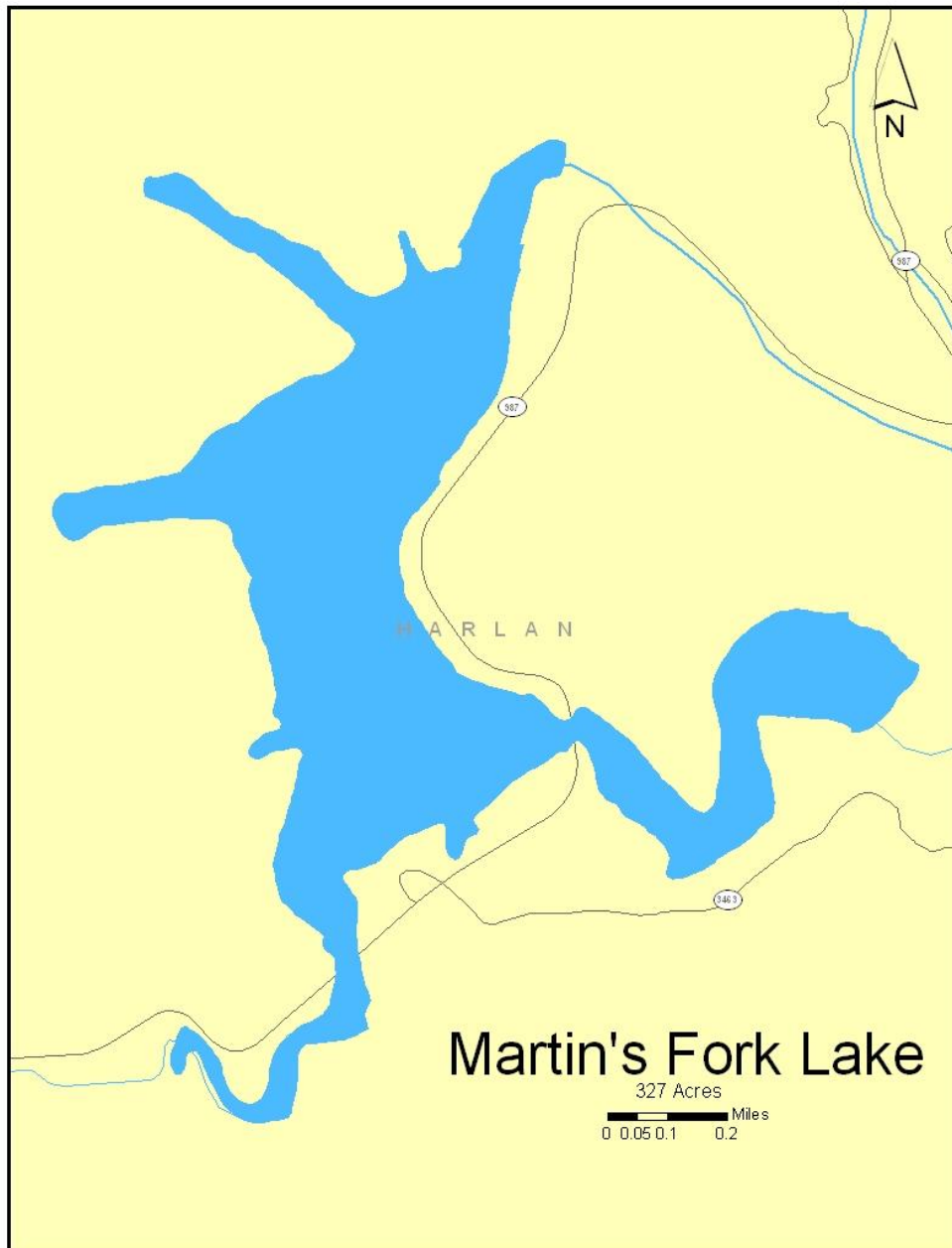


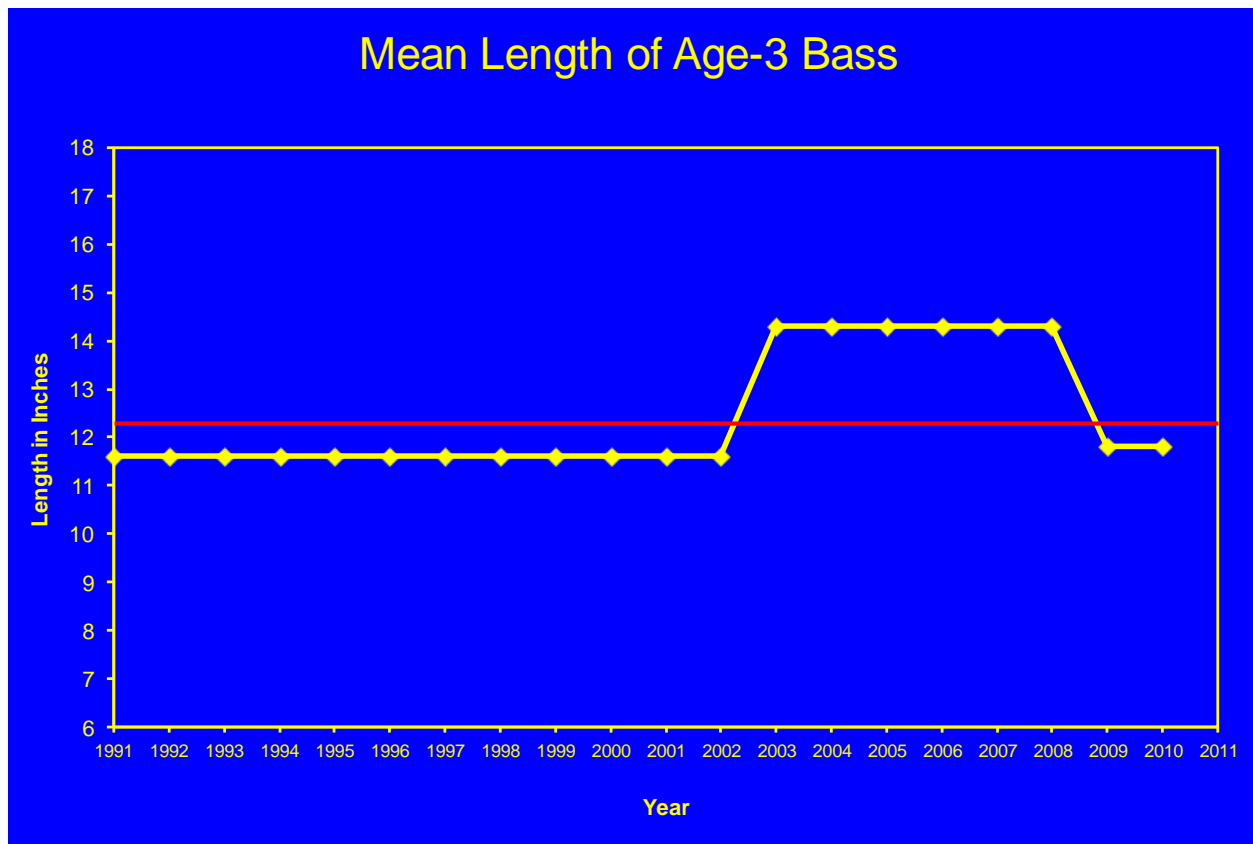
Martin's Fork Lake Bass Assessment 2011

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 a realistic opportunity to catch four species of black bass: largemouth, smallmouth, spotted, and Coosa. This lake also offers fishing for channel catfish, white crappie, and bluegill. The following graphs show trends and rankings for each of the five population parameters used in the largemouth bass assessment. Note that data was not collected in 1988, 1989, 1993, or 1994. Please see "Understanding The Largemouth Bass Assessment" article for an explanation of how the assessment works. The bass population is under statewide fishing regulations.



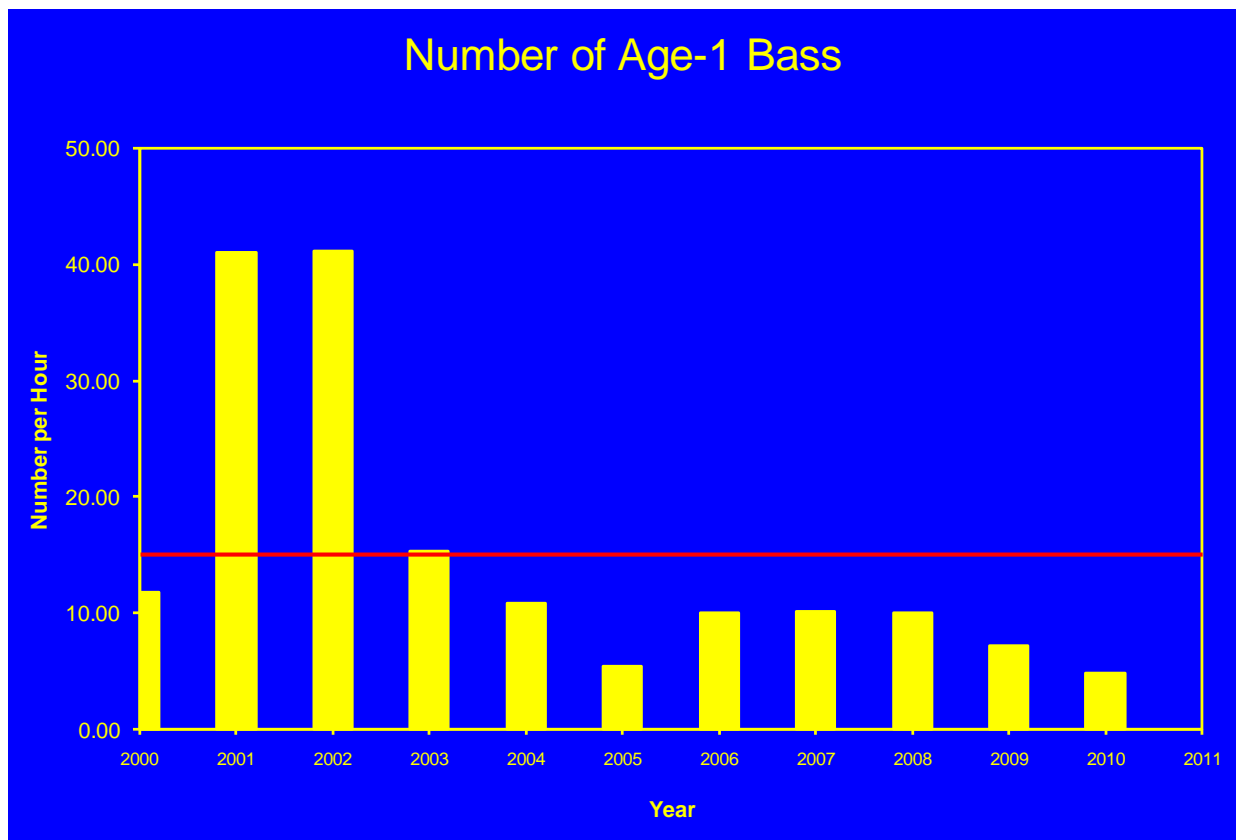
Parameter 1 – Length at age-3 (growth rate)

At Martin's Fork Lake, the length of an age-3 largemouth bass decreased from 14.3 inches in 2003 to 11.8 inches in 2009. This growth rate is still considered "excellent for lakes in this size range. Growth rates are generally related to factors such as population density, food resources, and weather patterns. The density of young largemouth bass remains low at Martin's Fork Lake and is largely responsible for the high growth rates observed there.



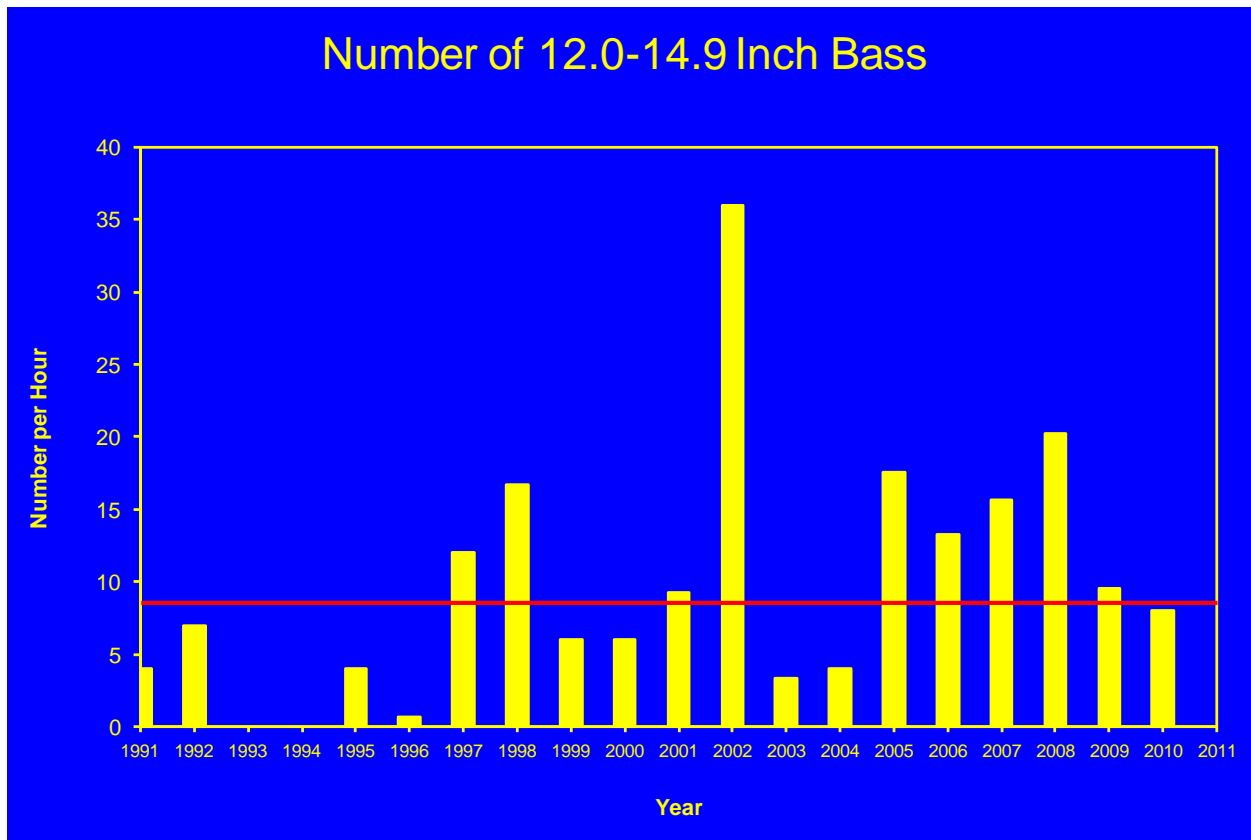
Parameter 2 – Numbers of age-1 bass (how good the spawn was)

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 age-1 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 15.24 fish per hour of electrofishing (red line). This is considered to be a "poor" age-1 catch rate. This catch rate reached a low of 4.80 fish per hour in 2010. The drop in age-1 catch rates is indicative of reduced spawning conditions and/or survival rates to age-1. While the low densities of age-1 fish seen at Martin's Fork Lake are likely responsible for the excellent growth rates seen there, they also mean that few fish will be available to anglers once they reach a catchable size.



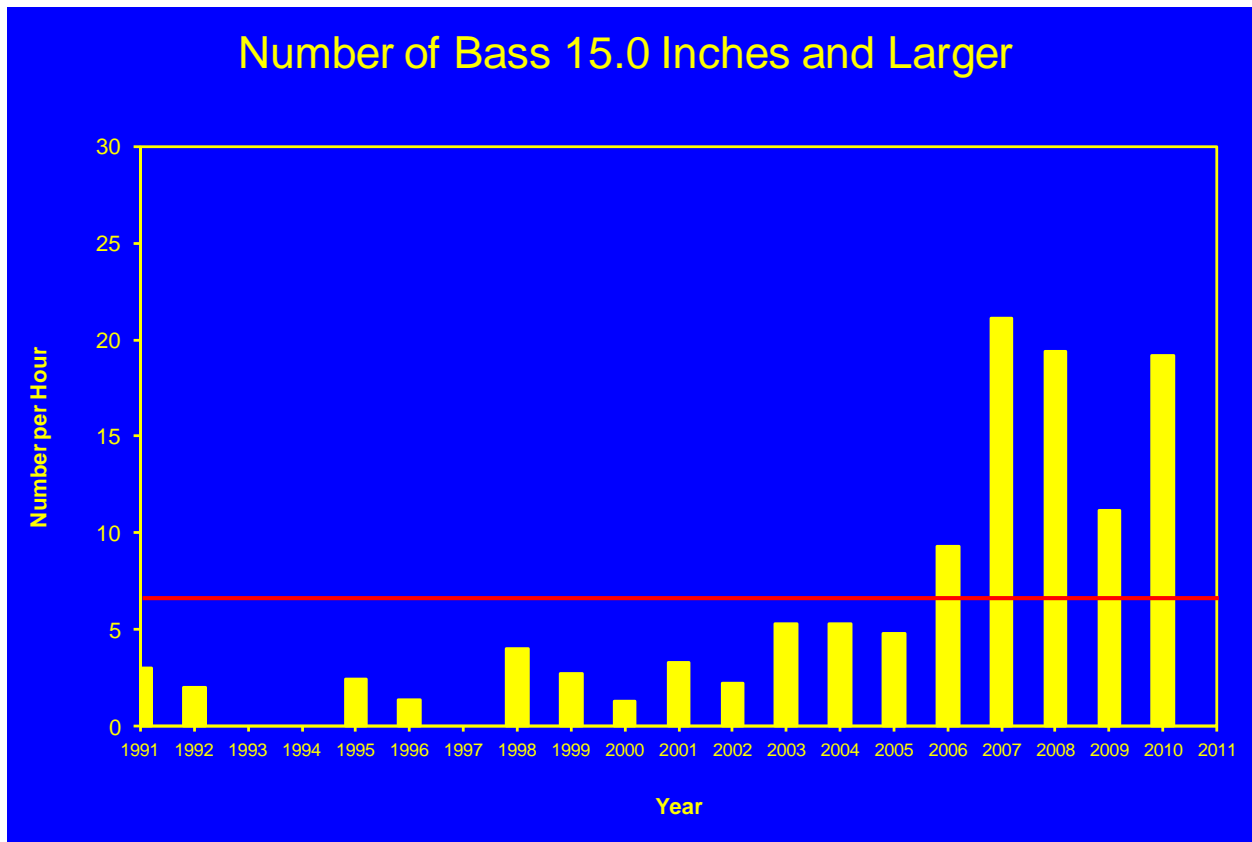
Parameter 3 – Numbers of 12.0-14.9 inch bass

The electrofishing catch of 12.0-14.9 inch largemouth bass has averaged 9.39 fish per hour over the years (red line), which gives Martin’s Fork Lake a “poor” rating when compared to other lakes of its size. From 2005-2008 high numbers of fish in this size range were observed averaging 16.69 fish per hour. While that average is still considered a “poor” catch rate, it is above average for this lake and explains higher catch rates of larger fish recently observed. Catch rates in the 12.0-14.9 inch size range were down in 2009 and 2010 however, indicating that the increased catch rates of larger fish may be short term.



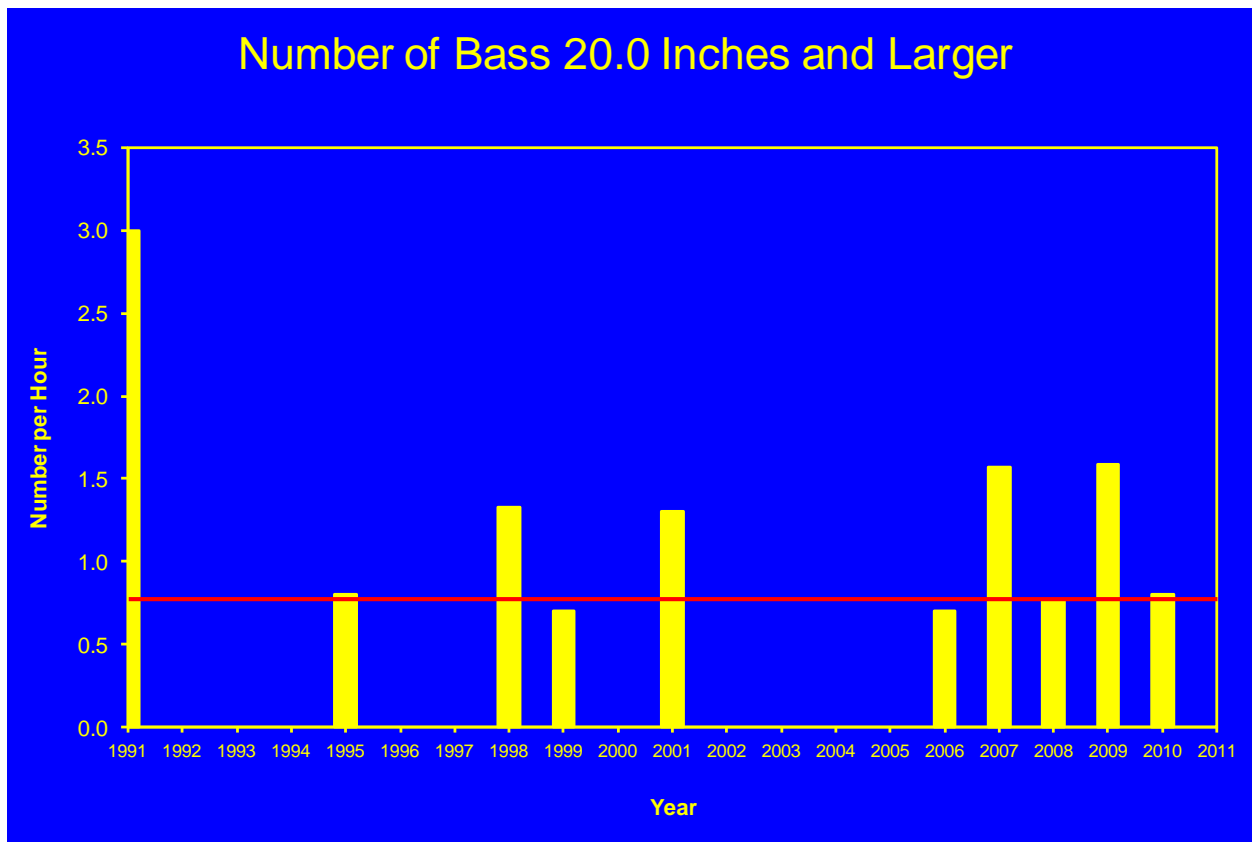
Parameter 4 – Numbers of 15 inch and larger bass

The catch rate of 15 inch and larger largemouth bass at Martin's Fork Lake has averaged 6.50 fish per hour (red line) of electrofishing for a long term rating of "fair". Recent improvement has been dramatic with an average catch rate of 17.73 fish per hour over the past four years, improving the score to "good". While this improved catch rate may only be experienced short term, more quality largemouth bass are available at Martin's Fork Lake now than at any other time.



Parameter 5 – Numbers of 20-inch and larger bass

The electrofishing catch rate of 20.0 inch and larger largemouth bass has averaged 0.77 fish per hour at Martin's Fork Lake since 1986. This catch rate gives the lake a "poor" 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 average catch rate for largemouth bass over 20 inches for the past five years is 1.09, which is considered "fair."



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

Overall, the largemouth bass fishery at Martin's Fork Lake has averaged a "fair" rating (9.22) over the past 11 years (red line). The largemouth bass population at this lake showed consistent improvement until a peak in 2007-2008, since which it has remained fairly stable. In 2010, the score was "fair" (10). Larger fish are fairly abundant; however limited reproduction may cause reductions in fishing quality in years to come. In 2009 age-0 largemouth bass were stocked to supplement a poor year class. If the trend of poor reproduction continues, Martin's Fork Lake may require more supplemental largemouth bass stockings.

