

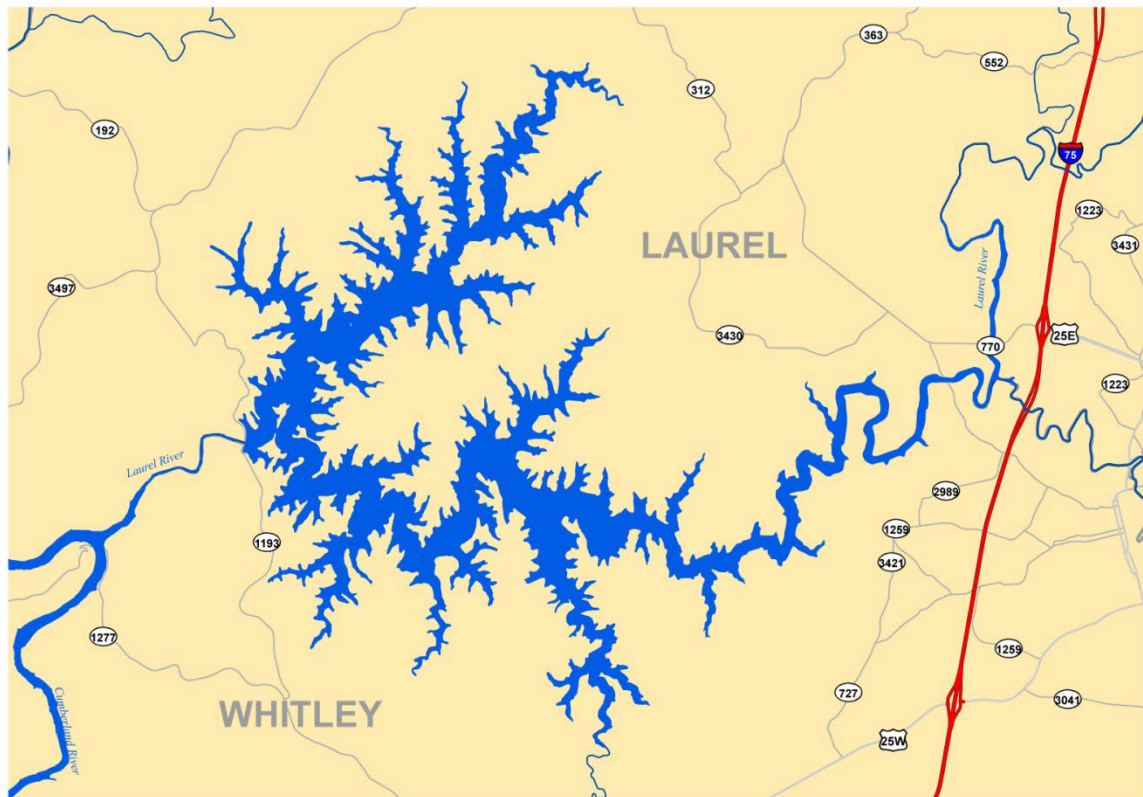
Laurel River Lake Bass Assessment 2022

Laurel River Lake is a U.S. Army Corps of Engineers mainstem reservoir located on the Laurel River in Laurel and Whitley counties in southeastern Kentucky. This 5,600-acre lake (average recreational pool, 1012 ft elevation) was impounded in 1974 with the completion of Laurel Dam (located at Laurel River mile 2.8). This deep, clear reservoir lies within the Daniel Boone National Forest and is a popular fishing and boating destination for numerous visitors each year. The majority of the lake is moderately fertile (mesotrophic), however, the upper Laurel River arm is highly fertile (eutrophic).

Laurel River Lake contains three black bass species: largemouth, spotted, and smallmouth bass. According to the creel survey in 2018, largemouth bass comprise about 61% of the black bass catch in the lake. Although largemouth bass can be found throughout the lake, they are most concentrated in the fertile upper Laurel River Arm.

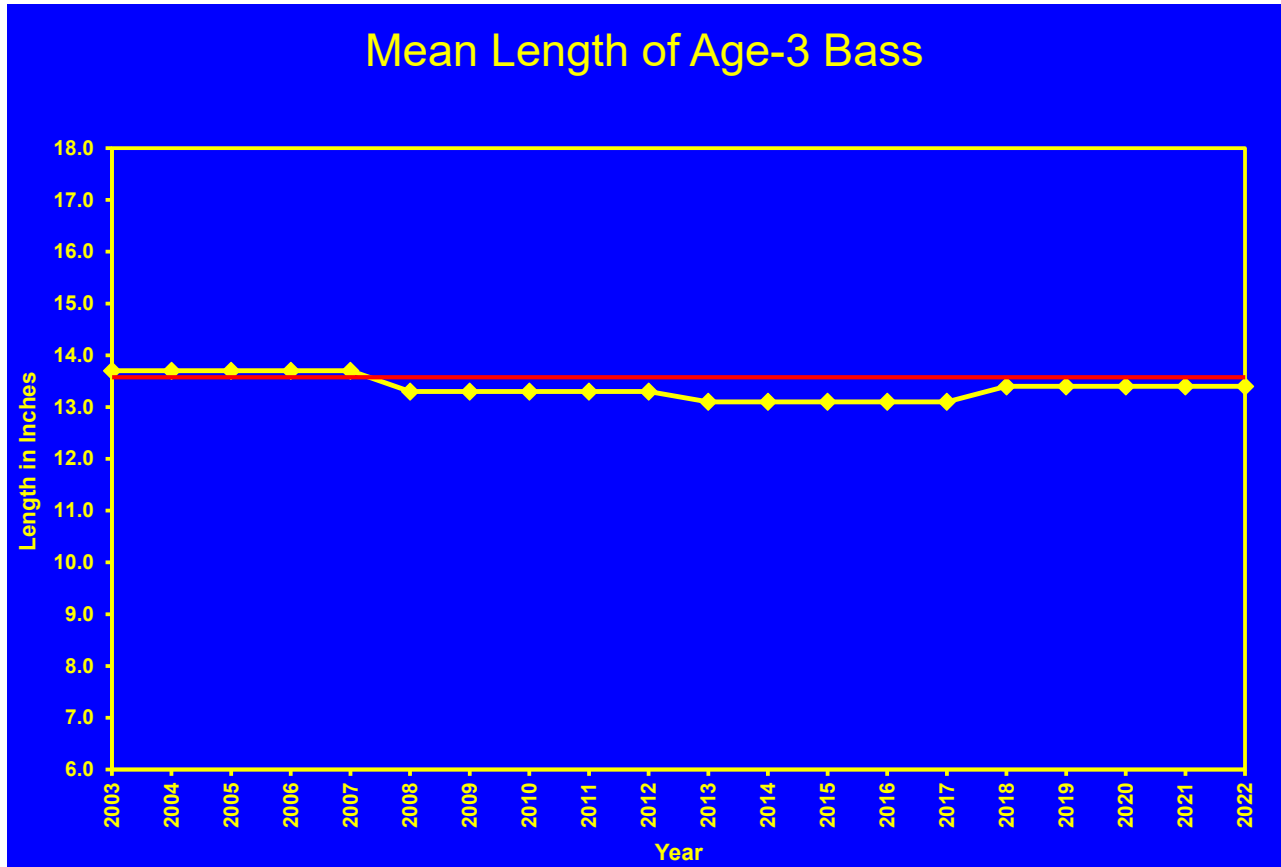
Please see the [Sportfish Assessments](#) page for an explanation of how the assessment works and for a list of other lakes with largemouth bass assessments.

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



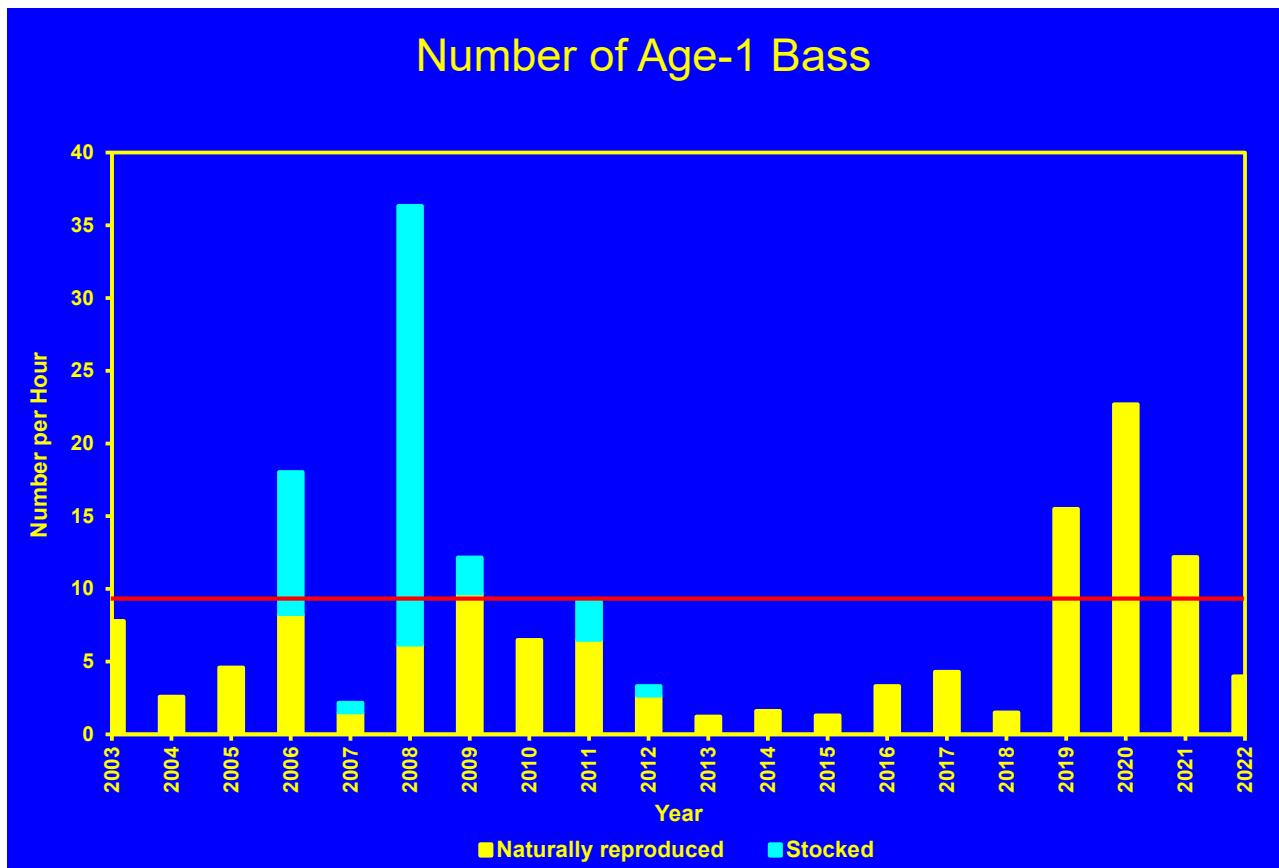
Parameter 1 – Length at Age-3 (growth rate)

At Laurel River Lake, the length of an age-3 largemouth bass averaged 13.5 inches (represented by the red line). When compared to other lakes of this size, this is considered to be excellent growth for largemouth bass. Growth rates improved in 2018, and although mean lengths of largemouth bass aged in 2008 and 2013 were lower than average, the observed growth rates were still excellent. Growth rates will be evaluated every 5 years to monitor any changes.



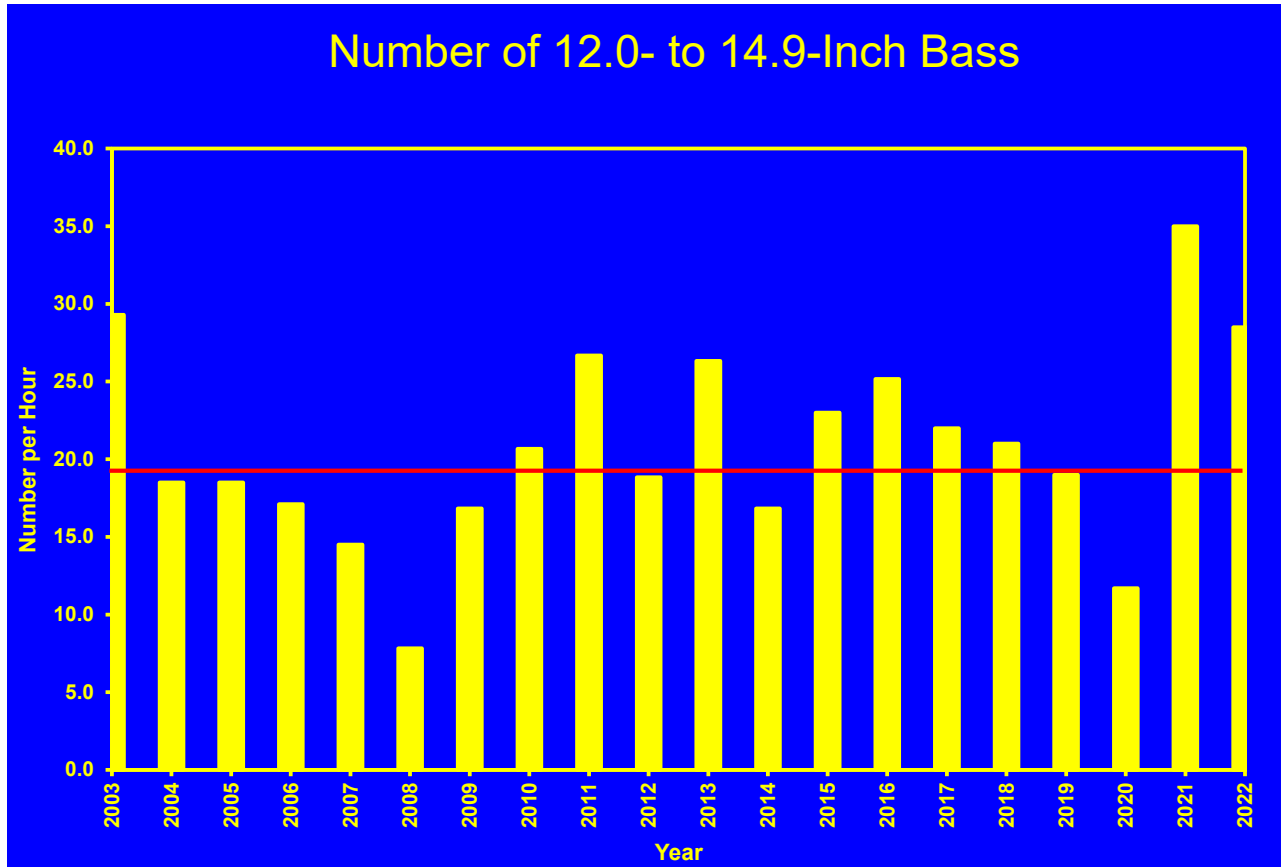
Parameter 2 – Number of Age-1 Bass (how good the spawn was)

KDFWR looks at the spring electrofishing catch rates of age-1 largemouth bass to assess the success of the spawn that occurred in the prior year. For example, the age-1 catch rate in 2016 would represent the 2015 year-class. 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 Laurel River Lake, age-1 largemouth bass catch rates have fluctuated widely and have averaged 9.3 fish per hour of electrofishing (red line; 1990-present). When compared to other lakes of this size, the average catch rate of age-1 bass at Laurel River Lake is considered to be relatively low. Supplemental stockings of young largemouth bass occurred in the fall from 2005-2008 and 2010-2012 to bolster weak year classes. The fall stockings in 2005 and 2007 were effective, as stocked fish (indicated by the aqua-colored bars) were numerous in the spring 2006 and 2008 samples and contributed to the higher than average catches in those years; however, these increased year classes did not lead to improved catch rates of legal-size fish over time. Age-1 catch rates from 2019-2021 were above average, and have helped bolster the current population.



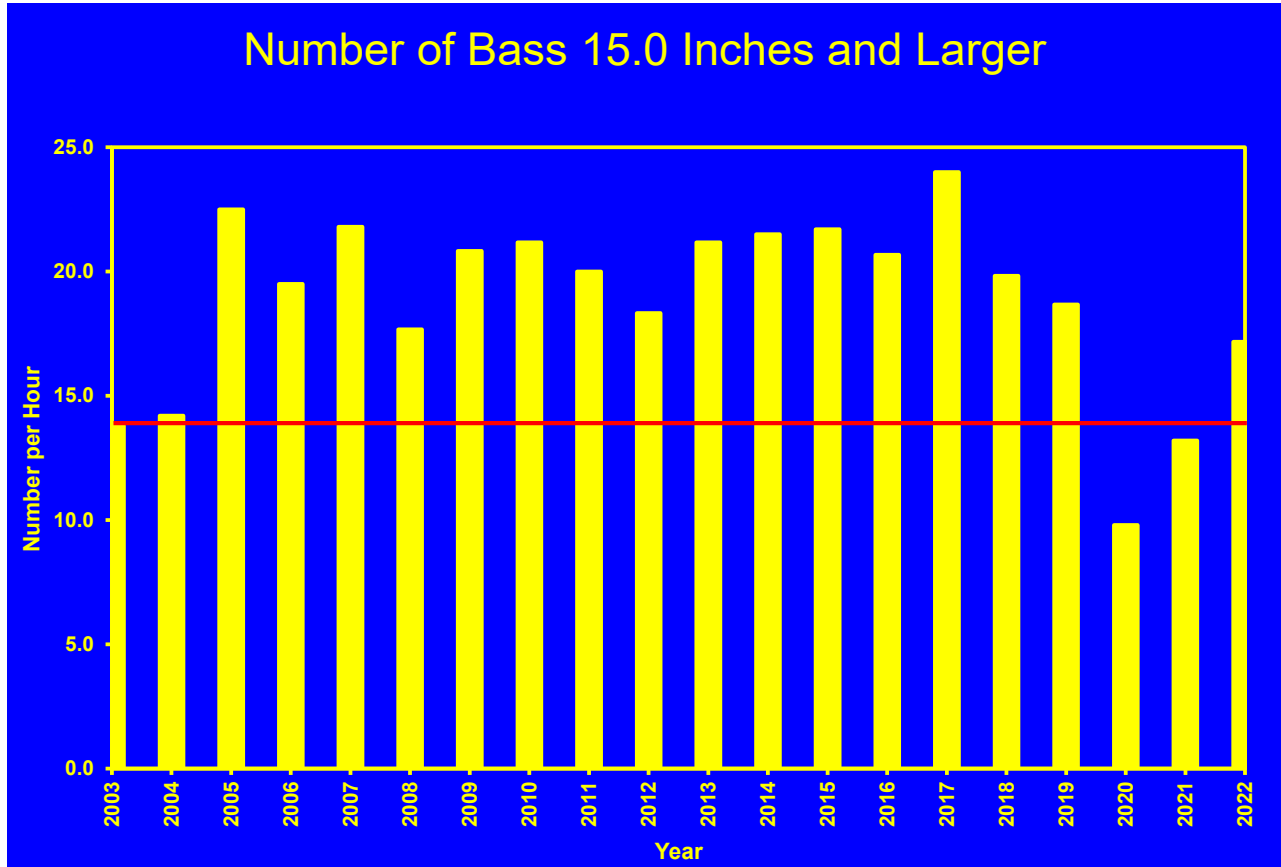
Parameter 3 – Number of 12.0- to 14.9-Inch Bass

The electrofishing catch rate of 12.0- to 14.9-inch largemouth bass has averaged 19.3 fish/hour (red line) since 1990 at Laurel River Lake, which is considered fair for lakes of its size. Although catch rates were low in 2020, catch rates of 12.0- to 14.9-inch largemouth bass have been above the historic average the last several years.



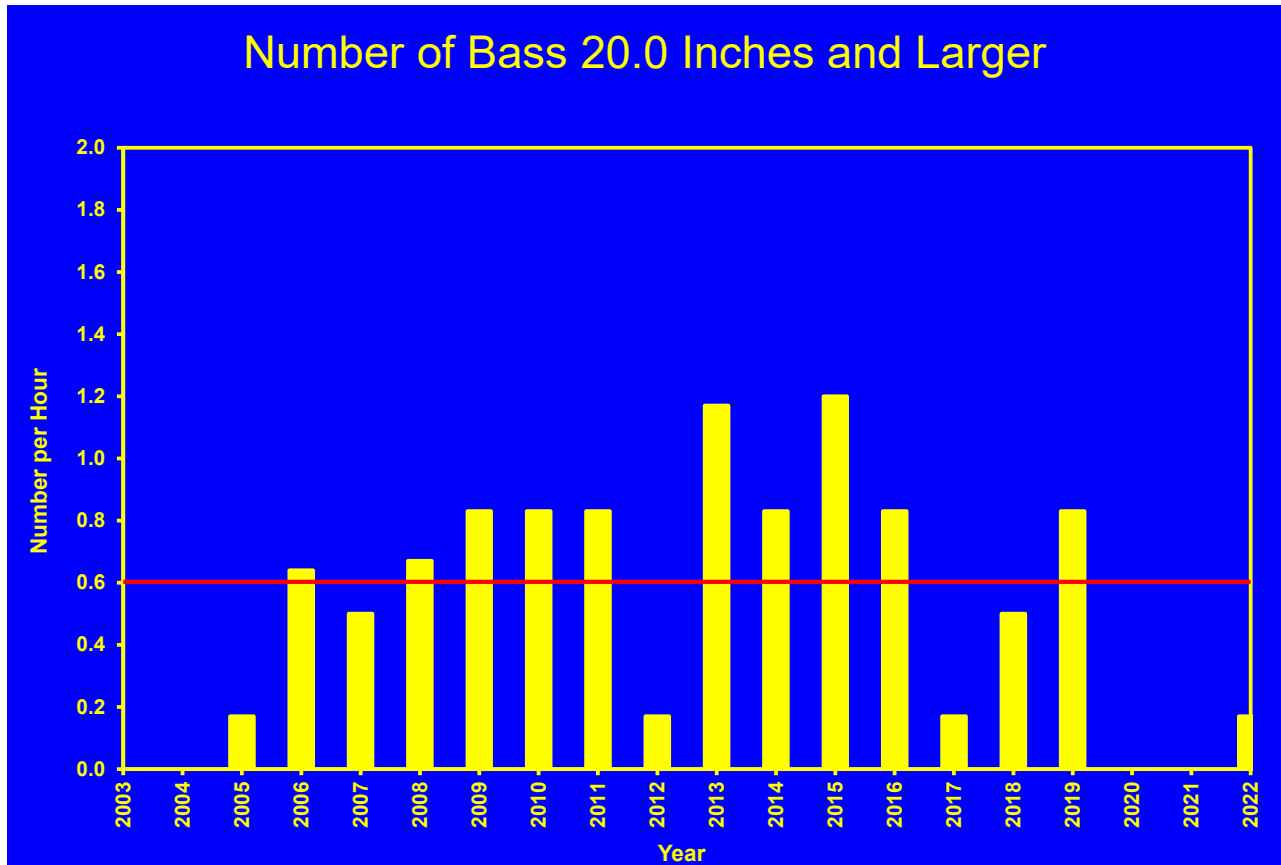
Parameter 4 – Number of Bass 15.0 Inches and Larger

The catch rate of 15.0 inch and larger largemouth bass at Laurel River Lake has averaged 13.8 fish/hour of electrofishing and had been relatively consistent from 2005-2019. Lower than average catch rates in 2020 and 2021 were likely due to consecutive weak year classes, but the population has been improving. This trend bodes well for the future, as anglers should be able to enjoy good fishing for quality largemouth for the next several 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 0.6 fish/hour (red line) for Laurel River Lake since 1990. The catch rate of these larger fish bottomed out in the early 2000's but had improved from 2006-2019. Improving numbers of largemouth bass over 15.0 inches, should help bolster this number over time.



Overall – Total Assessment Score (all five parameters added together)

Overall, the largemouth bass fishery at Laurel River Lake has averaged right at a fair/good rating (12.4; red line). Since 2005, the rating has improved slightly, largely due to the increased catch of harvestable size fish (parameters 4 and 5) and the excellent growth rates observed in the bass population. Our electrofishing efforts on Laurel River Lake are designed to assess the total black bass population, not just largemouth bass. This approach likely dilutes our largemouth bass catch rate because we sample some areas of the lake that are better suited for spotted bass or smallmouth bass. Although the largemouth bass population has averaged a fair/good rating on a lakewide basis, the population would rank higher in certain areas of the lake. A relatively high proportion of larger fish in the population, coupled with excellent growth rates, should bode well for the future of the largemouth bass fishery on Laurel River Lake.

