

2019 Upper Potomac River Walleye Summary

Walleye are a gamefish species growing in popularity in the mid-Atlantic region. First introduced in 1979, walleye can be found in the upper Potomac River from Cumberland, MD downstream to Washington D.C. The highest concentration of walleye are located in the middle section of the river between Dam 3 (Harpers Ferry) and Dam 5 (Clear Springs).

In the spring, many of the adults move upstream and concentrate below the major river dams to spawn. The current Potomac River fishery is maintained through a combination of natural reproduction and supplemental juvenile stocking. The Maryland Department of Natural Resources Freshwater Fisheries Program monitors the fishery through annual spring and fall boat electrofishing surveys.



28 inch female walleye collected in 2020 spring broodfish collection. Females this size can produce more than 300,000 eggs.

Walleye collected in the spring 2020 electrofishing sample ranged in size from 10-28.5 inches with an average total length of 16.1 inches (Figure 1). Walleye greater than 20 inches made up 14% of the sample. Walleye less than 13 inches in length are considered young-of-year (YOY) fish. YOY walleye made up the greatest percentage of the 2020 spring sample at 37%. The fall 2019 electrofishing catch rate for YOY walleye was also above average at 4.2 fish/hr (Figure 2). These results suggest that 2019 was a very good year for walleye recruitment in the upper Potomac. Previous strong walleye year-classes have been observed in 2014 and 2015. YOY walleye catch rates for these years were above 5 fish/hr (Figure 2). These strong year-classes are key to maintaining a productive fishery.

The fall 2019 catch rate for adult walleye (>15 inches) was lower than values observed for the past several years at 2.8 fish/hr (Figure 3). As adult fish from the strong 2014 and 2015 year-classes leave the population through harvest and natural mortality, we see a decrease in their

numbers resulting in a lower electrofishing catch rate. There are still plenty of catchable size fish in the river, with most being in the 18-20 inch size range.

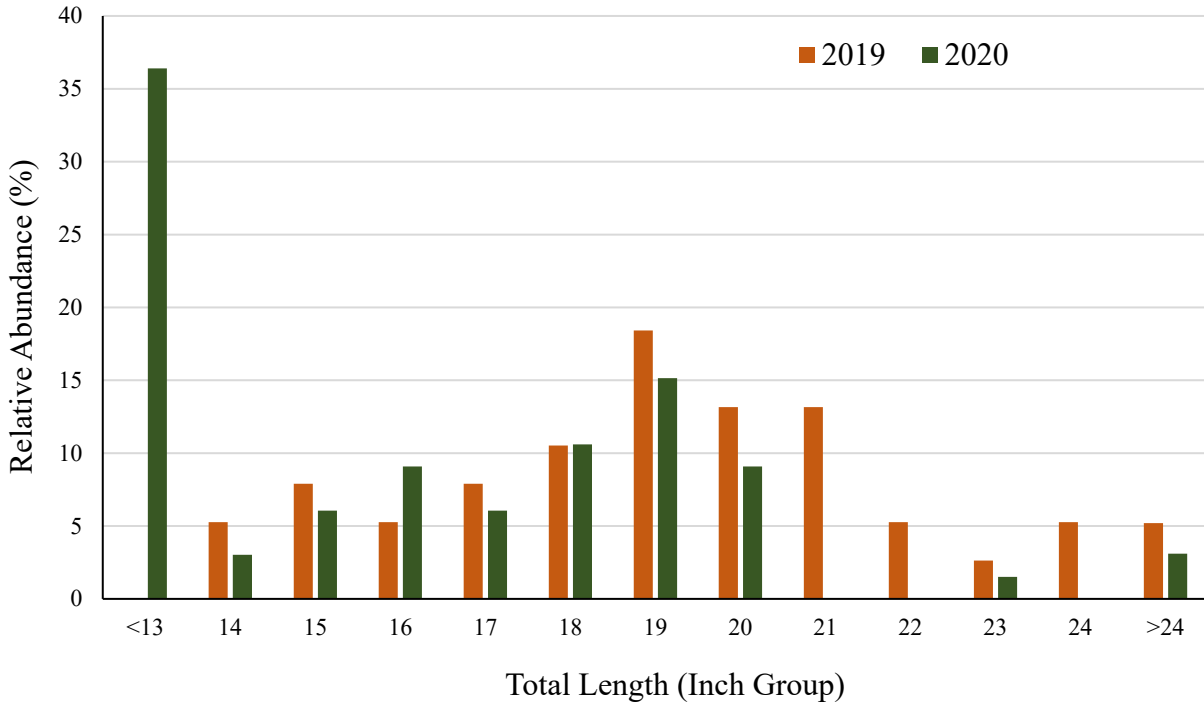


Figure 1. Size distribution of upper Potomac River walleye collected by boat electrofishing in spring 2019 and 2020.

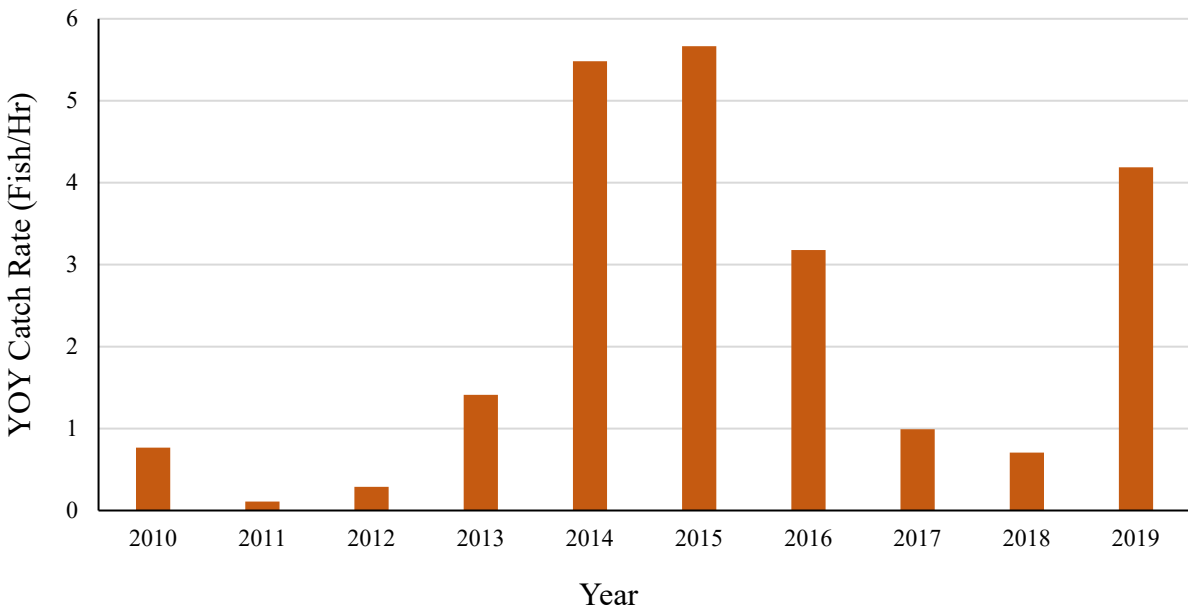


Figure 2. Annual catch rates for young-of-year walleye (<13 inches) for the upper Potomac River (2010-2019).

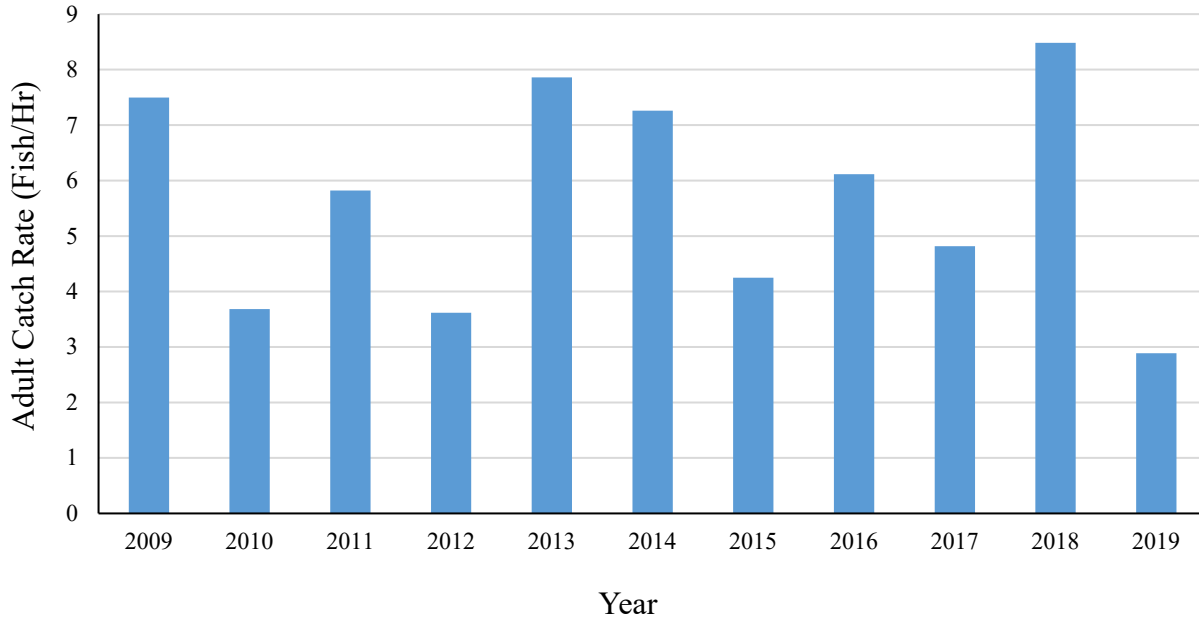


Figure 3. Annual catch rates for adult walleye (>15 inches) for the upper Potomac River (2009-2019).

A key management action to maintaining a productive walleye fishery is the annual supplemental stocking of walleye fingerlings. Every spring, adult broodfish are collected from the river and transported to a department hatchery. The fish are strip spawned at the facility and the fertilized eggs are transferred to hatching jars. Following hatch out, the fry are put into prepared ponds and allowed to grow to one inch fingerlings. These fingerlings are then stocked back into the upper Potomac River and other waterbodies throughout the state. Fingerlings in the river grow very rapidly reaching 9-12 inches by the end of the fall. Since 2014, an average of 60,000 walleye fingerlings have been stocked into the upper Potomac River each year. Monitoring has shown that hatchery produced fingerlings contribute roughly 50% to overall year-class strength.



(clockwise from top left) strip spawning adult walleye at hatchery, eggs in incubation jars, juvenile walleye after one year in the river, one inch walleye fingerlings

For 2020, anglers can expect a drop in the number of walleye >20 inches. The good news is that the strong 2019 year-class will mean good numbers of fish in the >12 inches for the next few years as these fish mature. Anglers are reminded of the current Maryland regulations for walleye.

- Year round minimum size = 15 inches
- January 1 – April 15 maximum size = 20 inches (mainstem Potomac River from Chain Bridge in DC to Cumberland, MD)
- Daily creel limit = 5 legal size fish



For more information or question regarding the upper Potomac River fisheries, please contact Michael Kashiwagi (Michael.kashiwagi@maryland.gov).