



2022 LATE SPRING PANFISH SURVEY REPORT

WATER: WEST BASS LAKE

COUNTY: FLORENCE

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INTRODUCTION AND SURVEY OBJECTIVES

The DNR conducted a late spring fyke net survey of West Bass Lake during 2022. This survey is designed to assess the summer spawning panfish populations (bluegill, pumpkinseed and rock bass) within the lake. West Bass Lake is located in the town of Homestead, with boat access within the county park.

WISCONSIN DNR CONTACT INFO.

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General Waterbody Characteristics: Lake Class: Simple - Cool - Dark

Acres: 55

Shoreline Miles: 1.3

Maximum Depth (feet): 19

Lake Type: Drainage

Public Access: Boat Landing

Regulations: Statewide Regulations

Table 1. Summary of all surveys conducted during 2022

SURVEY INFORMATION

Species	Survey Date(s)	Gear Used	Effort	Water Temp. (°F)
Bluegill, Pumpkinseed, Lepomis Hybrids, Rock Bass	6/21-6/22/2022	Fyke Net	6 Net-Nights	77-78

FISH METRIC DESCRIPTIONS

Catch per unit effort (CPUE) is the number of fish per mile (electrofishing) or per net-night (netting) and is used to index abundance when we are unable to get a Population Estimate.

Relative stock density (RSD) is an index used to describe size structure of fish populations. It is calculated by dividing the number of fish larger than a certain length by the number of stock size fish for a given species. Stock size is a length set for each species and is used to offset potential large year classes of juvenile fish. Example: RSD6 is the percentage of fish (above stock length) that were greater than 6 inches during the survey.

Length frequency distribution (LFD) is a graphical representation of the number of fish captured by inch group. Smaller fish (or younger age classes) may not always be represented in the length frequency due to different habitat usage or sampling gear limitations.

Mean length at age is used to index growth. Structures are taken from a subsample of fish captured. These structures can be used to estimate the age of that particular fish. The mean length at each age is then used to characterize growth of the entire population.

SURVEY METHODS

- Surveys are designed to evaluate each species when they are particularly vulnerable to our gear.
- Standard fyke nets and/or electrofishing gear is used to capture fish.
- Data is collected from the target species of each survey to gather population metrics.
- Fish metrics are compared to previous surveys of this water, and the mean/median values for waters in this "area" (Florence and Forest Counties).

Table 2. Summary of applicable fish metrics for this survey

PANFISH ABUNDANCE AND SIZE STRUCTURE

Species	CPUE (catch/net-night)	RSD6	RSD7	RSD8	RSD9	RSD10	RSD11	RSD12
Bluegill	57.3	31.7	9.9	0.3	0.3	0.3	0.0	
Pumpkinseed	8.5	19.6	11.8	0.0				
Bluegill x PKS Hybrid	1.2	—						
Bullhead (All spp.)	10.5	—						
Black Crappie	21.3	85.8	58.3	19.7	6.3	0.8	0.0	



GEAR USED DURING THIS SURVEY

- **Fyke Nets** are set in areas where we anticipate fish to congregate. Fish traveling along the shoreline will be met by a "lead", which is similar to a fence. The lead directs the fish toward the trap end of the net. Fish travel through a series of funnels and eventually become trapped. Fish are then removed from the net and placed in holding tanks to gather data before being returned to the lake.



Photo Credit: Carl Sundberg



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WATER: WEST BASS LAKE

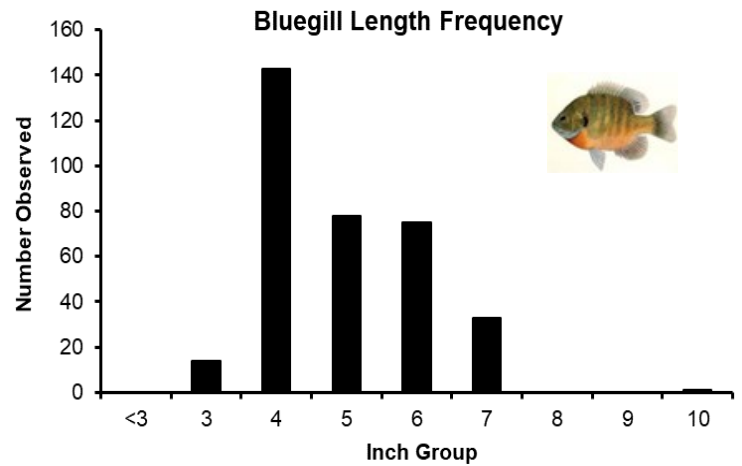
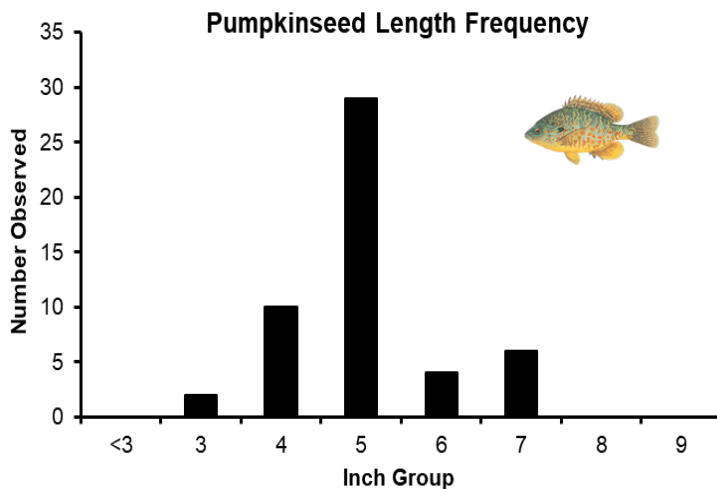
COUNTY: FLORENCE

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BLUEGILL

During our two day fyke net survey, we captured 344 bluegill, which is a relative abundance of 57.3 bluegill/net-night. This puts the West Bass Lake bluegill population just below the mean (62.0/net-night) and above the median (39.8/net-night) relative abundance of bluegill for this area.

Every bluegill captured was measured to assess size structure. The mean length of bluegill during this survey was 5.42 inches, with approximately 31.7% of the fish being ≥ 6 inches and 0.3% ≥ 8 inches in length. These data show that the size structure of this bluegill population is well below the area average of 60.2% ≥ 6 inches and 8.9% ≥ 8 inches.



PUMPKINSEED

A total of 51 pumpkinseed were captured during this survey, giving them a relative abundance of 8.5 fish/net-night. This suggests that pumpkinseed are likely the third most abundant panfish species in West Bass Lake, behind bluegill and black crappie.

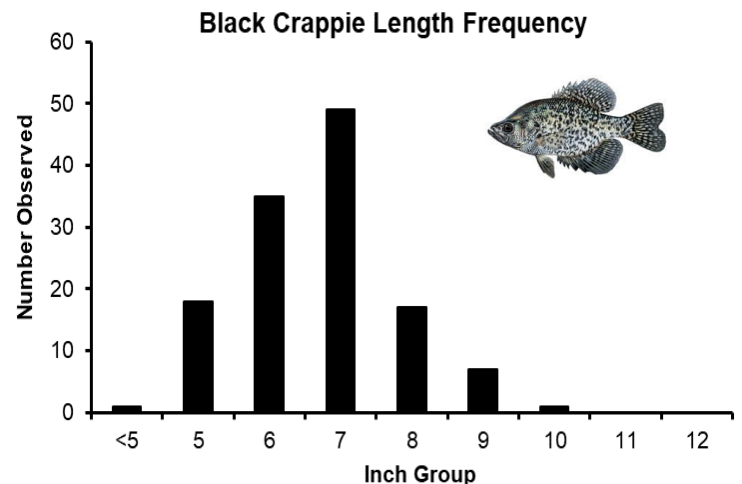
Pumpkinseed size structure was poor, with only 19.6% of the catch being ≥ 6 inches.

BLACK CRAPPIE

This survey was not designed to properly assess the black crappie population (typically they would be surveyed earlier in spring). However, black crappie relative abundance was quite high for this type of survey (21.3/net-night), which suggests an abundant population. Since this survey wasn't designed for black crappie the size structure observed may not be reflective of the overall population.

OTHER SPECIES

During this survey, we captured five fish species that were not detailed in this summary. The list of these species (with catch/net-night listed in parenthesis) is as follows: yellow and black bullhead (combined 10.5), bluegill x pumpkinseed hybrid (1.2), northern pike (0.8) and largemouth bass (0.7).



SURVEY NOTES

- The public launch to West Bass Lake provides good angler access. There is also a Florence County campground on this lake.
- 2022 was the first time a panfish netting survey was conducted on West Bass Lake.
- The survey indicated a panfish population that provides angling opportunity. While panfish abundance is desirable, bluegill size structure is not. Panfish age and growth analysis should occur during the next survey to better understand if growth rates or angler harvest are limiting size structure.
- West Bass Lake has had a very light history of fish surveys. A bass electrofishing survey in 2017 showed an adult largemouth bass population with low relative abundance and high size structure when compared to the area average. The 2017 survey showed that there is also a significant population of northern pike in West Bass Lake, however that population could not be assessed adequately.
- A few large fish were captured during the 2022 survey and worthy of note (10.2" bluegill and 21.0" largemouth bass).
- The current statewide regulations are appropriate for this water.
- West Bass Lake is considered a public access lake and is on a 10 year sampling rotation. The next survey is scheduled for 2027.