to in this report as the 2024-25 fishing season ran from May 4, 2024, through March 2, 2025. The open water creel survey ran from May 4 through Oct. 31, 2024. There was no winter ice creel survey on Fay Lake.

## WEATHER

Ice-out on Fay Lake was around March 19, 2024.

## FISHING REGULATIONS

The following seasons, daily bag limits and length limits were in place on Fay Lake during the 2024-25 fishing season:

| SPECIES | SEASON | BAG LIMIT | MIN. SIZE |
|---|---|---|---|
| Largemouth bass | 5/ 4 - 3/ 2 | 5* | 14" |
| Smallmouth bass | 6/ 15 - 3/ 2 | 5* | 14" |
| *Bass species have a combined bag limit of 5. Catch & release is open all year. | | | |
| Muskellunge | 5/ 25 - 12/ 31 | 1 | 40" |
| On open water | | | |
| Northern pike | 5/ 4 - 3/ 2 | 5 | None |
| Walleye | 5/ 4 - 3/ 2 | 3 | 15" |
| 20"- 24" Protected Slot, 1>24" | | | |
| Panfish | Open all year | 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. All estimates should be considered minimum values because we did not survey the winter months during November 2024 through April 2025. Each species page has up to five graphs depicting the following:

1. **DIRECTED FISHING EFFORT**
   Estimated number of hours during each month that anglers spent fishing for a species.

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

3. **SPECIFIC CATCH AND HARVEST RATES**
   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 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**
Largest and average (mean) length of a species of fish harvested. 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. This was the second time the DNR conducted a creel survey on Fay Lake. The last creel survey took place during 2007-08. Due to staffing limitations the DNR was unable to conduct the winter portion of the creel survey. Therefore, all estimates within this report are specific to only the May through October open water 2024 fishing season.

## GENERAL ANGLER INFORMATION

Anglers spent 3,733 hours, or 13.2 hours per acre, fishing Fay Lake during the 2024 open water season (Table 1). That was less than the Florence County average of 20.5 hours per acre and less than the open water fishing effort documented during the 2007-08 creel survey (27.3 hours per acre). June was the most heavily fished month (1,253 hours). Creel clerks were able to conduct 168 interviews throughout the survey.

## RESULTS BY SPECIES

**WALLEYE** (Table 2, Figure 1)
Walleye received no directed fishing effort. Anglers caught 8 walleye and there was no documented harvest during the survey.

**NORTHERN PIKE** (Table 2, Figure 2)
Northern pike received the most fishing effort of any gamefish species during the season. Anglers spent 2,475 hours targeting northern pike. Fishing effort for northern pike was highest in July (942 hours). Total catch of northern pike was 1,833 fish, and total harvest was 244 fish. Highest catch (788 fish) occurred in June, and highest harvest (89 fish) occurred in July. Anglers fished an estimated 1.4 hours to catch, and 11.1 hours to harvest a northern pike during the survey. Mean length of harvested northern pike was 22.3 inches, and the largest measured was a 36.2-inch fish.

**MUSKELLUNGE** (Table 2, Figure 3)
Muskellunge received no directed fishing effort during the survey. Anglers caught 3 muskellunge, and there was no documented harvest.

**LARGEMOUTH BASS** (Table 2, Figure 4)
Fishing effort directed at largemouth bass was 154 hours during the season. Largemouth bass fishing effort was greatest in June (51 hours). Total catch of largemouth bass was 116 fish, and there was no documented harvest. The highest catch (34 fish) occurred in August. Anglers fished an estimated 2.1 hours to catch a largemouth bass during the survey.

**YELLOW PERCH** (Table 2, Figure 5)
Yellow perch received 99 hours of directed fishing effort. Total catch of yellow perch was 50 fish, and there was no documented harvest during the survey.

**BLUEGILL** (Table 2, Figure 6)
Bluegill were the most sought-after panfish species during the survey. Fishing effort directed at bluegill was 940 hours. Total catch of bluegill was 6,612 fish, and total harvest was 1,178 fish. Mean length of bluegill harvested was 6.3 inches, and the largest measured was a 7.8-inch fish.

**BLACK CRAPPIE** (Table 2, Figure 7)
Black crappie received 386 hours of directed fishing effort. Anglers caught 527 black crappie and harvested 66 fish. Mean length of black crappie harvested was 9.5 inches, and the largest measured was a 11.1-inch fish.

**PUMPKINSEED** (Table 2, Figure 8)
Pumpkinseed received 154 hours of directed fishing effort. Anglers caught 620 pumpkinseed and harvested 81 fish. Mean length of pumpkinseed harvested was 6.3 inches, and the largest measured was a 7.4-

inch fish.

**BULLHEAD SPECIES** (Table 2, Figure 9)
Bullhead received only 26 hours of directed fishing effort. Anglers caught 151 bullhead and harvested 56 fish. Mean length of bullhead harvested was 10.7 inches, and the largest measured was a 12.1-inch fish.

## Acknowledgements

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

We also thank our cooperators, Dan and Diane Roethel of Fay Lake Resort, 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 DNR fisheries management staff: John Kubisiak, Lawrence Eslinger, Jason Halverson, Mark Love, Eric Brown, Greg Matzke, Katie Renschen, and Ethan Burns. Efforts from the United States Forest Service staff that also helped complete this survey include Jake Carleen, Matt Messer, and Jeremy Hubbard. The creel clerk on Fay Lake during the survey period was Shannon Morrell.

Additional copies of this report, and those covering other local lakes, can be obtained from the DNR Woodruff Service Center or online at:
http://dnr.wisconsin.gov/topic/Fishing/north/trtycrlsrvys.html

*Table 1. Sportfishing effort summary, Fay Lake, 2024-25 summer season; compared to 2007-08 summer season creel results, Florence County averages, and Ceded Territory averages.*

| MONTH | NUMBER OF ANGLER PARTY INTERVIEWS | TOTAL ANGLER HOURS | TOTAL ANGLER HOURS/ACRE | 2007-08 TOTAL ANGLER HOURS/ACRE | FLORENCE COUNTY AVERAGE HOURS/ACRE | CEDED TERRITORY AVERAGE HOURS/ACRE |
|---|---|---|---|---|---|---|
| May | 36 | 730 | 2.6 | 7.7 | 5.0 | 4.7 |
| June | 43 | 1,253 | 4.4 | 6.7 | 5.4 | 6.0 |
| July | 43 | 1,122 | 4.0 | 6.3 | 6.0 | 6.4 |
| August | 16 | 273 | 1.0 | 3.5 | 3.2 | 5.0 |
| September | 24 | 317 | 1.1 | 2.7 | 2.6 | 3.1 |
| October | 6 | 38 | 0.1 | 0.4 | 0.5 | 1.4 |
| December | - | - | - | 3.3 | 1.5 | 1.0 |
| January | - | - | - | 2.6 | 1.7 | 1.7 |
| February | - | - | - | 1.2 | 1.1 | 1.6 |
| March | - | - | - | 0.2 | 0.1 | 0.2 |
| Summer Total | 168 | 3,733 | 13.2 | 27.3 | 20.5 | 26.5 |
| Winter Total | - | - | - | 7.3 | 4.4 | 4.6 |
| Grand Total | 168 | 3,733 | 13.2 | 34.6 | 23.1 | 30.7 |

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 Fay Lake 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 Fay Lake to other lakes.

**2007-08 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 Fay Lake.

**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 Fay Lake to other lakes in northern Wisconsin.

*Table 2. Comparison of creel survey synopses, Fay Lake, 2024-25 and 2007-08 summer fishing seasons.*

*CREEL YEAR: SUMMER 2024-25*

| 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 | 0 | 0.0% | 8 | * | 0 | * | ** |
| Northern pike | 2,475 | 58.5% | 1,833 | 1.4 | 244 | 11.1 | 22.3 |
| Muskellunge | 0 | 0.0% | 3 | * | 0 | * | ** |
| Largemouth bass | 154 | 3.6% | 116 | 2.1 | 0 | 0.0 | ** |
| Yellow perch | 99 | 2.3% | 50 | * | 0 | * | ** |
| Bluegill | 940 | 22.2% | 6,612 | 0.2 | 1,178 | 0.8 | 6.3 |
| Black crappie | 386 | 9.1% | 527 | 0.9 | 66 | 7.0 | 9.5 |
| Pumpkinseed | 154 | 3.6% | 620 | 0.4 | 81 | 33.9 | 6.3 |
| Bullhead sp. | 26 | 0.6% | 151 | 0.3 | 56 | 1.0 | 10.7 |

*CREEL YEAR: SUMMER 2007-08*

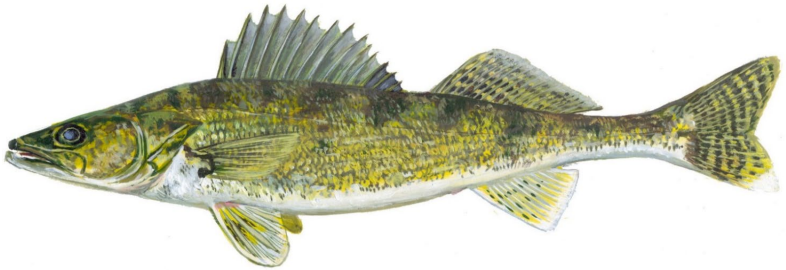
| SPECIES | DIRECTED EFFORT (HOURS) | PERCENT OF TOTAL | TOTAL CATCH | SPECIFIC CATCH RATE (HRS/FISH) | TOTAL HARVEST | SPECIFIC HARVEST RATE (HRS/FISH) | MEAN LENGTH OF HARVESTED FISH |
|---|---|---|---|---|---|---|---|
| Walleye | 717 | 5.8% | 30 | 24.3 | 16 | 45.4 | 17.8 |
| Northern pike | 2,297 | 18.6% | 927 | 3.0 | 111 | 20.8 | 23.4 |
| Smallmouth bass | 0 | 0.0% | 11 | * | 0 | * | ** |
| Largemouth bass | 500 | 4.0% | 281 | 3.5 | 7 | 73.8 | 20.5 |
| Yellow perch | 449 | 3.6% | 328 | 4.9 | 80 | 6.8 | 7.5 |
| Bluegill | 4,962 | 40.1% | 14,607 | 0.3 | 8,343 | 0.6 | 6.8 |
| Black crappie | 3,142 | 25.4% | 4,208 | 0.8 | 3,482 | 0.9 | 8.8 |
| Pumpkinseed | 249 | 2.0% | 119 | 2.5 | 114 | 2.5 | 6.8 |
| Yellow bullhead | 62 | 0.5% | 228 | 1.5 | 87 | 1.5 | 11.0 |

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



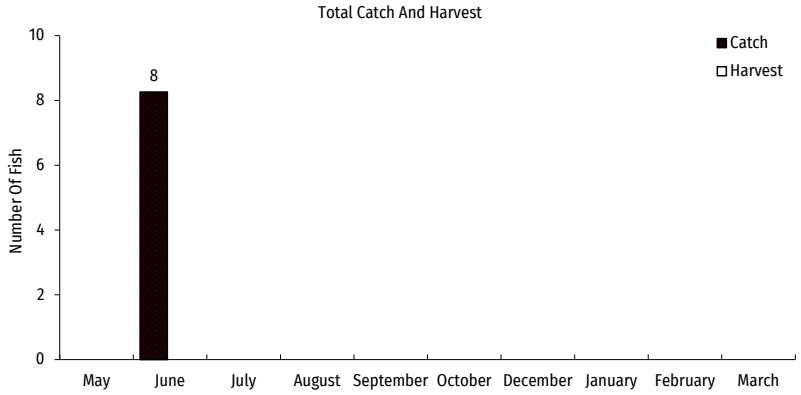
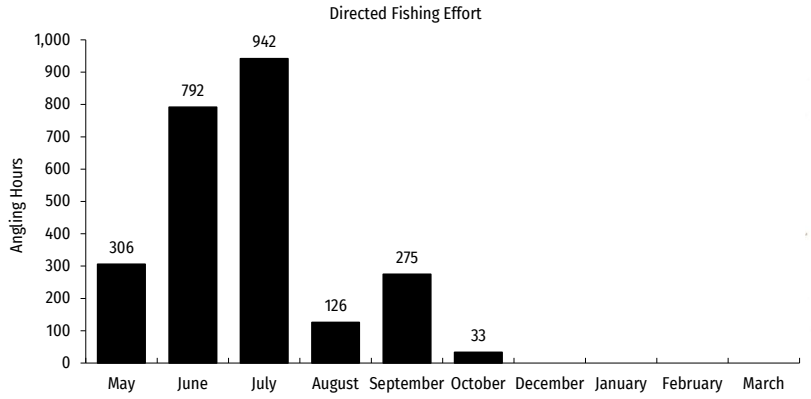
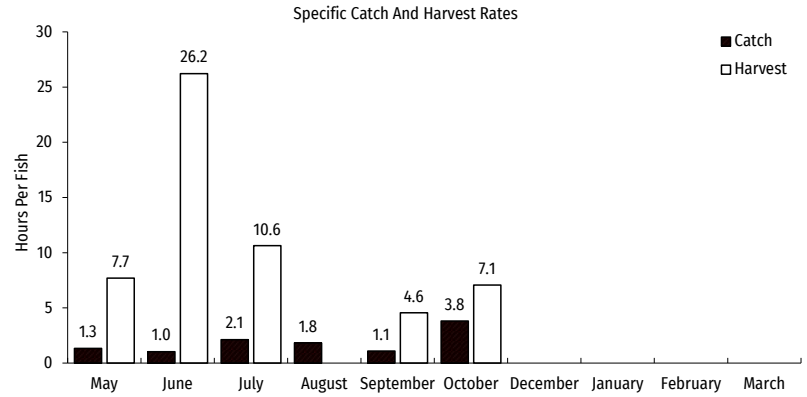
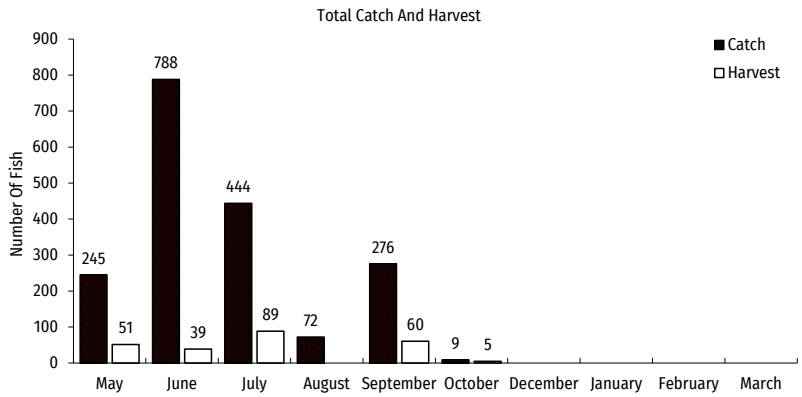


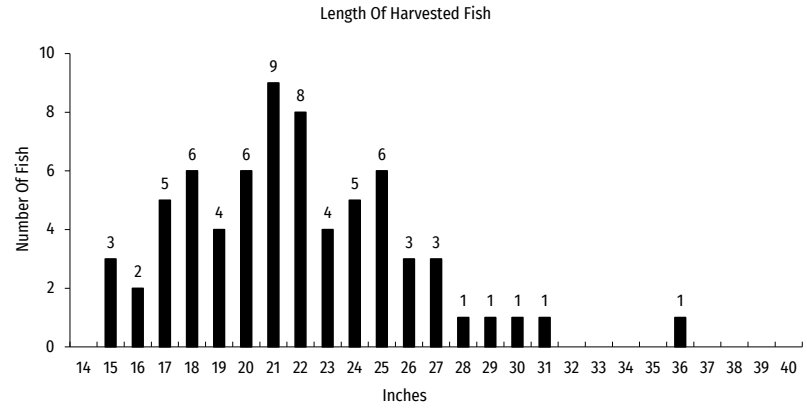

*Figure 1. Walleye fishing effort, catch, harvest and length distribution, Fay Lake, during 2024.*




## Northern Pike



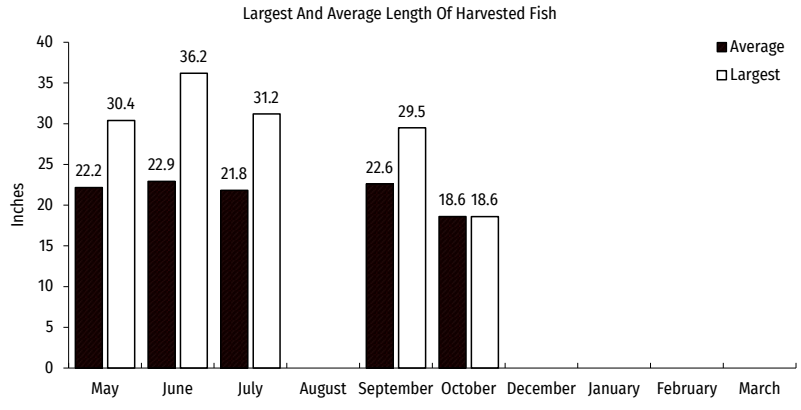




*Figure 2. Northern pike fishing effort, catch, harvest and length distribution, Fay Lake, during 2024.*

## Muskellunge

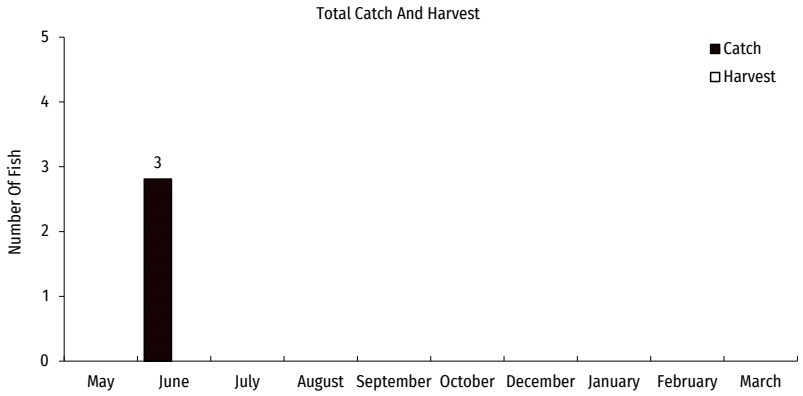
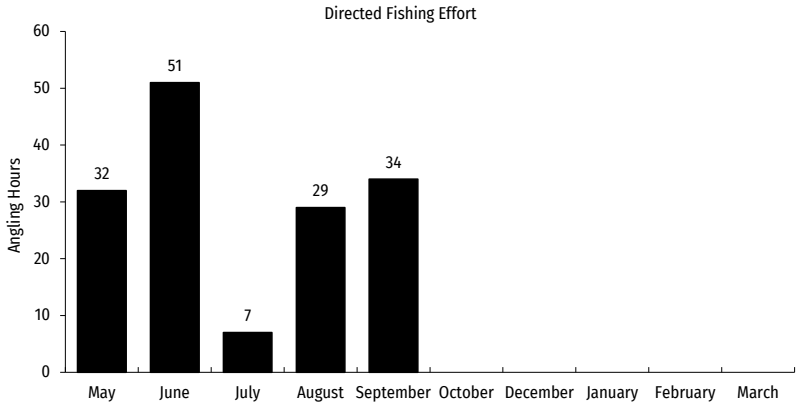
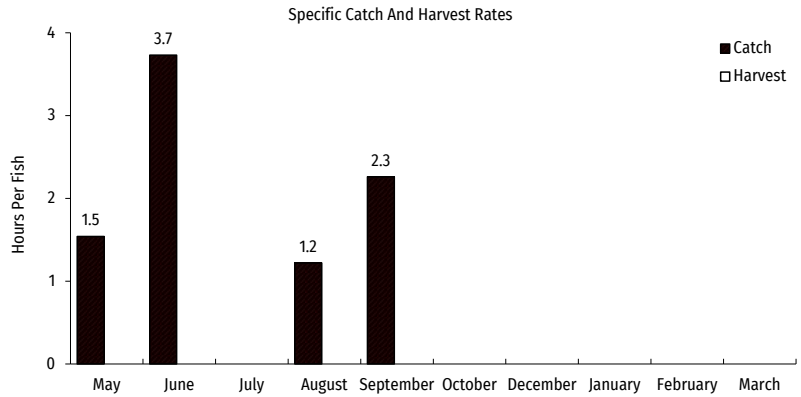



*Figure 3. Muskellunge fishing effort, catch and harvest, Fay Lake, during 2024.*







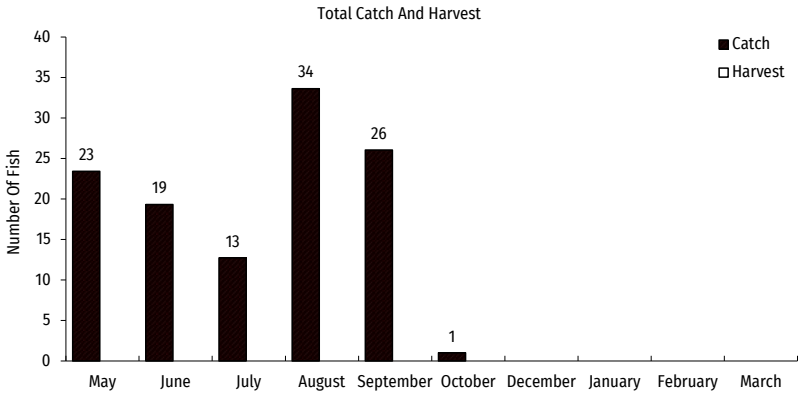
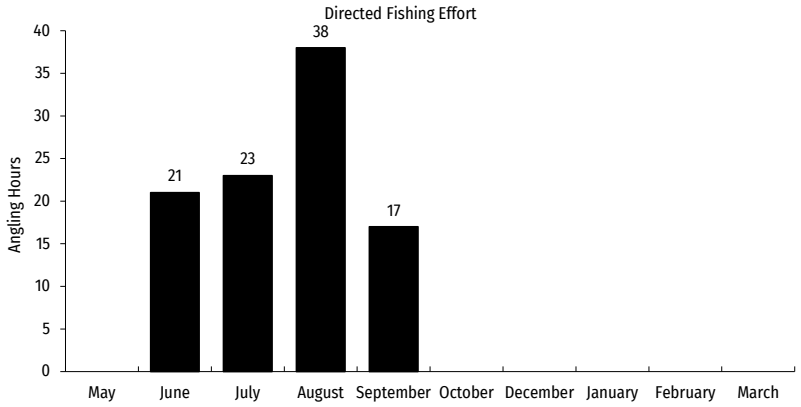
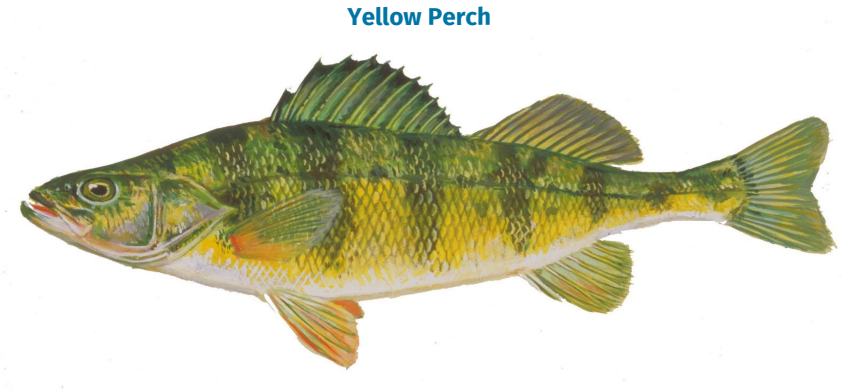
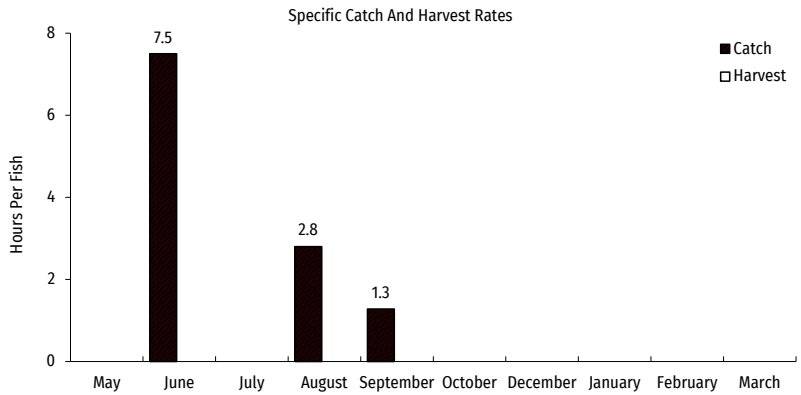




*Figure 4. Largemouth bass fishing effort, catch, harvest and length distribution, Fay Lake, during 2024.*



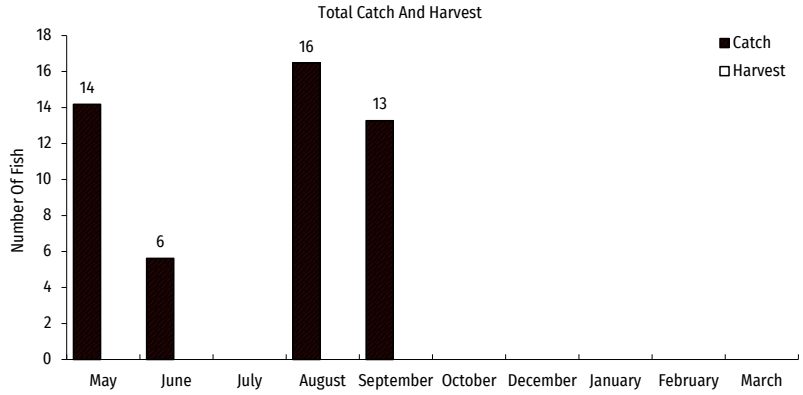
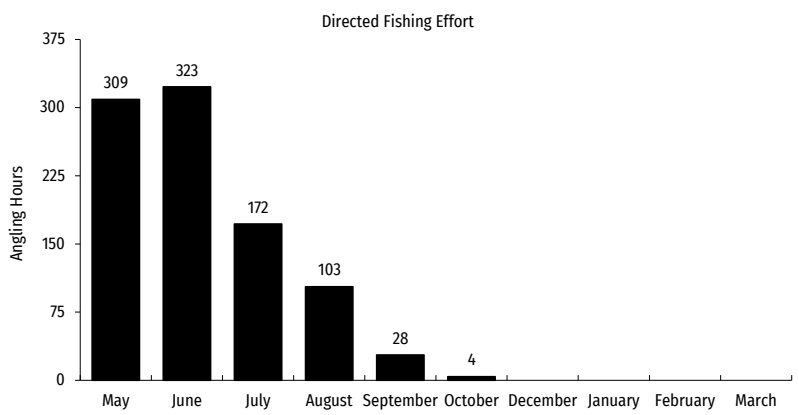
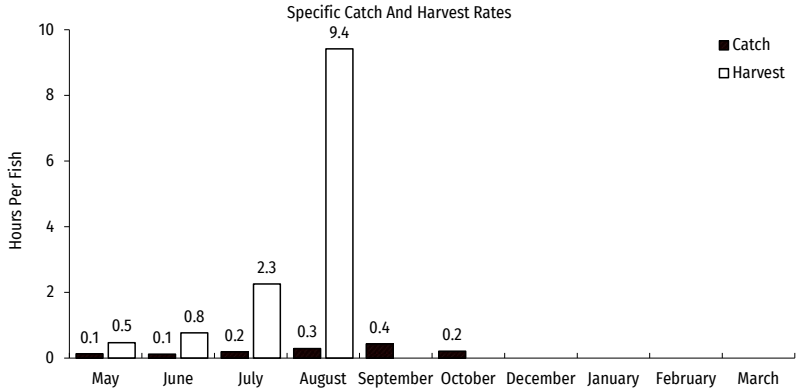
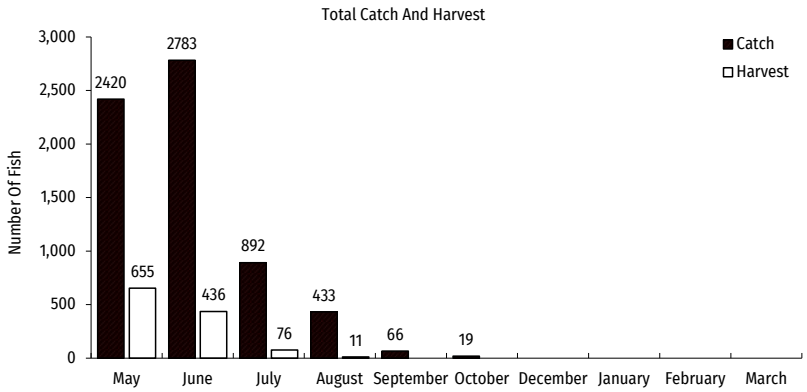



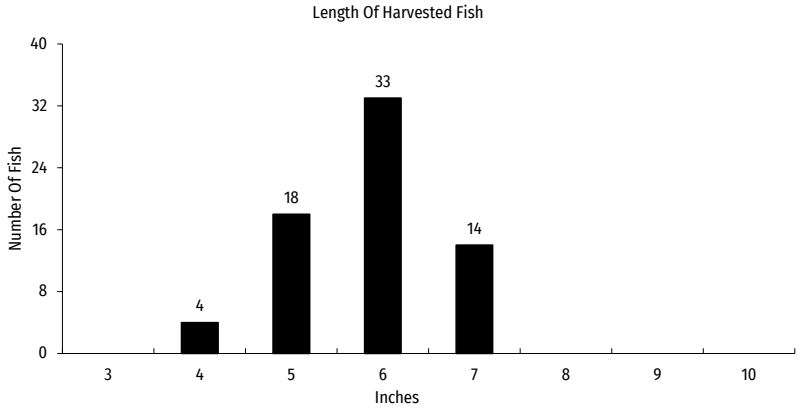

*Figure 5. Yellow perch fishing effort, catch, harvest and length distribution, Fay Lake, during 2024.*







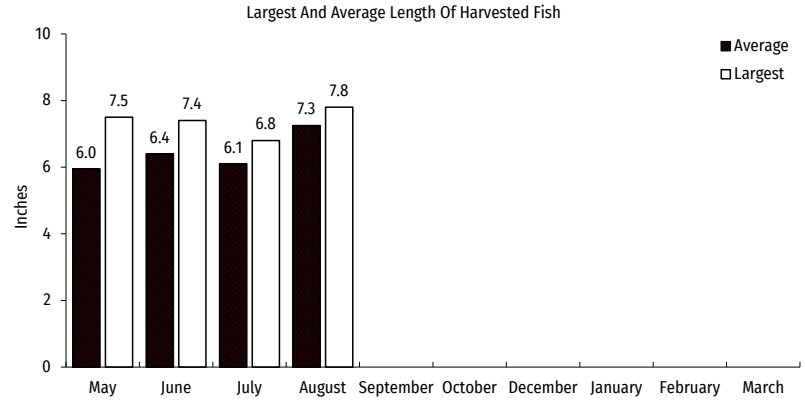
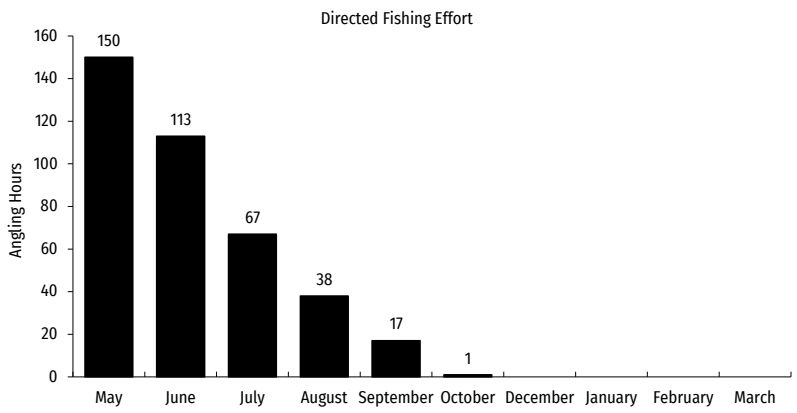
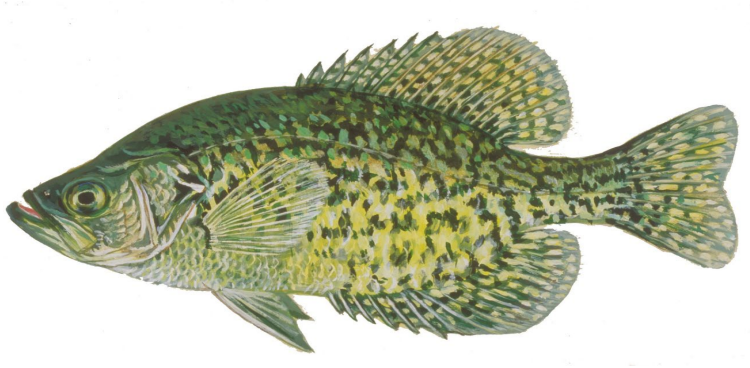
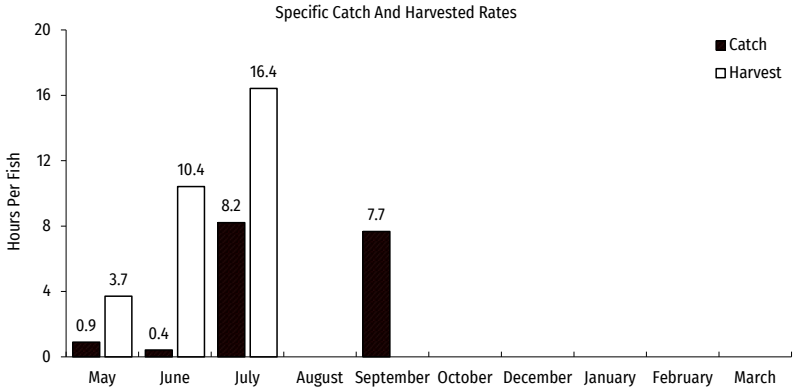



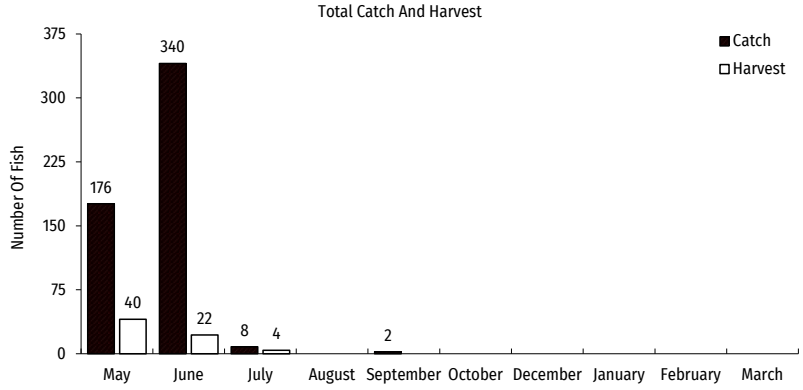

*Figure 6. Bluegill fishing effort, catch, harvest and length distribution, Fay Lake, during 2024.*

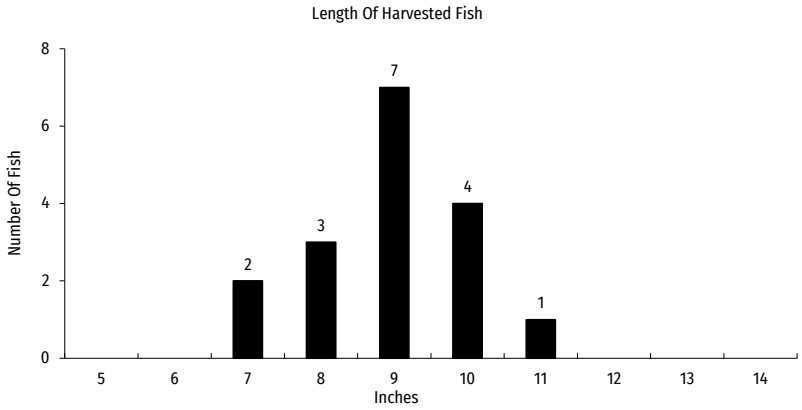



## Black Crappie





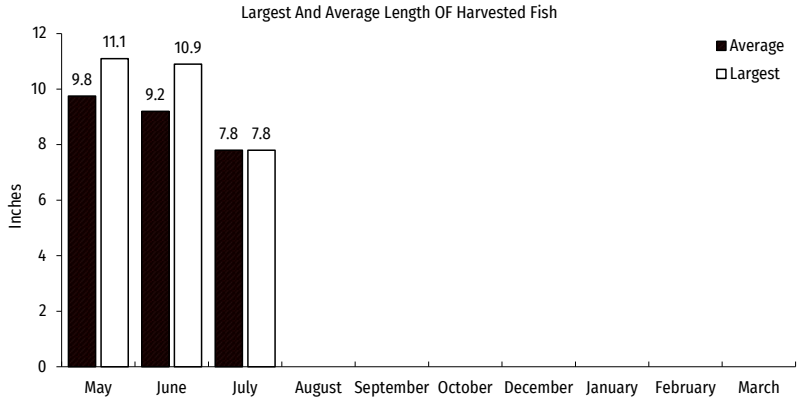
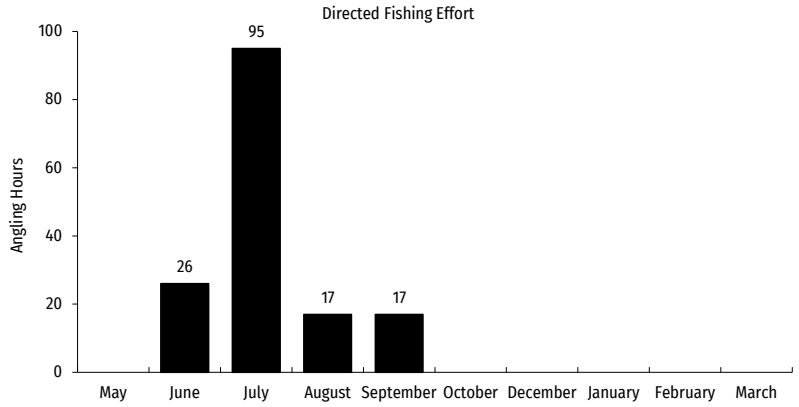
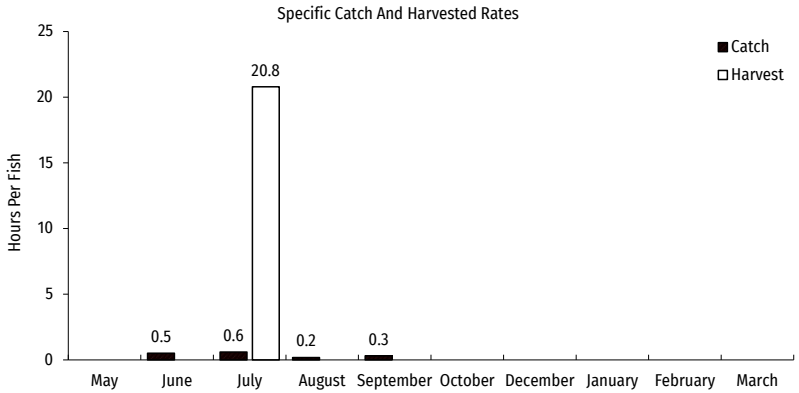
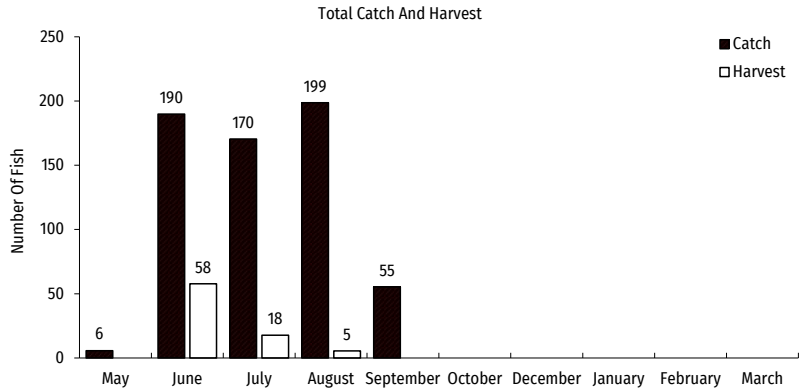



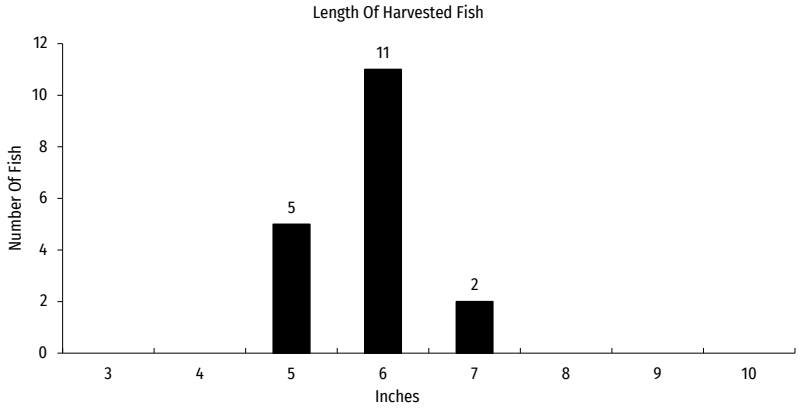

*Figure 7. Black crappie fishing effort, catch, harvest and length distribution, Fay Lake, during 2024.*




**Pumpkinseed**



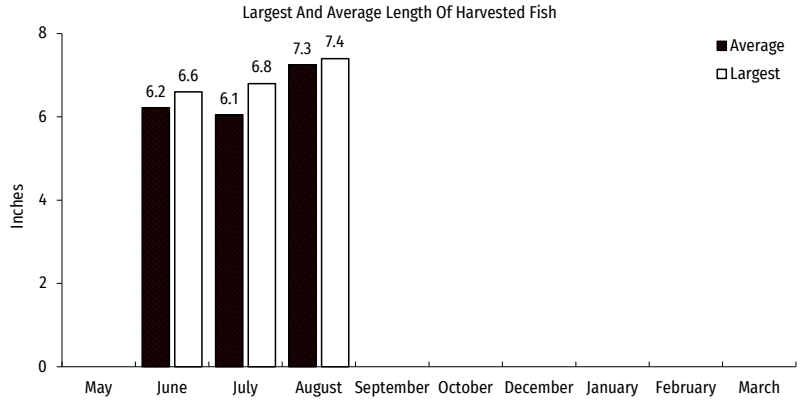
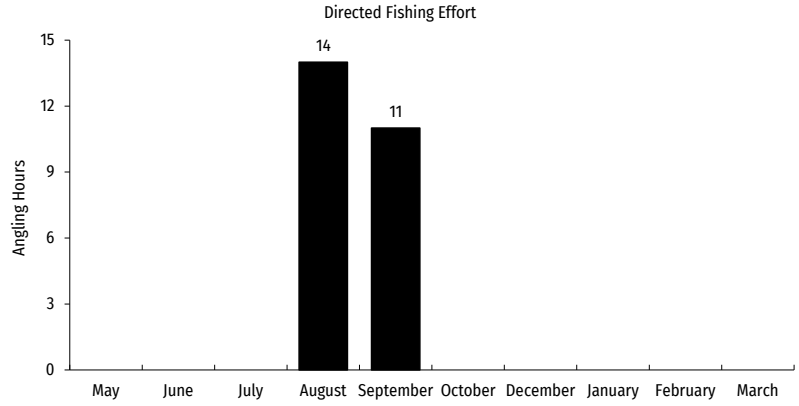
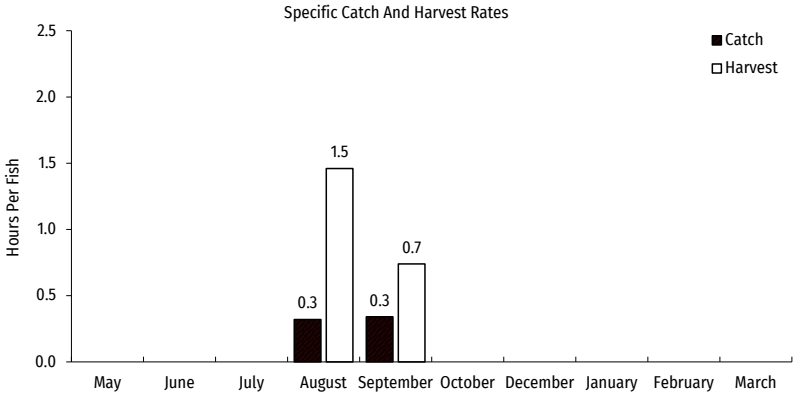



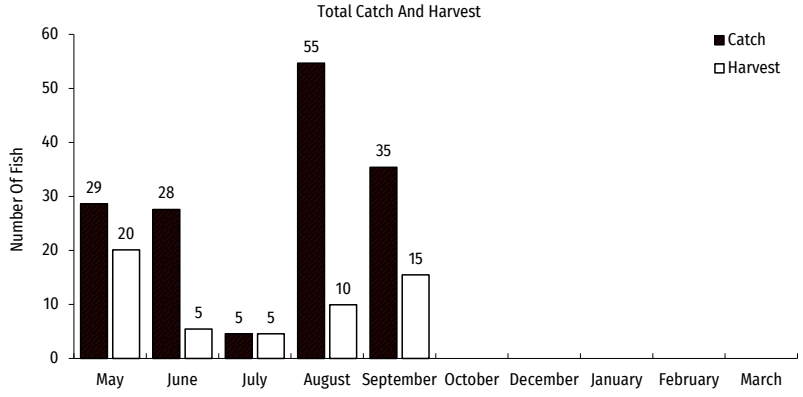

*Figure 8. Pumpkinseed fishing effort, catch, harvest and length distribution, Fay Lake, during 2024.*

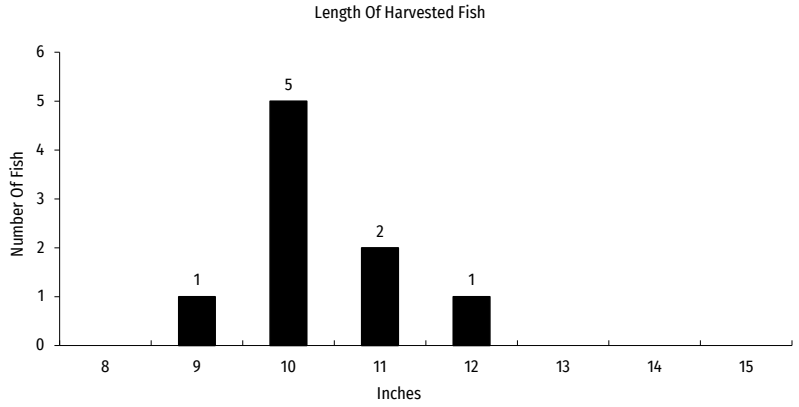



## Bullhead Species

Black (top image; note: the black barbels on chin), yellow (middle image; note: the white barbels on chin) and brown (bottom image; note: the dark brown barbels on chin and mottled skin) bullheads have all been noted to be present in Fay Lake.



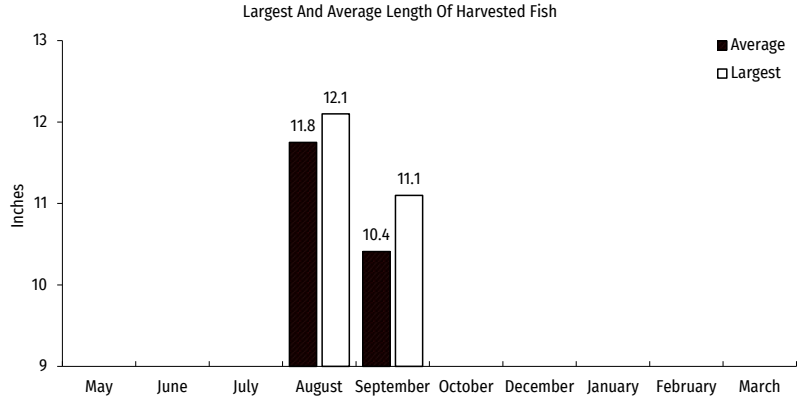




*Figure 9. Bullhead species fishing effort, catch, harvest and length distribution, Fay Lake, during 2024.*