

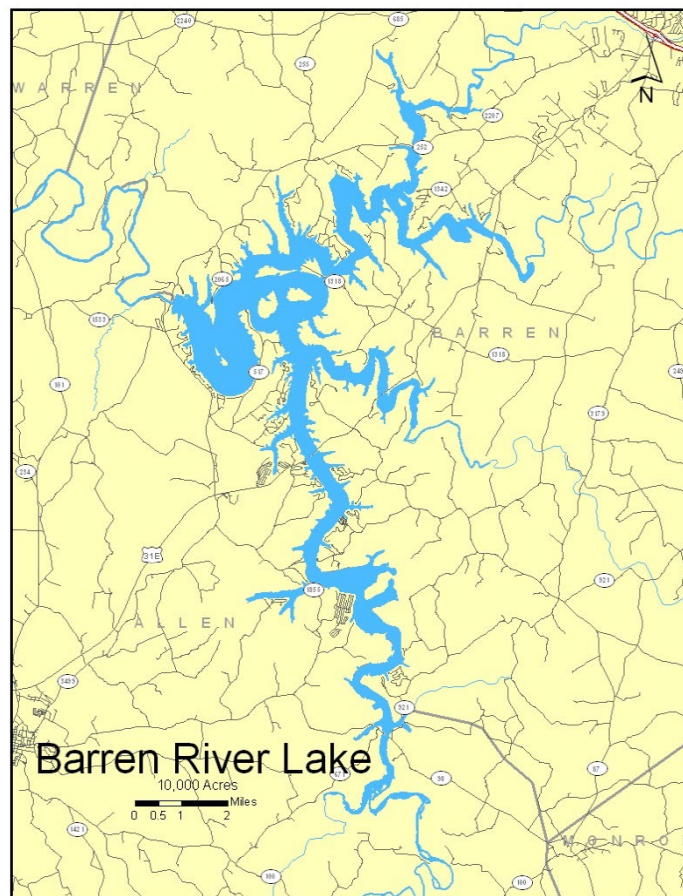
## Barren River Lake Bass Assessment 2021

Barren River Lake is a 10,000-acre reservoir operated by U.S. Army Corps of Engineers. Impounded in 1964, this flood control reservoir experiences a 27-ft fluctuation in water level with drawdown beginning in mid-October and subsequent fill up beginning in mid-March. Lake stratification occurs from mid-May to mid-October with thermocline depths during the summer months ranging from 15 to 18 feet. The lake is classified as moderately fertile and enjoys an abundant forage fish population dominated by gizzard shad.

Largemouth bass represent 90% of bass angler catch and bass sampled by spring electrofishing. Spotted bass grow to good sizes in Barren River Lake (15-17 inches) but only account for 5-10% of the bass caught by anglers or electrofishing. Smallmouth also grow to large sizes (20-inch plus), but only account for 1% of bass population.

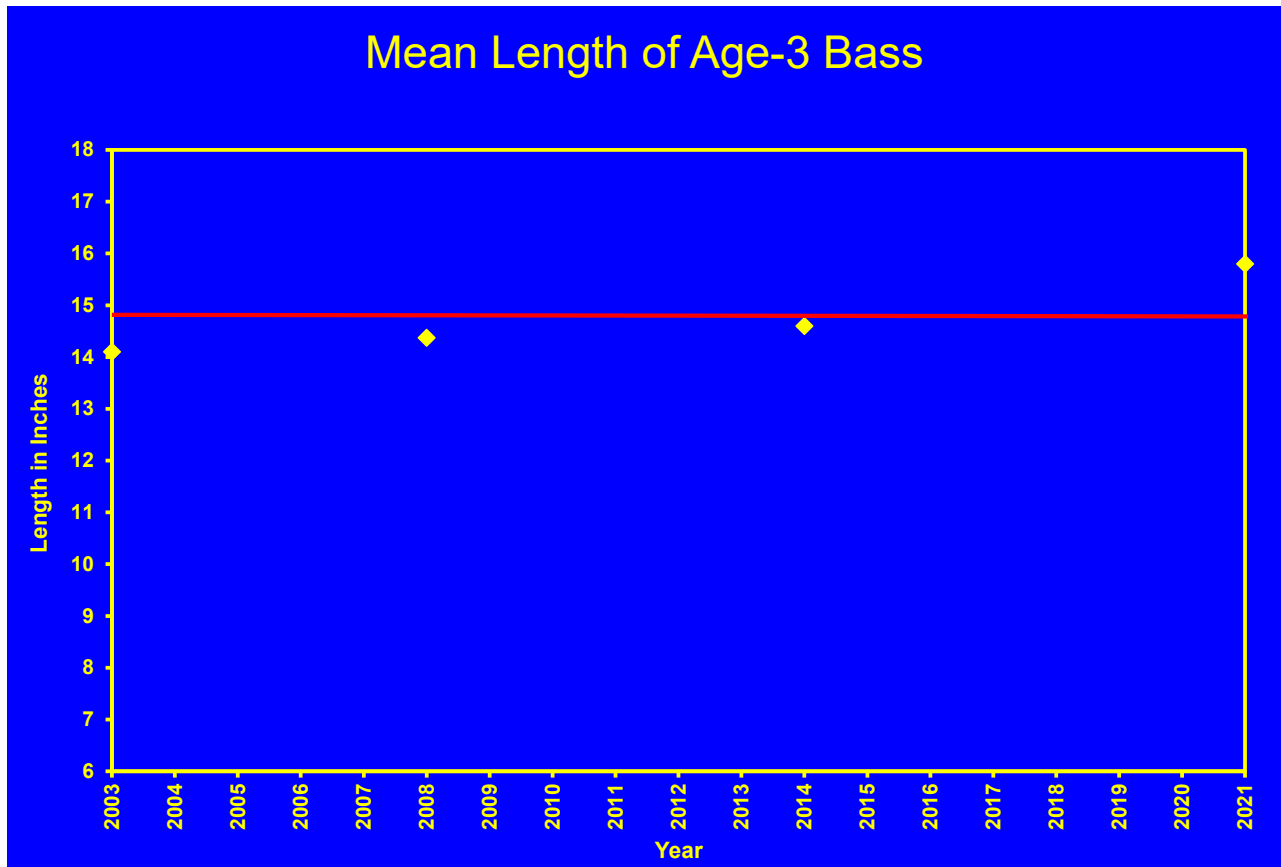
The following graphs show trends and rankings for five population parameters used in the largemouth bass assessment. Due to flooding and persisting high water levels in 2011, 2013, and 2018-20, we were unable to conduct spring bass sampling in those years.

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.



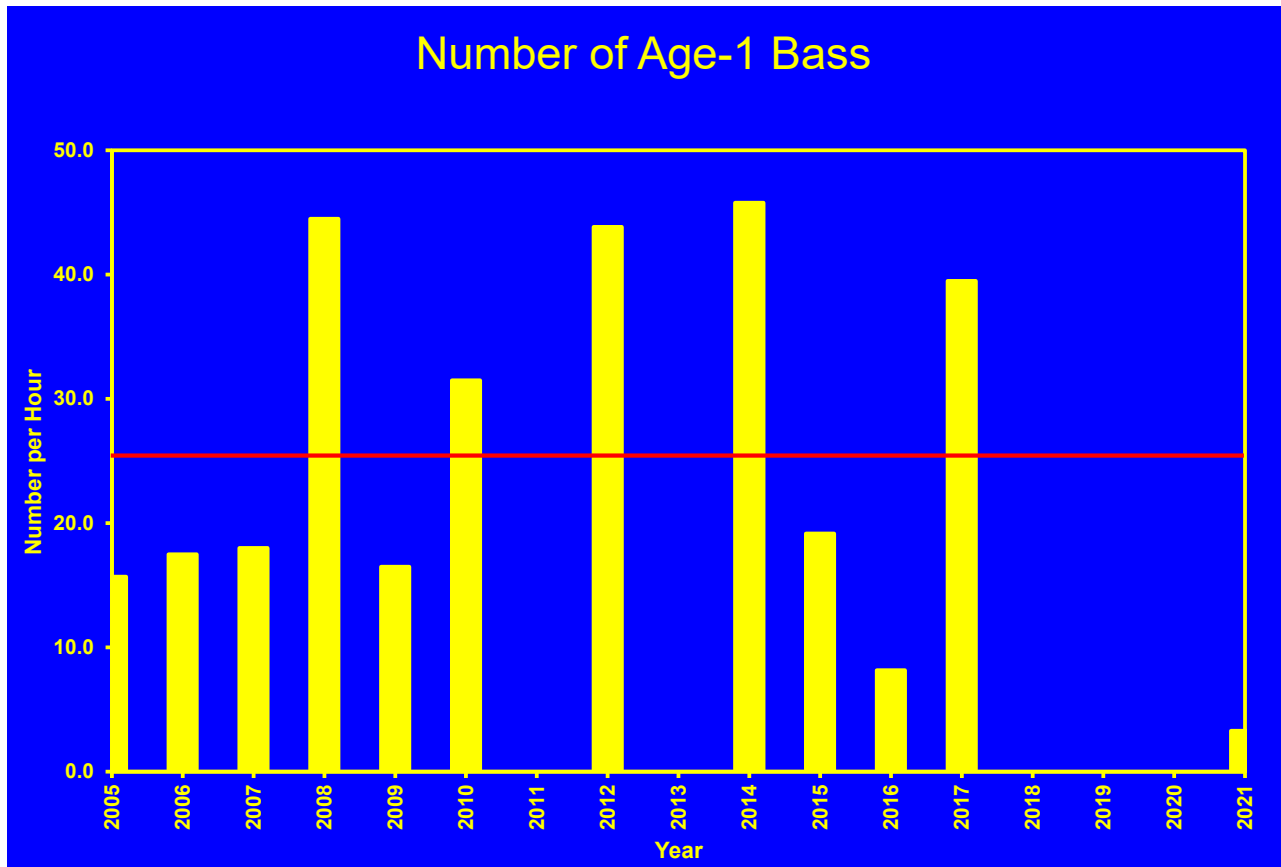
## Parameter 1 – Length at age-3 (growth rate)

Average length of age-3 largemouth bass collected at Barren River Lake (2003, 2008, 2014 and 2021) is approximately 14.7 inches (represented by the red line). This is an exceptional growth rate for a reservoir largemouth population in Kentucky and speaks to the lake's fertility and abundant food resources.



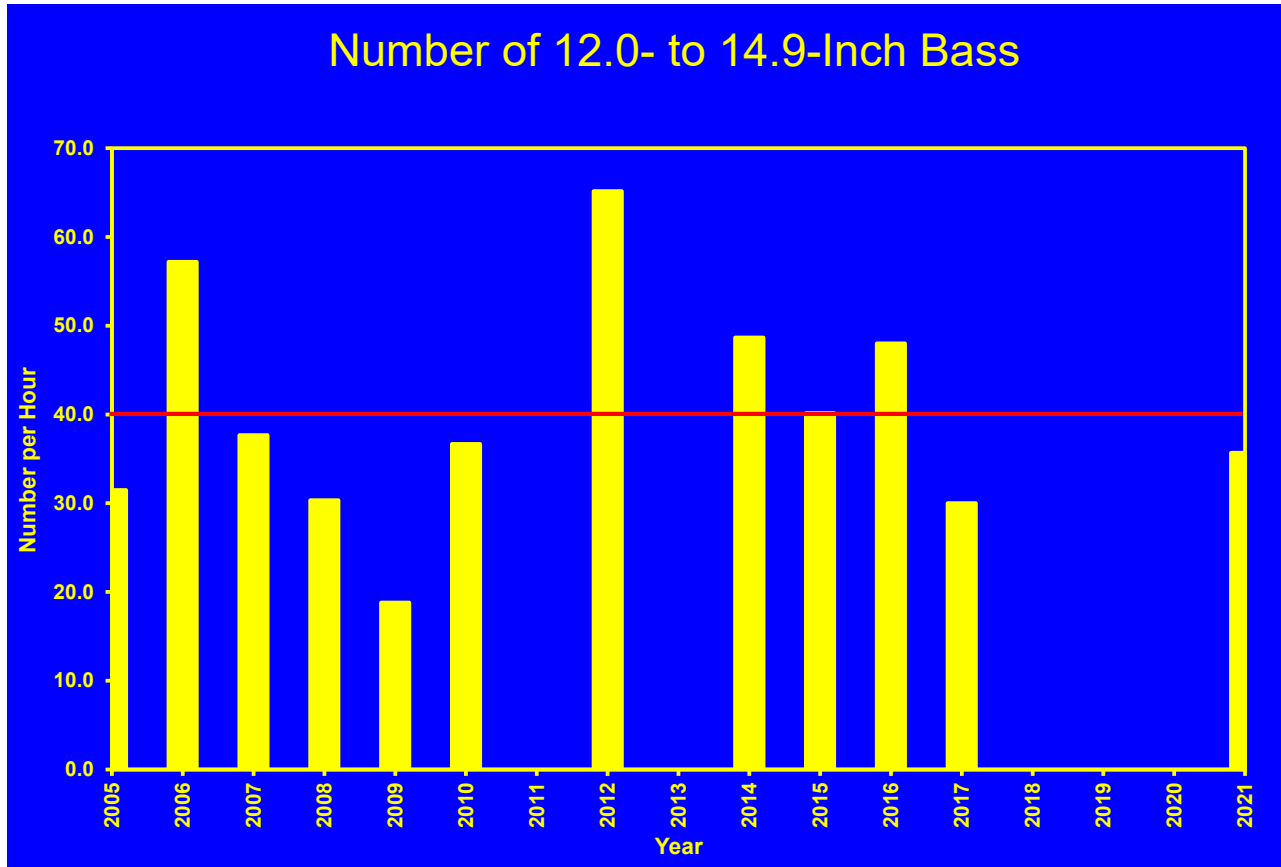
## Parameter 2 – Number of age-1 bass (how good the spawn was)

KDFWR looks at the spring electrofishing catch rates of age-1 largemouth bass to assess the success of the spawn 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 Barren River Lake, the age-1 largemouth bass catch rate is approximately 20.0 fish per hour of electrofishing in normal years. Exceptional spawns or year classes were produced in 2007, 2009, 2011, 2013, and 2016.



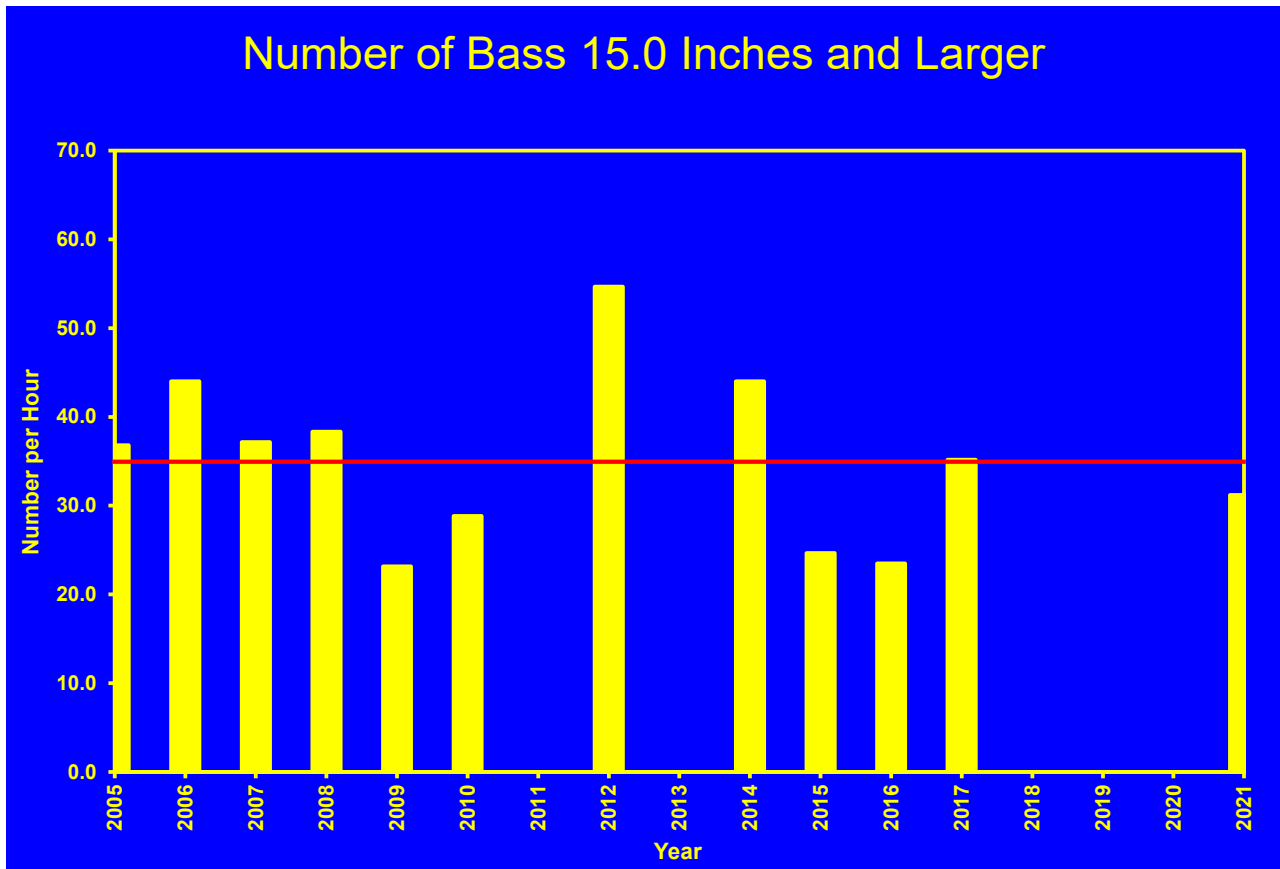
### Parameter 3 – Number of 12.0- to 14.9-inch bass

Spring electrofishing catch of 12.0- to 14.9-inch largemouth bass has averaged 40.0 fish/hour, which is exceptional compared to other large reservoirs in KY. This parameter only dipped below a very good rating (22.7 fish/hour) once in the years noted below, reflecting the lake's consistency in producing a quality bass population. This parameter affords a reasonable expectation of how many largemouth will move into the 15-inch plus size range by year's end.



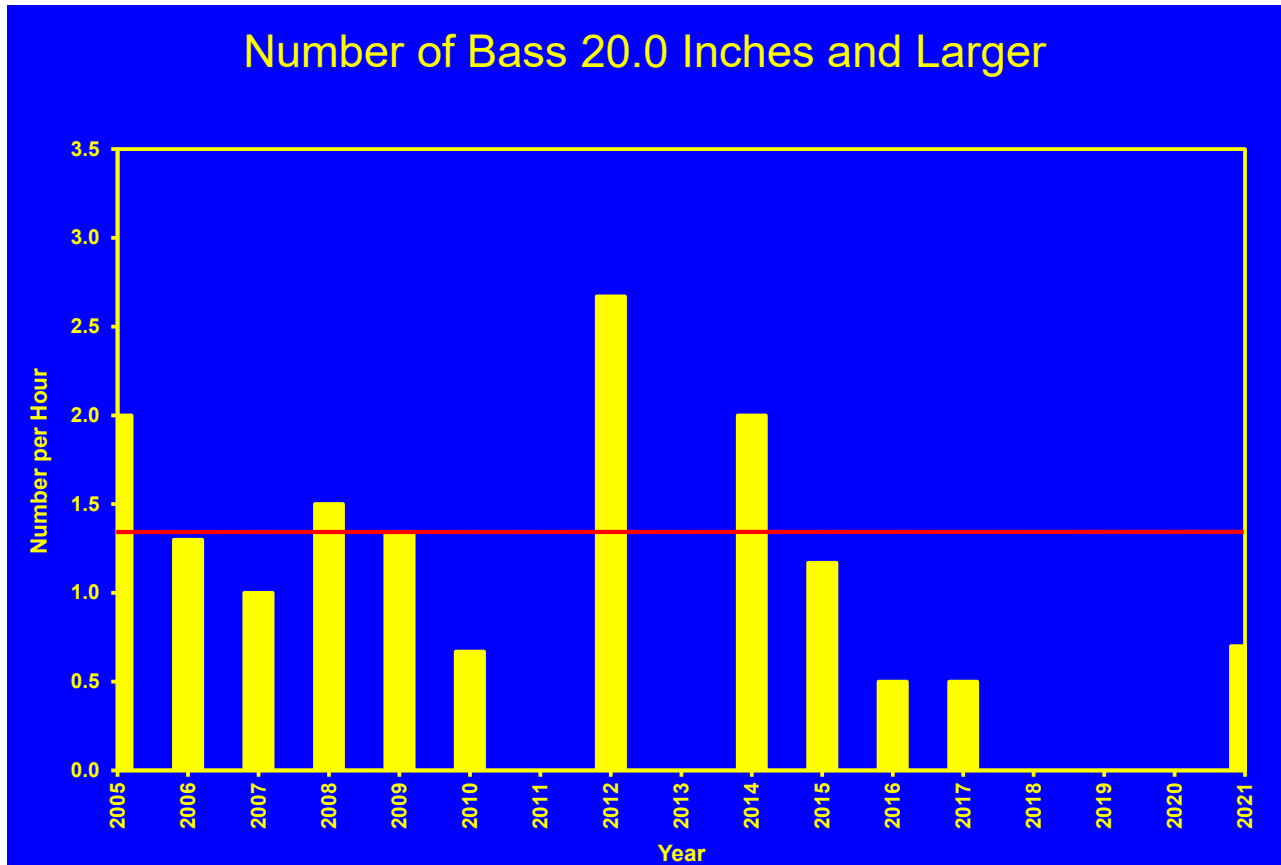
## Parameter 4 – Number of 15.0 inch and larger bass

Spring electrofishing samples of 15.0-inch and larger largemouth bass at Barren River Lake averages about 35.1 fish/hour. This parameter also reflects Barren River Lake as one of Kentucky's best largemouth bass lakes as it consistently produces exceptional numbers of 15.0-inch and larger bass. Even the leanest year for 15.0-inch plus largemouth at Barren River Lake still ranked in the excellent category (20.0 fish/hour) when compared to other large KY reservoirs. These stable yields of 15.0-inch plus largemouth make it one of the most consistent quality largemouth bass fisheries in the state.



## Parameter 5 – Numbers of 20.0-inch and larger bass

Spring electrofishing catch of 20.0 inch and larger largemouth bass has averaged 1.3 fish/hour. Data from the past couple of years suggests lower than average “big bass” potential; however, the stability of quality bass production makes catching trophy largemouth in most years a very possible occurrence. Largemouth bass in Barren River Lake take at least 5-8 years to achieve 20.0 inches in length.



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

Overall, the largemouth bass fishery at Barren River Lake has averaged an excellent rating (17.7). The largemouth bass population at Barren River Lake has historically (prior to years noted in this assessment) been consistently good and ranked as one of the top bass fisheries in the state.

