



Leesville Lake 2021 Management Report



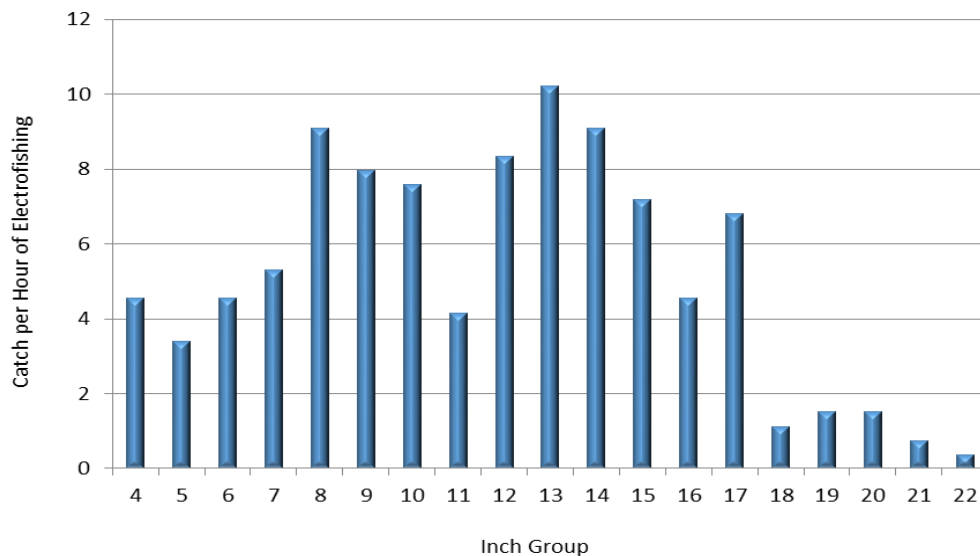
Leesville Lake is a 3,400-acre impoundment located near Altavista, Virginia. This reservoir straddles the Pittsylvania and Bedford County borders. Leesville Lake is owned by American Electric Power and is managed primarily for hydroelectric power generation and to pump back stored water to Smith Mountain Lake for additional hydroelectric power generation. Facilities are limited primarily to two Marinas, two public boat launching facilities, and two day use areas near the Leesville and Smith Mountain Lake dams.

This reservoir experiences major water level fluctuations, which can be up to 10 feet per day. Dramatic water fluctuations are a result of power generation and pump back storage for Smith Mountain Lake. The headwaters of Leesville Lake is a very harsh environment for most fish species due to the cold water temperatures, fast water currents, and poor forage resources. Consequently, fishing is generally not as productive from Smith Mountain dam to approximately mile marker 6. While most fishing should be concentrated downstream of mile marker 6 area, there are seasonal movements into the upper reaches for some species such as striped bass and walleye during spawning and summer refuge periods. For newcomers to Leesville Lake, the frequent water level fluctuations does affect fish behavior and adds an extra challenge determining productive fishing patterns.

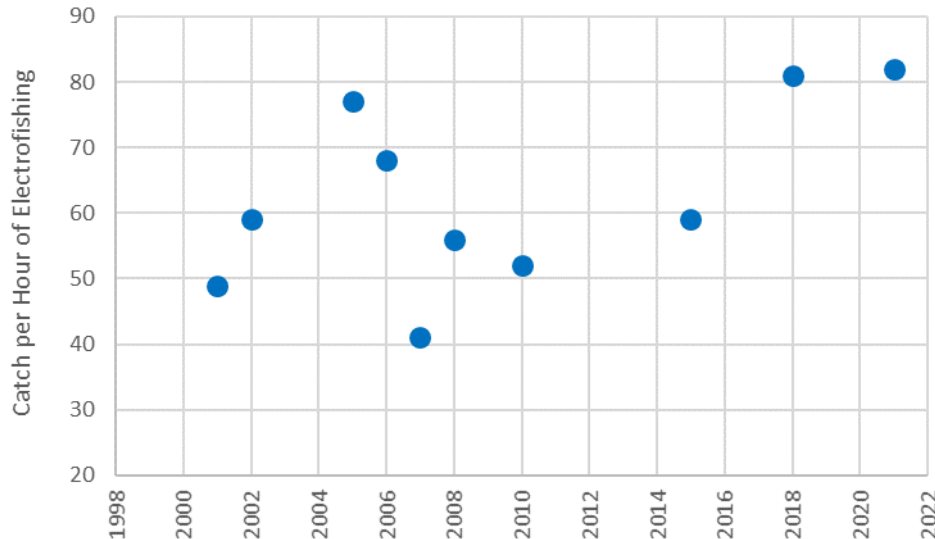
There are two public ramps and two marinas at Leesville Lake. The public ramps are located near the Leesville dam and in the upper end of the reservoir (both in Pittsylvania County). The only amenities available at these access sites are the boat ramp, associated parking, and toilet facilities. American Electric Power seasonally maintains two public picnic facilities, one near each dam. Car only access for the one just below the Smith Mountain Lake dam and by water or land for the other, next to the Leesville dam public ramp. Boaters also need to watch for floating debris that is a routine occurrence on this reservoir.

Largemouth Bass

Largemouth bass are the most sought after species by anglers at Leesville Lake. Smallmouth bass are also present at Leesville Lake but do not contribute to the black bass fishery due to their very low abundance. Based on Department of Wildlife Resources (DWR) electrofishing samples, largemouth bass densities in the lower half of this reservoir rival nearby Smith Mountain Lake and Philpott Reservoir. The highest numbers of bass are found in the downstream half of the lake. There are good numbers bass between 12 and 17 inches with bass available up to 22 inches.



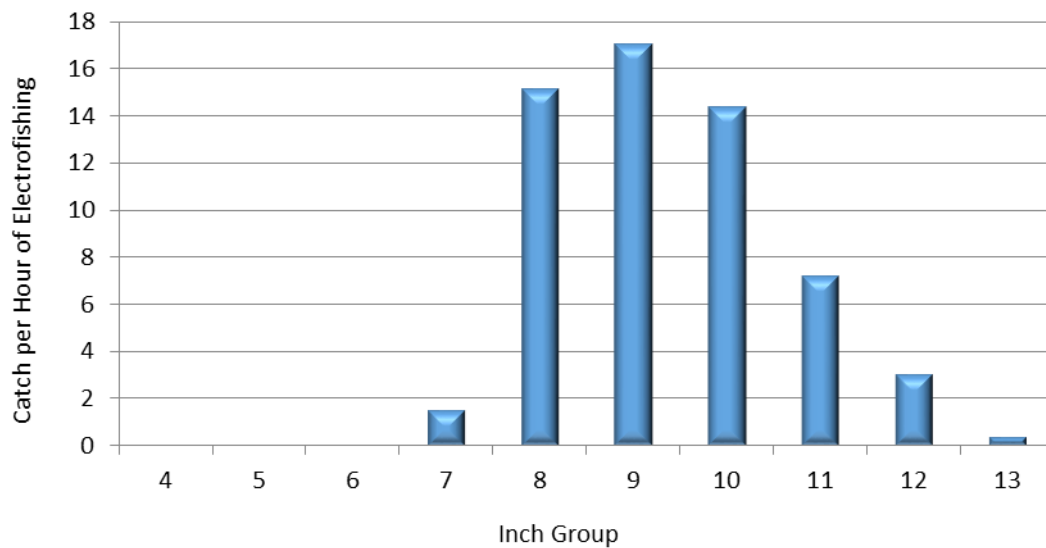
Leesville Lake largemouth bass data collected during DWR sampling in the spring of 2021. Vertical bars represents the number of bass collected per hour of electrofishing sampling for each inch group.



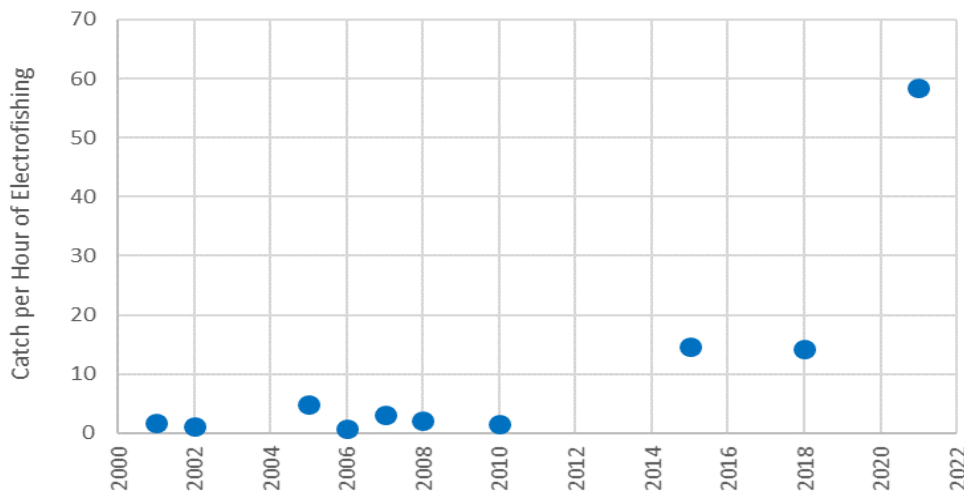
Leesville Lake catch rate for largemouth bass (≥ 8 inches) collected during DWR spring sampling.

Crappie

The crappie population has historically been low and did not provide a very good fishery compared to most other reservoirs. However, DWR sampling in 2021 showed the crappie population dramatically increased the last few years and now provides a very good fishery. Most crappie collected in 2021 were 8-11 inches and should continue to provide good fishing opportunities in 2022. Crappie have variable reproductive success and the recent increase may be the result of a very good spawn a few years ago and could return to much lower numbers in the future.



Leesville Lake crappie data collected during DWR sampling in the spring of 2021. Vertical bars represents the number of crappie collected per hour of electrofishing sampling for each inch group.



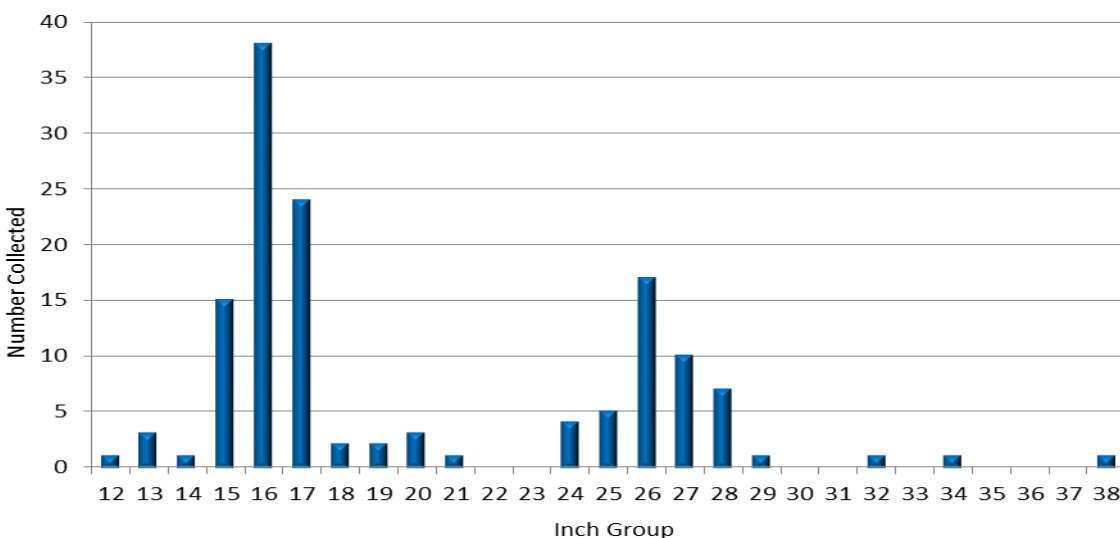
Leesville Lake catch rate for crappie collected during DWR spring sampling.

Striped Bass

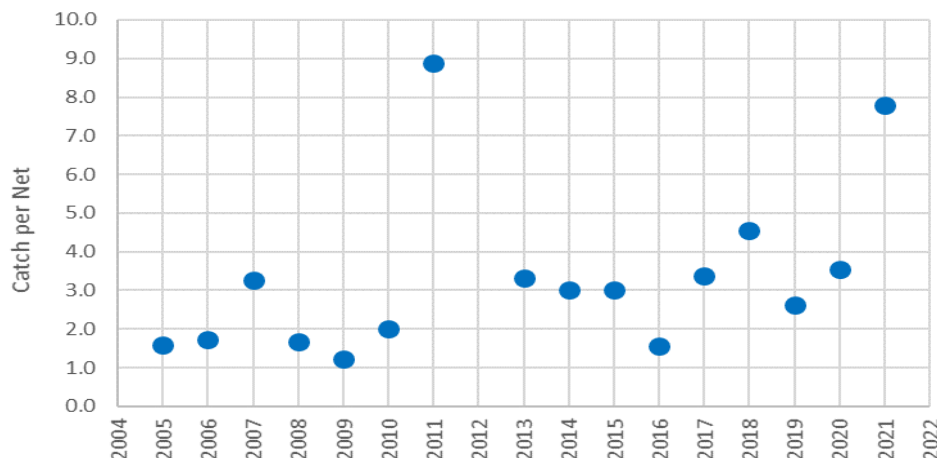
The current state record striped bass was caught from Leesville Lake in 2000. This reservoir has historically supported a fair striped bass population that has fluctuated in both numbers and sizes due to variable stocking survival and the constant loss of striped bass through the Leesville dam. There is no natural reproduction of striped bass at Leesville Lake so the fishery is dependent on stocking. The striped bass population had been declining due to limited recruitment from 2010 - 2016. However, both the 2017 and the 2020 year classes were better than average, so there will be good numbers of stripers around 20 inches and in the 26-29 inch range for 2022. In addition, there are still some stripers remaining from a very successful stocking in 2010, most of those fish are in the 15-25 pound range.

Striped bass occasionally utilize the cooler water in the upper reaches of the reservoir during the summer months for thermal refuge. However, forage is very limited in this area of the

reservoir and most striped bass move downstream to utilize additional forage when water temperatures are cooler in the fall through early summer.



Leesville Lake striped bass data collected during DWR sampling in the fall of 2021. Vertical bars represents the number of striped bass collected for each inch group.



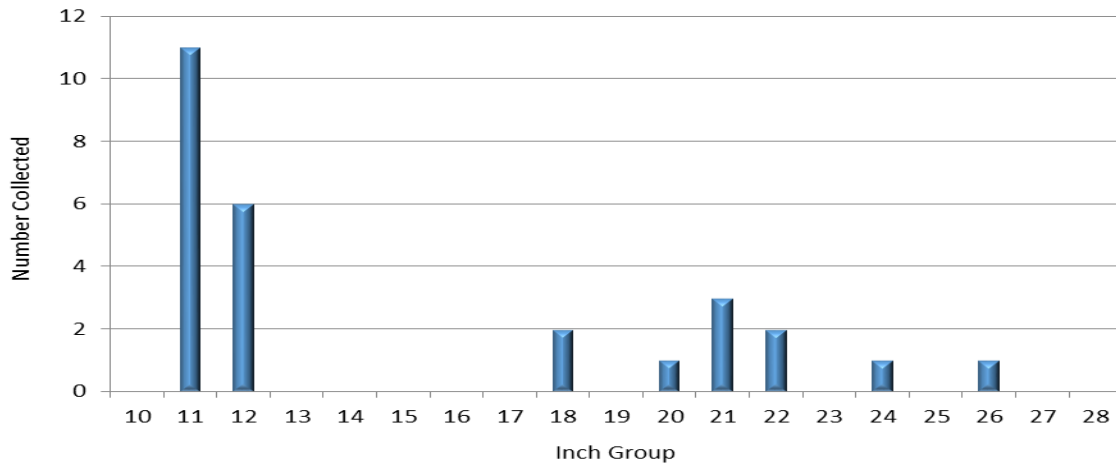
Leesville Lake catch rate for striped bass collected during DWR fall sampling.

Walleye

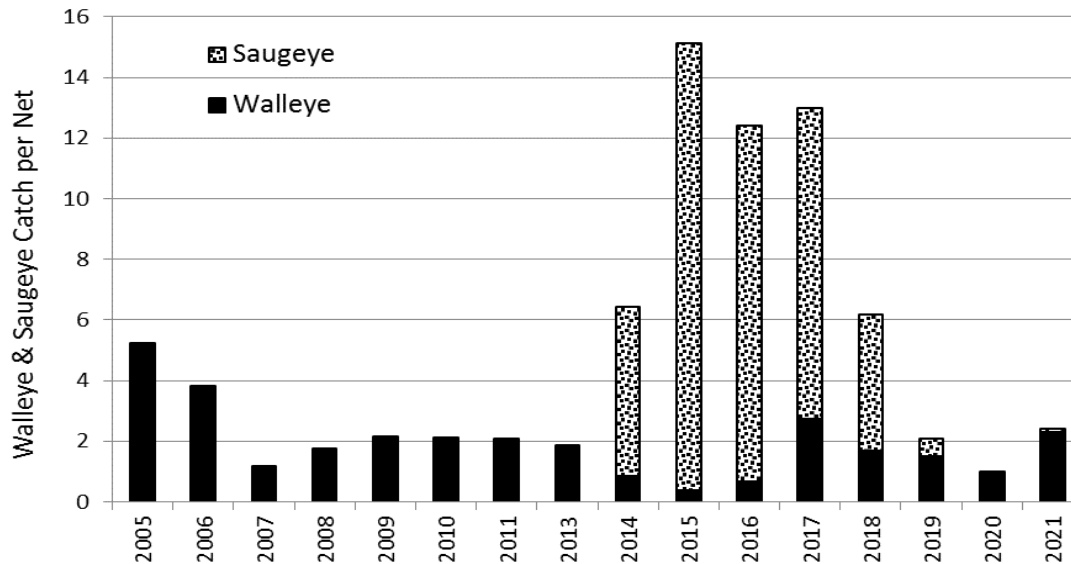
Leesville Lake has historically produced a marginal walleye population with occasional fish up to seven or eight pounds. The walleye population has fluctuated but remained fairly low in comparison to other Virginia walleye waters, due to limited stockings and loss of fish through the Leesville dam. Experimental saugeye stockings were initiated in 2013 and produced better survival in 2013-2015 than any of the previous walleye stockings. Consequently, the walleye (walleye and saugeye) numbers were very good beginning in 2015. Only walleye have been stocked since 2016 and the population has declined due to lower stocking success from the walleye and the continued loss of saugeye through the dam and into the Staunton River. Saugeye stocking was discontinued at Leesville Lake because high numbers were going through the Leesville dam and were mixing with the walleye in the river where DWR collects walleye broodfish for DWR hatcheries.

The best concentrations of walleye are typically between mile marker 7 and Leesville Dam. Walleye fishing in mountain reservoirs is typically challenging and successful walleye

anglers spend considerable time with specialized gear pursuing this species in order to be consistently successful. Walleye are predominantly nocturnal feeders so daytime anglers must be very patient and deliberate in their fishing techniques. There is no or very limited natural reproduction of walleye so the population is sustained with stocking.



Leesville Lake walleye data collected during DWR sampling in the fall of 2021. Vertical bars represents the number of walleye collected for each inch group.



Leesville Lake catch rate for walleye and saugeye collected during DWR fall sampling.

Catfish

Catfish are abundant at this reservoir with the most common species being channel and blue catfish. There are limited numbers of flathead and white catfish available.

White Perch

White bass at Leesville Lake historically produced a good fishery. However, the increasing white perch population in the last 15 years has nearly eliminated the white bass population to the extent there is very few, if any white bass remaining. White bass populations across the state have failed after white perch are established. Although white perch are not as

desirable as white bass because of their smaller size and slow growth, they have produced a good fishery due to their high abundance.

For additional information, you can contact Dan Wilson at the region 2 office in Forest, VA at 434-525-7522.