



2019 Fisheries Survey Summary Report

McGinnis Lake

Adams County, WI

WBIC: 179100

Introduction and Survey Objectives

In 2019, the Department of Natural Resources (DNR) conducted a spring electrofishing survey to assess the largemouth bass and panfish populations. The fish population demographics (size structure, relative abundance, growth, and body condition) were compared to fish populations in similar lakes of Wisconsin. The following report is a brief summary of the activities conducted and general status of fish populations.

Acres: 27 Shoreline Miles: 1.5 Maximum Depth (feet): 28
 Lake Type: Seepage Public Access: 1 Boat Launch Lake Class: Simple warm clear
 Fishing Regulations: Statewide Default Regulations

Wisconsin DNR Contact Info.

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Survey Information				
Gear	Survey Date (s)	Water Temp. (F)	Target Species	Survey Effort
Maxi-boom	5/22/2019	59	Bass, Panfish	1.65, 0.5 mi

Survey Methods

Night time spring electrofishing protocols as outlined in the statewide fisheries management handbook were used to survey the fishery. Electrofishing for all fish species took place over a 0.5 mile station along the shoreline and gamefish were targeted for the rest of the shocking of the shoreline area (1.65 miles). All gamefish and panfish were measured in length to the nearest 0.1 in and a subsample were weighed and a structure removed to estimate age. Non-gamefish were counted.

Fish Metric Descriptions

Proportional Stock Density (PSD) is an index used to describe size structure of fish. PSD is calculated by dividing the number of quality or preferred size fish by the number of stock size fish for a given species.

Catch per unit effort (CPE) is an index used to measure fish population relative abundance which is the number of fish captured per unit of effort. CPE indexes are compared to statewide data.

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

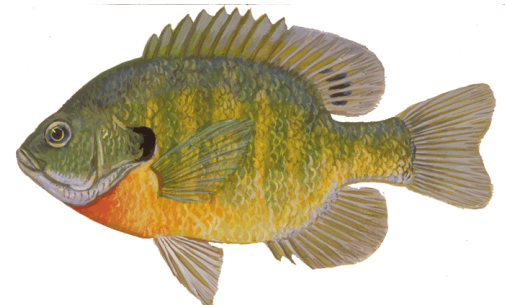
Mean length at age is an index used to assess fish growth. Growth structures (otoliths or anal fin rays) are collected from a subsample. Mean length at age is compared to statewide data.

Mean Wr is an index used to look if fish are in good body condition (value of 100 = good).

Abundance Metrics			
Species	2019 Number Caught	2019 CPE	Abundance Rating
BLUEGILL	37	66	>75th Percentile; Very High
PUMPKINSEED	92	184	—
LARGEMOUTH BASS	134	71	>90th Percentile; Very High

Other Species Caught	
Species	Number Caught
BLACK CRAPPIE	6
NORTHERN PIKE	2
WHITE SUCKER	1
YELLOW PERCH	1

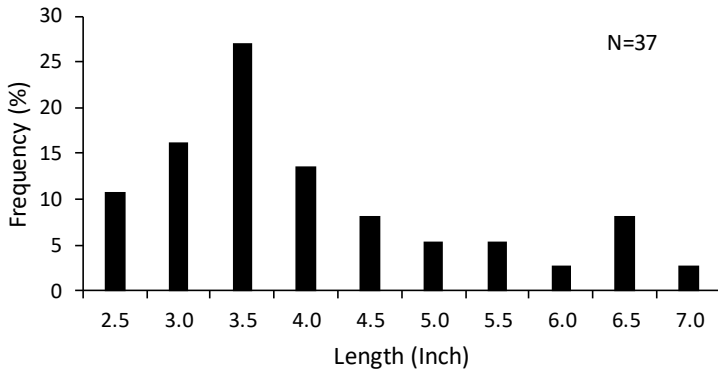
Growth Metrics					
Species	Age	2019 Mean Length (Inches)	Growth Rating	Mean Wr	Body Condition Rating
BLACK CRAPPIE	5	7.9	Slow	85	Fair-Poor
BLUEGILL	7	5.3	Very Slow	85	Fair-Poor
PUMPKINSEED	5	5.7	Slow	105	Excellent
LARGEMOUTH BASS	4	11.9	Average	98	Good



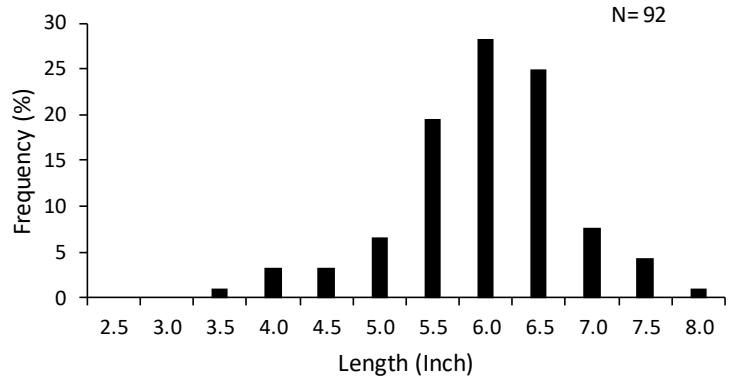


Size Structure Metrics							
Species	2019 Total	Average Length (inches)	Length Range (inches)	Stock; Quality; Preferred; Memorable Sizes (inches)	PSD	PSD-P	PSD-M
BLUEGILL	37	4.3 ± 0.4	2.5 - 7.1	3.0, 6.0, 8.0	15 ± 10	-	-
BLACK CRAPPIE	6	9.0 ± 2.2	7.3 - 13.0	5.0, 8.0, 10.0, 12.0	-	-	-
PUMPKINSEED	92	6.2 ± 0.2	3.8 - 8.0	3.0, 6.0, 8.0	66 ± 7	1	-
LARGEMOUTH BASS	134	12.5 ± 0.5	6.0 - 17.6	8.0, 12.0, 15.0, 20.0	74 ± 6	26 ± 6	-

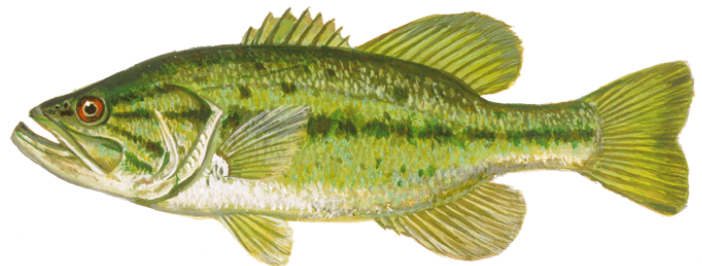
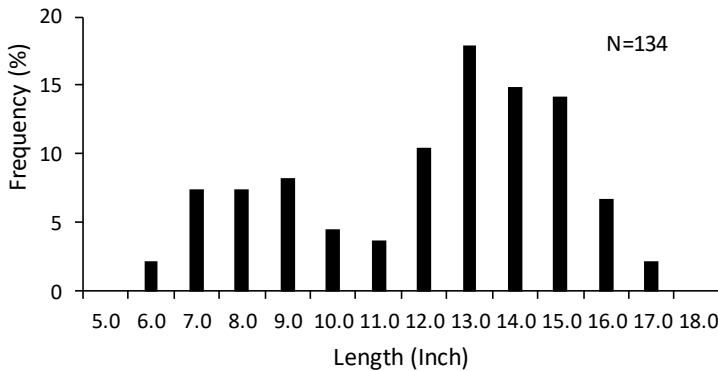
Bluegill



Pumpkinseed



Largemouth Bass



Summary

- 273 fish were caught during the electrofishing survey, seven fish species, pumpkinseeds were the most caught fish species.
- Pumpkinseed and bluegills are both in the *Lepomis* family, while related they are different. Pumpkinseeds have a unique configuration of colored spots and stripes that make them stand out from bluegills and other species in this sunfish family. Both pumpkinseeds and bluegills have black opercle flaps but the pumpkinseed has a distinctive, crimson spot in a half-moon shape on the rear edge. Pumpkinseeds are the dominant sunfish in McGinnis Lake, this could be due to pumpkinseeds preferring cool to moderately-warm waters (75-89°F) while bluegills like it hotter (85-88°F). McGinnis Lake is relatively deep and may provide a thermal preference for pumpkinseeds to thrive over the bluegills. The relative abundance of sunfish in McGinnis Lake was greater than the 75th compared to bluegill populations in similar lakes. Growth is very slow for bluegills, body condition fair-poor, and size structure poor (15% are 6" and greater). Pumpkinseeds have better growth, but still grow slow, and are in excellent body condition and decent size structure (66% are 6" and greater). Slow growth is likely due to the abundant population reducing the amount of food available for each fish.
- Largemouth bass are very abundant, greater than the 90th percentile compared to lakes similar to McGinnis Lake. Growth is average compared to the average largemouth bass in Wisconsin and they are in good body condition. Size structure is good, 74% of the fish were 12" and larger and 26% were 15" or larger. The percentage of fish 14" and greater was 44%, which is very high compared to lakes like McGinnis Lake.
- For balanced bass-panfish populations, PSD ranges from 40-70 for largemouth bass and 20-60 for bluegills. Largemouth bass are in the upper end of the range 74±6, and the same for *Lepomis* (both bluegill and pumpkinseed) PSD is 62±6. PSD-P in balanced populations ranges from 10-40 for largemouth bass and 5-20 for bluegills., where largemouth bass was 26±6 and *Lepomis* was 9±4 both within the ranges.
- McGinnis Lake should be managed as a bass-sunfish lake. Anglers may occasionally catch a yellow perch and black crappie. The survey did not target northern pike, pike are targeted using fyke nets. The two pike caught were 27.1" and 31.6", both nice fish.