Abstract

Hominy Municipal Lake was sampled using boat electrofishing to determine the status of the Black Bass populations. Staff sought to determine if previous stockings of Smallmouth Bass had been successful in establishing a sustainable population. No Smallmouth Bass were collected in 2023.

Introduction

Background

Hominy Lake is located 1.7 miles west of the town of Hominy on state highway 20. It was made by the impoundment of Claremore Creek in 1940 creating a 165-ac lake. Hominy Lake has a shoreline of 7.2 miles with 5,000 ac-ft of water storage. The lake has a normal elevation of 850.30 ft with an average depth of 20.8 ft and a max depth of 52.6 ft.

Current Management Practices

Monitoring of Heavily Utilized Black Bass Populations

Largemouth bass was the most sought after species in Oklahoma and Smallmouth bass was the fifth (up two since the previous survey) according to the most recent angler survey. The NCR has high profile largemouth bass fisheries that are utilized by both recreational and tournament anglers. These black bass populations require monitoring for constituent interaction and evaluation of recent regulation changes.

Results

2023

Hominy Lake has not been sampled for black bass since 2008. In recent years questions as to if Smallmouth Bass are present in the lake have come up. The last stocking of Smallmouth Bass took place in 2007, and 2000 the time before. Evaluating the status of the black bass in Hominy Lake will benefit the region in determining if a Smallmouth Bass population is present and established and how the Largemouth and Spotted Bass are doing in the lake.

Spring 2023:

Blass Bass were sampled using pulsed DC current using an ETS Electrofishing Systems unit. Sampling was done on March 24th with a total of 6 10min samples taking place. 62 Largemouth Bass and 7 Spotted Bass where collected. No Smallmouth Bass were collected or seen while sampling. No aging structures were collected.

Catch Per Unit Effort (CPUE) was 62 with a C.V. of .08 a significant increase from 2008, CPUE = 41.14, C.V. = .08. Length frequencies indicate four groups of Largemouth each making around 10% of the

abundance each. This is drastically different from 2008 where ~40% of the population was found in the 225mm to 274mm range (Figure 5.3.1). Proportional Size Distribution (PSD) were not significantly different (2023 = 73 ±17, 2008 = 42 ±16). Preferred sized LMB were significantly larger than 2008 (PSD-P; 2023 = 54 ±19, 2008 = 15 ±12). We did find memorable sized LMB but was not significantly different from 2008. Relative Weights were significantly larger than in 2008 (Wr; 2023 = 89.8 ±1.88, 2008 = 81.64 ±2.04).

Spring 2023 sampling found Smallmouth Bass did not establish in Hominy Lake from the previous stockings. There is no evidence restarting stockings would yield different results. Largemouth Bass overall were improved from 2008. A greater percentage of LMB were over 400mm in length, in addition to condition improving.

RECOMMENDATIONS

1. Evaluate LMB populations in 2027, collect otoliths for growth analysis.

Figures

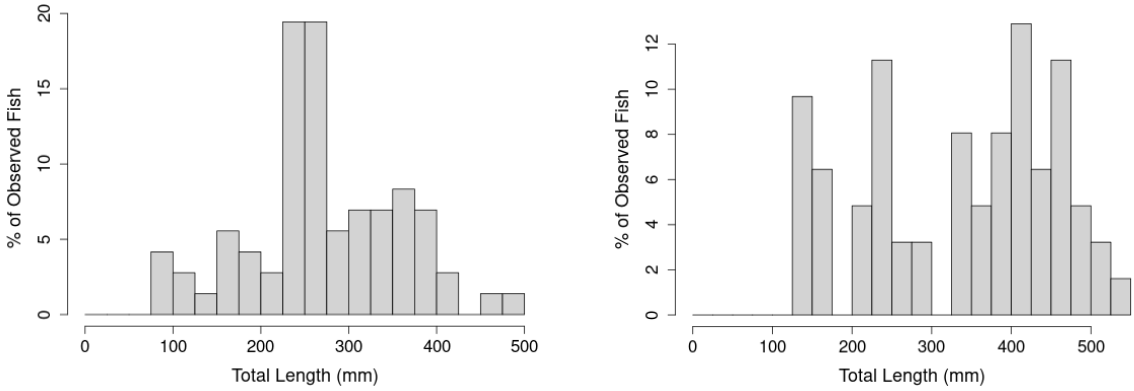

Figure 1. Length frequencies of Largemouth Bass in Hominy Lake from 2008 (Left) and 2023 (Right).