

Youghiogheny River Lake

Fayette/Somerset Counties

2021 Trap Net Survey

Youghiogheny River Lake is a 2,840-acre (at normal summer pool) impoundment with the dam located near Confluence, Pennsylvania. This waterbody serves as the boundary between southern Fayette and Somerset counties, and part of its waters lie in northern Garrett County, Maryland. Although 590 acres (about 21%) of the lake's surface area resides within Maryland, Pennsylvania Fish and Boat Commission Fisheries Management Area 8 biologists are responsible for developing the lake's aquatic resource management plans through cooperative agreement with Maryland DNR. Statewide fishing and fish harvest regulations for Commonwealth Inland Waters are used to manage the fish populations in the reservoir. Additional background information on Youghiogheny River Lake is provided through our previous Biologist Reports or through the [Army Corps of Engineers website for Youghiogheny River Lake](#).

Youghiogheny River Lake was surveyed from March 29 to April 2, 2021 with trap nets to evaluate the lake's Walleye population. The Walleye population in the lake is sustained through natural reproduction. In addition, the PFBC has been supplementally stocking Walleye fingerlings annually since 2002, except in 2015, 2017, and 2018 to augment the natural reproducing population.

Twelve fish species were collected during our 2021 trap net survey (Table 1). A total of 23 Walleyes were captured from our trap nets, all those captured were of legal size. This was our lowest total Catch Per Unit Effort (CPUE) of Walleye and CPUE \geq 15 inches of Walleye that we have ever recorded at Youghiogheny River Lake (Figure 1).

Table 1. Length and frequency distribution of sampled fish from trap netting in 2021.

Species	Number caught	Size range (inches)	Additional Comments
Walleye	23	18 - 24	100% \geq 15 inches
Northern Pike	10	22 - 40	80% \geq 24 inches
Smallmouth Bass	5	12 - 18	
Yellow Perch	79	3 - 14	6% \geq 9 inches
Black Crappie	24	3 - 13	75% \geq 9 inches
Rock Bass	4	2 - 8	--
Bluegill	6	3 - 7	--
Pumpkinseed	4	5 - 9	--
Channel Catfish	3	13 - 27	--
Brown Bullhead	1	12	--
Golden Shiner	1	NA	--
White Sucker	3	NA	--

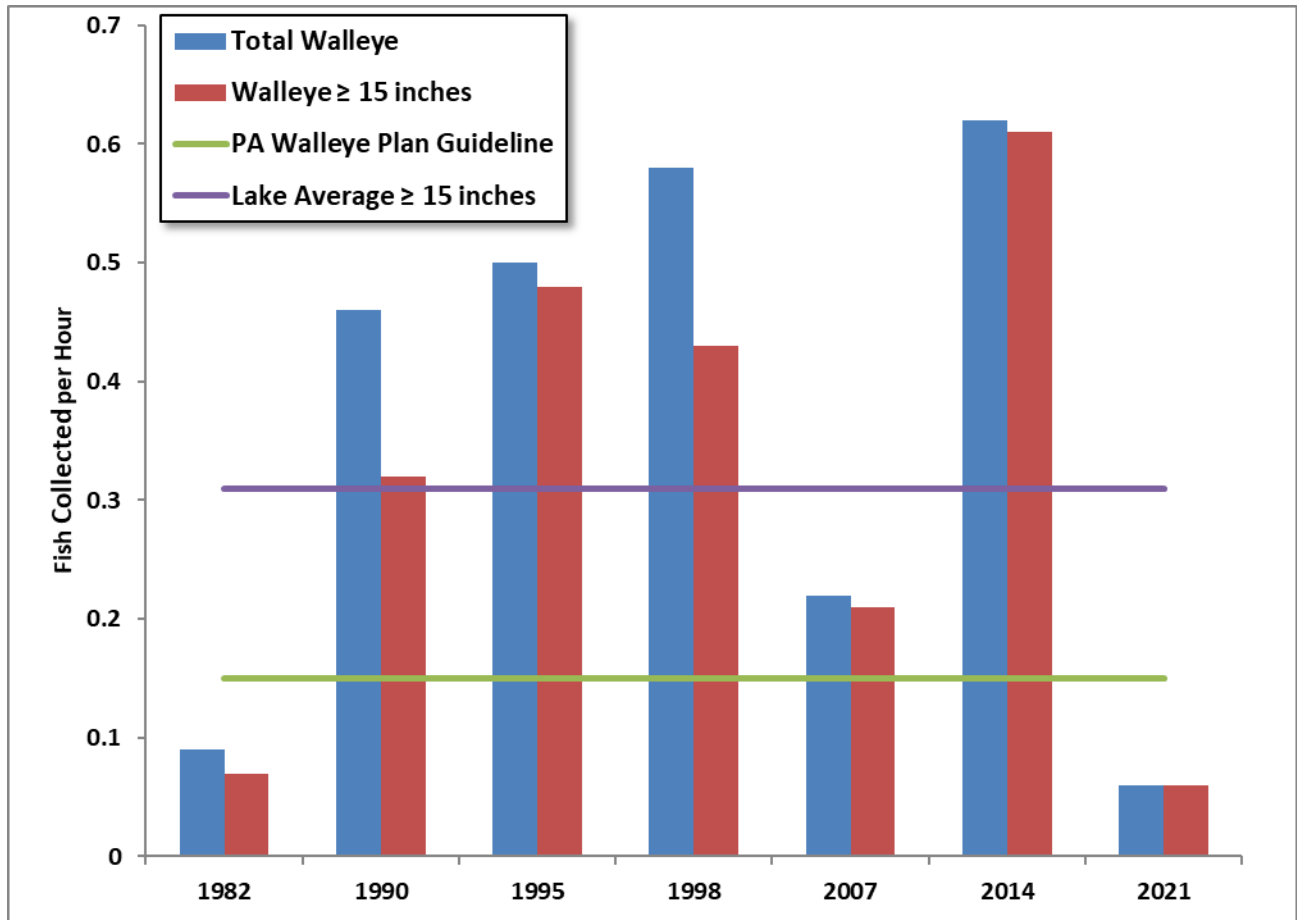


Figure 1. Walleye collected from trap nets in Youghiogheny River Lake.

In September 2019 a fish kill occurred at Youghiogheny River Lake resulting in mortality of coolwater fish species such as Walleye and White Sucker. This was caused by a number of conditions that happened at the same time: low pool elevation, sustained high air temperatures and warmer overall lake water temperatures, longer lake retention time, no dissolved oxygen at depths greater than 25 ft, and warmer water temperatures in the upper layer of the lake. These conditions caused coolwater fish species to move up in the water column where there was enough dissolved oxygen. However, water temperatures were too warm, and some fish unfortunately perished. The 2019 fish kill may have had significant negative impacts on coolwater fish such as Walleye, resulting in our low Walleye catch in 2021.

In order to evaluate the merits of our supplemental Walleye fingerling stocking program, we will continue to stock oxytetracycline (OTC) marked Walleye fingerlings at 20/ac (56,800 fish per year) for seven years (2019 – 2025), with a trap net survey planned in 2026. Walleye otoliths would be analyzed from the 2026 survey for the presence of OTC marks to evaluate the contribution of hatchery fish to the overall Walleye population.

Gary Smith, Area 8 Fisheries Manager