Grayson Lake Bass Assessment 2016

Grayson Lake is a 1,512-acre multipurpose reservoir on the Little Sandy River. This lake, located primarily in Carter County, is a clear, infertile reservoir that has developed into a popular fishing destination for largemouth bass, crappie, hybrid striped bass and catfish. The following graphs show trends and rankings for each of the five population parameters used in the largemouth bass assessment.

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 that the minimum size limit for largemouth bass on this lake is 15.0 inches.
Parameter 1 – Length at age-3 (growth rate)

At Grayson Lake the length of an age-3 largemouth bass has averaged 11.1 inches since 1996 (represented by the red line). When compared to other lakes of similar size, the growth rate for largemouth bass at Grayson Lake is considered “Poor”. The relatively stable growth rates from 1996 – 2001 slightly deviated in 2008 to 11.6 inches, this was the last year that KDFWR aged bass at Grayson Lake. Growth rates are generally related to factors such as population density, food resources, and weather patterns.
Parameter 2 – Numbers of age-1 bass (how good the spawn was)

KDFWR looks at the catch rate of age-1 largemouth bass to assess the success of the previous year’s spawn. This is an important parameter because the number of age-1 bass produced represents how good the fishing will be once these fish grow large enough for anglers to catch. At Grayson Lake, age-1 largemouth bass catch rates have averaged just over 75.0 fish per hour (f/h) of electrofishing. When compared to other lakes of similar size, this is considered to be an “Excellent” age-1 catch rate. For the most part, Grayson Lake is far above average in terms of spawning success.
Parameter 3 – Numbers of 12.0-14.9 inch bass

The electrofishing catch of 12.0-14.9 inch largemouth bass has averaged just over 15.0 f/h since 1990, which barely puts Grayson Lake into the “Poor” rating when compared to other lakes of similar size. In spite of the strong dip from 2000 – 2002, the lake has rebounded in recent years but still fluctuates right along the line between fair and poor. This value is important because these fish will hopefully grow to exceed the 15.0 inch legal size limit at the lake in the next couple years.
Parameter 4 – Numbers of 15.0 inch and larger bass

The electrofishing catch rate of 15.0 inch and larger largemouth bass has averaged 6.5 f/h since 1990. This is “Fair” when compared to other lakes of similar size. Since 2012, catch rates have increased to the point that they would be considered to be “Good” when compared to lakes of similar size. These high catch rates indicate that more fish are surviving past the 15.0 inch minimum size limit. Fishing most likely is better for these larger fish than it has been, but long term trends will dictate if this value continues to show improvement over historical values.
Parameter 5 – Numbers of 20.0 inch and larger bass

The electrofishing catch rate of 20.0 inch and larger largemouth bass has averaged 0.7 f/h for Grayson Lake since 1990. As compared to other lakes of similar size, this is a “Good” catch rate for this size group. In 2015, biologists observed the highest catch rates of fish over 20.0 inches for Grayson Lake and the last 3 years values have all been considered “Excellent”.

![Number of Bass 20.0 Inches and Larger](image-url)
Overall – Total Assessment Score (All five parameters added together)

Overall, when compared to other lakes in Kentucky, the largemouth bass fishery at Grayson Lake has rated “Fair” over the past 2 decades. Total assessment scores have all been considered to be “Good” over the last 5 years. Time will tell if these catch rates of larger size fish remain high, but for now anglers should get out and enjoy the fishery.