Codorus Creek
York County
2021 and 2023 Wild Brown Trout Evaluations

Codorus Creek is a 42.4-mile-long tributary to the Susquehanna River in York County, Pennsylvania. Codorus Creek, Section 4 (a 2-mile-long section that initiates at the confluence of the West Branch downstream to a point that is 0.4 mile downstream of Porters Road) supports a high density, Class A wild Brown Trout population. From 2005 to the end of 2022, this section was managed under the Trophy Trout, Artificial Lures Only program (TT-ALO). However, beginning January 1, 2023, this section was transitioned into the Artificial Lures Only, Trout Slot Limit program (ALO-TSL). This report summarizes findings of Brown Trout evaluations conducted in September 2021 and September 2023.

In September 2021, the TT-ALO section of Codorus Creek was re-examined to evaluate the status of the wild Brown Trout population. Biologists from PFBC's Fisheries Management Division surveyed the trout population using towed boat electrofishing gear. A single historical sampling site (446 yards in length; 13% of the total section length) was surveyed over two days. A total of 1,135 wild Brown Trout ranging 3 to 16 inches were collected (Figure 1). Most (98%) of the Brown Trout collected were < 12 in and no trophy-sized fish (≥ 18 in) were encountered during the survey. With an estimated biomass of 257.52 kg/ha of wild Brown Trout, a Class A population continues to easily be met in this section. Based on these results, PFBC staff determined that the TT-ALO program was not having the intended management effect (production of trophy-sized fish) on this Brown Trout population. Due to the high density of intermediate-sized (7 to 12 in) and relatively few large Brown Trout in the population, it appeared that this population would be better managed under the ALO-TSL program.

In September 2023, Biologists from PFBC's Fisheries Management Division re-visited Codorus Creek, Section 4 to conduct an evaluation of the wild Brown Trout population. The single historical sampling site was repeated in 2023. A total of 964 wild Brown Trout ranging 3 to 13 inches were collected (Figure 1). Brown Trout size structure was very similar to that observed in 2021, with fish < 12 in dominating the sample (98%). Further, the estimated Brown Trout biomass was 263.96 kg/ha, slightly higher than that observed in 2021. In 2023, sampling was conducted at three additional sites within Section 4 (693 yards in length, 20% of the total section length) to ensure all available habitat types were sampled to best describe Brown Trout size structure. A total of 803 Brown Trout ranging 3 to 17 inches were collected across the three sites (Figure 2). Size structure observed at these sites was similar to the historical site, although a few larger fish (14 to 17 in) were encountered. The 2023 survey marks the first year of a long-term evaluation to determine the potential effects of the ALO-TSL on this Brown Trout population.

Biologists plan to survey this section consistently through time to determine if Brown Trout abundance or size structure changes occur. The goal of the ALO-TSL program is to reduce

Brown Trout densities and competition for forage resources through angler harvest, thereby allowing more fish to reach larger sizes (> 12 in). Further, this regulation protects larger Brown Trout (> 12 in) that are desirable to anglers. Although it is too soon for population-level effects to have occurred as a result of the recently applied regulation, Codorus Creek, Section 4 continues to support a high density of Brown Trout, which should provide anglers with excellent fishing opportunities.
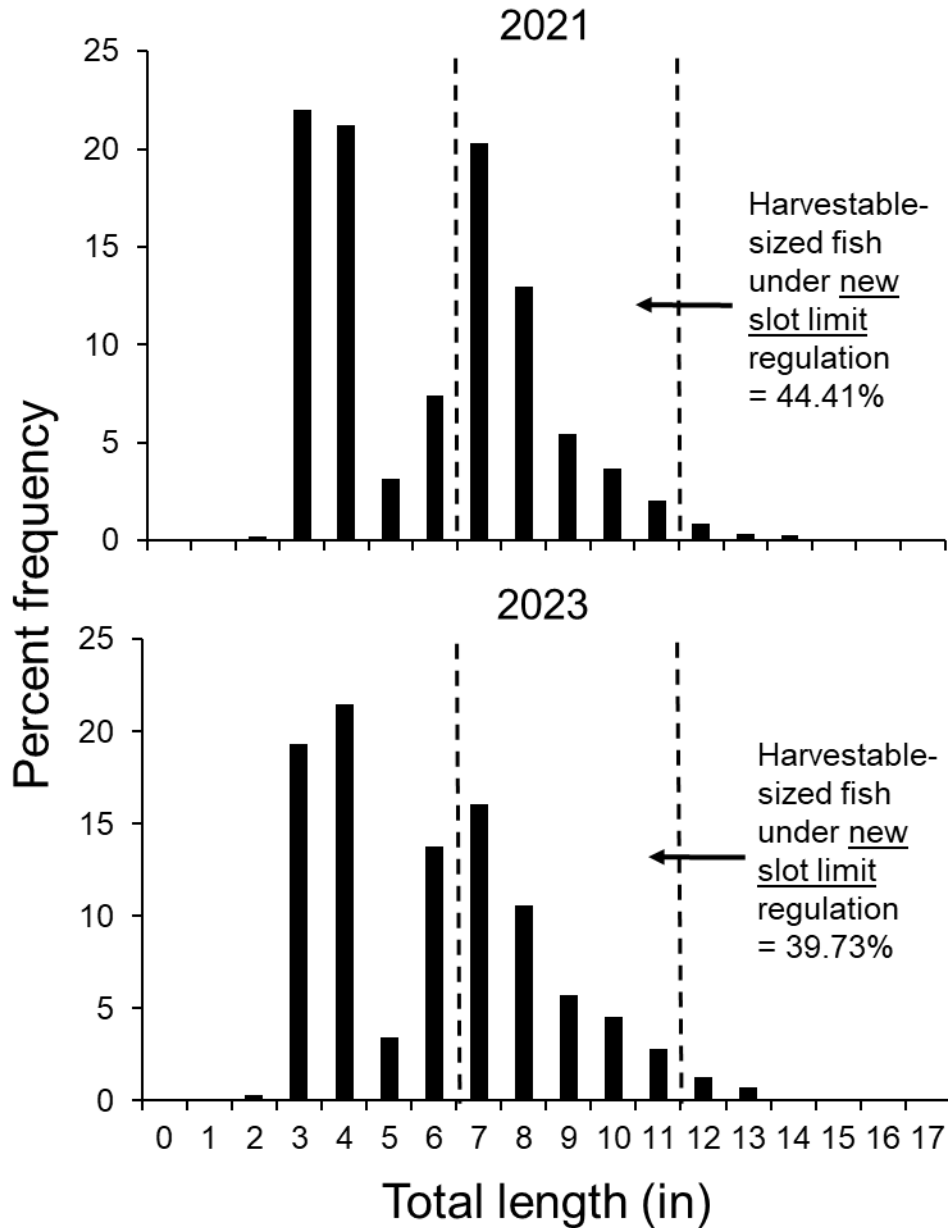

Figure 1. Length frequency distributions of Brown Trout captured at the historical sampling site on Codorus Creek, Section 4 during September 2021 and September 2023 surveys.
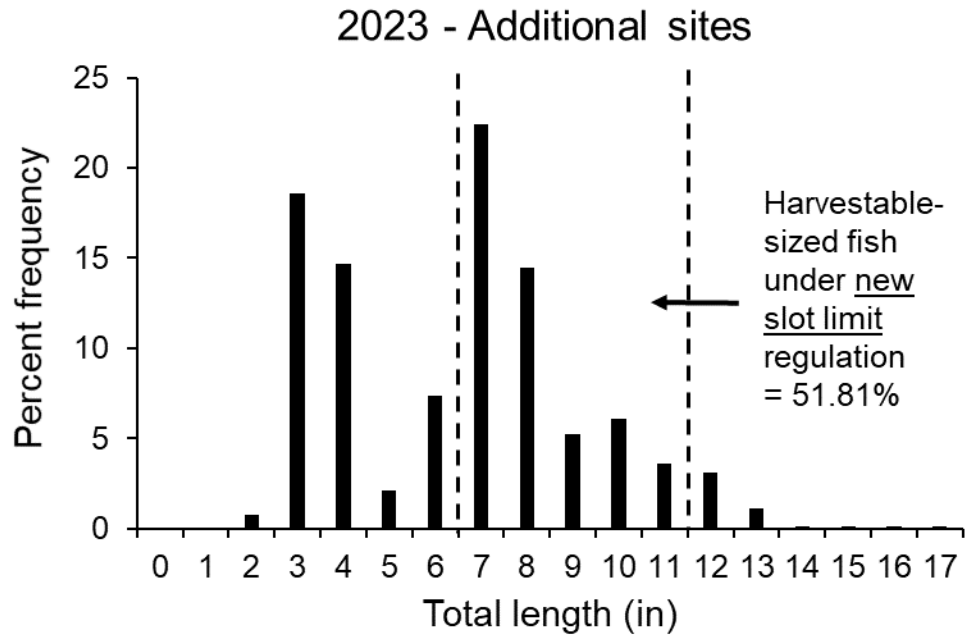
Figure 2. Length frequency distribution of Brown Trout captured at three additional sampling sites on Codorus Creek, Section 4 during the September 2023 survey.

Michael J. Porta
Area 6 Fisheries Manager