



Walnut Creek Reservoir 2024



Located in Albemarle County, Walnut Creek Reservoir is the youngest public impoundment in the area. The 45-acre reservoir was filled in 1990 and its primary use is recreation. The reservoir contains self-sustaining populations of Largemouth Bass, Bluegill, Redear Sunfish, and Black Crappie. Additionally, the lake is stocked annually with Channel Catfish to maintain a fishery. In the spring of 2023, the fish community of Walnut Creek was sampled by boat electrofishing and trapnets. This report summarizes the results of these surveys and what anglers can expect to catch in Walnut Creek.

Walnut Creek Reservoir contained a typical fish community for a central Virginia impoundment with a total of seven fish species collected in the 2023 surveys (Table 1). Largemouth Bass and Bluegill were the most abundant species collected in the electrofishing survey, while Bluegill and Redear Sunfish were the most abundant species collected in the trapnet survey (Table 1). Although the reservoir contains appropriate fish species, catch rates for most species dropped from previous surveys indicating a change in the fishery. In recent years, Albemarle County has been treating the lake for the problematic watershield vegetation. The treatment of this plant was warranted due to its overabundance and problems with recreation in the lake. Although necessary, the treatment has led to loss of some fish habitat and algae production needed for fish growth which appears to be causing depressed fish populations. In future years, work will be conducted to establish native, non-invasive vegetation and other fish habitat.

Even with the loss of habitat, Walnut Creek provides a decent Largemouth Bass fishery based on the size distribution of bass collected (Figure 1). Bass catch rates were slightly low for the area, but there were adequate numbers of young and adult bass present in the population. The 12–21-inch slot limit appears to protect a good portion of the adult bass population (Figure 1). Anglers looking to harvest bass should keep smaller bass (< 12 inches) so they do not become over abundant. The largest bass collected in 2023 measured 20 inches and weighed 4 lbs. The most productive areas for Largemouth Bass were the points and woody structures.

Sunfish catch rates were low with Redear and Bluegill comprising all the sunfish collected. The low numbers of sunfish are due to the low productivity of the watershed and loss of vegetative habitat. The bulk of sunfish collected were small (< 8 inches), but there were a limited number of sunfish over 9 inches collected (Figure 2). Redear were more abundant than most waters in the Charlottesville area and can offer a unique fishing experience for the area. Anglers determined to catch quality sunfish should concentrated their efforts around woody structure or the flats in the upper end of the lake during the spring spawning period.

Once an exceptional fishery, the Walnut Creek crappie fishery is currently lacking based on the numbers of crappie collected in the 2023 surveys. The crappie (all Black Crappie) catch rate was extremely low and was also likely a result of lack of habitat and food related to the herbicide treatments. Although low in number, the majority of crappie collected measured in the 9-to-12-inch range (Figure 3). Crappie are exhibiting fast growth; on average crappie are surpassing 9 inches by age-2 and 10 inches by age-3 (Figure 4). The largest crappie collected measured 13.5 inches and weighed 1.2 lbs. Anglers should expect low catch numbers of crappie in coming years until the population has a chance to rebound. There is a 9-inch minimum size limit, that should protect some of the younger fish added to the population and help rebound the population.

Anglers looking for a scenic lake that is in the Charlottesville area should visit Walnut Creek Reservoir. The lake offers good numbers of Channel Catfish and smaller panfish for

anglers to enjoy. The park has great amenities including an improved boat launch, plenty of bank fishing areas, and a swimming beach. Gas powered motors are prohibited in the reservoir.

For more information on Walnut Creek, please contact:

Johnathan Harris

District Fisheries Biologist

Virginia Department of Wildlife Resources

(804) 305-8940

Table 1. Species account and catch rates for fish collected throughout Walnut Creek Reservoir in 2023.

Species	Electrofishing			Trapnets		
	Number Collected	Catch Rate (fish/hour electrofishing)	Percentage of Catch	Number Collected	Catch Rate (fish/net-night)	Percentage of Catch
Black Crappie	15	14	7	47	1.6	23
Bluegill	62	59	32	90	3.0	45
Brown Bullhead	1	1	1	2	<1	1
Channel Catfish	None Collected			1	<1	<1
Green Sunfish	None Collected			5	<1	2
Largemouth Bass	95	90	49	2	<1	1
Redear	22	21	11	54	1.8	27

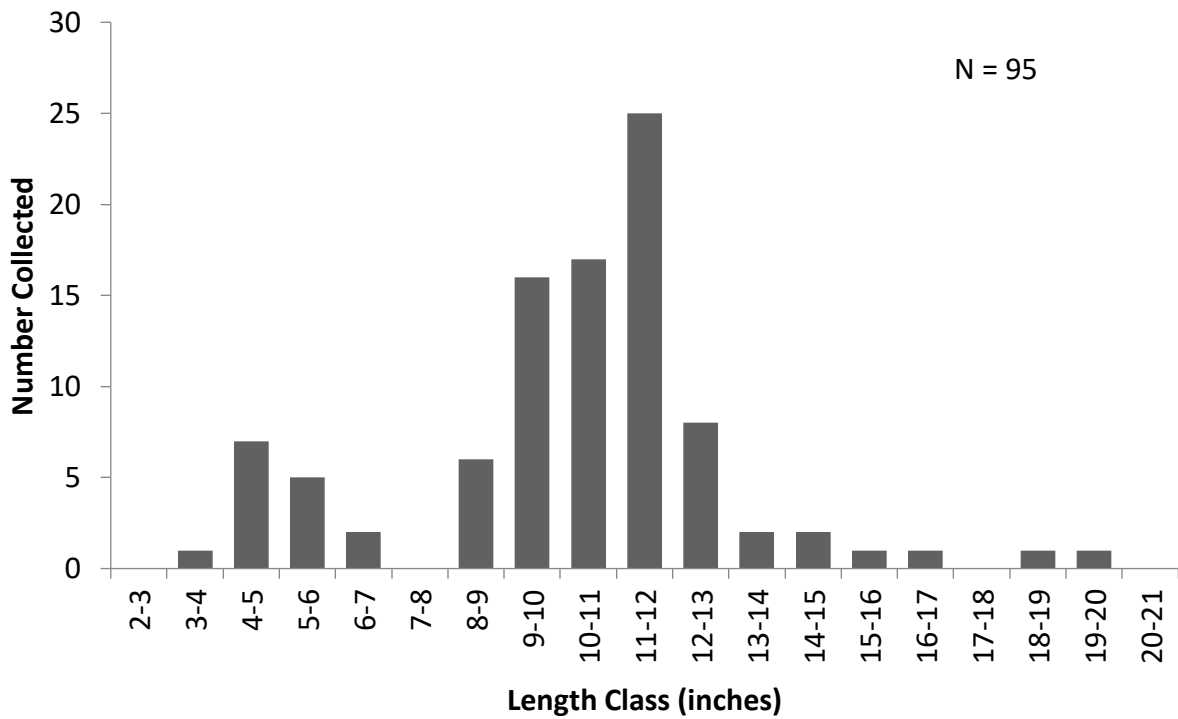


Figure 1. Length distribution of Largemouth Bass collected with electrofishing gear throughout Walnut Creek Reservoir in 2023.

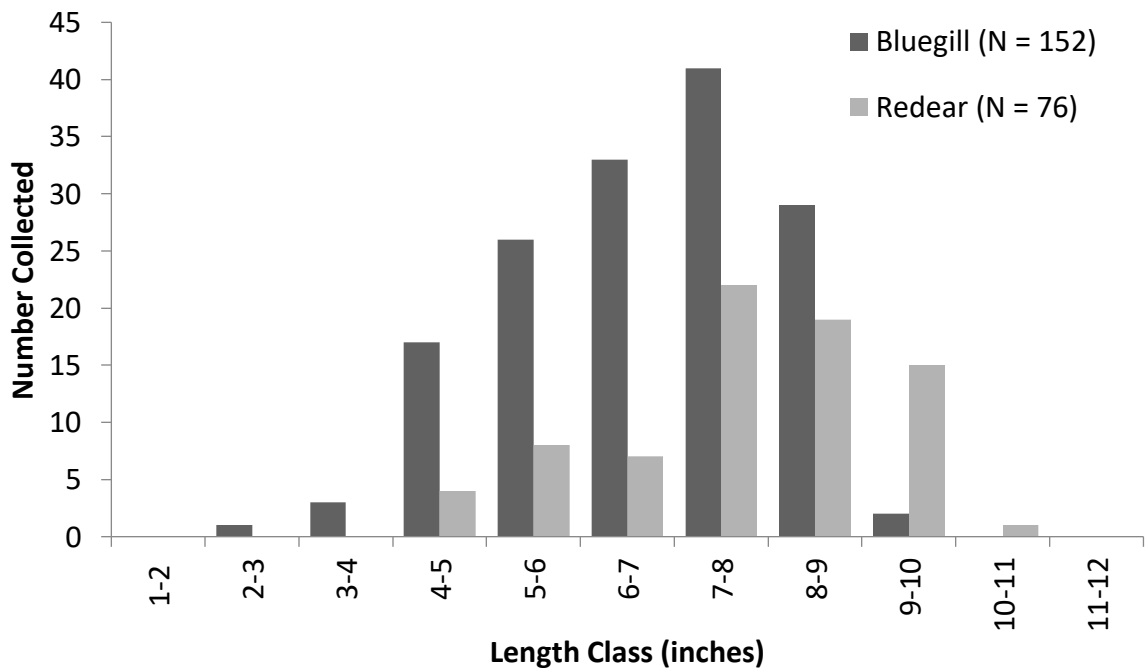


Figure 2. Length distribution of sunfish collected with electrofishing gear throughout Walnut Creek in 2023.

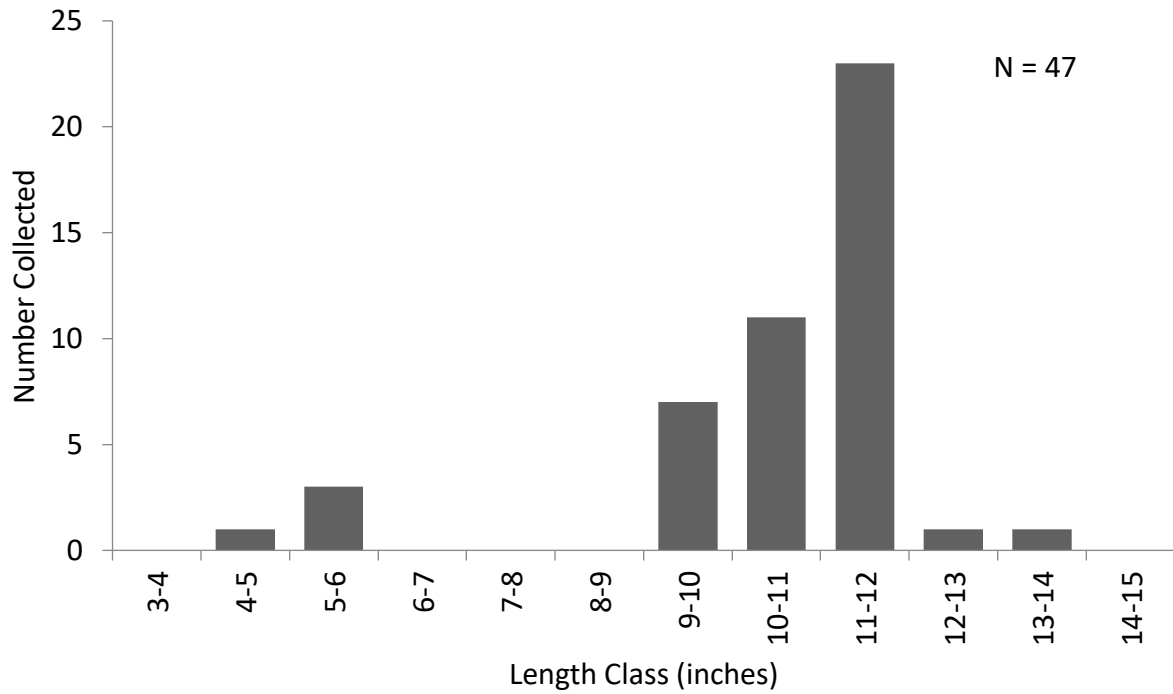


Figure 3. Length distribution of Black Crappie collected with trapnets throughout Walnut Creek Reservoir in 2023.

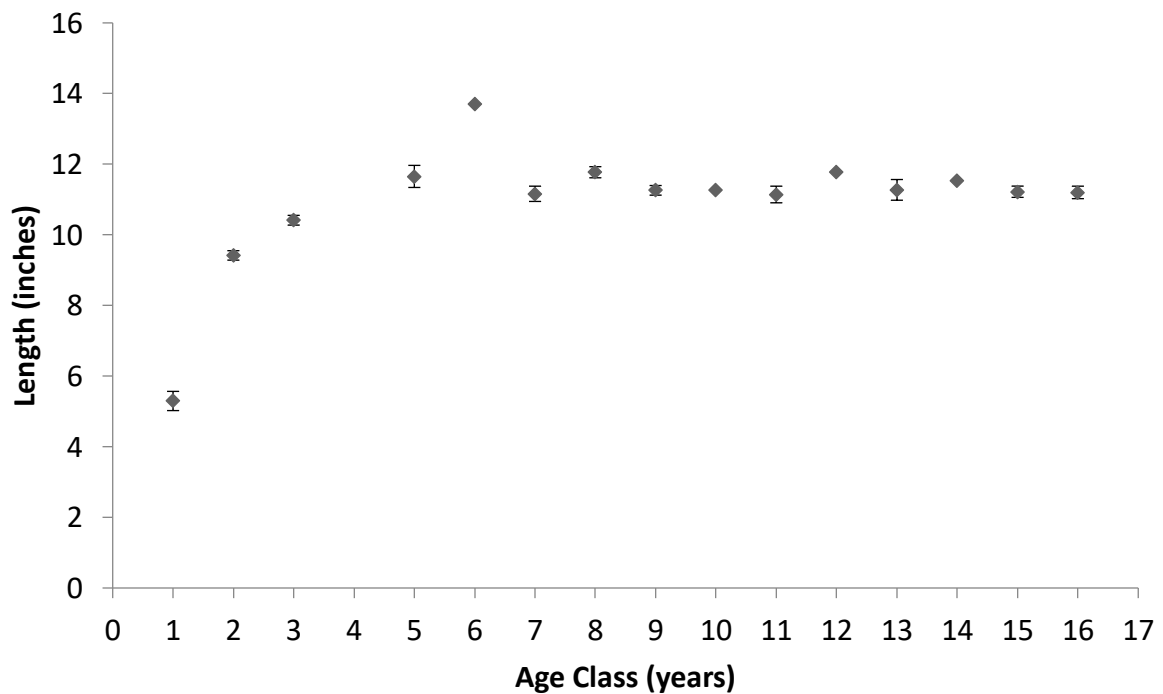


Figure 4. Average length-at-age of crappie collected throughout Walnut Creek Reservoir in 2023. Error bars indicate standard error.