



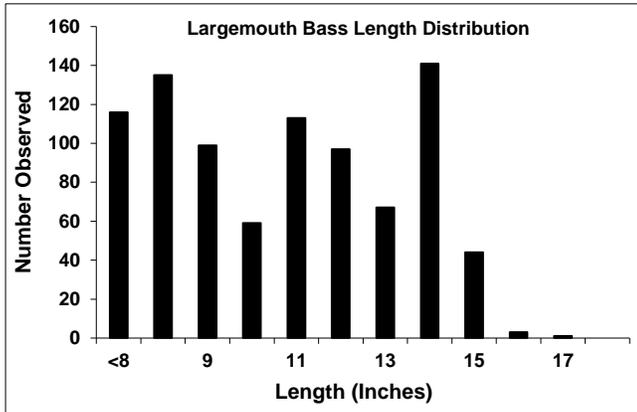
**WISCONSIN DNR
FISHERIES INFORMATION SHEET**

LAKE: Cosgrove Lake

COUNTY: FLORENCE

YEAR: 2015

The Wisconsin Department of Natural Resources is conducting a comprehensive survey of the Cosgrove Chain of Lakes (Cosgrove Lake), Florence County, to analyze the health of its fishery. Cosgrove Lake is located approximately 5 miles east of Florence, just south of US HWY 2. Cosgrove Lake covers 91 acres and achieves a maximum depth of 30 feet.



* Note: Adult bass are defined as all bass \geq 8 inches long.

Largemouth Bass



Largemouth bass were targeted during our spring fyke net survey along with 3 spring electrofishing surveys. During these surveys a total of 601 different adult largemouth bass were captured and marked with an identifiable fin clip. Another electrofishing survey on 6/1 and 4 days of late spring fyke netting were then conducted to estimate the size of the population. During this "recapture" survey a total of 239 different adult largemouth bass were captured, 81 of which (33.9%) bore the clip given during our "marking" survey. This data estimates the adult largemouth bass population in Cosgrove Lake to be approximately 1,729 fish (19.0/acre). This is the highest largemouth bass density of all lakes surveyed in Florence & Forest Counties and is considered extremely overabundant.

Largemouth bass size structure in Cosgrove Lake is not good with approximately 21.6% and 0.5% of the largemouth bass captured being \geq 14.0 and 16.0 inches respectively. The largest fish captured was 17.4 inches.

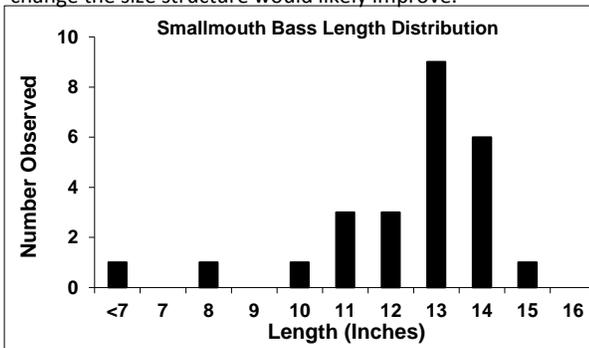
Poor size structure in high density populations is common. If we were able to reduce the abundance through a regulation change the size structure would likely improve.

Smallmouth Bass

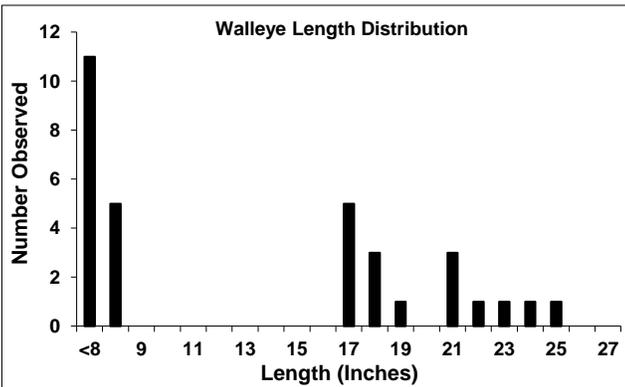


Smallmouth bass abundance was assessed the same way as largemouth bass. A total of 18 different adult smallmouth bass were captured and marked with an identifiable clip during our spring fyke net survey and the first two electrofishing surveys. "Recapture" surveys were conducted on 5/18 and 6/1 capturing only 8 different adult smallmouth, 2 of these fish (25%) had been captured during the "marking" survey. This data estimates the adult smallmouth bass population to be approximately 48 fish (0.53/acre). This is a low abundance of smallmouth bass, especially when compared to largemouth bass.

A total of 25 different smallmouth bass were measured during spring surveys to assess size structure. The Cosgrove Lake population has poor size structure with 28.0% of fish sampled being \geq 14.0 and no fish captured \geq 16.0 inches in length. While smallmouth bass are not abundant, the size structure and growth of the smallmouth bass population is likely being limited by the overabundant largemouth population.



* Note: Adult bass are defined as all bass \geq 8 inches long.



* Note: Adult walleye are defined as all sexable walleye and walleye of unknown sex \geq 15 inches long.

Walleye



Like the bass populations, we estimated the walleye population in Cosgrove Lake using a mark-recapture survey. A total of 11 adult walleye were captured during the "marking" survey and given an identifiable clip. During the "recapture" survey, a total of 12 different adult walleye were captured, with 3 fish (25%) bearing a clip from the "marking" survey. This data estimates the adult walleye population to be approximately 26 fish (0.29/acre), an extremely low population.

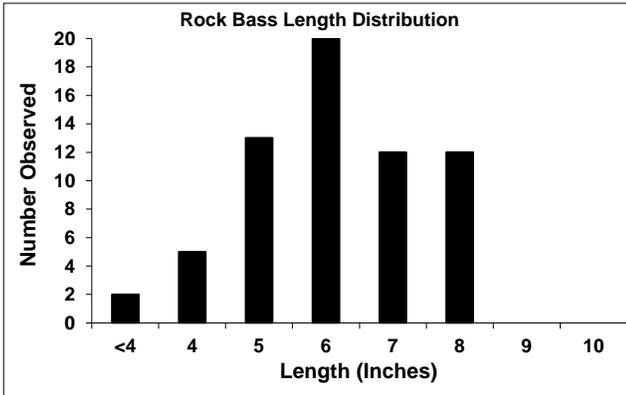
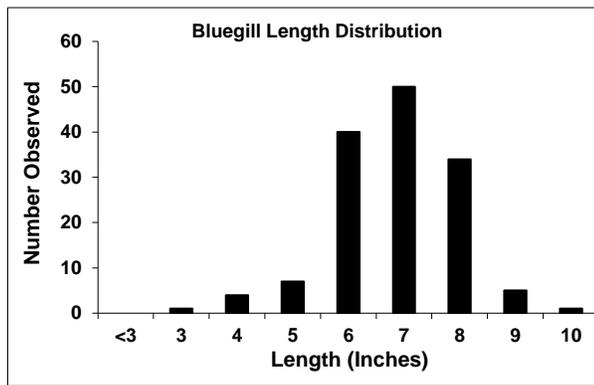
1971 was the last year walleyes were stocked in Cosgrove Lake prior to 2012. So the existence of this small population suggests that a low level of natural reproduction is likely occurring. In 2012, the WDNR began stocking walleyes into Cosgrove Lake again. Walleye are now being stocked every other year and the population will likely begin to increase.

Bluegill



Fyke nets were used to capture summer spawning panfish from 6/2-5/2015. Bluegill were the most abundant panfish captured during this survey suggesting that they are the most abundant panfish in Cosgrove Lake. However, at a relative abundance of 10.7 fish/net-night they are considered to be of low abundance.

Abundance is likely low due to the high density of largemouth bass, which likely limit bluegill recruitment. However, low abundance bluegill populations often times have desirable size structure. This was the case with Cosgrove which has good bluegill size structure with approximately 63.4% and 4.2% of the fish in our sample being ≥ 7.0 and 9.0 inches respectively.



Rock Bass



Rock bass were the 2nd most abundant panfish species during both of our spring netting surveys. During the late spring survey rock bass had a relative abundance of 5.0 fish/net-night. While this is not an abundant population by any means, it is more abundant than most rock bass populations in this region.

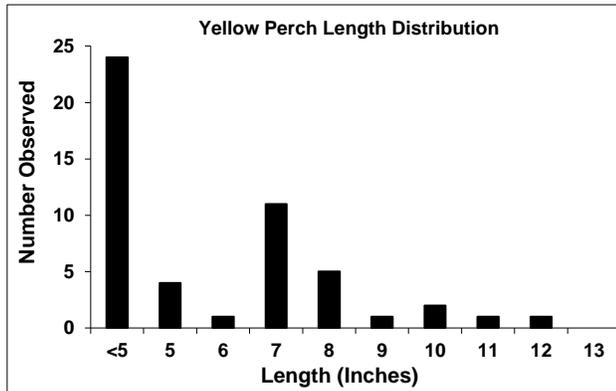
A total of 64 rock bass were measured to assess size structure. The size structure of this rock bass population is fair with 38.7% and 19.4% of the fish sampled being ≥ 7.0 and 8.0 inches respectively.

Yellow Perch



Yellow perch are the 3rd most abundant panfish species in Cosgrove Lake with a relative abundance of 1.9 fish/net-night during our early spring survey. Moderate numbers of yellow perch were witnessed during electrofishing surveys designed to capture bass. Suggesting that while the population is not large, they are present in "catchable" numbers.

A total of 50 yellow perch were captured during spring netting and a small index segment during bass electrofishing, these fish were measured to assess size structure. While the size structure is not great, if you remove the relatively abundant juvenile fish (those < 5 ") approximately 38.5% of the yellow perch sampled were ≥ 8.0 inches.



Other Species

Northern pike, black crappie and white sucker were the only other species sampled during our spring survey of Cosgrove Lake. All three of these species were rare with respective catch rates of 0.06, 0.19 and 0.25 fish/net-night during spring surveys.

Black crappie size structure was impressive. Of the 8 fish sampled, 4 were ≥ 13.0 inches in length.

This report is interim only; data and findings should not be considered final.
For answers to questions about fisheries management activities and plans for Cosgrove Lake contact:

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