2018 Clinch River Fisheries Management Report

From its origin near the town of Tazewell, the Clinch River flows some 135 miles through the heart of Southwest Virginia, reaching portions of Tazewell, Russell, Wise and Scott Counties before crossing the Tennessee state line. The Clinch contains more species of fish than any river in Virginia. It supports populations of sport fish like smallmouth bass, spotted bass, rock bass, sunfish, crappie, walleye, musky, freshwater drum, longnose gar, channel catfish, and flathead catfish. It also supports one of only two sauger populations in the state. Largemouth, white, and striped bass are also occasionally encountered, particularly in the lower reaches of the river.

Regulations

Certain gamefish species are managed under the following regulations. Species not listed below are managed under statewide regulations.

Species	Length Limit	Creel Limit
Smallmouth bass	20-inch minimum	1 per day
Sunfish (all species combined)	none	50 per day
Walleye	18-inch minimum	5 per day
Sauger	none	2 per day
Catfish (channel and flathead combined)	none	20 per day
Muskellunge	30-inch minimum	2 per day

Stocking

Walleyes are native to the Clinch River, but are stocked to enhance the population. In 2017, however, poor hatchery production resulted in insufficient numbers of walleye fry to meet statewide stocking allocations and the Clinch River received no walleye.

Population Sampling

Sport fish populations are sampled in the Clinch River using boat-mounted electrofishing gear. This sampling equipment generates a controlled field of electricity around the boat that immobilizes the fish. The fish can then be collected with dipnets and placed in a livewell on the boat to recover. This method does not kill the fish, but only stuns the fish so that they can be collected, counted, measured and released. These population samples are typically conducted during April and May, when most fish are in shallow water.

The relative abundance of each fish species is calculated as the number of fish collected per hour of sampling. This is also referred to as the catch rate or catch per unit of effort (CPE). The total length and weight of individual fish are measured to determine the condition of the fish and also to evaluate the size structure of the populations. A balanced size structure with representative numbers of both large and small fish is ideal. Mostly small fish in the population might mean that growth is slow or few fish are surviving to older ages. Mostly large fish in the population might mean that natural reproduction is lacking and there are not enough young fish being recruited to replace older fish that die.

All of these data together are used to make management decisions about the fishery. Biologists use the data to make stocking recommendations and regulation proposals. The relative abundance of a particular species or the size structure of that species may not always correspond with what you catch as an angler. The electrofishing method tends to collect average and small fish better than really big fish. It is likely that you will catch more or bigger fish in your efforts than biologists collect in sampling. The data collected in sampling is best used to track trends in the population from year to year and also to compare to another location on the river or other rivers in Virginia. Routine sampling locations include: Carterton, Burton's Ford, Dungannon, Fort Blackmore and Clinchport. Other locations are sampled when boat access is suitable and the schedule allows.

Smallmouth Bass

Smallmouth bass relative abundance (number of fish collected per hour of sampling) in the Clinch River varies from year to year, but has generally ranged between 70 - 90 fish/hr (Figure 1). The 2017 smallmouth bass catch rate of 40 fish/hr was down substantially compared to previous years. Sampling catch rates can be affected by river levels, water clarity and weather, but sampling under the same conditions each year helps to minimize these factors.

The abundance of smallmouth bass populations in rivers is heavily influenced by reproductive success. In years with good spawning conditions and survival, strong year classes are produced. Strong year classes increase the population abundance and create better fishing opportunities. These strong year classes usually persist for 10 years or more, until most of the individual fish die of old age or other causes. When two or more strong

year classes are produced in quick succession, the fishing can be extraordinary. Of course, when average or weak year classes are produced the population declines and fishing is not as good. Population samples indicate that smallmouth recruitment in the Clinch has been relatively consistent in recent years.

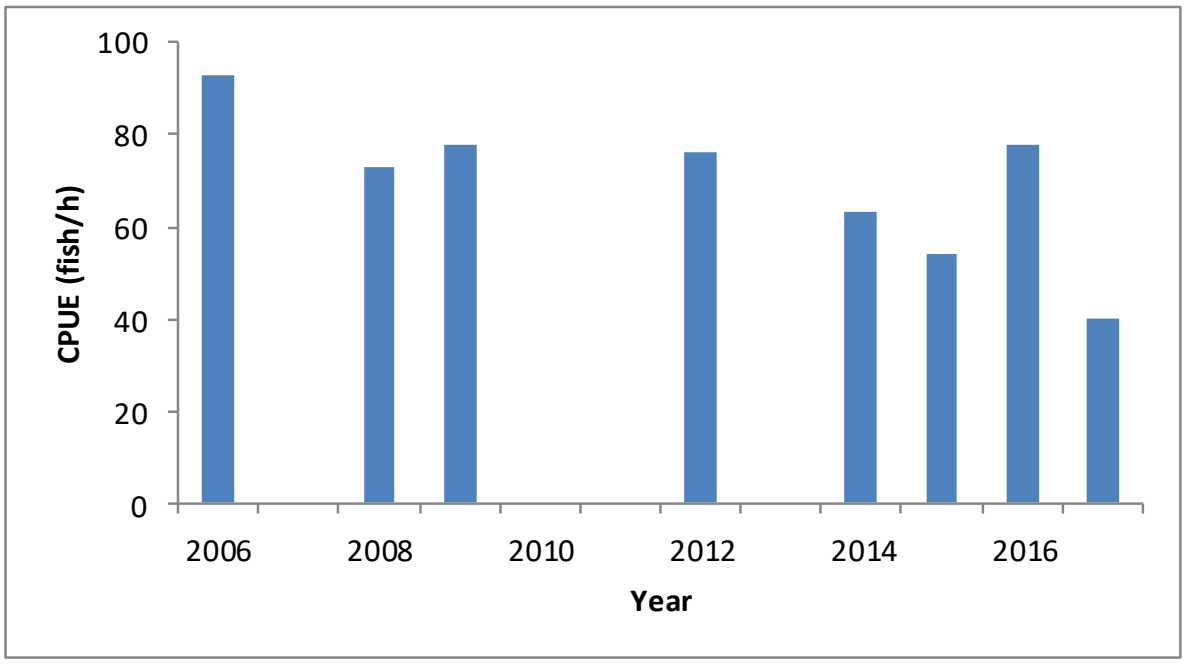

Figure 1**.** Number of smallmouth bass collected per hour of sampling on the Clinch River 2006-2017.

Smallmouth bass observed in the 2017 sample ranged in length from 4 –20 inches with an average length of almost 11 inches (Figure 2). Proportional size distribution (PSD) is an index that measures the percentage of adult fish that are ≥11 inches in length. The PSD for smallmouth bass in 2017 was 55%. The percentage of adult fish ≥ 14 inches in the collection was 29% and the percentage of adult fish that were ≥ 17 inches was 5%. Just one smallmouth bass collected in 2017 exceeded the 20-inch minimum length limit for this species. The 20-inch minimum length limit regulation was implemented on January 1, 2015 and had been in place about two years at the time of the current sample. Additional sampling will be necessary to determine if the regulation has an impact on the population size distribution.

Overall, the smallmouth bass population in the Clinch River should provide good fishing opportunities for anglers targeting this species. Good numbers of quality and preferred-size fish are available, although the size structure is somewhat smaller than that seen on other Virginia rivers.

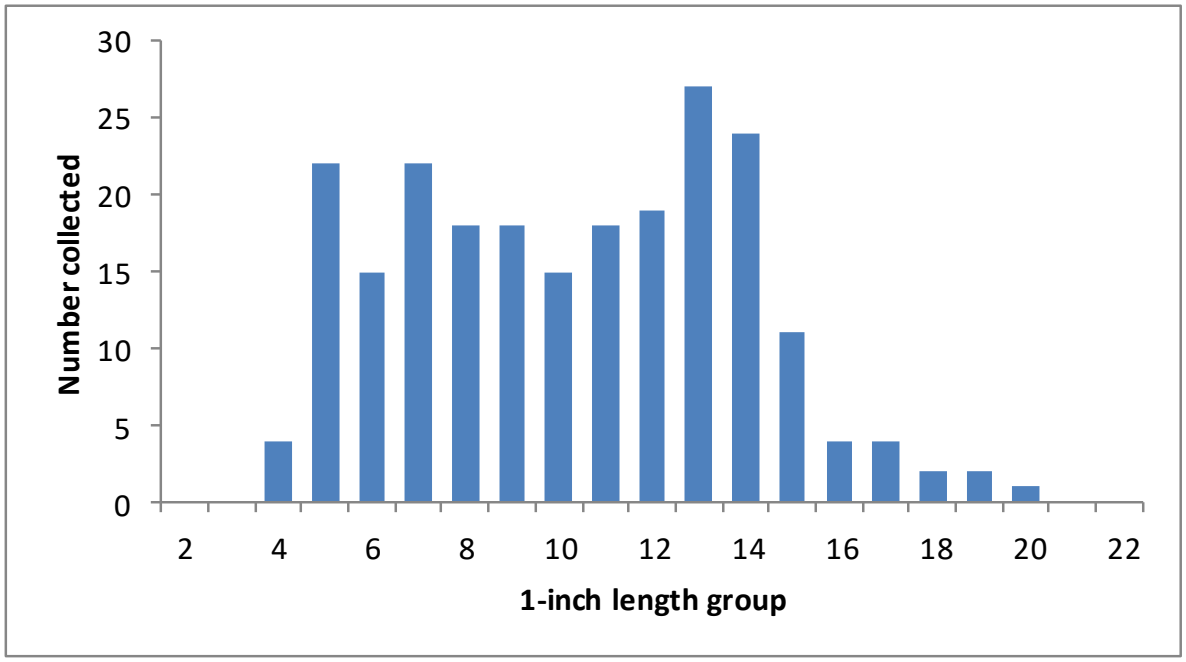

Figure 2. Length frequency distribution of smallmouth bass sampled from the Clinch River during electrofishing samples in spring 2017.

Rock Bass

Rock bass catch rates also fluctuate from year to year (Figure 3). Rock bass were collected at a rate of 22 fish/hr in 2017, which represents a continued decline over the last several years. The size structure of the rock bass population is good in the Clinch and has remained constant even though the catch rate is down. Anglers should find quality-sized rock bass.

Walleye

Walleye catch rates have improved since the early 2000s from ≤ 1 fish/hr to a high of 11 fish/hr in 2016 (Figure 5). The catch rate for the 2017 sample was down substantially at 5 fish/h and may reflect the lack of stocking in 2016. The walleye collected in the current sample ranged from 15 to 23 inches. Of notice in the 2017 sample was the lack of walleye in the 10-12 inch length range, which would represent the stocking cohort that was not stocked in 2016.

Catfish

Channel catfish are more abundant in some sections of the river than others, but overall they were not collected in large numbers. The average catch rate for 2017 was approximately 3 fish/hr. Flathead catfish are native to the Clinch, and a few are collected in sampling each year. Because catfish tend to favor deeper water, their population abundance may not be accurately represented in electrofishing samples. Electrofishing samples are concentrated in shallow water to maximize effectiveness and visibility of stunned fish.

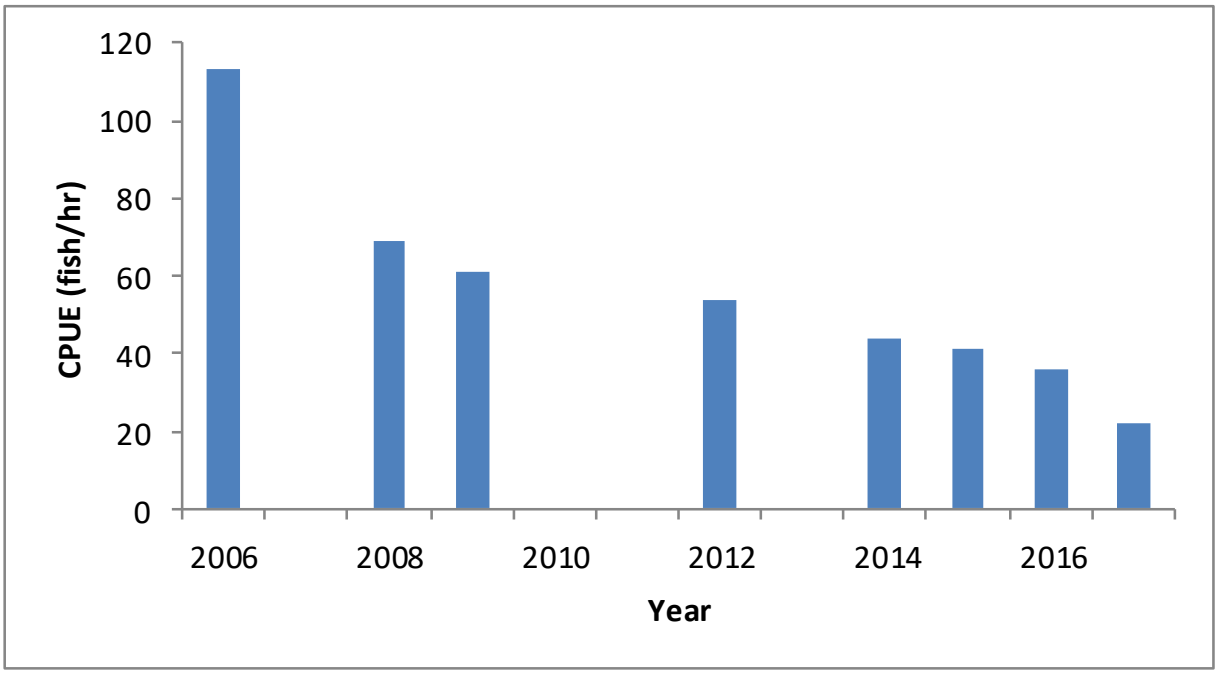

Figure 3. Number of rock bass collected per hour of sampling on the Clinch River 2006-2017.

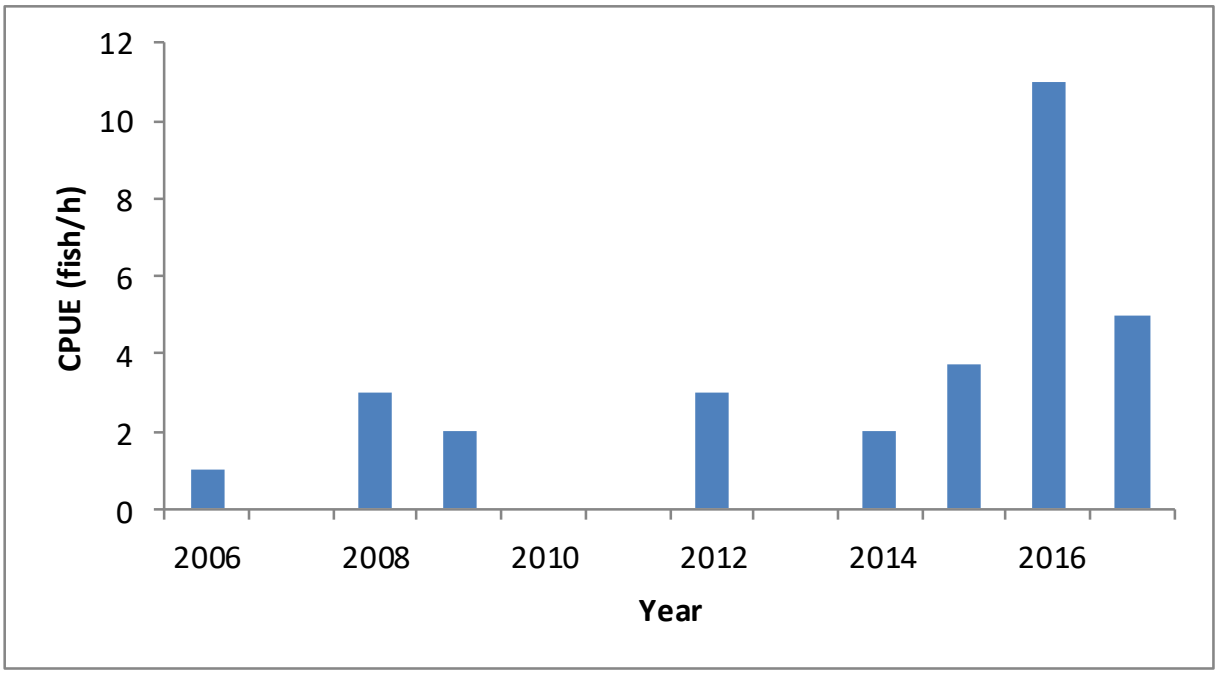

Figure 5. Number of walleye collected per hour of sampling on the Clinch River 2006-2017.

Other species
Sauger are not common, but two separate state records were landed in 2005. Sauger are typically collected at a catch rate of less than one fish per hour. Musky and freshwater drum are also collected at similar rates.

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