

Cave Run Lake Largemouth Bass Assessment 2022

Cave Run Lake is an 8,270-acre US Army Corps of Engineers reservoir on the mainstem Licking River located in Bath, Menifee, Morgan, and Rowan counties and is mostly surrounded by the Daniel Boone National Forest. Impounded in the early 1970's, this lake is a popular destination for those anglers fishing for largemouth bass, muskie, crappie, bluegill, white bass, and channel and flathead catfish. The following graphs show data trends and rankings for each of the five parameters used in the largemouth bass assessment. In 2002, 2008, 2009, 2010, 2011, 2015 and 2020 adverse water conditions made sampling unfeasible; therefore, data is not presented for those years.

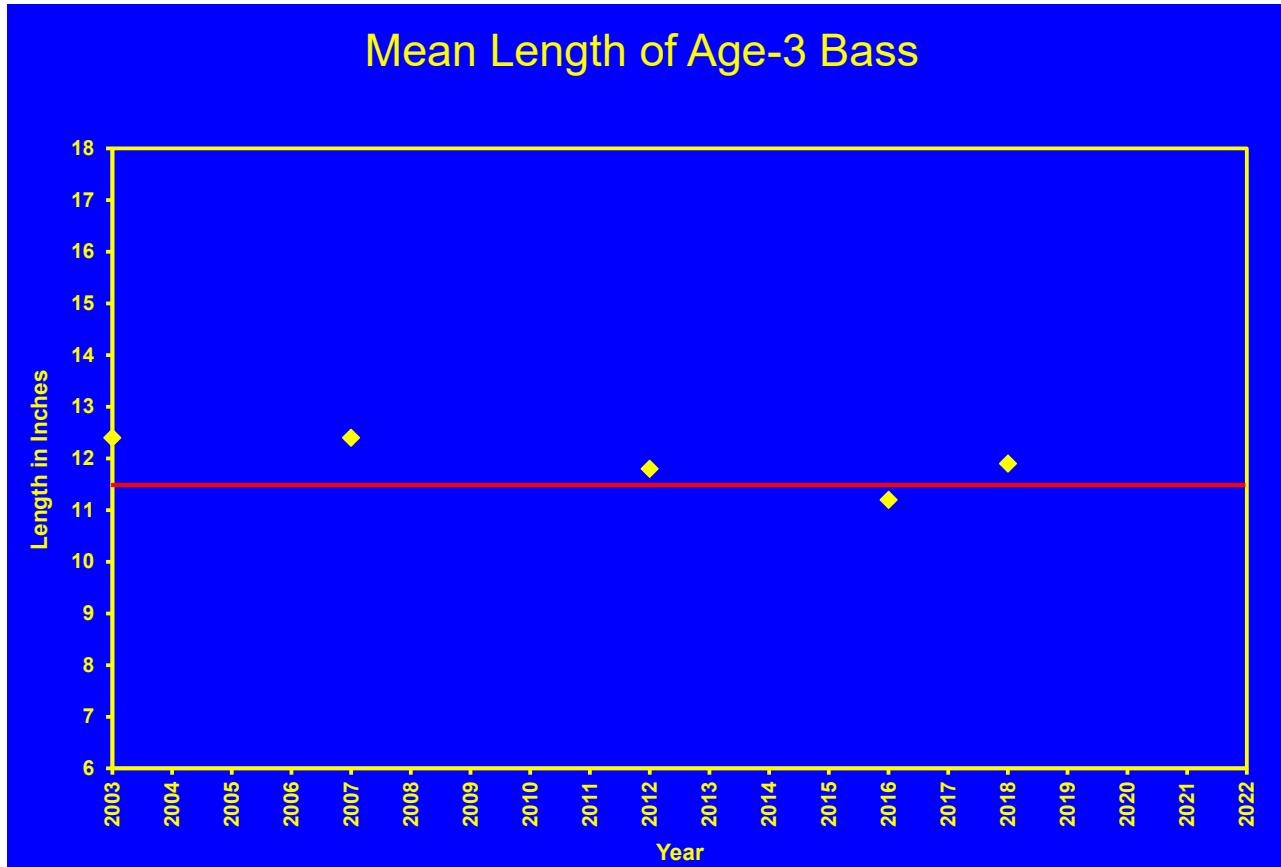
Please see the [Sportfish Assessments](#) page for an explanation of how the assessment works and for a list of other lakes with largemouth bass assessments.

Please note there is a 13.0- to 16.0-inch protective slot limit on largemouth bass which has been in effect since 1996.



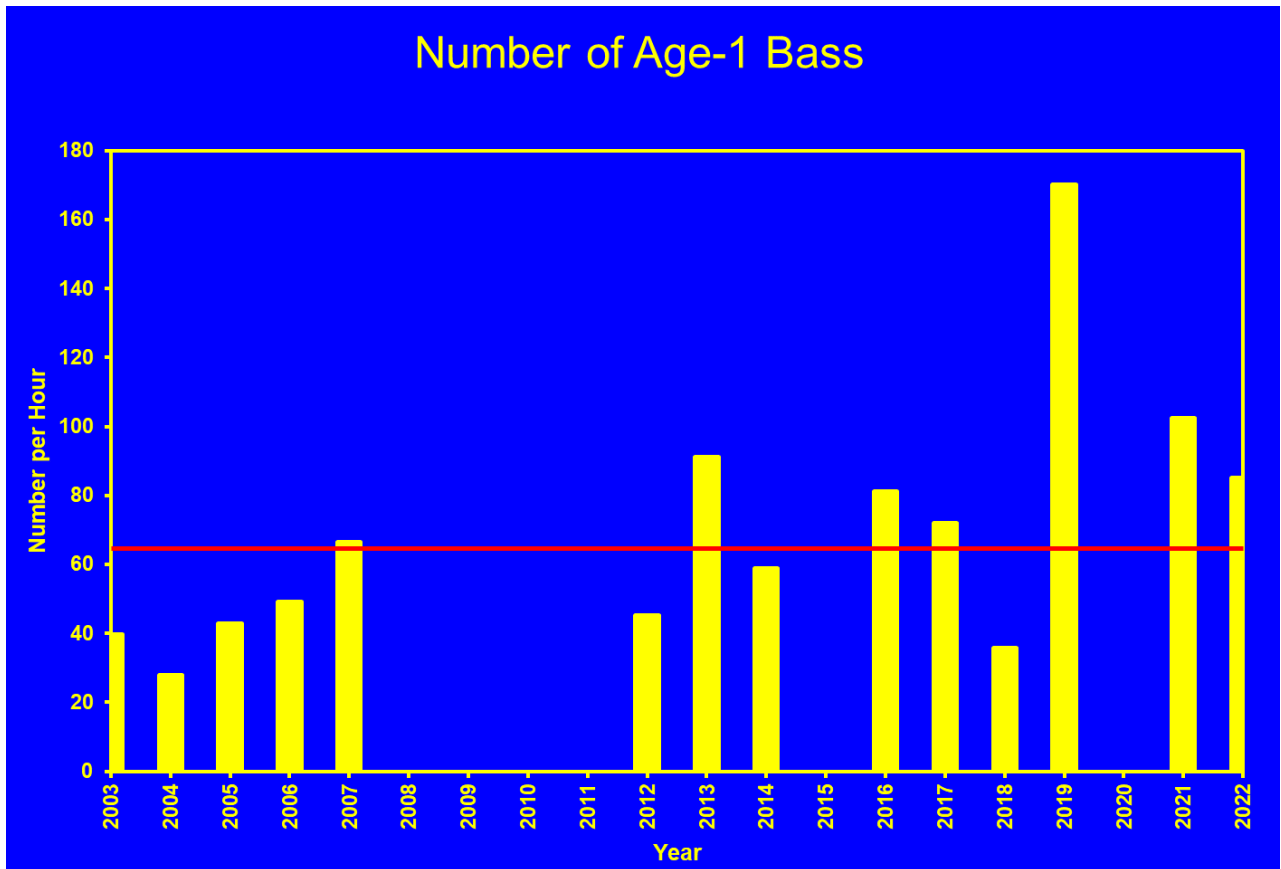
Parameter 1 – Mean Length at Age-3 (growth rate)

At Cave Run Lake, since 2000, the average length of a 3-year-old largemouth bass is 11.5 inches (represented by the red line). This parameter is an average of the lengths of all three-year-old bass collected, and is important for management purposes because it indicates how well fish are growing. When compared to other lakes of similar size, this growth rate for largemouth bass is considered “fair”. Growth rates can change annually and are tied to factors such as population density, watershed fertility, food availability, and weather.



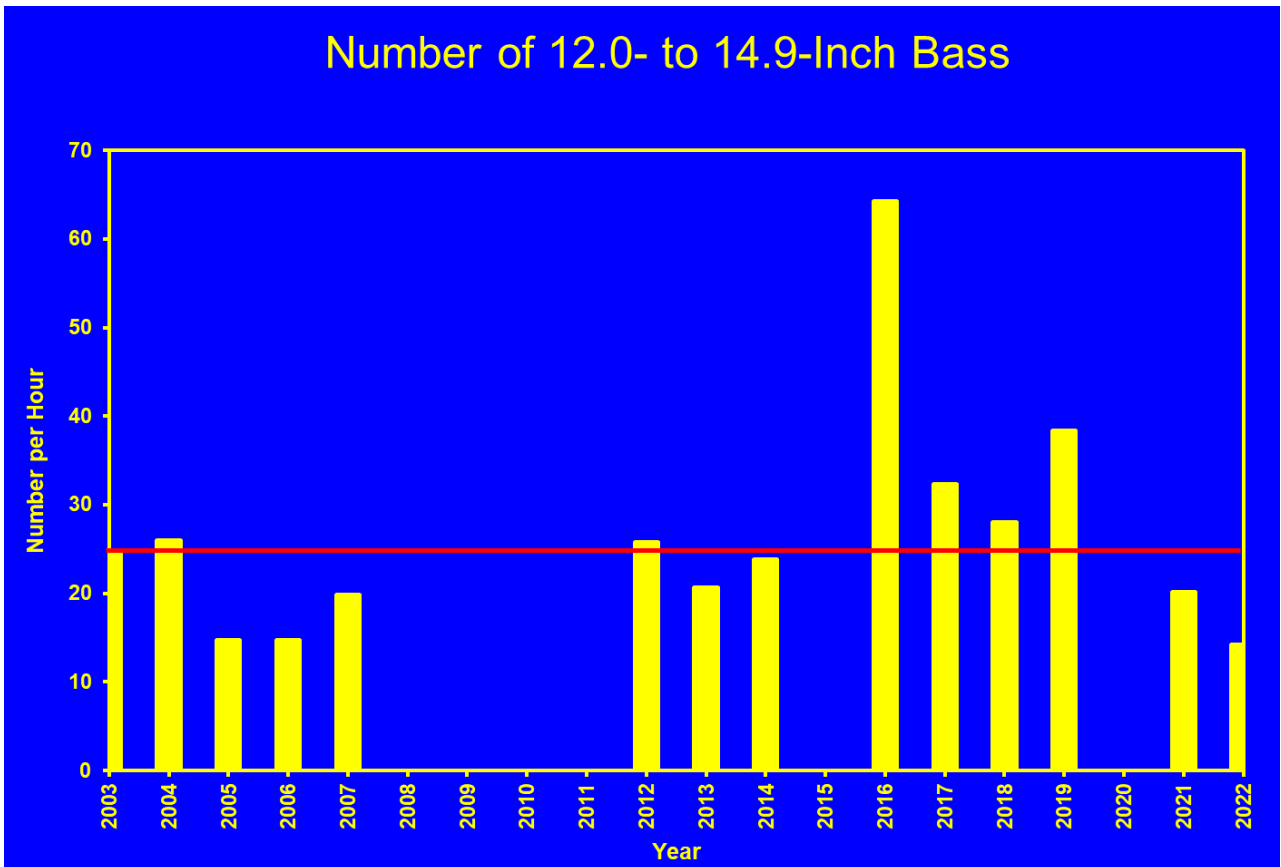
Parameter 2 – Number of Age-1 Bass (spawning success)

The electrofishing catch rate of 1-year-old largemouth bass is calculated to determine the spawning success of the previous year. This is an important parameter because the number of age-1 bass can be used as a predictor for how good fishing will be in the future. At Cave Run Lake, age-1 largemouth bass catch rates are routinely rated off the charts as “excellent”. These exceptionally high recruitment rates are one of the reasons Cave Run Lake has a slot limit. The excess recruits compete for limited resources in the lake and slow down growth rates (as indicated by the “fair” rating of the mean length at age 3). Removal of some of these fish helps free up resources and improve growth rates.



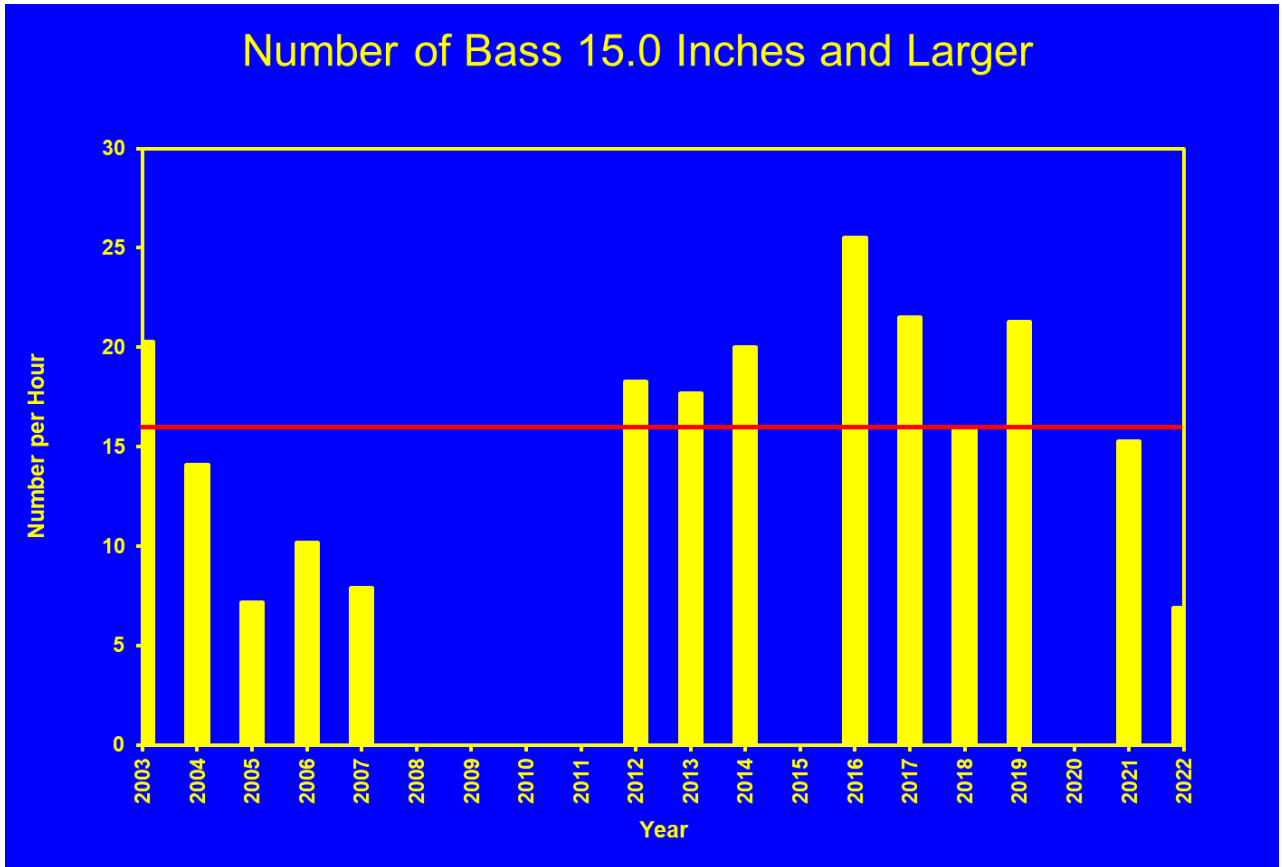
Parameter 3 – Number of 12.0- to 14.9-Inch Bass

The electrofishing catches for 12.0- to 14.9-inch largemouth bass averaged 26.4 fish/hour since 2000. This puts Cave Run Lake in the “good” rating when compared to other similarly sized lakes. Catch rates for this category can be deceiving when compared to lakes which have a 15.0-inch minimum size limit. The slot limit on Cave Run Lake allows some fish in this category (from 12.0-12.9 inches) to be harvested. The abnormally high capture rate of this size of fish in 2016 seems to have settled out in subsequent years. Removal of this potential outlier still gives a rating in the “good” category.



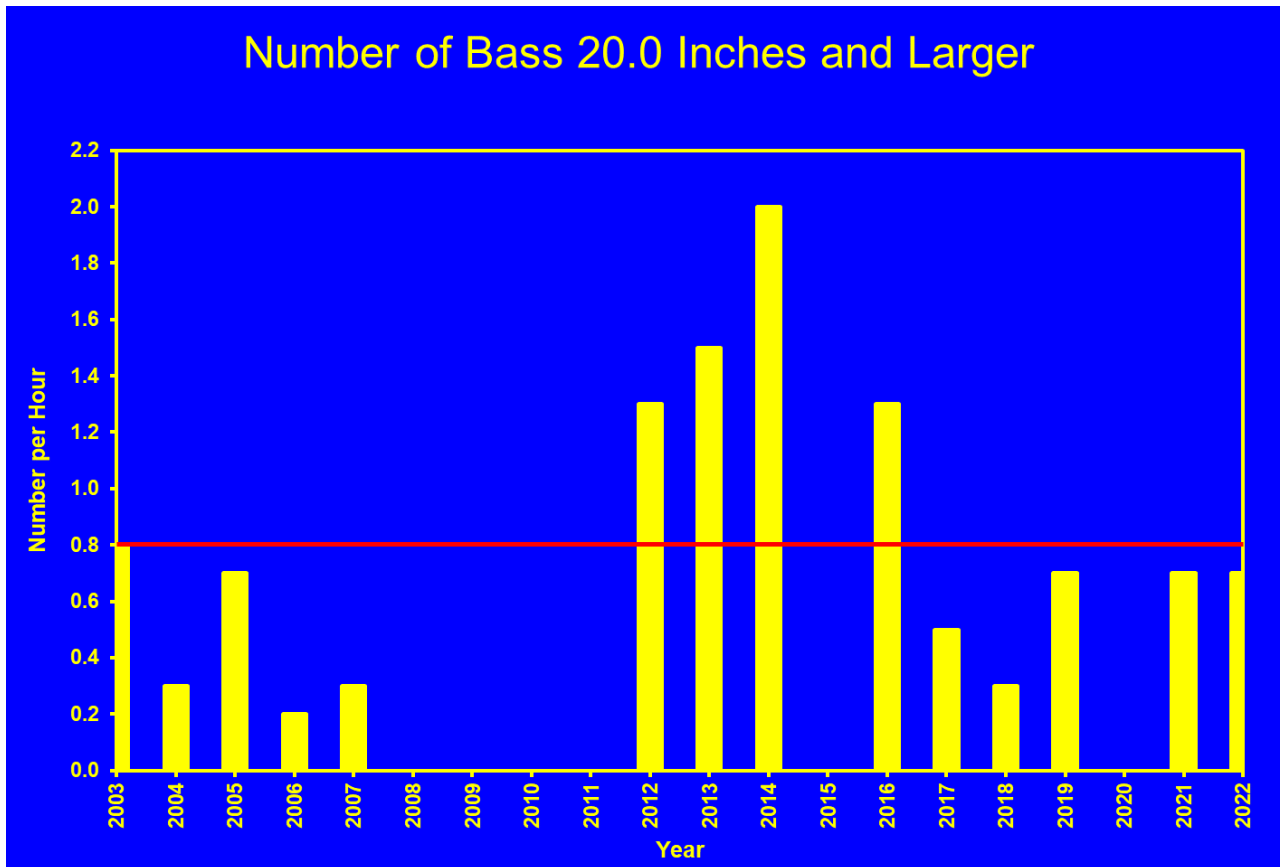
Parameter 4 – Number of Bass 15.0 Inches and Larger

The catch rate of 15.0-inch and larger largemouth bass at Cave Run Lake has averaged 15.2 fish/hour of electrofishing since 2000. When compared to lakes of similar size, this catch rate is “good”. Catch rates of 15-inch and larger fish can be inconsistent and erratic because larger fish are more difficult to sample. Even with this potential inconsistency, Cave Run Lake is routinely in the “good” range.



Parameter 5 – Numbers of 20.0-inch and larger bass

The electrofishing catch of 20.0-inch and larger largemouth bass has averaged 0.8 fish/hour for Cave Run Lake since 2000. When compared to similarly sized lakes this catch rate is considered “good”. Fish of this size in a reservoir environment are difficult to sample consistently, which usually accounts for the variability in catch rates rather than any significant change in the population. After a couple of excellent years of sampling, the values for this parameter have settled back into its average. While this recent dip might seem concerning, note that it is more consistent with the early 2000’s sampling values and right on average for the lake.



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

Overall, the largemouth bass fishery at Cave Run Lake has averaged a “good” rating (13.9) over the last 20 years, as indicated by the red line. For a couple of years, the assessment flirted with “excellent” but once again settled back into the “good” category. Sampling data can be highly variable due to a multitude of factors; therefore, it is important to look at data over time as opposed to information collected in a single year when making management decisions.

Population trends overall have been on the increase since the inception of the slot limit in 1996. Removal of some of the excess recruits has increased growth rates and allowed fish to get to a larger size quicker. Continued removal of these fish is needed to not only maintain the current fishery, but the potential is there for the fishery to improve if anglers increase the harvest of fish under the slot limit.

Note: spring sampling has not been conducted consistently in recent years due to extremely high-water levels during the sampling time frame. Samples will be collected as frequently as conditions allow.

