2021 LATE SPRING SURVEY REPORT

WATER: GORDON LAKE COUNTY: FOREST

INTRODUCTION AND SURVEY OBJECTIVES

The Wisconsin Department of Natural Resources, in collaboration with the US Forest Service, conducted a late spring fyke net and electrofishing survey of Gordon Lake, Forest County, to analyze the health of its fishery. This survey is designed to assess the summer spawning panfish populations (bluegill, pumpkinseed and rock bass) as well as the bass populations. The pages that follow will detail the current state of the fishery, as well as any changes since the previous assessment. Gordon Lake is located approximately 4 miles northwest of Armstrong Creek, with boat access to Gordon Lake off of Laura Lake Road.

Acres:	50	Shoreline Miles:	1.45	Maximum Depth (feet):	30
Lake Type:	Seepage	Lake Class:	Simple-Warm-Dark	Public Access:	Boat Landing
Regulations:	No Special Regulations				

WISCONSIN DNR CONTACT INFO.

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Summary of all surveys conducted during 2021 — **SURVEY INFORMATION**

Species	Survey Date(s)	Gear Used	Effort	Water Temp. (°F)
Largemouth Bass and Smallmouth Bass	5/23/2021	Boomshocker	1.45 Miles	64
Bluegill, Pumpkinseed, Rock Bass	6/14-6/17/2021	Fyke Net	12 Net-Nights	70-72

FISH METRIC DESCRIPTIONS

Population estimate (PE) is estimated by marking a portion of the population, then capturing another sample of fish and using the ratio of new fish : previously marked fish to estimate the number of fish that are in the population.

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

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 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).
- Data collected is used to monitor the fishery, determine if stocking is necessary, evaluate fishing regulations, and determine how to improve the fishery.

GEAR USED DURING THIS SURVEY

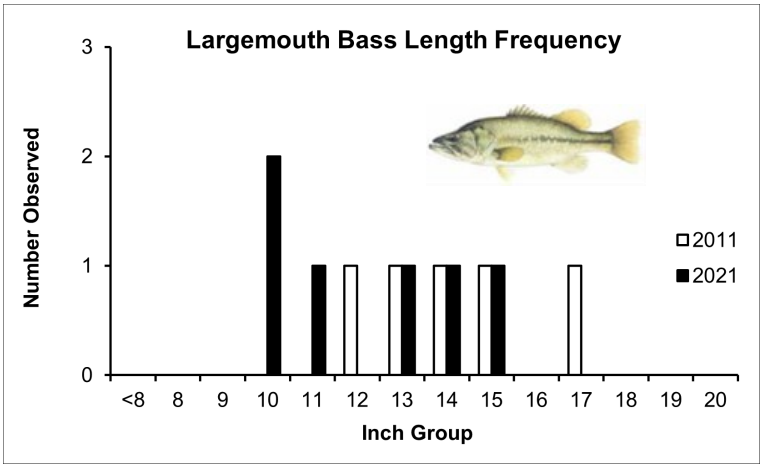
- **Fyke Nets** are set in areas where we anticipate fish to congregate. Fish traveling along the shoreline will be met by a “lead” which is similar to a fence. The lead directs the fish toward the trap end of the net, fish travel through a series of funnels and eventually become trapped. Fish are then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

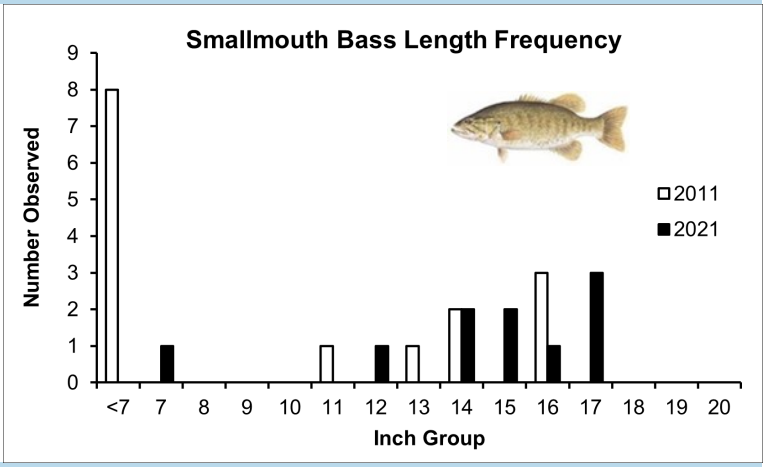
- **Boomshocker** is a specially designed boat that creates an electric current in the water immediately in front of the boat. The boat is driven along the shoreline and shallow areas of the lake, when the boat encounters fish they are momentarily stunned. Once the fish is stunned they can be netted out of the lake and placed in a holding tank. After data is collected the fish are returned to the lake.

LARGEMOUTH BASS

An electrofishing survey was conducted on the night of 5/23/2021 to assess the largemouth bass population in Gordon Lake. The survey was conducted along the entire 1.45 mile shoreline and all bass observed were netted. During this survey 6 largemouth bass were caught, all of which were ≥ 8 inches and considered adults, for a relative abundance of 4.14 adults/mile. Largemouth bass relative abundance has increased since 2011 (3.45 adults/mile). Largemouth bass relative abundance is low as relative abundance is far below the area average of 17.02 adults/mile. Largemouth bass relative abundance is well below the statewide 25th percentile for this lake type (13.28 fish/mile).

Every largemouth bass captured during this year's survey was measured, but not enough fish were captured to conduct comparative size structure analysis. A length frequency figure comparing this survey to the 2011 survey can be seen to the right.





SMALLMOUTH BASS

Smallmouth bass were assessed with the same electrofishing survey as largemouth bass. During this survey, 10 smallmouth bass were caught, 9 of which were ≥ 8 inches and considered adults, for a relative abundance of 6.21 adults/mile. This is an increase from the 2011 survey (4.83 adults/mile). Smallmouth bass abundance is low as their relative abundance is less than the area average (10.71 adults/mile).

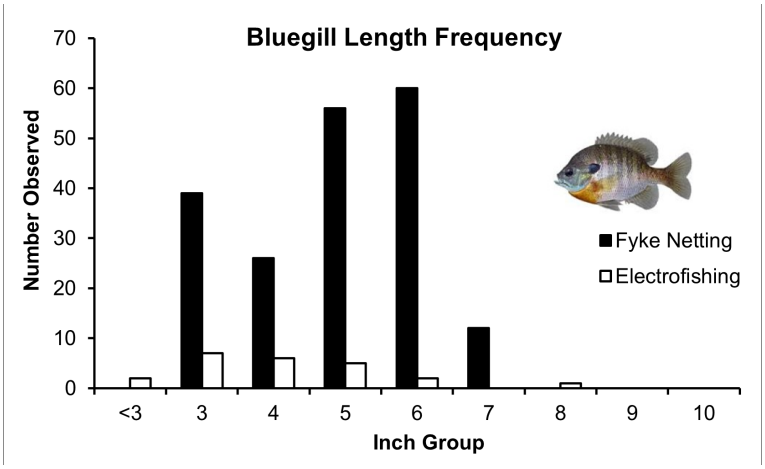
All smallmouth bass caught were measured but the sample size was too small to conduct comparative size structure analysis. A length frequency figure comparing the 2021 and 2011 surveys can be seen to the left.

BLUEGILL

A late spring fyke net survey was conducted from 6/14-6/17/2021 to assess the summer spawning panfish populations. During this survey, a total of 193 bluegill were captured for a relative abundance of 16.1 bluegill/net-night. Gordon Lake is considered to have a very low abundance of bluegill, as the area average is 65.6 bluegill/net-night.

Bluegill relative abundance during the 0.5 mile "All Fish" station within the bass electrofishing survey was 46.00 fish/mile. This is very low relative abundance.

All bluegill caught during the fyke netting survey were measured to assess size structure of the population. After removing fish less than 3 inches for analysis, 37.3% were ≥ 6 inches, while 6.2% were ≥ 7 inches. The Gordon Lake bluegill population is considered to have very low size structure. The area averages for bluegill size structure are 61.6% ≥ 6 inches and 31.1% ≥ 7 inches. A comparison of catch by gear can be seen to the right.



SURVEY NOTES

- The public launch to Gordon Lake provides adequate angler access.
- This survey indicates bass populations that provide some angling opportunity.
- The 2021 survey strongly underestimates the abundance of both bass species. Gordon Lake has poor water conductivity which led to the inability to capture fish, with many fish evading the netting efforts. Gordon Lake likely has moderately abundant largemouth and smallmouth bass populations.
- This was the first panfish netting survey on Gordon Lake since 2001.
- The current statewide regulations are appropriate for this water.
- Gordon Lake is on an 8 year sampling rotation. The next survey is scheduled for 2029.

OTHER SPECIES

During this survey, six fish species were captured that were not detailed in this summary. The list of these species (with catch/net-night listed in parenthesis) is as follows: northern pike (0.2), walleye (0.8), black crappie (2.1), yellow perch (0.2), white sucker (0.1), and bullhead (all species grouped) (0.9).