

## Lake Cumberland Bass Assessment 2022

Lake Cumberland is a U.S. Army Corps of Engineers mainstem reservoir on the Cumberland River in south central Kentucky. This 50,250-acre reservoir was impounded in 1950 with the completion of Wolf Creek Dam (located at Cumberland River mile 460.9).

Water levels in Lake Cumberland can fluctuate up to 50 feet annually due to hydroelectric production, with a normal summer pool elevation of 723 ft mean sea level (msl). In 2007, the water level was reduced to 680 ft msl to decrease pressure on Wolf Creek Dam and allow for repairs to be made on the dam. The water level was increased to 705 ft msl in early 2013 with the completion of the dam remediation project and was raised to 723 ft msl in spring 2014.

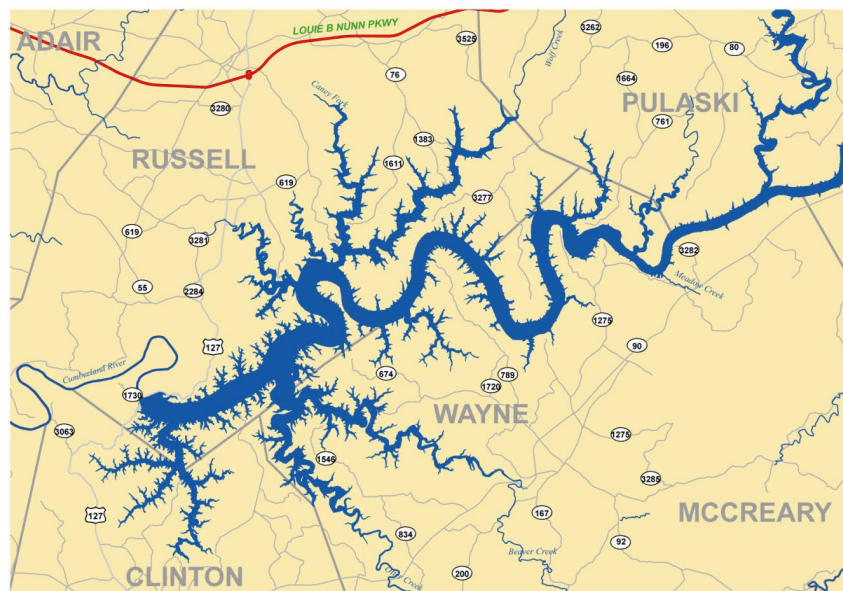
In early spring 2007, KDFWR initiated a habitat enhancement program on Lake Cumberland to provide cover for young bass and crappie during the reduced elevations. KDFWR, Corps of Engineers, and local volunteers deployed over 1,000 treetops in shallow water areas of Fishing, Caney Fork, Otter, Wolf, White Oak, and Faubush creeks. The habitat work, coupled with the abundant natural re-vegetation of newly exposed shoreline areas, provided needed cover for the bass populations when the lake levels rose.

Lake Cumberland contains three black bass species: largemouth, spotted, and smallmouth bass. According to the most recent creel survey in 2016, largemouth bass comprise about 35% of the black bass catch in the lake.

No black bass sampling was conducted on Lake Cumberland during spring 2020.

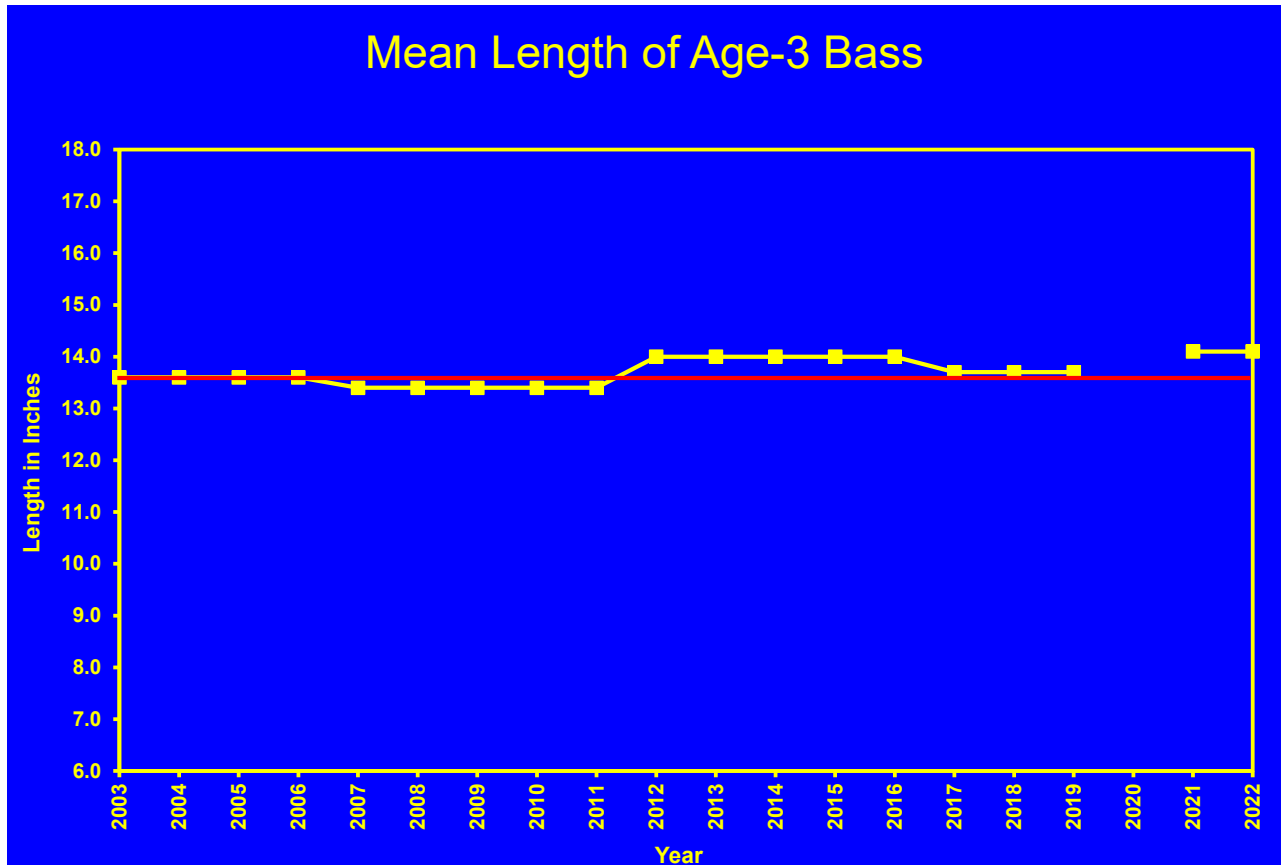
Please see the [Sportfish Assessments](#) page for an explanation of how the assessment work and for a list of other lakes with largemouth bass assessments.

**Please note the minimum size limit for largemouth bass on this lake is 15.0 inches.**



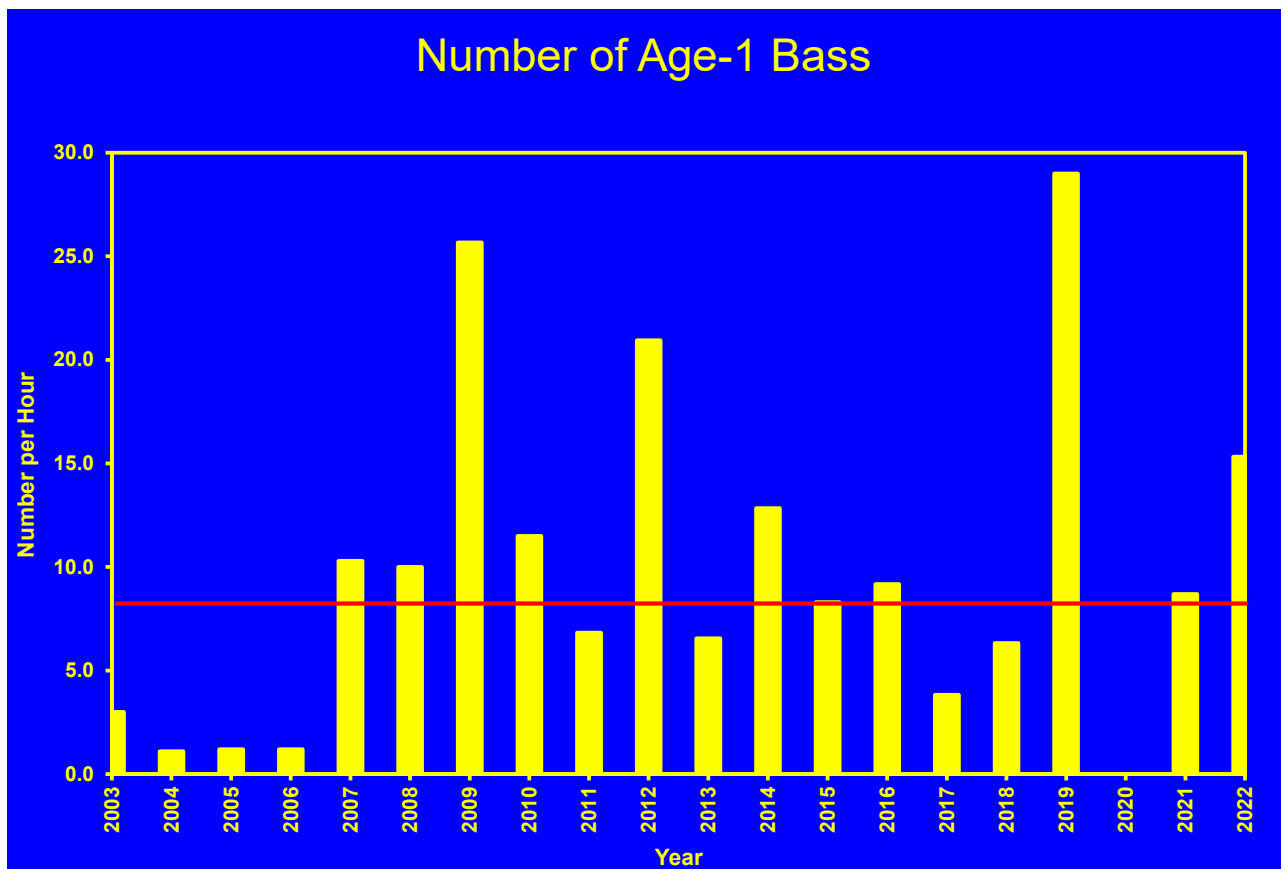
## Parameter 1 – Length at Age-3 (growth rate)

At Lake Cumberland, the length of an age-3 largemouth bass has averaged 13.6 inches since 1990, which is shown by the red line. This is considered to be an excellent growth rate for largemouth bass in Kentucky. Growth rates have remained remarkably consistent since 1999, indicating that the largemouth bass have sufficient food resources in the lake.



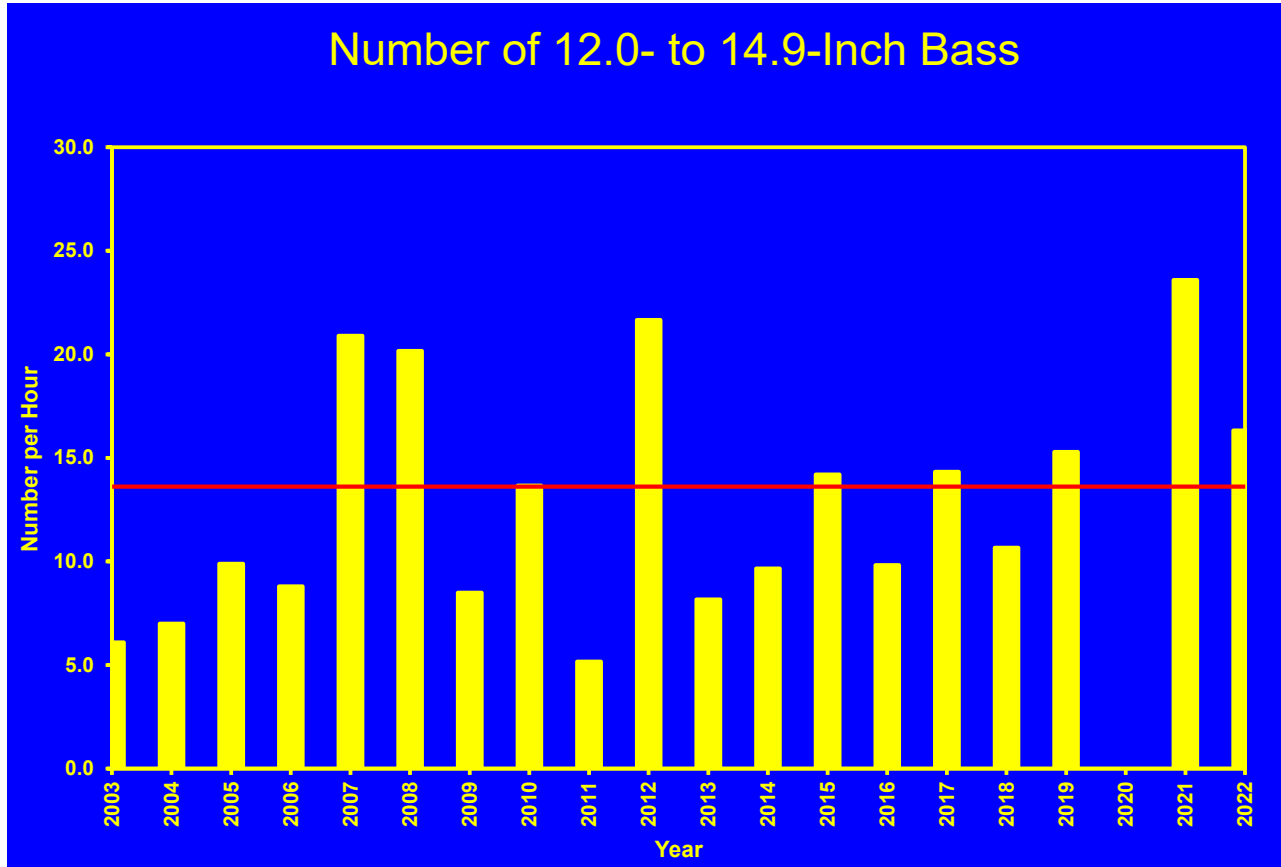
## Parameter 2 – Number of Age-1 Bass (how good the spawn was)

KDFWR looks at the electrofishing catch rates of age-1 largemouth bass in the spring to assess the success of the spawn which occurred in the prior year. This is an important parameter because the number of bass produced represents how good the fishing will be once these fish grow large enough for anglers to catch. At Lake Cumberland, age-1 largemouth bass catch rates have averaged 8.1 fish per hour of electrofishing (red line) since 1990. This catch rate is considered low when compared to other lakes in the state; however, the spawn at Lake Cumberland has been sufficient to maintain adequate numbers of largemouth bass in the lake. Based on the 2016 creel survey, anglers at Lake Cumberland harvest approximately 17% of the legal-sized largemouth bass. Because this is a fairly low overall harvest rate for largemouth, lower numbers of fish are required to replenish the population. Higher catch rates of age-1 bass after the drawdown may be the result of improved survival rates due to the increased cover along the shoreline. The strong 2018-year class, sampled in 2019, has helped bolster the bass population the last few years.



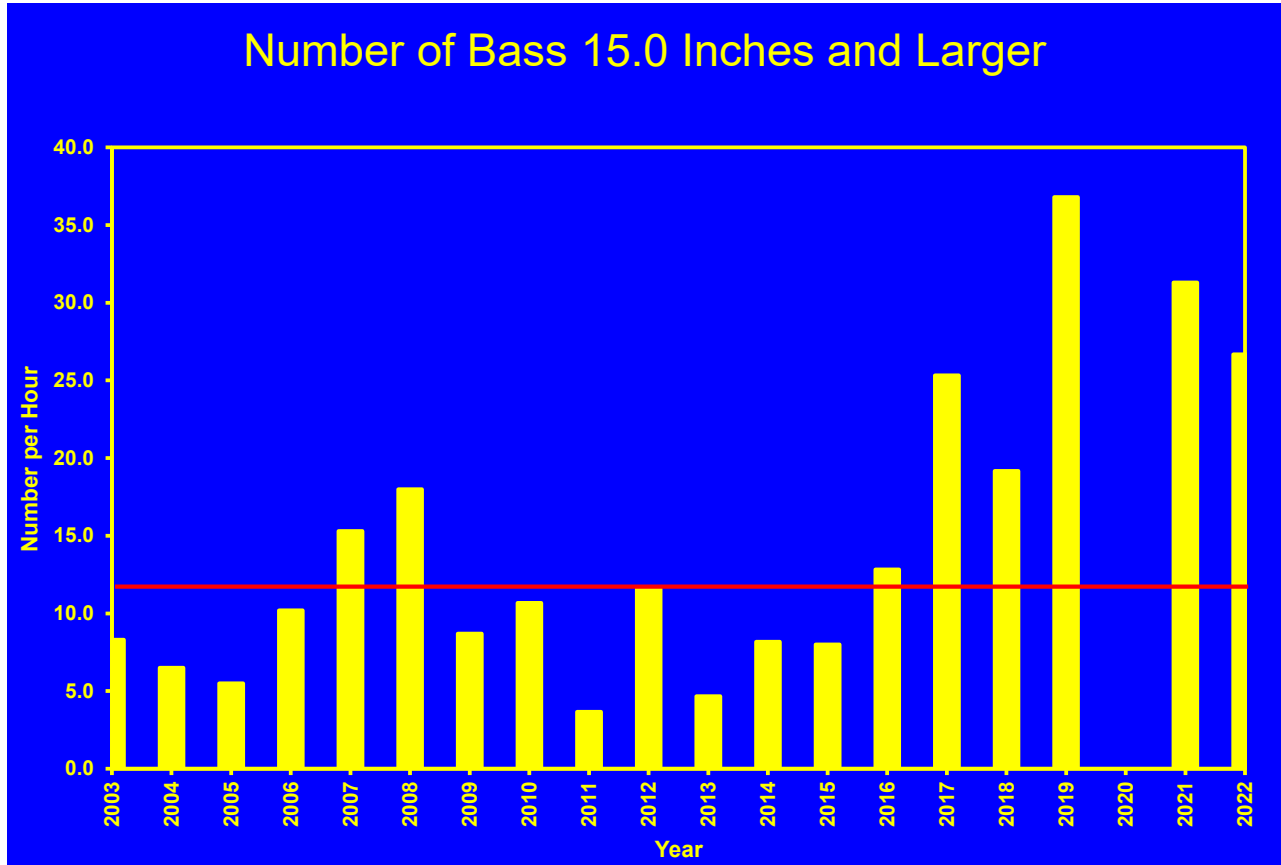
### Parameter 3 – Number of 12.0- to 14.9-Inch Bass

The electrofishing catch of 12.0- to 14.9-inch largemouth bass has fluctuated widely over the years and averaged 13.4 fish/hour (red line; 1990-present). This number is low when compared to other lakes across the state of the same size. Catch rate values between 2007-2012 should be interpreted with caution as the low water levels may have increased electrofishing efficiency. Increased catch rates in 2021 and 2022 are likely the result of the strong 2018 year class.



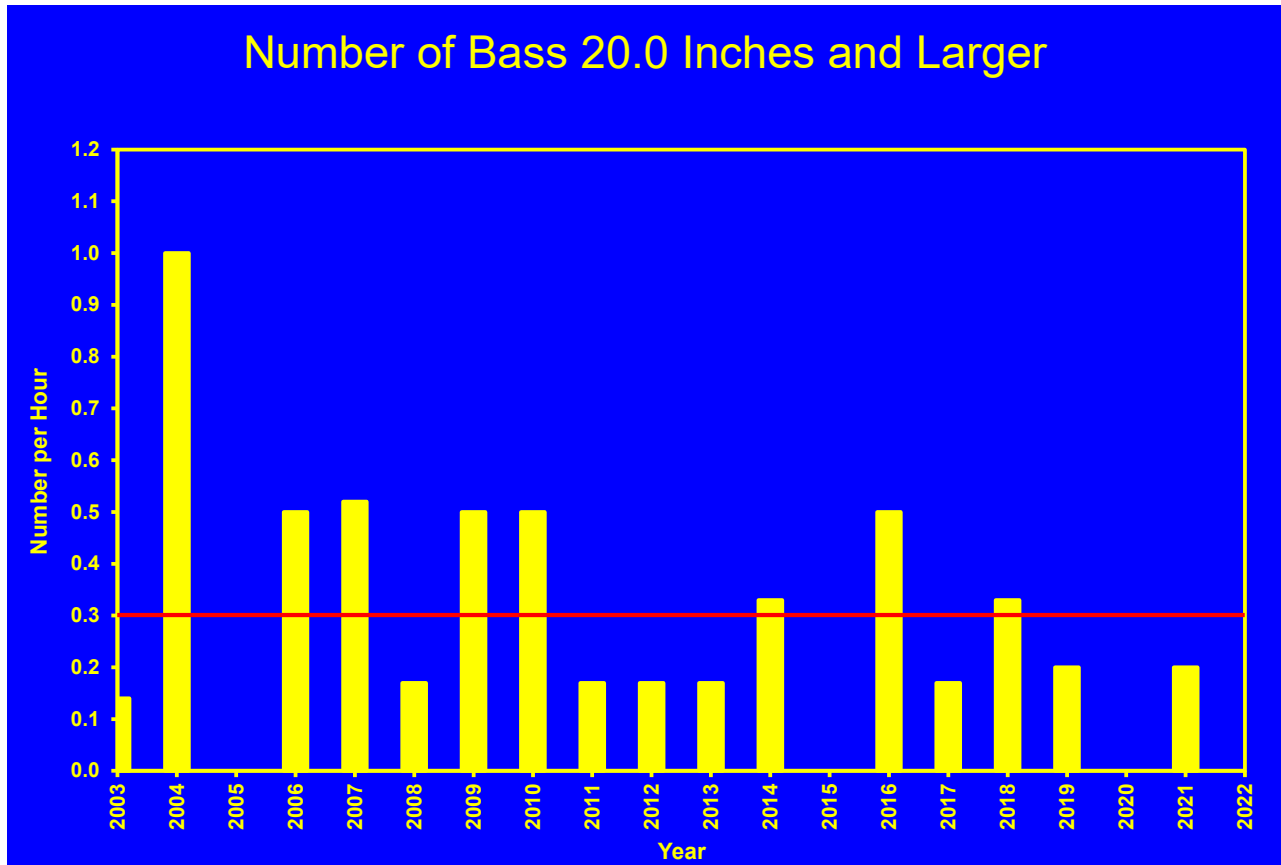
## Parameter 4 – Number of Bass 15.0 Inches and Larger

Since 1990, the catch rate of 15.0 inch and larger largemouth bass at Lake Cumberland has averaged 11.7 fish/hour of electrofishing (red line). This is a fair catch rate for this size group when compared to other lakes of this size in the state. Improved catch rates from 2016-2022 may be the result of increased survival of young fish from improved habitat after the drawdown. It appears there are adequate numbers of quality bass in the population, and fishing should be good for the next few years.



## Parameter 5 – Number of 20.0-Inch and Larger Bass

The electrofishing catch of 20.0-inch and larger largemouth bass has averaged about 0.3 fish/hour for Lake Cumberland since 1990 (red line). When compared to other lakes in the state, this is considered a fair catch rate for this size group. Although the number is somewhat low, anglers still have the opportunity to catch a trophy-sized largemouth on occasion.



## Overall – Total Assessment Score (All five parameters added together)

Overall, the largemouth bass fishery at Lake Cumberland has averaged a fair rating (10.8) over the past 32 years. The relatively low catch rates for the various size classes have detracted from the assessment in most years. Our electrofishing efforts are designed to assess the total black bass population on Lake Cumberland, not just the largemouth bass. This approach likely dilutes our largemouth bass catch rate because we sample some areas that are better suited for spotted bass or smallmouth bass. Although the largemouth bass population has averaged a fair rating on a lake-wide basis, the population would rank higher in certain areas of the lake. Furthermore, the excellent growth rate exhibited by largemouth bass in the lake, along with the relatively high proportion of larger fish in the population, should provide anglers with good fishing for years to come.

