



## 2023 North Fork Pound Lake Fisheries Management Report



North Fork of Pound Lake is a 154-acre reservoir located in Wise County. The lake, which was formed in 1966, has a shoreline length of 13.5 miles, a maximum depth of 55 feet and an average depth of 19 feet. The area surrounding the lake is almost completely forested. Some mature oak and hemlock stands are visible, and poplar trees now stand where mountain families once raised corn on steep hillsides. The U.S. Forest Service now owns most of the land surrounding the lake. The dam is owned and operated by the U.S. Army Corps of Engineers. The lake supports a diverse assemblage of fish species. Largemouth Bass, Smallmouth Bass and Spotted Bass are available. Bluegill, Black Crappie, White Crappie, Rock Bass, Walleye, Muskellunge, Channel Catfish, Flathead Catfish, and Common Carp are also present. The primary forage fishes are Alewives and Gizzard Shad, which were introduced into the lake in the late 1990's. The Department stocked Alewives in 1997, and the Gizzard Shad originated from an anonymous source.

### Regulations

The fish populations in North Fork of Pound Lake are currently managed under the following regulations:

Species	Length Limit	Creel Limit
Bass (Largemouth, Smallmouth, Spotted)	14 - 18 inch protected slot	5 per day combined
Sunfish (all species combined)	none	50 per day
Crappie	10-inch minimum	25 per day
Walleye	18-inch minimum	5 per day
Catfish (Channel and Flathead combined)	18-inch minimum	5 per day
Muskellunge	30-inch minimum	2 per day

### Stocking

North Fork of Pound Lake is currently managed as a developing Walleye water with the goal of establishing and maintaining an exceptional Walleye population. As a developing Walleye water, North Fork of Pound Lake generally receives annual stockings of fingerlings at a rate of 100 per acre. Approximately 15,400 Walleye fingerlings were stocked in North Fork of Pound Lake in 2022. A total of 1400 catchable-sized (average length = 11 inches) Channel Catfish were released into North Fork of Pound Lake in fall 2020.

### Population Sampling

In order to provide quality fishing opportunities, fish populations need to offer both abundance and good size structure. Each spring, VDWR fisheries biologists sample the fish populations in North Fork Pound Lake using boat-mounted electrofishing gear to assess abundance and size structure. Fish abundance is measured in terms of how many fish are collected per hour of electrofishing. Size structure is measured by looking at the proportion of adult fish in the sample that are larger than a given size. For example, we consider the proportion of adult Largemouth Bass larger than 15 inches, or the proportion of adult Black Crappie that are over 10 inches. Catch rates and size structure data provide a standardized means of comparing fish samples from year to year, as well as to samples collected at other lakes. Length structure measures give information about the sizes of fish available in the population.

## Black Bass

Largemouth Bass was the most abundant black bass species (and fish species overall) collected in the 2022 electrofishing sample. The 2022 sample produced an average catch rate of 60 fish/h for Largemouth Bass, which was higher than that observed in 2021 (48 fish/h; Figure 1). Spotted Bass abundance was equivalent in the 2022 sample (23 fish/h) compared to 2021 (23 fish/h). Smallmouth Bass, although generally not as abundant as other black bass species, had a catch rate of 6 fish/h in the 2022 sample.

Largemouth Bass observed in the 2022 sample ranged in length from 4 –21 inches with an average length of 12 inches (Figure 2). Approximately 79% of the adult ( $\geq 8$  in) Largemouth Bass observed in 2022 measured 12 inches or more while 30% were 15 inches or longer. One percent of adult Largemouth Bass were  $\geq 20$  inches. Spotted Bass ranged in length from 2-12 inches with an average length of 7 inches while Smallmouth Bass ranged in length from 3-18 inches with an average length of 11 inches.

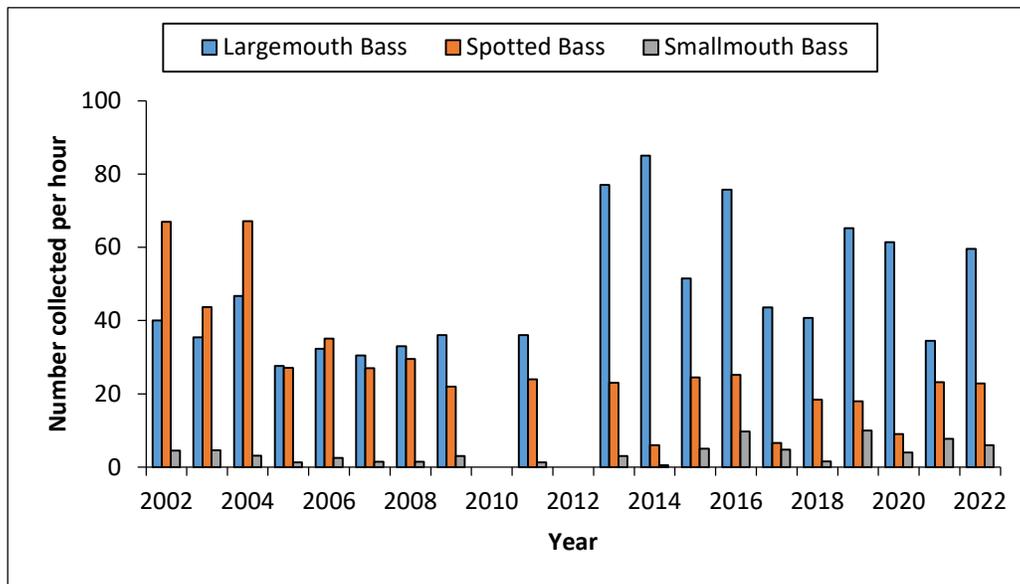


Figure 1. Number of Largemouth Bass, Spotted Bass, and Smallmouth Bass collected per hour of sampling on North Fork of Pound Lake 2002-2022. The lake was not sampled in 2010 or 2012.

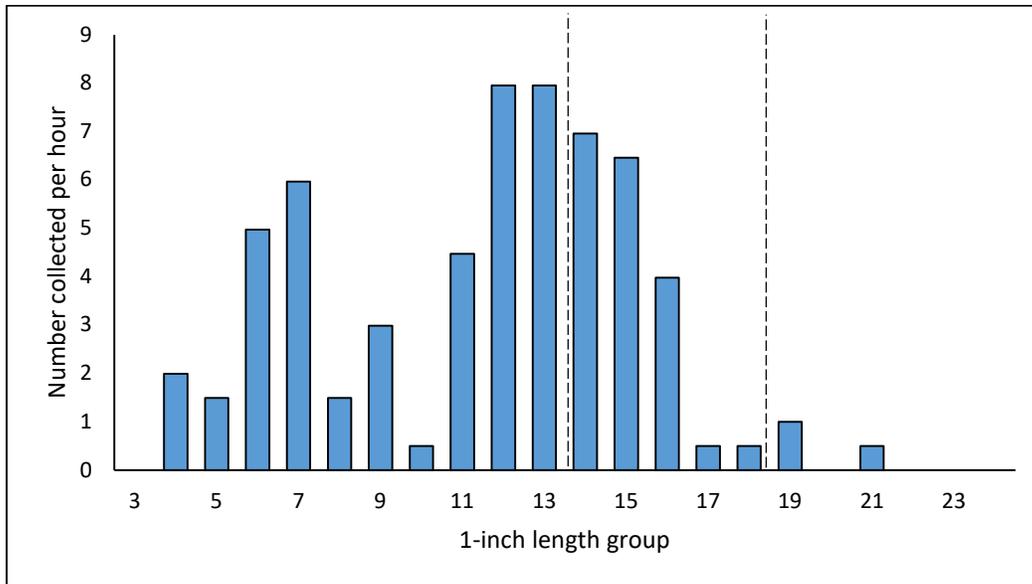


Figure 2. Length frequency distribution of Largemouth Bass sampled from North Fork of Pound Lake during electrofishing samples in spring 2022. Dashed, vertical lines represent the upper and lower boundaries of the 14-18 inch protected slot limit.

### Crappie

The relative abundance of crappie populations varies considerably from year to year and crappie are often characterized as having “boom and bust” cycles of abundance. This variability in abundance is generally the result of inconsistent spawning success. When the crappie population has a really good spawn, that year class of fish will increase the population abundance and provide good fishing for several years. Poor spawning success creates missing year classes that have the opposite effect. The stocking of crappie fingerlings in North Fork of Pound Lake is intended to offset this variability. Black Crappie were collected at a rate of 6 fish/h in 2022, which is slightly higher than 2021 (4 fish/h). Although both Black Crappie and White Crappie are present in North Fork of Pound Lake, only Black Crappie were collected in 2022.

The crappie population in North Fork of Pound Lake has good size structure with 54% of the population within the preferred-size range ( $\geq 10$  in) and 15% measuring 12 inches or longer. The abundance and sizes of crappie available in North Fork Pound Lake should provide good fishing opportunities.

### Walleye

North Fork of Pound Lake was initially stocked with Walleye fingerlings from 1999 to 2004. VDWR biologists evaluated the performance of stocked Walleyes from 2000 to 2004 in lakes across the state. Although the Walleyes in North Fork Pound Lake survived and grew well, they did not produce the relative abundance of walleyes observed in some other impoundments, like Flannagan Reservoir. Because VDWR only has a limited number of Walleye to stock each year, the decision was made to stop stocking Walleyes at North Fork Pound Lake in order to concentrate fish in lakes where they were most likely to produce the best populations. However, sampling from 2005 to 2007 indicated higher abundances than observed in earlier samples. As a result North Fork Pound Lake was added back to the Walleye stocking list in 2007.

The relative abundance of Walleye observed in the 2022 sample (2 fish/h) which is slightly lower than that of the preceding year. The lack of Walleye stocking in North Fork of Pound Lake in 2016 and 2018 may have contributed partially to this lower catch rate. However, spring electrofishing is not an optimal method for sampling Walleye in small impoundments. Additional work will be done in the near future to evaluate the most effective method to sample Walleye in North Fork Pound Lake.

#### Other Species

Both Channel Catfish and Flathead Catfish are abundant in North Fork of Pound Lake and provide excellent fishing opportunities for anglers wanting to target these species. Flathead Catfish tend to get larger in North Fork of Pound Lake and trophy-sized fish ( $\geq 40$  inches) have been collected. Although not abundant, Muskellunge are present and can provide some exciting action for those anglers lucky enough to hook one.

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