

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

BASS PATTERSON LAKE

2022 – 2023 CREEL SURVEY REPORT

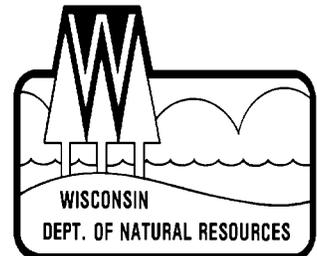
WASHBURN COUNTY



Treaty Fisheries Publication



Compiled by
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DNR Treaty Fisheries Technician



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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.

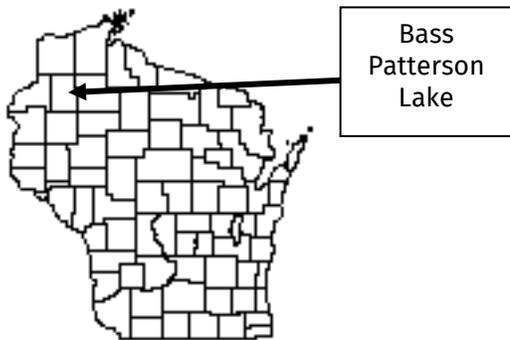
You may have encountered a DNR creel survey clerk on a recent fishing trip. We appreciate your cooperation during an interview. The survey only takes a few minutes of your time, and it gives the DNR valuable information needed for management of the fishery.

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

Bass Patterson Lake is located in Washburn County near the town of Springbrook.

PHYSICAL CHARACTERISTICS

Bass Patterson Lake is a 188-acre seepage lake with a maximum depth of 35 feet. Littoral substrate consists primarily of sand, gravel, and rock. Bass Patterson Lake contains soft, slightly acidic, clear water of moderate transparency.

SEASONS SURVEYED

The open-water creel survey ran from May 7 through Oct. 31, 2022, and the ice fishing creel survey ran from Dec. 1, 2022 through March 5, 2023.

WEATHER

Ice-out on Bass Patterson Lake was around April 29, 2022. Fishable ice formed around December 4, 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	5/7-3/5	5	none
Largemouth and Smallmouth Bass Catch and release only all other times of year			
Musky	5/28-12/31	1	40"
Northern Pike	5/7-3/5	5	none
Walleye	5/7-3/5	3	none
		Only 1>14"	
Panfish	year round	25	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 1-9, 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:

- ESTIMATED FISHING EFFORT**
The estimated number of hours during each month that anglers spent fishing for a species.
- ESTIMATED CATCH AND HARVEST**
The estimated number of fish of the indicated species caught or harvested by all anglers, regardless of targeted species.
- 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.
- LENGTH DISTRIBUTION OF HARVESTED FISH**
All fish of a species that were measured by the clerk during the entire creel survey season.
- 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 4,493 hours, or 23.9 hours per acre, fishing Bass Patterson Lake during the 2022-23 season (Table 1). That was less than the Washburn County average of 28.3 hours per acre, and less than the fishing effort documented during the 2017-18 creel survey (25.4 hours per acre). July was the most heavily fished month (1,163 hours), and fishing effort was lightest in February (110 hours). The creel clerks were able to conduct 172 interviews throughout the survey.

RESULTS BY SPECIES

WALLEYE (Table 2, Figure 1)

Walleye received 14 percent of the fishing effort during the season. Anglers spent 1,258 hours targeting Walleye. The greatest fishing effort for Walleye was in December (262 hours). October had the least amount of Walleye fishing effort (24 hours).

Total catch of Walleye was 179 fish, with a harvest of 70. Highest catch (56 fish) occurred in December, and highest harvest (27 fish) occurred in December. Anglers fished an average of 8.1 hours to catch and 23.6 hours to harvest a Walleye during the survey. The mean length of harvested Walleye was 18.2 inches, and the largest measured was a 21.8-inch fish.

MUSKELLUNGE (Table 2, Figure 2)

Anglers spent 458 hours targeting Muskellunge during the season. Muskellunge fishing effort was greatest in June (157 hours). There was no documented Muskellunge catch or harvest during the survey.

SMALLMOUTH BASS (Table 2, Figure 3)

Fishing effort targeted at Smallmouth Bass was 1,296 hours during the season. Smallmouth Bass fishing effort was greatest in July (537 hours). Total catch of Smallmouth Bass was 384 fish, with 52 harvested. Highest catch (143 fish) occurred in July. Anglers fished an average of 4.6 hours to catch a Smallmouth Bass during the survey.

LARGEMOUTH BASS (Table 2, Figure 4)

Fishing effort directed at Largemouth Bass was 2,176 hours during the season. Largemouth Bass fishing effort was greatest in July (694 hours). Total catch of Largemouth Bass was 2,698 fish, with a harvest of 261. Highest catch (1,206 fish) occurred in July. Anglers fished an average of 0.9 hours to catch a Largemouth Bass during the survey.

PANFISH (Table 2, Figures 5-9)

YELLOW PERCH received 923 hours of directed fishing effort. Total catch of Yellow Perch was 806 fish, with 168 harvested. The mean length of harvested fish was 9.5 inches.

BLUEGILL received 1,411 hours of directed fishing effort. Total catch of Bluegill was 3,972 fish, with 905 harvested. The mean length of harvested fish was 8 inches.

BLACK CRAPPIE received 1,423 hours of directed fishing effort. Anglers caught 842 Black Crappie and harvested 308. The mean length of harvested fish was 11.2 inches.

PUMPKINSEED received 26 hours of directed fishing effort. Anglers caught 24 Pumpkinseed and there was no documented harvest during the survey.

ROCK BASS were not specifically targeted by anglers during the survey. However, anglers caught 32 Rock Bass with no documented harvest.

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 cooperators, Travis and Andrea Place, 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 treaty fisheries staff: Angelena Sikora, Gene Hatzenbeler, Todd Brecka, Misty Rood, and Bill Sobaski. Creel clerks during the survey period were Gina Winther and Matthew Kufahl.

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/trtycr/srvys.html>

Table 1. Sportfishing effort summary, Bass Patterson Lake, 2022-23 season; compared to 2017-18 creel results, Washburn County averages, and Ceded Territory averages.

Month	Number of Angler Party Interviews	Total Angler Hours	Total Angler Hours/Acre	2017-18 Total Angler Hours/Acre	Washburn County Average Hours/Acre	Ceded Territory Average Hours/Acre
May	12	421	2.2	2.8	4.0	4.8
June	28	1,003	5.3	4.2	5.9	6.2
July	40	1,163	6.2	8.3	6.1	6.6
August	28	639	3.4	3.3	4.1	5.2
September	25	450	2.4	2.2	2.6	3.2
October	12	251	1.3	1.7	0.7	1.4
December	11	274	1.5	0.6	1.2	1.1
January	7	119	0.6	1.6	2.0	1.7
February	6	110	0.6	0.6	1.6	1.6
March	3	63	0.3	0.1	0.1	0.2
Summer Total	145	3,927	20.9	22.5	23.3	27.4
Winter Total	27	566	3.0	2.9	5.0	4.6
Grand Total	172	4,493	23.9	25.4	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 Bass Patterson 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 Bass Patterson Lake to other lakes.

2017-18 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 Bass Patterson 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 Bass Patterson Lake to other lakes in northern Wisconsin.

Table 2. Comparison of creel survey synopses, Bass Patterson Lake, 2022-23 and 2017-18 fishing seasons.

CREEL YEAR: 2022-2023

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	1,258	14.0%	179	8.1	70	23.6	18.2
Muskellunge	458	5.1%	0	*	0	*	**
Smallmouth Bass	1,296	14.4%	384	4.6	52	25.1	13.3
Largemouth Bass	2,176	24.3%	2,698	0.9	261	9.0	14.2
Yellow Perch	923	10.3%	806	1.2	168	5.6	9.5
Bluegill	1,411	15.7%	3,972	0.4	905	1.6	8.0
Black Crappie	1,423	15.9%	842	1.7	308	4.6	11.2
Pumpkinseed	26	0.3%	24	1.3	0	*	**
Rock Bass	0	0.0%	32	*	0	*	**

CREEL YEAR: 2017-18

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	1,152	11.2%	145	7.9	9	129.9	15.7
Northern Pike	102	1.0%	6	*	0	*	**
Muskellunge	666	6.5%	23	34.1	0	*	**
Smallmouth Bass	1,681	16.3%	527	3.8	38	45.9	12.8
Largemouth Bass	2,164	21.0%	3,016	0.9	285	8.2	12.3
Yellow Perch	1,244	12.1%	904	1.5	215	6.0	8.9
Bluegill	2,504	24.3%	4,937	0.6	1,436	1.8	7.9
Black Crappie	482	4.7%	51	25.6	2	*	9.5
Pumpkinseed	24	0.2%	29	4.0	0	*	**
Rock Bass	277	2.7%	448	7.0	32	32.9	7.7

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

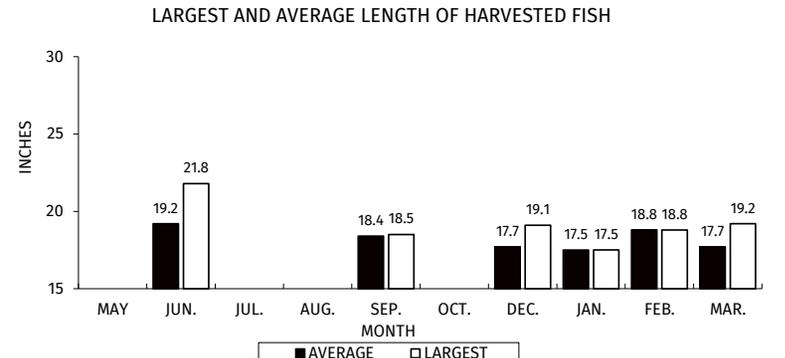
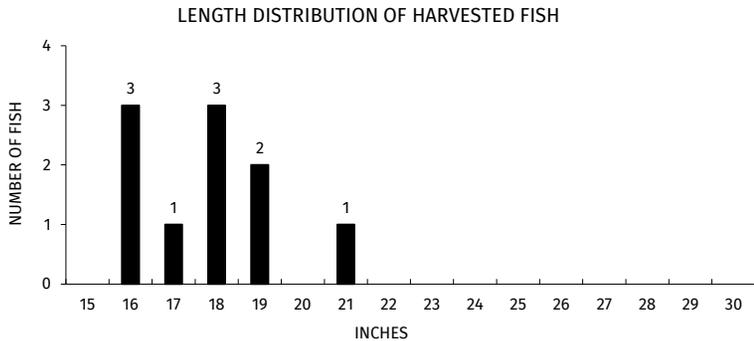
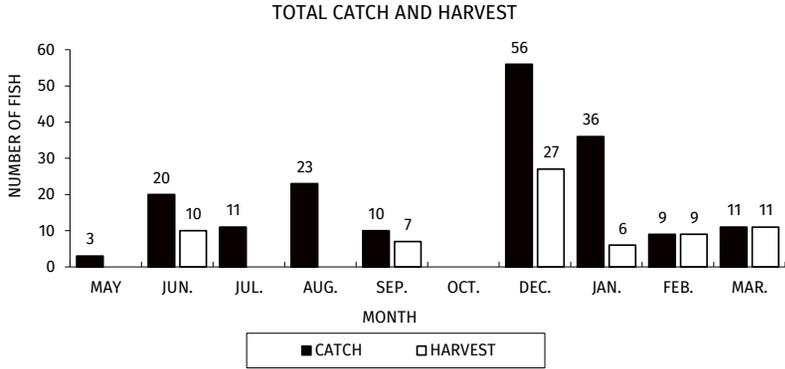
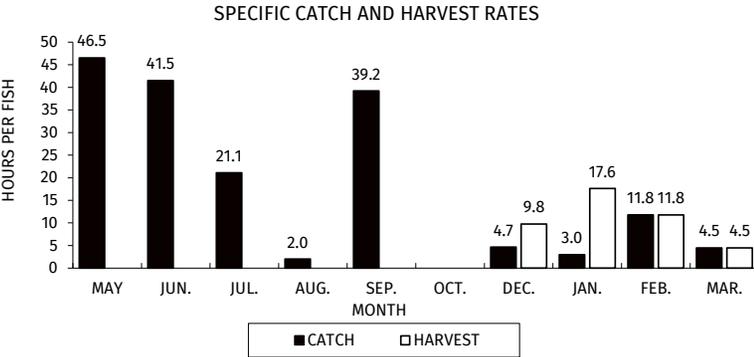
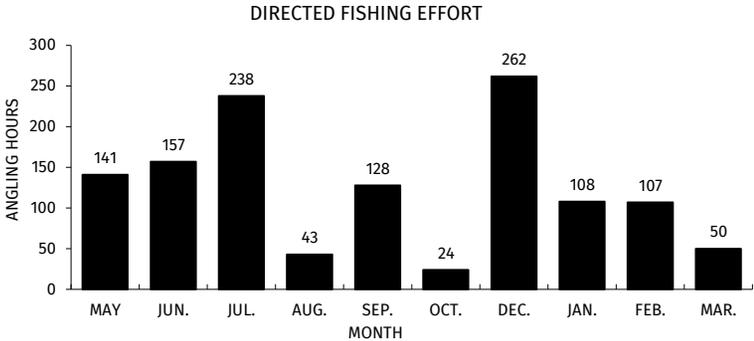
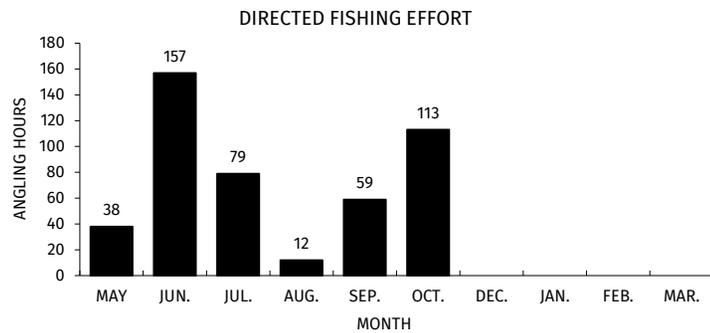


Figure 1. Walleye sportfishing effort, catch, harvest, and length distribution, Bass Patterson Lake, during 2022-23.



MUSKELLUNGE

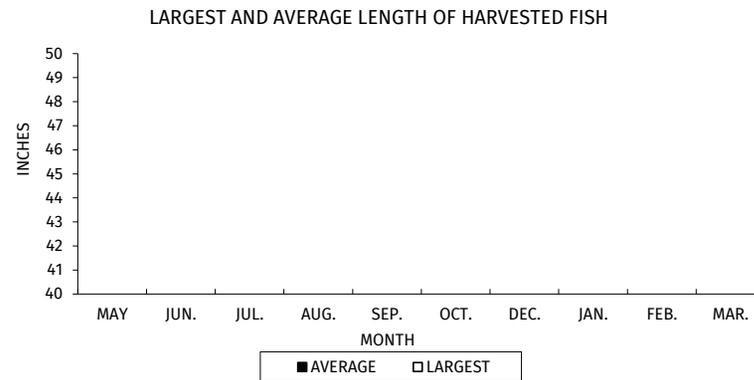
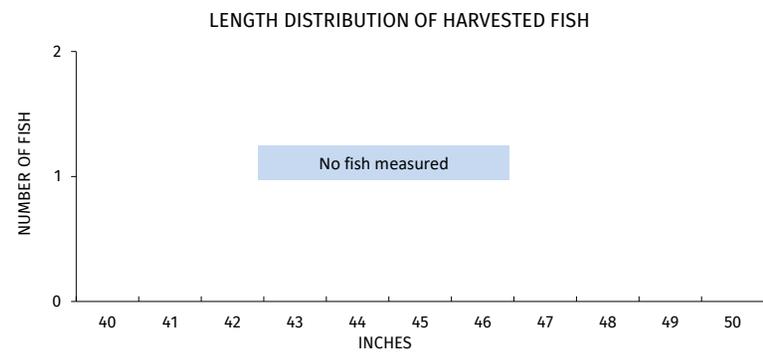
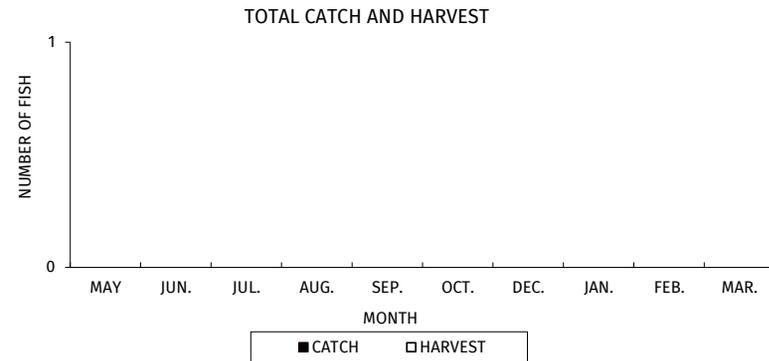
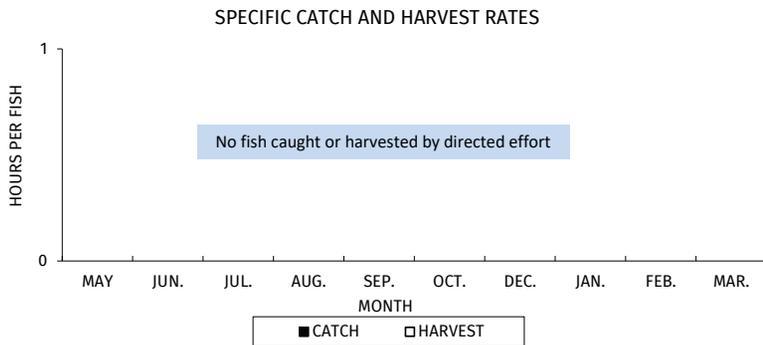


Figure 2. Muskellunge sportfishing effort, catch, harvest, and length distribution, Bass Patterson Lake, during 2022-23.

SMALLMOUTH BASS

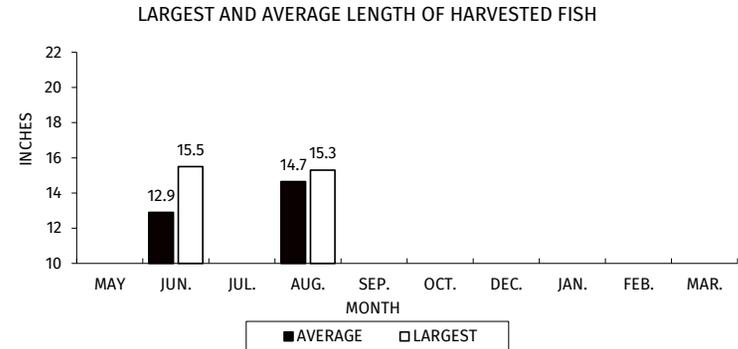
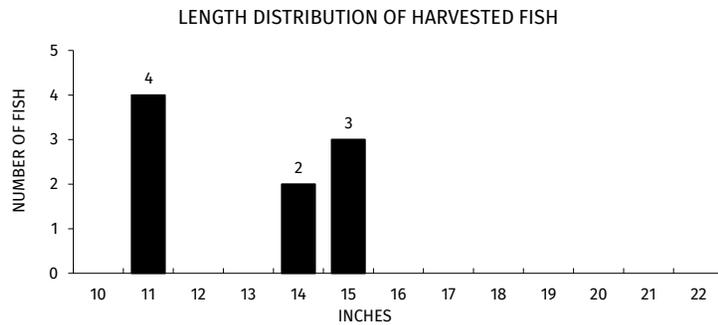
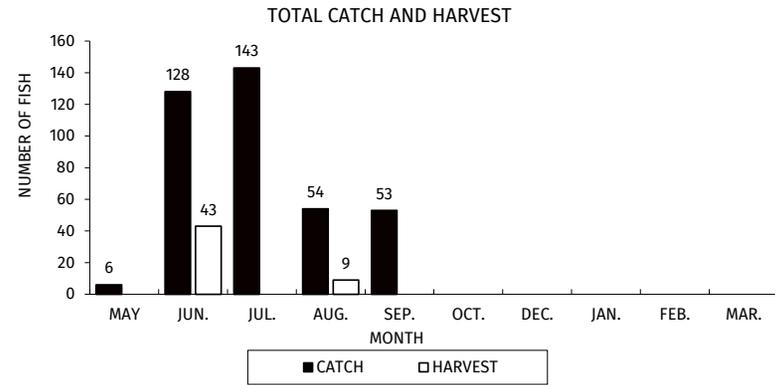
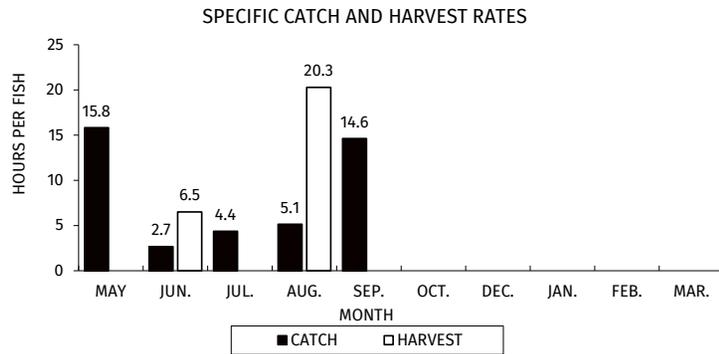
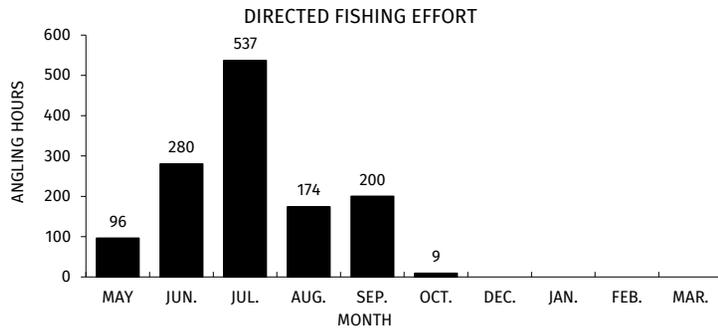


Figure 3. Smallmouth Bass sportfishing effort, catch, harvest, and length distribution, Bass Patterson Lake, during 2022-23.

LARGEMOUTH BASS

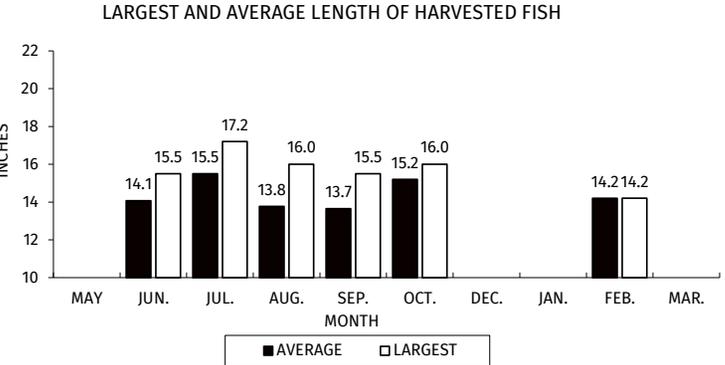
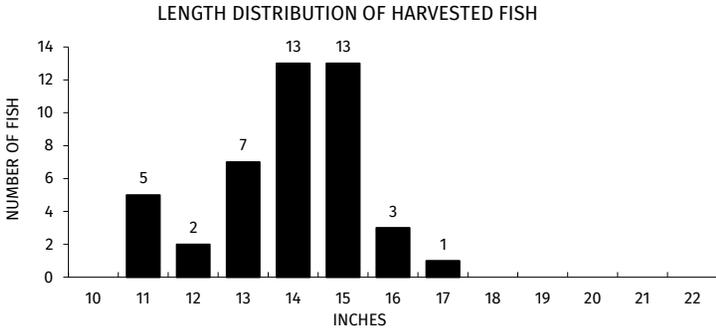
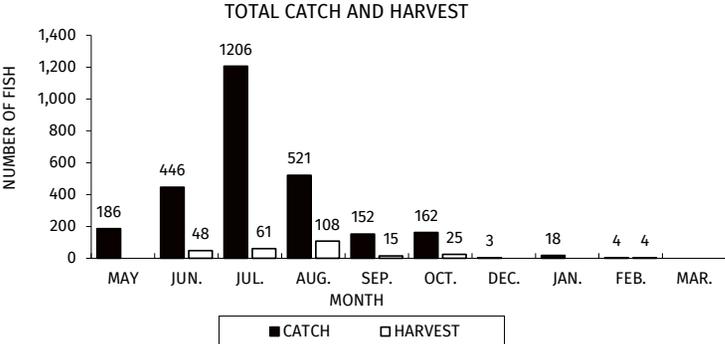
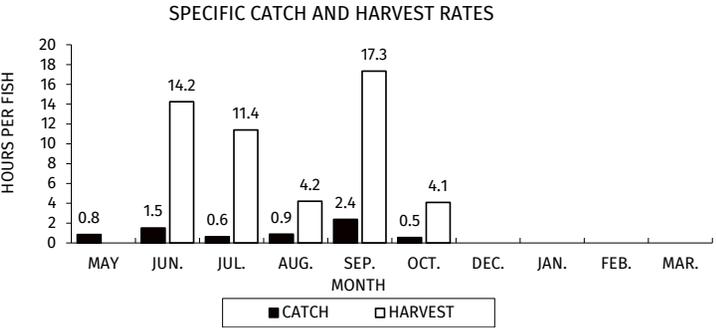
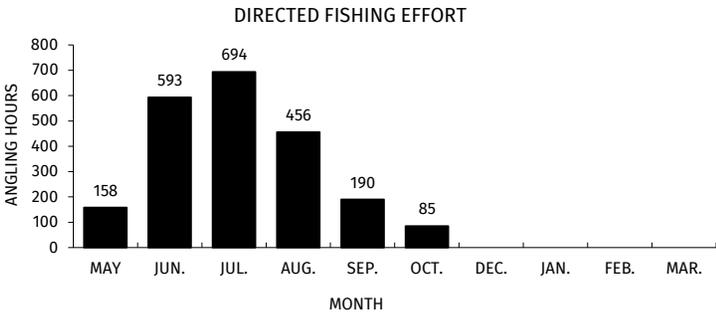


Figure 4. Largemouth Bass sportfishing effort, catch, harvest, and length distribution, Bass Patterson Lake, during 2022-23.

YELLOW PERCH

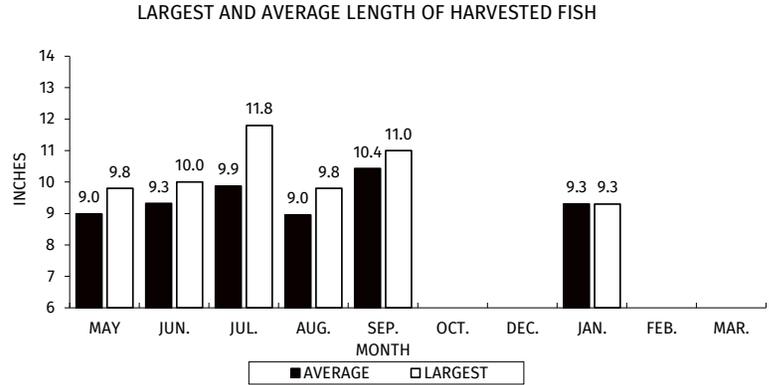
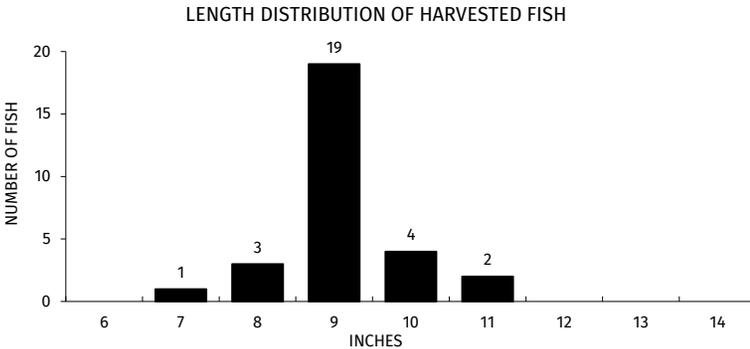
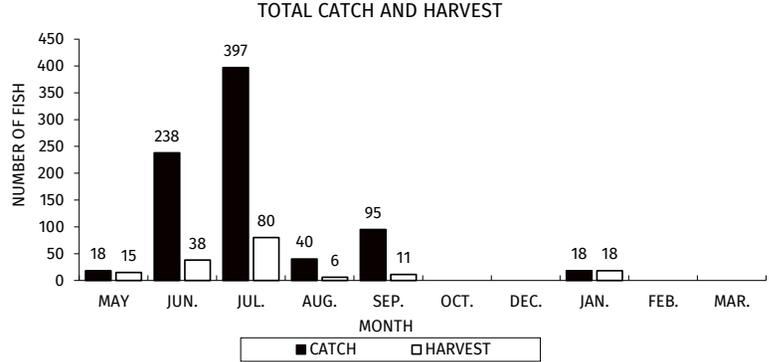
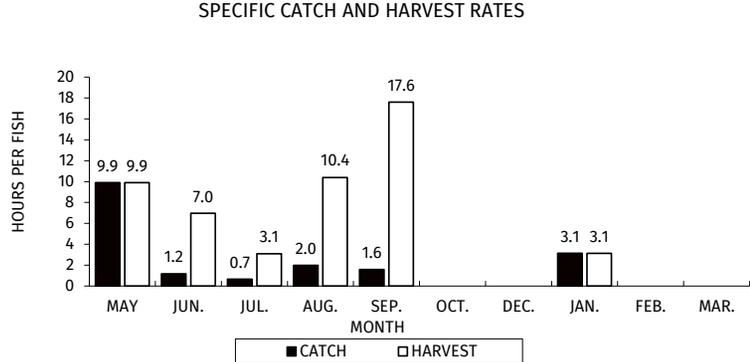
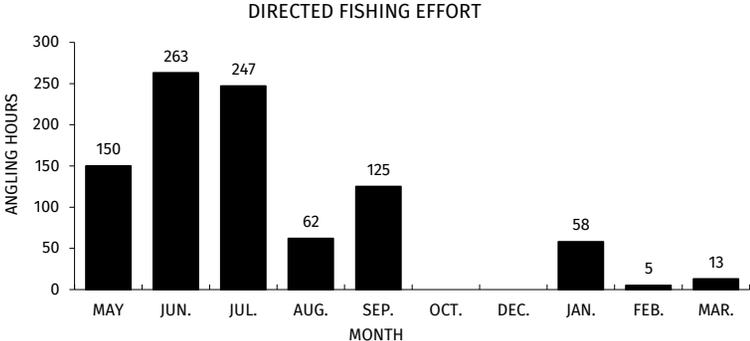


Figure 5. Yellow Perch sportfishing effort, catch, harvest, and length distribution, Bass Patterson Lake, during 2022-23.

BLUEGILL

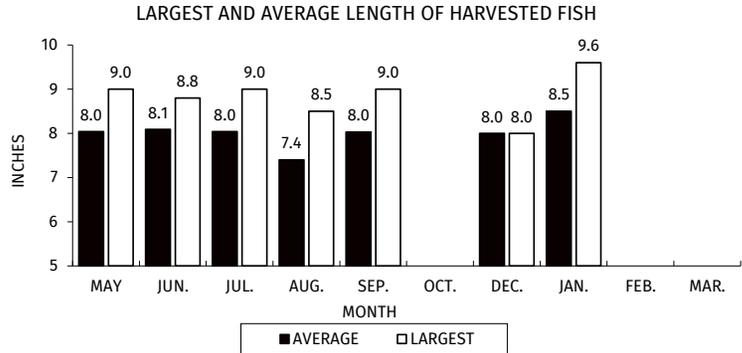
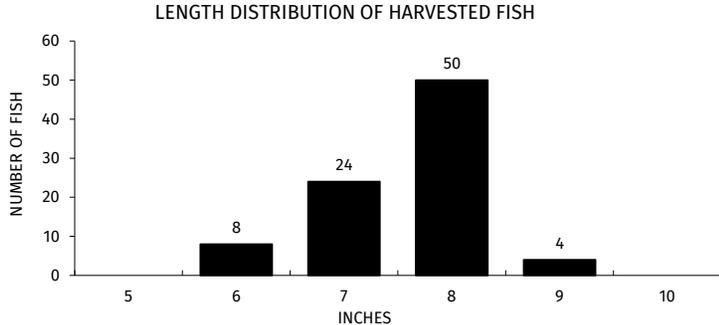
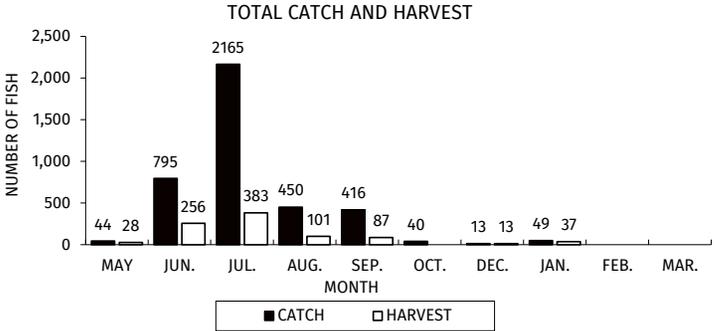
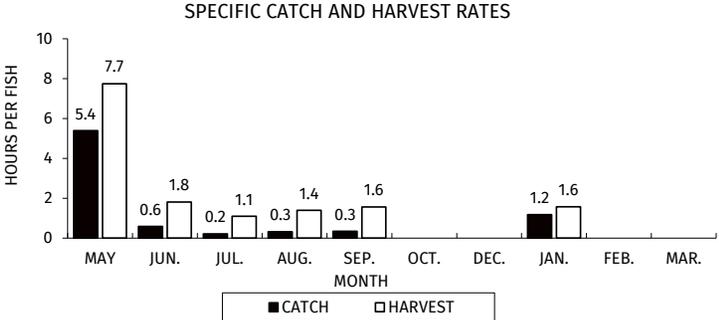
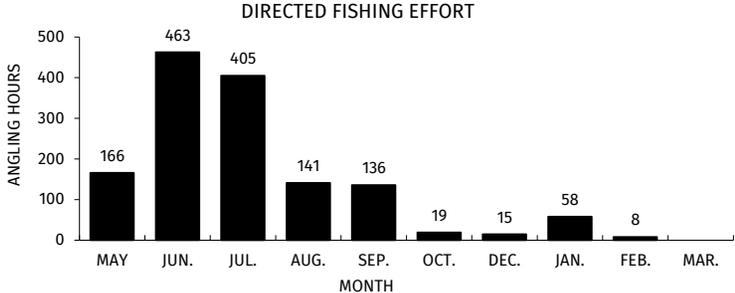


Figure 6. Bluegill sportfishing effort, catch, harvest, and length distribution, Bass Patterson Lake, during 2022-23.

BLACK CRAPPIE

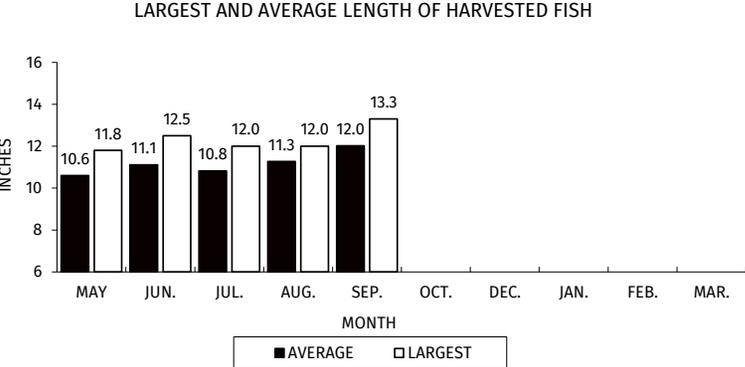
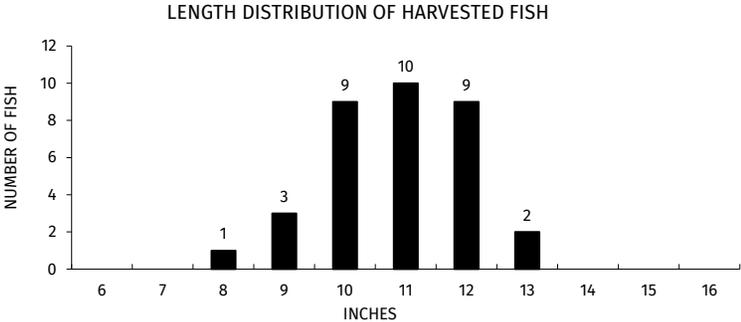
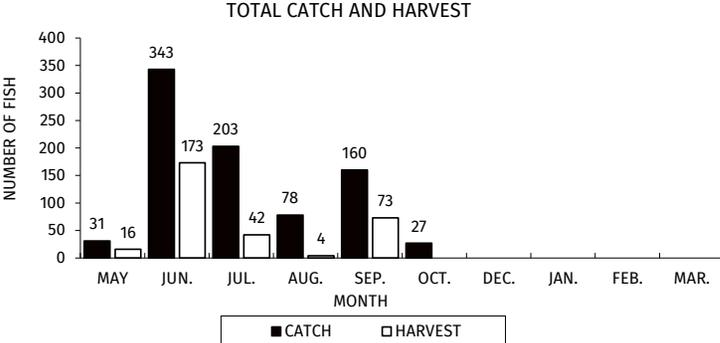
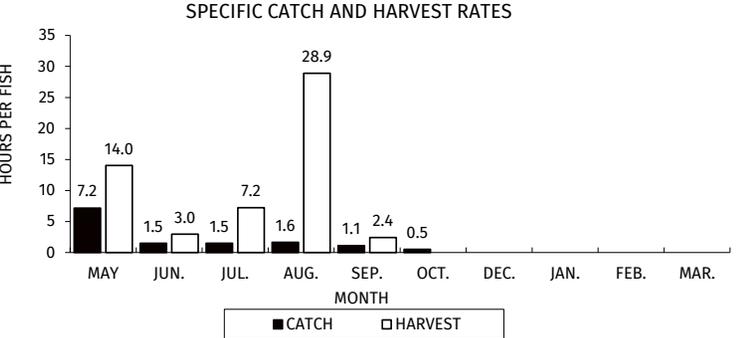
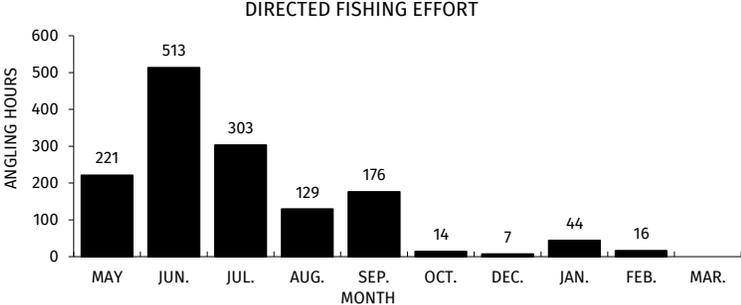


Figure 7. Black Crappie sportfishing effort, catch, harvest, and length distribution, Bass Patterson Lake, during 2022-23.

PUMPKINSEED

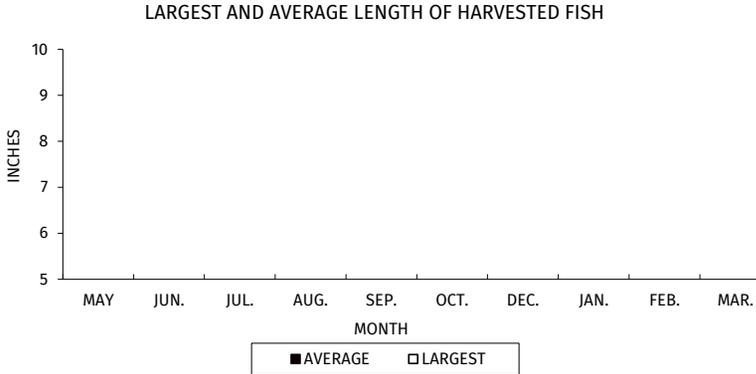
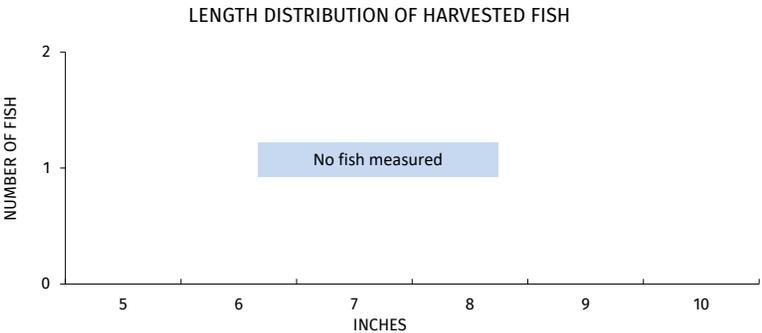
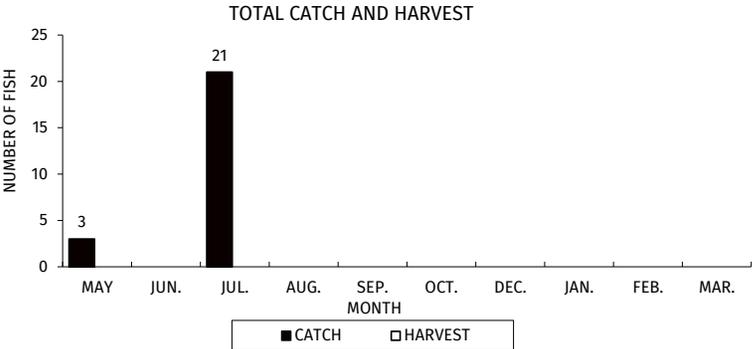
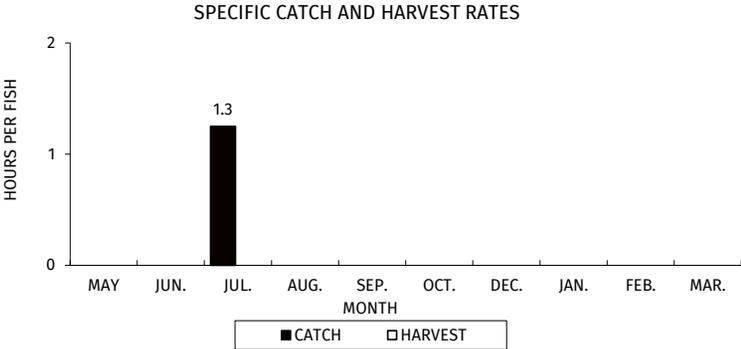
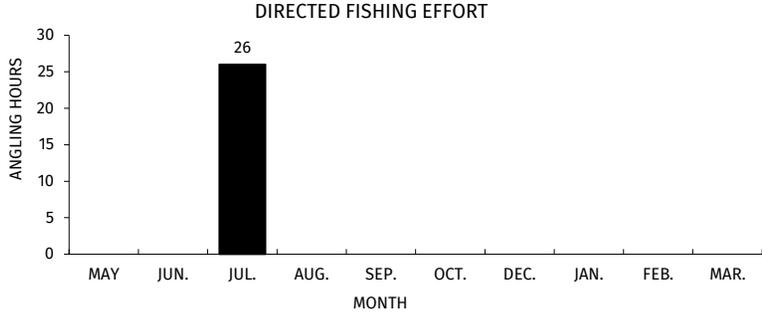
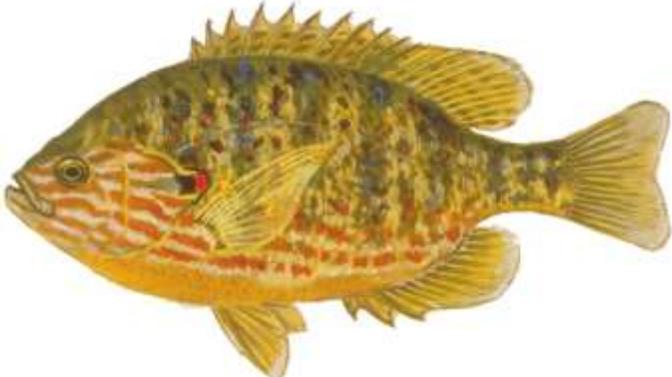


Figure 8. Pumpkinseed sportfishing effort, catch, harvest, and length distribution, Bass Patterson Lake, during 2022-23.

ROCK BASS

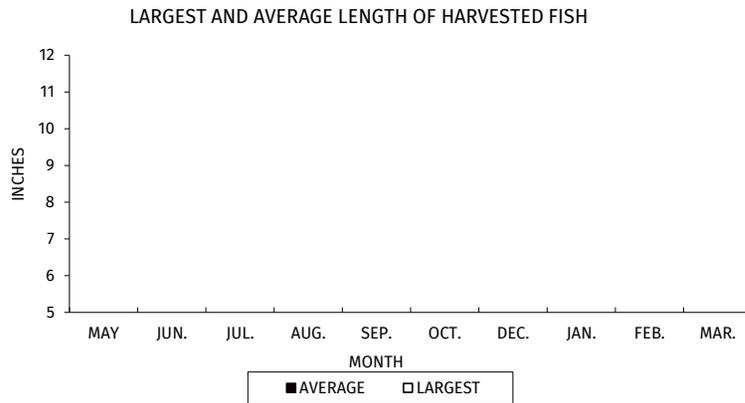
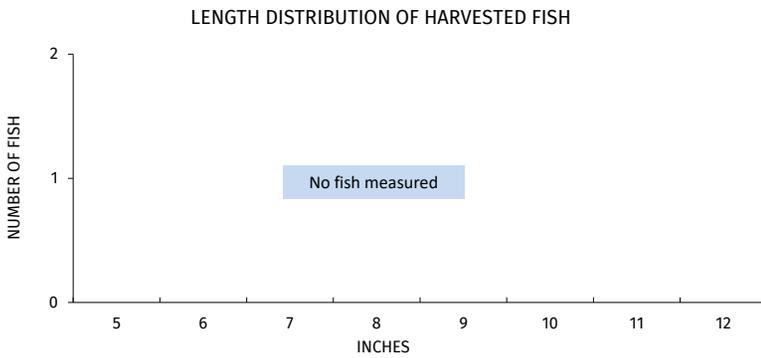
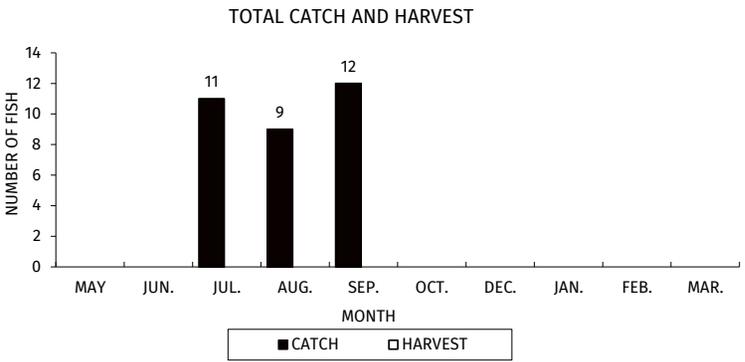
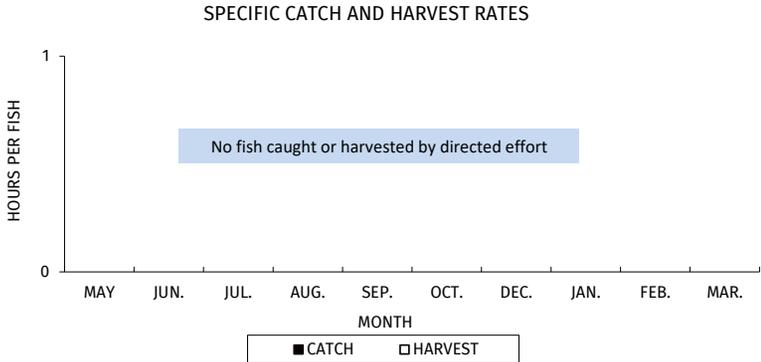
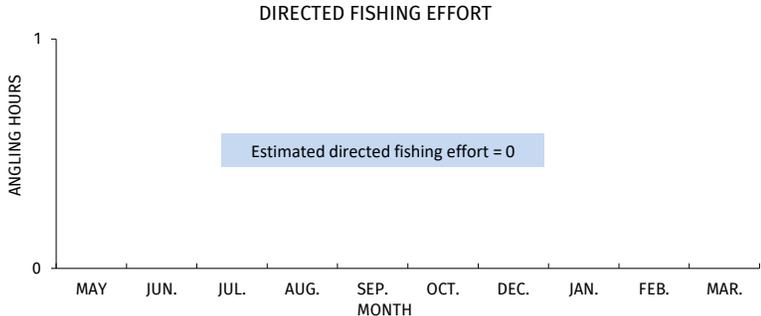


Figure 9. Rock Bass sportfishing effort, catch, harvest, and length distribution, Bass Patterson Lake, during 2022-23.