

Speedwell Forge Lake

Lancaster County

2020 - Warmwater Fishery Restoration Update

[Speedwell Forge Lake](#) is a 106-acre reservoir located in Elizabeth Township, Lancaster County and is owned and managed by the Pennsylvania Fish and Boat Commission (PFBC). Speedwell Forge Lake was created by impounding Hammer Creek. The lake is located about 15 miles north of the city of Lancaster. Speedwell Forge Lake was drawn down during late 2011 and early 2012 to complete necessary repairs to the deteriorating spillway, which were magnified during Tropical Storm Lee and Hurricane Irene. During the drawdown, a variety of fish habitat was placed in the lake by habitat biologists within the Division of Habitat Management, and an [exceptional map](#) of the habitat structures is available to anglers. Additionally, a substantial amount of terrestrial vegetation grew naturally along the remnant creek channel during the drawdown, which also provides excellent fish habitat.



Aerial photograph of Speedwell Forge Lake.

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Following the repairs to the spillway, Speedwell Forge was refilled in the spring of 2016 and was immediately placed in the [Catch and Release Lakes Program](#). This regulation requires that any fish caught, regardless of species, must be immediately released. To restore fish populations and re-establish fishing opportunities more rapidly, the PFBC has stocked numerous species. They include one-time stockings of Largemouth Bass, Golden Shiners, and White Crappie in 2016 and a stocking of Tiger Muskellunge in 2017, and annual stockings of Channel Catfish. This information, along with future stockings, can be found on our [Warmwater/Coolwater Stockings Page](#).



Area 6 Fisheries Manager Mike Porta with an 18in, 3.5 lb Largemouth Bass captured at Speedwell Forge Lake.

Biologists from the PFBC conduct fish population surveys every few years on reservoirs that have recently been refilled to monitor the development of fish populations. These surveys typically occur in the springtime and target panfish, Largemouth Bass, and other sport fish with trap nets and boat electrofishing. However, sampling during the spring and summer 2020 was cancelled due to necessary COVID-19 protocols. When sampling could safely resume, biologists from the Area 6 Fisheries Management office conducted a nighttime electrofishing survey at Speedwell Forge Lake on September 22, 2020 and a daytime electrofishing survey on October 8, 2020. Approximately half of the lake's shoreline was sampled during each survey. These surveys primarily targeted the Largemouth Bass population, but all other fish encountered were netted to collect a baseline sample for evaluating age and size structure.

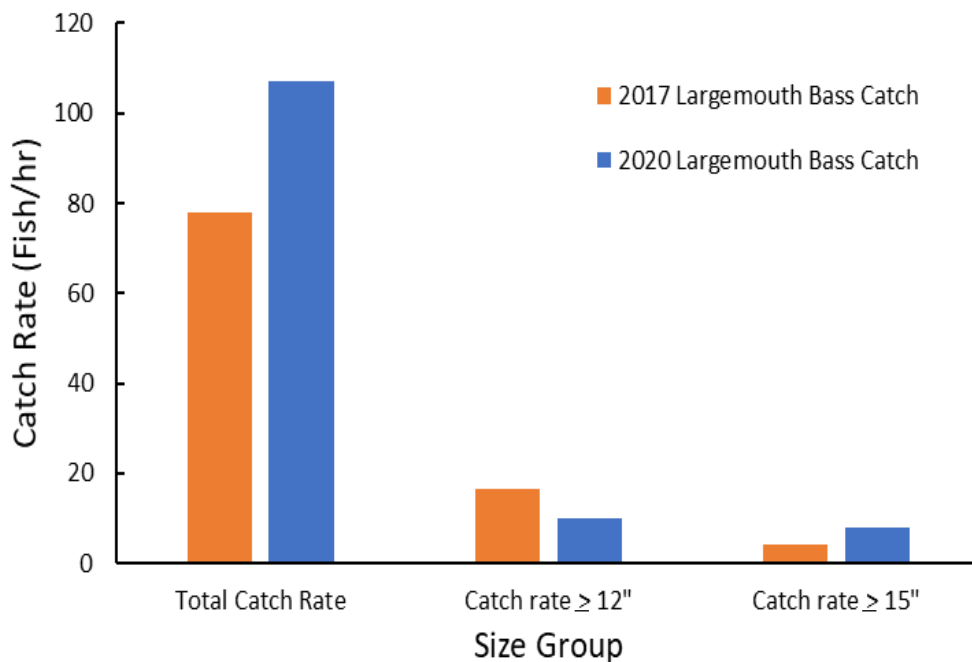


Figure 1. Comparison of Largemouth Bass catch rates between June 2017 and September 2020 samples.

A total of 165 Largemouth Bass (107 in September and 58 in October) were captured during the two electrofishing surveys in 2020. For comparison purposes, only Largemouth Bass collected during the September sampling effort will be used, as temperatures during this survey were more comparable to those in the spring (June 2017). The total catch rate of 107 fish/hr in 2020

was notably higher than the catch rate of 78 fish/hr observed in 2017. Additionally, the catch rate of fish ≥ 15 in, in 2020 (8 fish/hr) nearly doubled the 2017 survey catch rate (4.1 fish/hr). However, the catch rate of Largemouth Bass ≥ 12 in (10 fish/hr) was slightly lower in 2020 than in 2017 (16.4 fish/hr). The increase in the total catch rate of Largemouth Bass in 2020 is likely the result of higher numbers of small fish produced during the last several years. If these several year classes recruit to adulthood, they should quickly fill the current voids in the length distribution (11-12-inch fish) and fishing opportunities should substantially improve in the coming years. Additionally, the presence of more large Largemouth Bass ≥ 15 in suggests anglers have opportunity to catch more quality-sized fish.

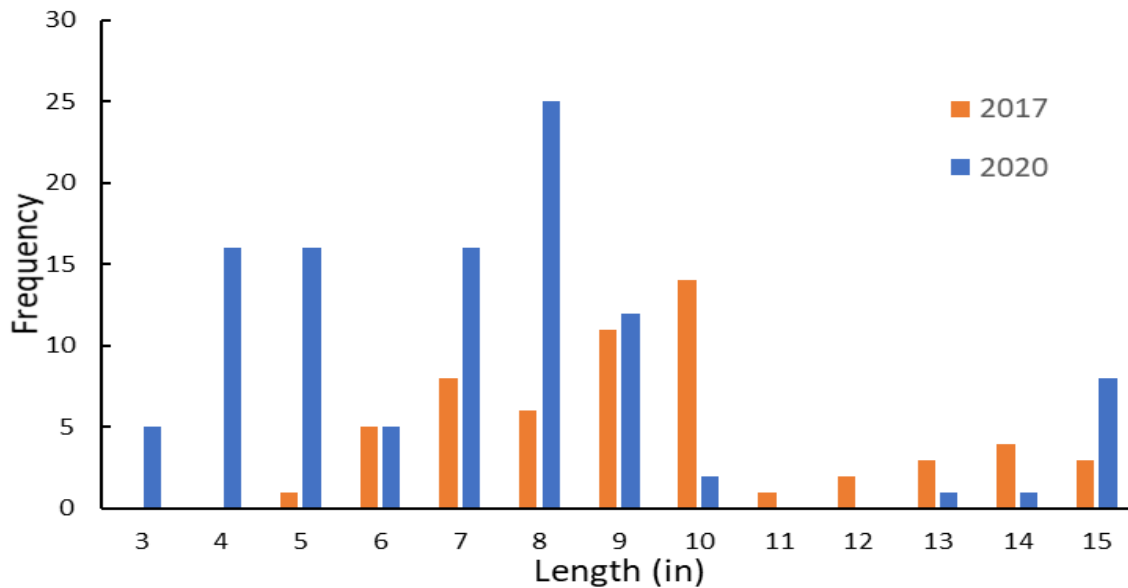


Figure 2. Length frequency distributions of Largemouth Bass collected during the June 2017 and September 2020 electrofishing surveys conducted at Speedwell Forge Lake.

During both surveys, the majority of Largemouth Bass were captured in the upper half of the lake (above the Brubaker Valley Road bridge) and were concentrated around undercut banks, woody debris, riprap, and aquatic vegetation.



An angler with a quality-sized Speedwell Forge Lake Largemouth Bass.

There were several other notable observations made during the 2020 surveys. First, the abundance of White Suckers was more than double previous survey catch rates. White Suckers can have deleterious impacts on centrarchid species (bass, crappies, and sunfish) through nest disturbance and direct competition. However, White Suckers can also provide an exceptional forage base for many predatory fishes, because they are a soft-rayed fish. As a result of their high abundance, a stocking of Tiger Muskellunge has been recommended for 2021. The goal of this stocking program is to reduce White Sucker numbers and to potentially create additional sport fishing opportunities.

Additionally, although the optimal sampling method for evaluating crappies was not used, we encountered several size classes of White Crappie. This suggests that the initial stocking of White Crappie in 2016 was successful and those fish are now spawning and have created several year classes. The observation of several White Crappie year classes is promising, as

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reproduction of crappies can be very sporadic, which produces inconsistent year classes. Further, this suggests that there are larger, mature adults in the population, but these fish were not sampled effectively with boat electrofishing.

Finally, numerous sunfish (Bluegill, Green Sunfish, and Pumpkinseeds) were encountered during these surveys, but very few exceeded 7in. However, like crappies, electrofishing during fall is not the optimal sampling method for assessing sunfish abundance and size structure. Future surveys at Speedwell Forge Lake will use trap nets to target panfish populations. These surveys will also target Channel Catfish to determine if catch objectives in the [Catfish Management Plan](#) are being met.

Table 1. Number and size range of fish captured during the two surveys conducted at Speedwell Forge Lake in 2020.

Species	September 22, 2020		October 8, 2020	
	Number Caught	Size Range (inches)	Number Caught	Size Range (inches)
Bluegill	194	2-7	18	2-6
Brown Bullhead	2	9-11	-	-
Green Sunfish	56	3-6	50	3-7
Hybrid Sunfish	3	4-6	1	4-5
Largemouth Bass	107	3-15	57	3-18
Pumpkinseed	32	3-6	38	3-5
White Crappie	44	3-8	10	3-8
White Sucker	-	-	58	6-16
Yellow Bullhead	1	11-12	-	-

Based on these results, the Speedwell Forge Lake fish populations appear to be developing at an adequate pace. Area 6 Fisheries Management staff plan to revisit Speedwell Forge Lake during Spring 2021 to conduct an electrofishing survey for Largemouth Bass and a trap net survey to evaluate the panfish and Channel Catfish populations. For anglers and boaters visiting Speedwell Forge Lake, be advised that only electric motors can be used. There are two

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boat ramps on Speedwell Forge Lake located on either side of Brubaker Valley Road. This lake provides great opportunities for recreationalists preferring use of kayaks. A mooring area is available to anglers and boaters wishing to leave their kayaks at the lake (in a locked environment), and the dense brush and standing timber provides fishing access only to those anglers using small watercrafts. Ample access is available to shoreline anglers fishing at Speedwell Forge Lake, including shoreline areas and fishing piers near each boat launch.

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