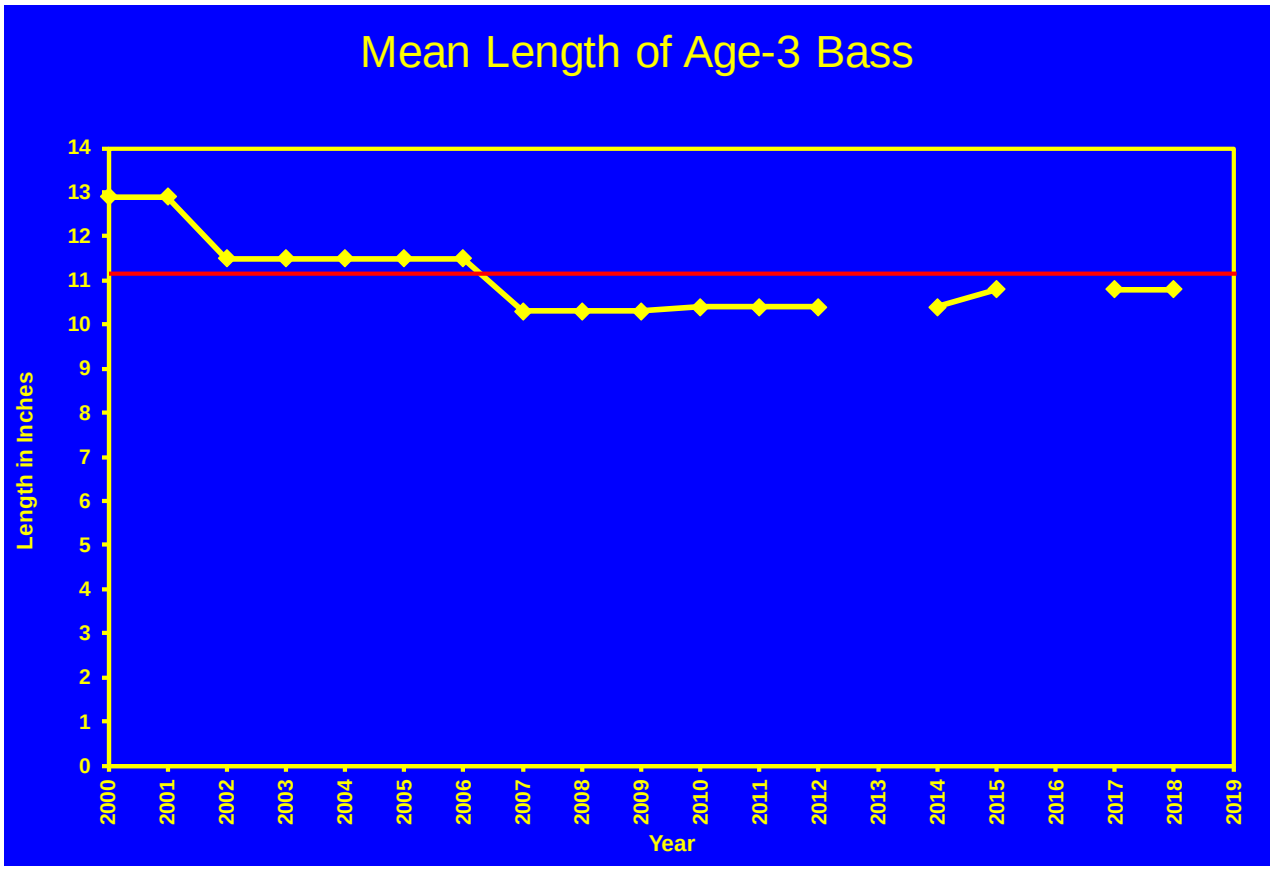
Lake Malone Largemouth Bass Assessment 2019

Lake Malone is a 767-acre multipurpose lake in Logan, Muhlenberg, and Todd counties. The lake has two boat ramps, two marinas, and is a popular fishing destination for largemouth bass, bluegill, redear sunfish, and channel catfish. The following graphs show data trends and rankings for each of the five 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.

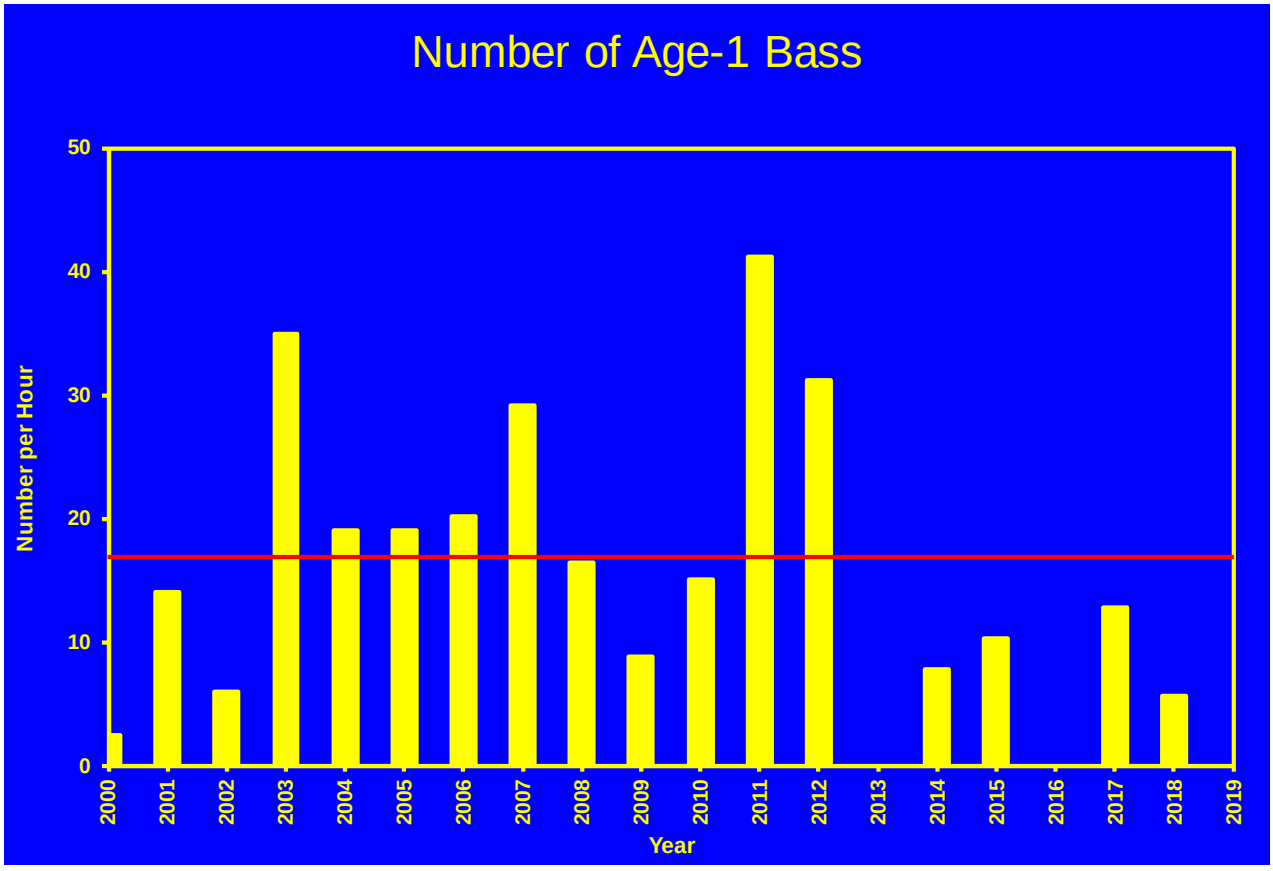
Parameter 1 – Mean Length at Age-3 (growth rate)

At Lake Malone, from 2000-2018, the average length of 3-year old largemouth bass is 11.1 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 “Good”. Growth rates can change annually and are tied to factors such as population density, watershed fertility, food availability, and weather. Growth has declined since the early 2000s but has remained relatively stable for the past decade.



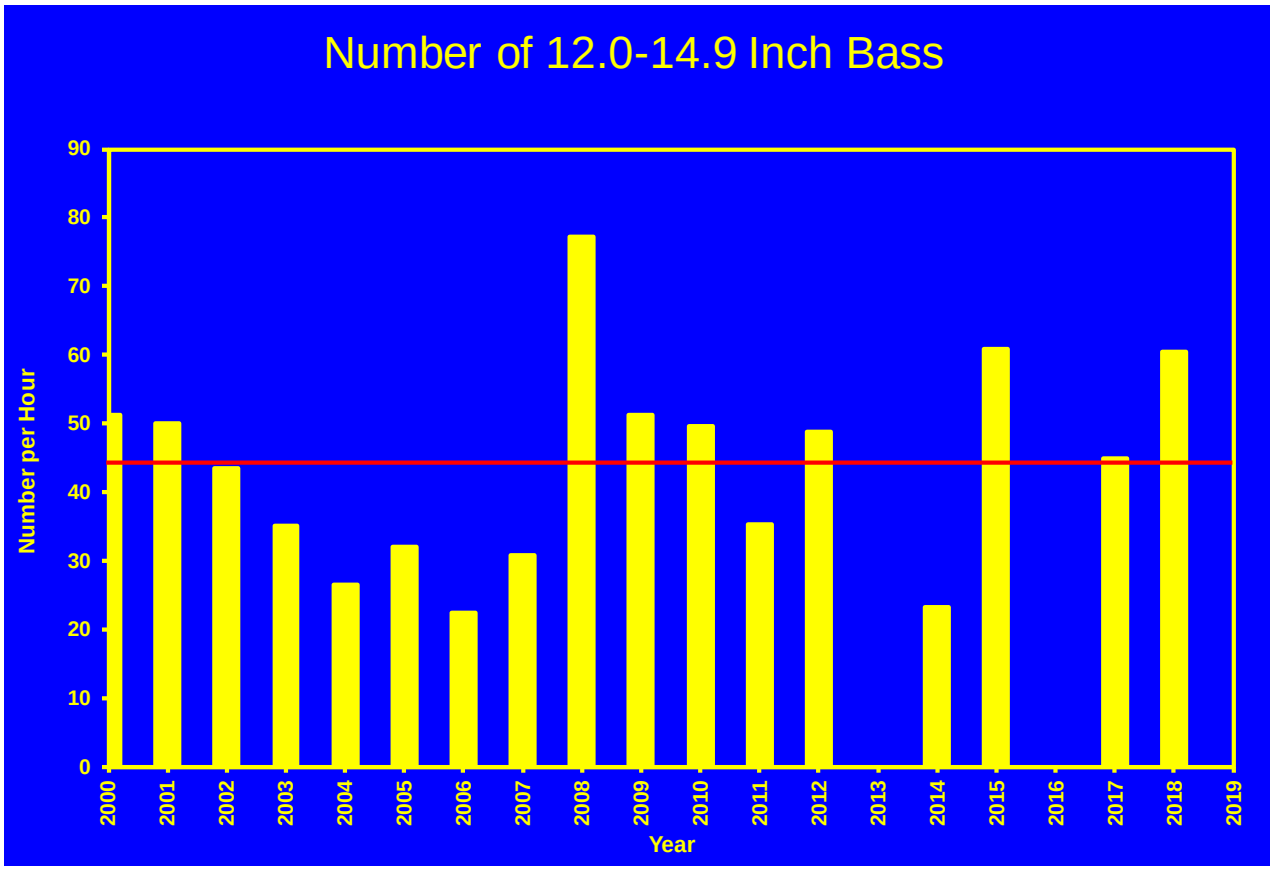
Parameter 2 – Number of Age-1 Bass (spawning success)

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 is used as a predictor for how good fishing will be in the future. At Lake Malone, age-1 largemouth bass catch rates have been variable with a high of 41.2 fish/hr in 2011. Variability can be attributed to sampling inefficiency due to lake conditions, weather, or normal population fluctuation. Overall, the age-1 catch rate has averaged 17.3 age-1 fish per hour of electrofishing over the last two decades, but has been "Poor" for the last four samples.



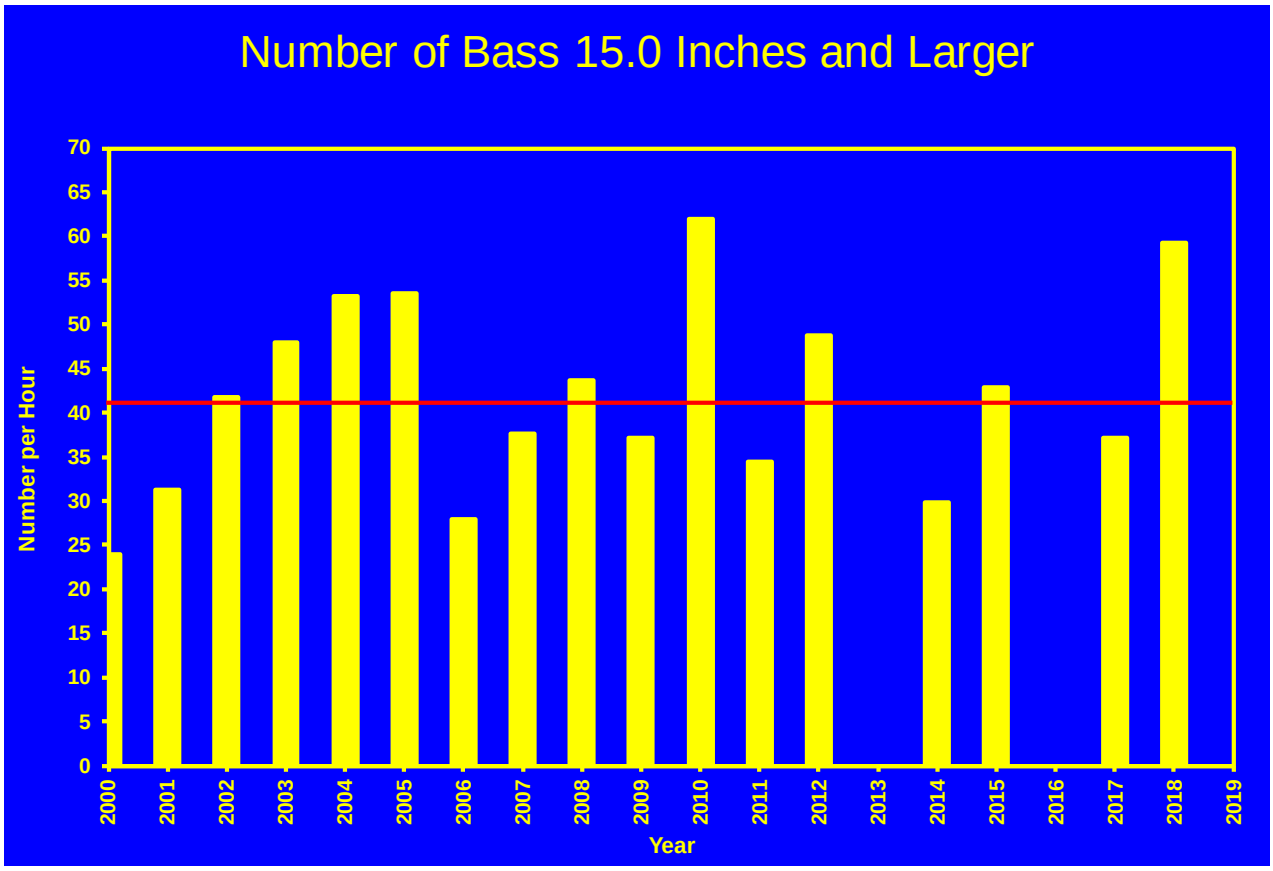
Parameter 3 – Number of 12.0- to 14.9-Inch Bass

The electrofishing catch for 12.0- to 14.9-inch largemouth bass averaged 43.7 fish/hour from 2000 to 2018. This parameter is important because it directly represents the number of fish currently protected by the 12- to 15-inch protective slot limit. Despite low catch rates for age-1 bass in recent samples the catch rate for bass 12.0-14.9 inches remains “Good” to “Excellent” when compared to similar lakes. Age and growth data collected in 2015 indicate largemouth bass growth is highly variable, and “Fair” to “Good” when compared to similar lakes.



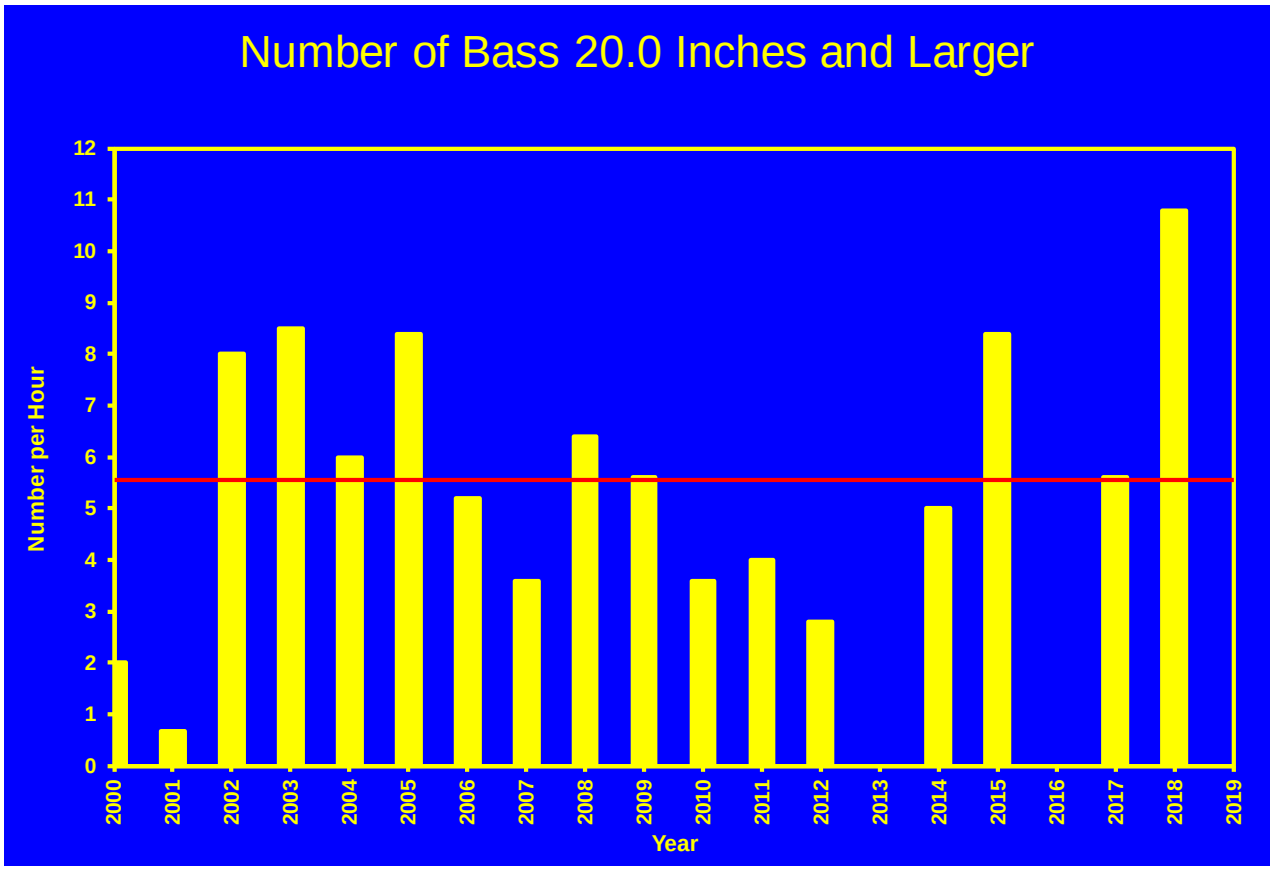
Parameter 4 – Number of 15.0-Inch and Larger Bass

This parameter generally reflects the number of legally harvestable fish in the population. The catch rate of 15.0-inch and larger largemouth bass at Lake Malone has averaged 41.9 fish/hour of electrofishing from 2000 through 2018. The catch rate of 15.0-inch and larger fish has been relatively stable through the years with most variability likely attributable to variability in sampling conditions. Large fish are most susceptible to capture during the pre-spawn staging. When sampling occurs during this window affects catch rate for bigger fish. Recent samples are within the expected range, which is “Excellent” compared to similarly sized lakes.



Parameter 5 – Numbers of 20.0-inch and larger bass

The electrofishing catch of 20.0-inch and larger largemouth bass has averaged 5.6 fish/hour for Lake Malone from 2000 to 2018. When compared to similarly sized lakes, this catch rate is considered “Excellent”. Fish of this size in a reservoir environment are difficult to sample consistently which likely accounts for the range in catch rates rather than any significant change in the population. The electrofishing catch rate for bass 20.0-inches and larger in 2018 was the highest ever recorded.



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

Overall, the largemouth bass fishery at Lake Malone has averaged a “Good” rating (15.1) over the past 18 years as indicated by the red line. If we discount a low in 2014 due to very poor sampling conditions (high water), the bass population has been generally improving since 2012. The high catch rates of 15.0-inch and larger and 20.0-inch and larger fish should provide many opportunities for big fish over the next few years. Sampling data can be highly variable due to a multitude of factors, therefore, it is important to look at all data over time as opposed to information collected in a single year, or a single parameter, when making management decisions.