2022 LATE SPRING PANFISH SURVEY REPORT

WATER: SAND LAKE COUNTY: FLORENCE

INTRODUCTION AND SURVEY OBJECTIVES

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

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

Acres: 48
Shoreline Miles: 1.2
Maximum Depth (feet): 58
Lake Type: Seepage
Public Access: Boat Landing
Regulations: Statewide Regulations

WISCONSIN DNR CONTACT INFO.

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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	6/23-6/24/2022	Fyke Net	6 Net-Nights	76

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	41.7	36.4	8.0	2.4	1.6	0.0		
Pumpkinseed	1.5	33.3	22.2	11.1	0.0			
Rock Bass	10.5	55.7	19.7	4.9	0.0			
Yellow Perch	0.0	—						
Black Crappie	4.8	92.9	82.1	82.1	82.1	32.1	3.6	3.6

GEAR USED DURING THIS SURVEY

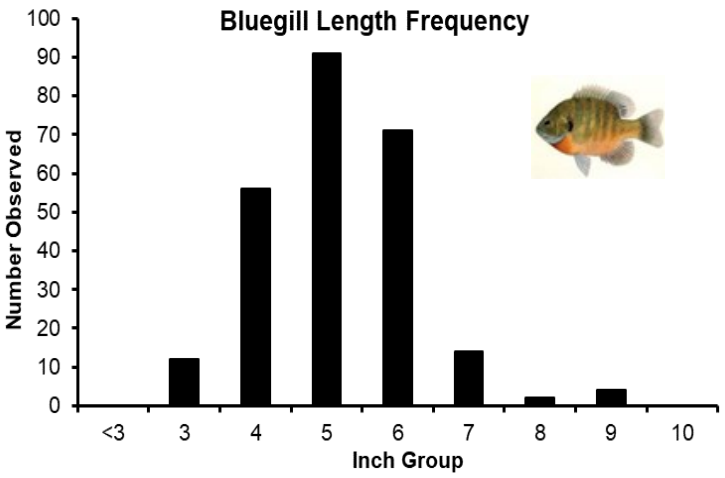
- **Fyke Nets** are set in areas where we anticipate fish to congregate. Fish traveling along the shoreline will be met by a “lead”, which is similar to a fence. The lead directs the fish toward the trap end of the net. Fish travel through a series of funnels and eventually become trapped. Fish are then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

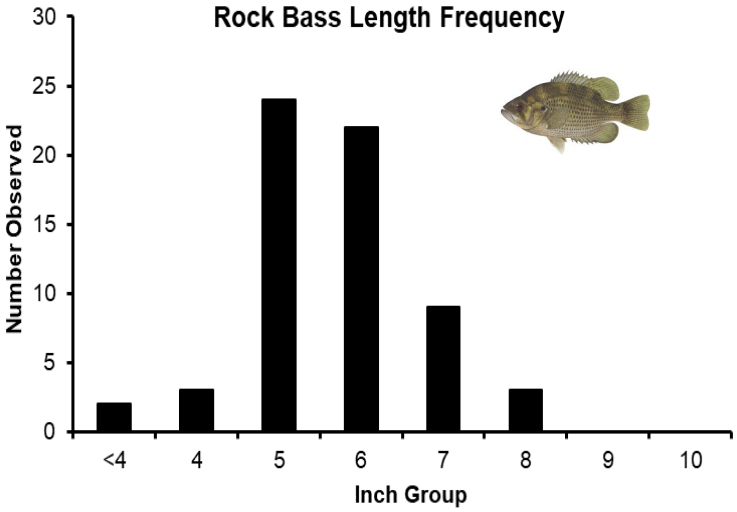
Photo Credit: Carl Sundberg

BLUEGILL

During our two day fyke net survey, we captured 250 bluegill, which is a relative abundance of 41.7 bluegill/net-night. This puts the Sand Lake bluegill population 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 5.67 inches, with approximately 36.4% of the fish being ≥ 6 inches and 2.4% ≥ 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.





ROCK BASS

A total of 63 rock bass were captured during this survey, giving them a relative abundance of 10.5 fish/net-night. This relative abundance is above average for rock bass populations in this area.

Rock Bass size structure was poor, with 19.7% of the catch being ≥ 7 inches.

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: black crappie (4.8), pumpkinseed (1.5), largemouth bass (0.7), walleye (0.5) and northern pike (0.3).

SURVEY NOTES

- The public launch to Sand Lake provides good angler access.
- Stocking records for Sand Lake include walleye stocking that has occurred since 2012. These fish are being stocked by WDNR and the Homestead-Aurora Sportsmen's Club. Trout were stocked in Sand Lake on a regular basis from 1958 to 2016 to create a two story fishery.
- 2022 was the first time a panfish netting survey was conducted on Sand Lake.
- The survey indicated panfish populations that provide good angling opportunity. Abundance of bluegill is considered moderate. Bluegill size structure is lower than average, with quality fish sampled during this survey including some over 9.0 inches. While this survey did not target black crappie, a relative abundance of 4.8/net-night suggests a fishable population of black crappie.
- Sand Lake has had a very light history of fish surveys. Bass electrofishing surveys were conducted in 2017 and 2011. These surveys showed that Sand Lake contains populations of both largemouth and smallmouth bass that are of low to moderate abundance with large individuals present of both species.
- The current statewide regulations are appropriate for this water.
- Sand Lake is considered a public access lake and is on a 10 year sampling rotation and is scheduled to be surveyed in 2028. If possible, an adult walleye survey should occur during that survey to assess the stocking efforts of the WDNR and the Sportsmen's Club.