

Fisheries Research Summary

Division of Inland Fisheries

N.C. Wildlife Resources Commission



Oak Hollow Lake Largemouth Bass Assessment

Oak Hollow Lake is an 800-acre impoundment that is used by the city of High Point as a source of recreation and water supply. Oak Hollow Lake contains many fish species of interest to anglers including sunfish, catfish, white crappie, black crappie and largemouth bass.

The largemouth bass fishery in Oak Hollow Lake is governed by a minimum size limit of 14 inches with a creel limit of five fish per day, with two fish allowed below 14 inches. Periodic sampling of largemouth bass populations is needed to determine if current size and creel regulations are adequately protecting the fisheries. The objective of this survey was to obtain stock assessment data needed to evaluate and manage largemouth bass in Oak Hollow Lake.



Largemouth bass were sampled in early May 2010 by Commission biologists using shoreline electrofishing. All fish collected were measured (total length, inches) and weighed (lbs). A subsample of fish were sacrificed for age determination using sagittal otoliths (ear bones) and the remaining fish were returned to the reservoir.

In general, Oak Hollow Lake supports an excellent largemouth bass fishery. Mean catch-per-unit effort was 72 fish/hour of electrofishing and is above the average range for Piedmont reservoirs (30-60 fish/hour) suggesting a high density of largemouth bass. Plus, almost 60 percent of the largemouth bass collected were greater than 14 inches (Figure 1).

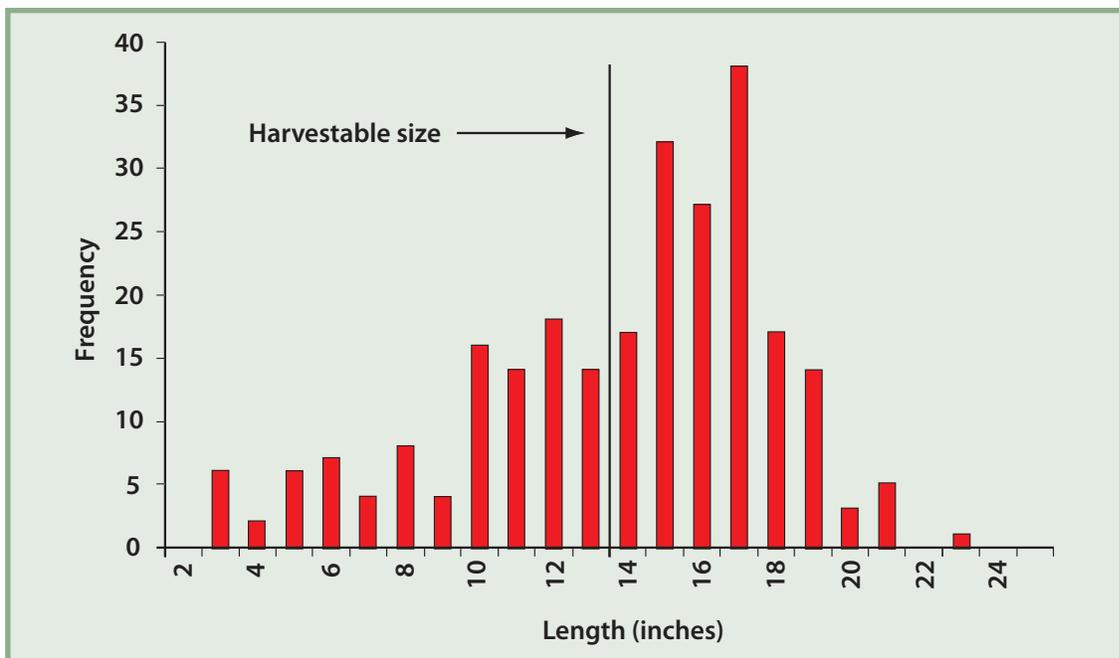


Figure 1 - Largemouth bass size structure at Oak Hollow Lake in 2010. The black line represents the 14-inch minimum size limit.



Growth rates are similar to those reported previously at Oak Hollow Lake as largemouth bass reached 14 inches between 3 and 4 years of age and suggest average growth (Figure 2).

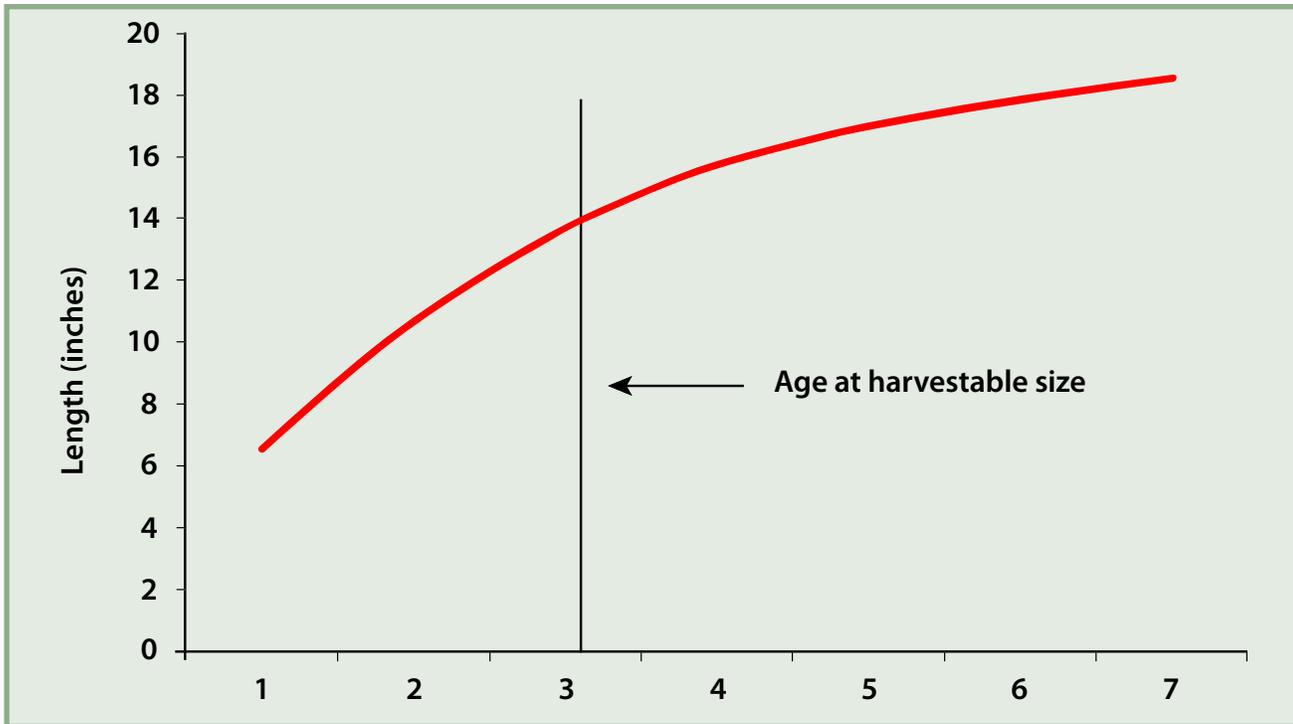


Figure 2 - Growth curve for largemouth bass at Oak Hollow Lake in 2010. The black line represents the age largemouth bass reach 14 inches.

Mean relative weight values, a measure of plumpness, were above the ideal value of 100 for all size classes. These results indicate that the fish are in excellent body condition and that there is an ample source of forage within the lake. The largest fish captured measured 23 inches long and weighed 7 pounds.



Jessica Baumann, a fisheries biologist with the Commission, holds largemouth bass from Oak Hollow Lake.

Overall, the largemouth bass population appears to be in great shape with good recruitment, average growth rates, excellent body condition, and a large percentage of harvestable size fish. Current size and creel regulations are adequately protecting the largemouth bass fishery in Oak Hollow Lake.

Biologists recommend that Oak Hollow Lake continue to be managed under the general statewide regulation of a 14-inch minimum length limit with a creel limit of five largemouth bass per day including two fish less than 14 inches. They also recommend that Commission personnel resample Oak Hollow Lake in four to five years.