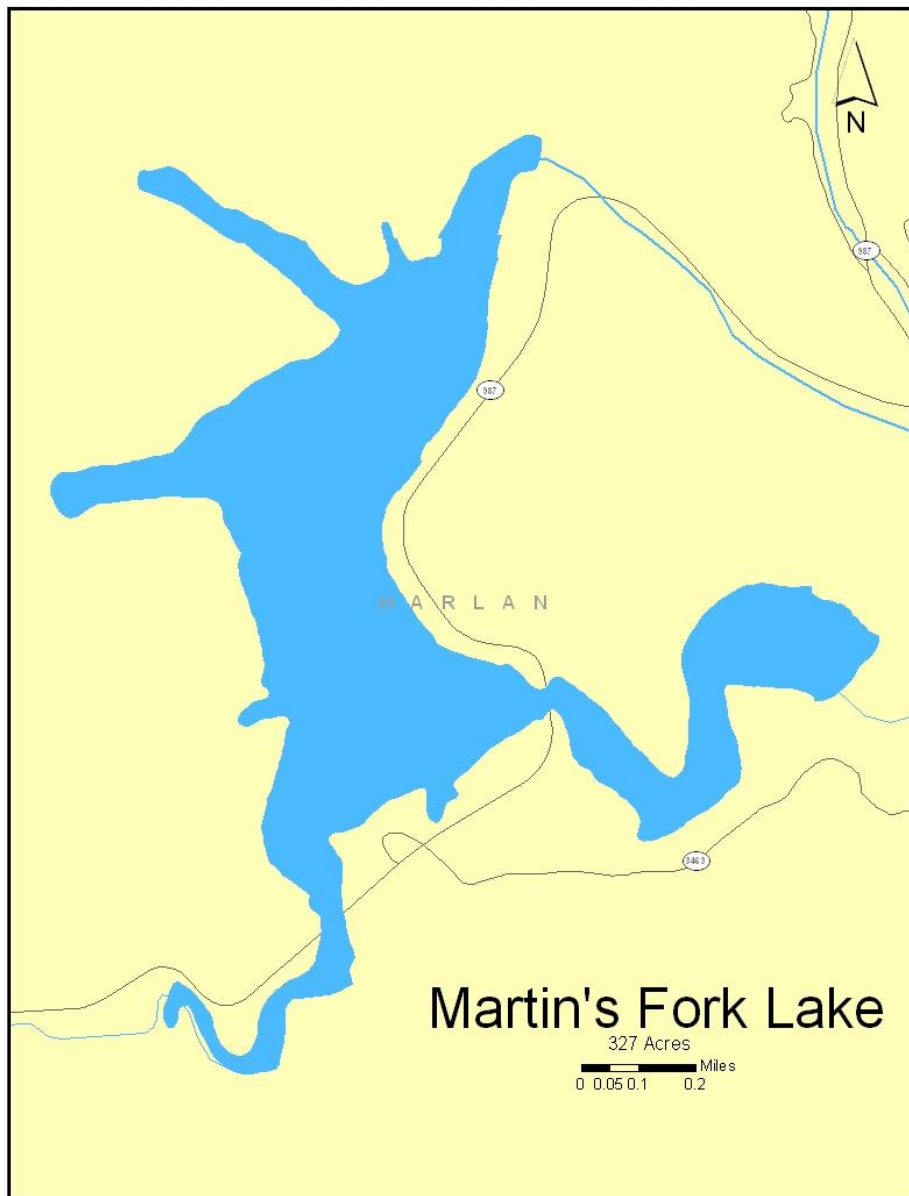


## Martin's Fork Lake Bass Assessment 2016

Martin's Fork Lake is a 334 acre multipurpose reservoir on Martin's Fork of the Cumberland River in Harlan County. Martin's Fork Lake is the only lake in Kentucky that offers anglers an opportunity to catch four species of black bass: largemouth, smallmouth, spotted, and Coosa. This lake also offers fishing for channel catfish, white crappie, bluegill and native strain walleye. The following graphs show trends and rankings for each of the five population parameters used in the largemouth bass assessment.

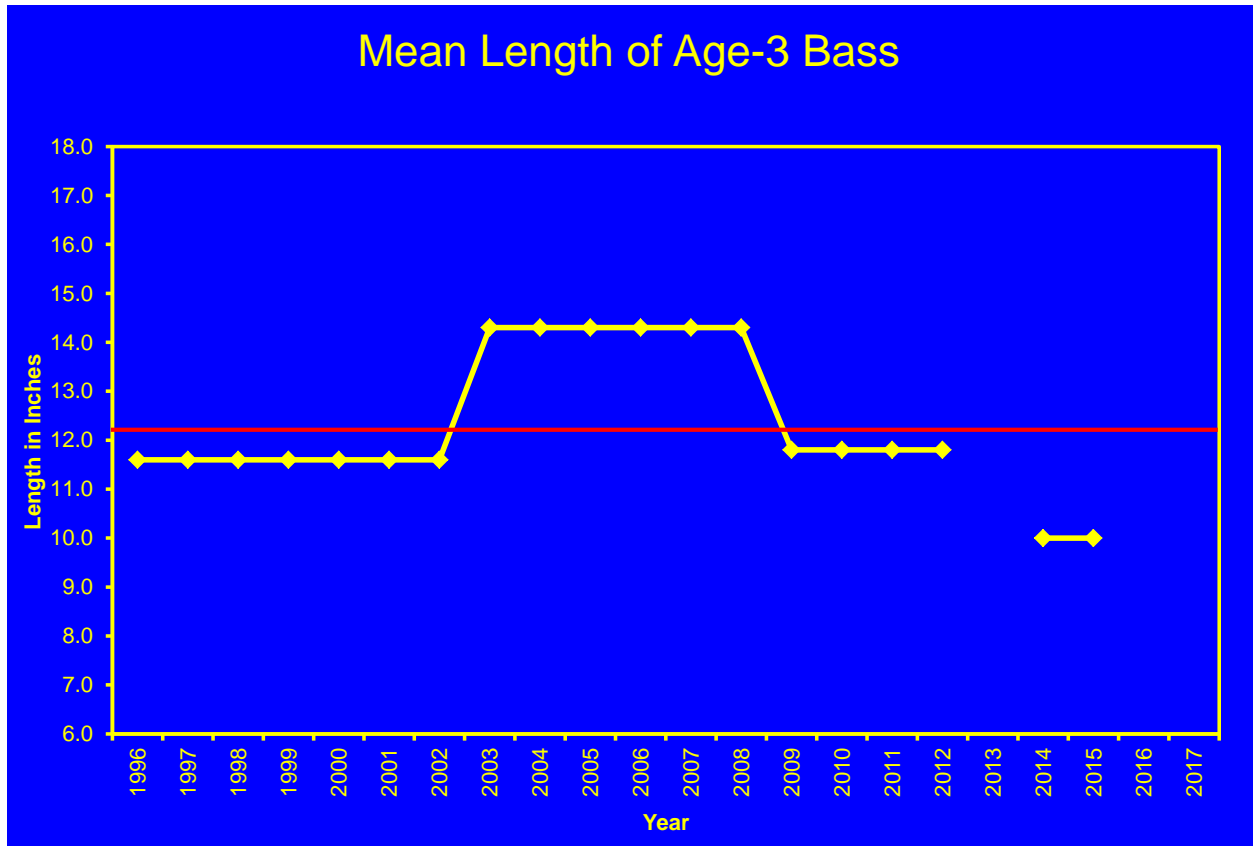
Please see the [Sportfish Assessments](#) page for an explanation of how the assessment works and for a list of other lakes with largemouth bass assessments.

The bass population is under statewide fishing regulations.



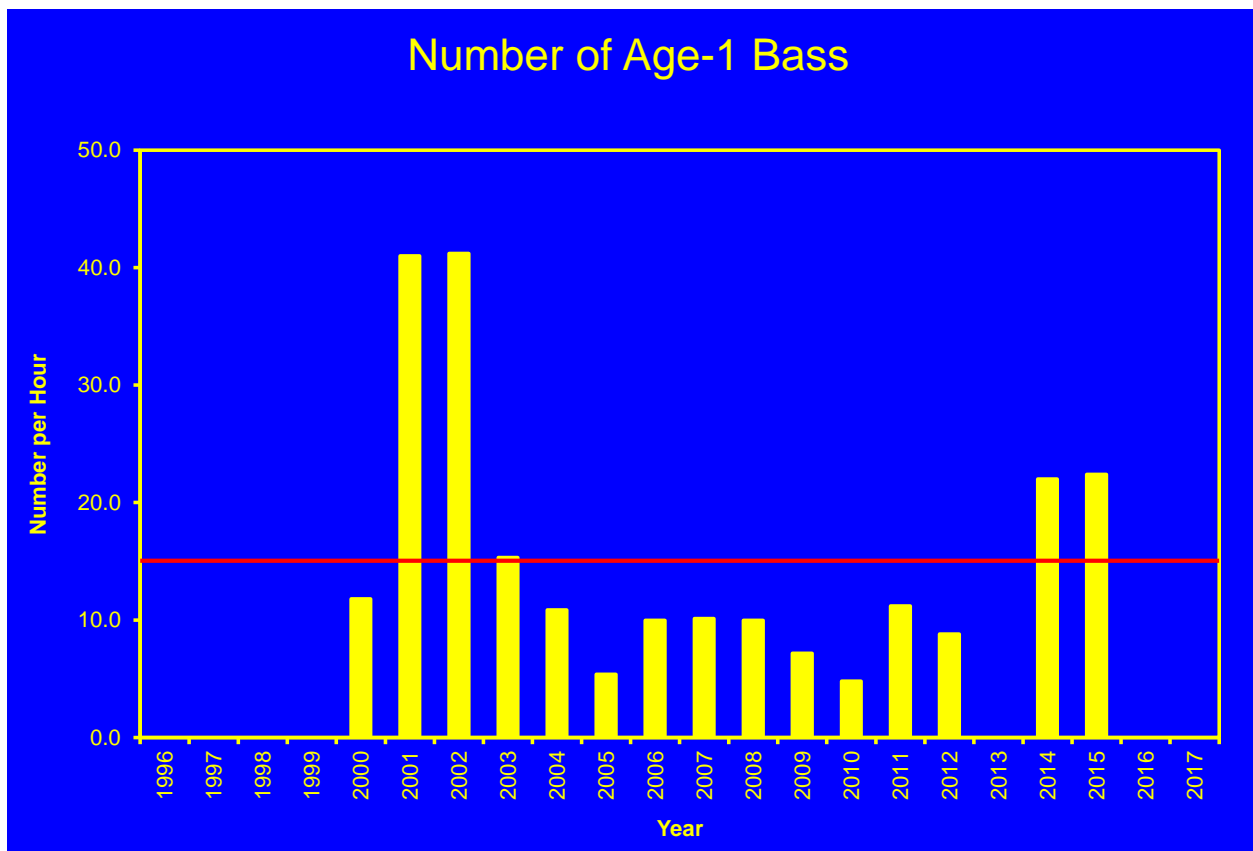
## Parameter 1 – Length at age-3 (growth rate)

At Martin's Fork Lake, the length of an age-3 largemouth bass has averaged 12.1 inches since 1986 and receives a rating of "excellent". This parameter decreased from 14.3 inches in 2003 to 10.0 inches in 2015. Although this growth rate is below average, it is still considered "good" for lakes in this size range. Growth rates are generally related to factors such as population density, food resources, and weather patterns.



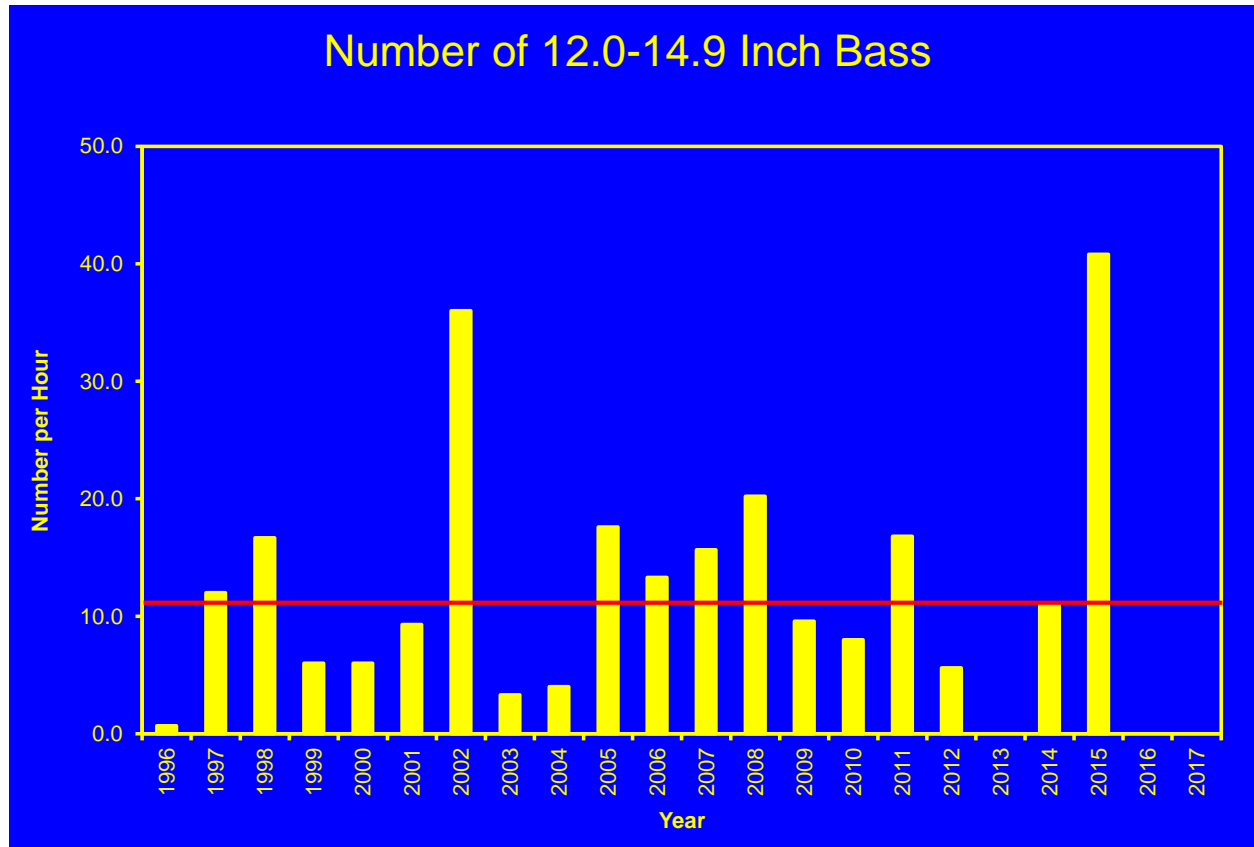
## Parameter 2 – Numbers of age-1 bass (how good the spawn was)

KDFWR looks at the 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 Martin's Fork Lake, age-1 largemouth bass catch rates have averaged 15.5 fish per hour of electrofishing (red line) since 2000. This is considered to be a "fair" age-1 catch rate. This catch rate stayed relatively low through 2012. The low age-1 catch rate is indicative of reduced spawning conditions and/or survival rates to age-1. In the fall of 2011 and 2013 Martins Fork Lake received supplemental stockings of fingerling-largemouth bass to assist with recruitment. While the low densities of age-1 fish are likely responsible for the excellent growth rates seen here, supplemental stockings will help to stabilize the population and increase angler success in the years to come.



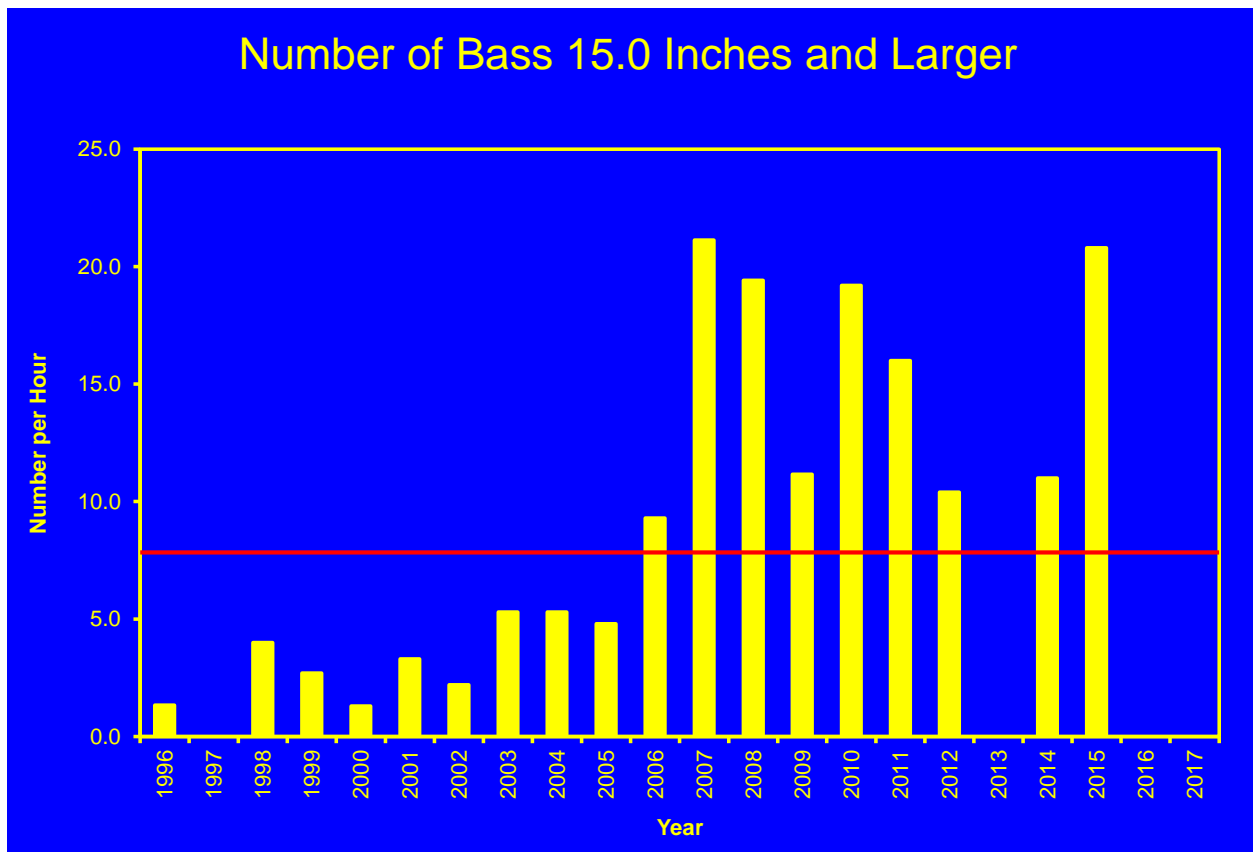
### Parameter 3 – Numbers of 12.0-14.9 inch bass

The electrofishing catch of 12.0-14.9 inch largemouth bass has averaged 10.9 fish/hr (red line) since 1986. This gives Martin’s Fork Lake a “poor” rating when compared to other lakes of its size. In 2015 numbers of fish observed in this size range were higher than in all previous years. While the average is still considered a “poor” catch rate, it is encouraging to see the recent increase in fish of this size. This will likely lead to higher catch rates of larger fish in the near future.



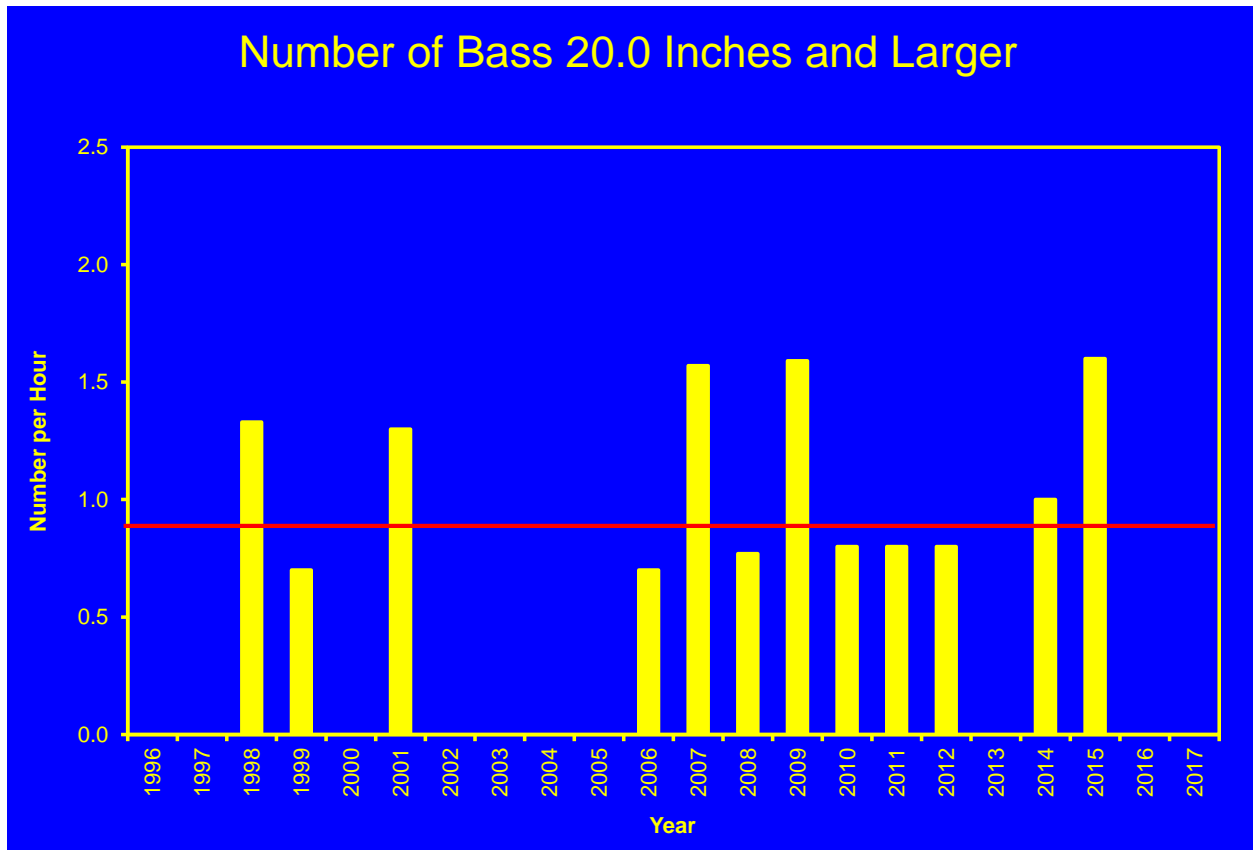
## Parameter 4 – Numbers of 15 inch and larger bass

The catch rate of 15 inch and larger largemouth bass at Martin's Fork Lake has averaged 7.8 fish per hour (red line) of electrofishing for a long term rating of "fair". The past six years have shown relatively stable catch rates of 15 inch and larger fish with 2015 showing the highest. Earlier stockings of fingerling bass have likely helped these sample numbers. Stronger upcoming year classes should continue to show improved numbers. There was no sample data collected in 2013 or 2016 due to heavy spring rainfalls.



## Parameter 5 – Numbers of 20-inch and larger bass

The electrofishing catch rate of 20.0 inch and larger largemouth bass has averaged 0.8 fish per hour at Martin's Fork Lake since 1986. This catch rate gives the lake a "fair" rating when it is compared to other lakes in its size range. Largemouth bass over 20 inches have been collected in each of the past five years indicating consistent angling opportunities for trophy fish. The catch rate for largemouth bass over 20 inches from 2015 was 1.6 fish per hour, which is considered the low end of "good" and comes in above average for the lake. There was no sample data collected in 2013 or 2016.



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

Overall, the largemouth bass fishery at Martin's Fork Lake has averaged a "fair" rating (11) since 2000 (red line). The largemouth bass population at this lake showed consistent improvement until a peak in 2007-2008, since which it has fallen slightly until recent. In 2015, the score was back up (13). Larger fish are fairly abundant; however limited reproduction may cause reductions in fishing quality in years to come. During 2009, 2011, and 2013 age-0 largemouth bass were stocked to supplement those year classes. If the trend of poor reproduction continues, Martin's Fork Lake will likely require more supplemental largemouth bass stockings. Increased efforts to improve summer and winter habitat (brush and trees) will likely help boost natural recruitment as well.

