

Speedwell Forge Lake

Lancaster County

2021-2022 - 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 \(PFBC\)](#). The reservoir is located approximately 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 PFBC Division of Habitat Management, and this [map](#) provides anglers with habitat structure locations. Additionally, a substantial amount of terrestrial vegetation grew naturally along the remnant creek channel during the drawdown, which continues to provide fish habitat.



View of Speedwell Forge Lake from the upper access area. Photo credit: Melanie Migliaccio (PFBC).

Following repairs to the spillway, Speedwell Forge Lake was refilled in the spring of 2016. After refilling, the lake 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 minimize the time necessary to restore self-sustaining fish populations and re-establish fishing opportunities, in addition to disallowing harvest and adding fish spawning, nursery and adult habitat, the PFBC has stocked numerous species. They include one-time stockings of Largemouth Bass, Golden Shiners, and White Crappie in 2016, 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](#). This report details findings from surveys conducted at Speedwell Forge Lake during 2021 and 2022 that highlights restoration progress, including evidence of successful spawning and return to self-sustaining status of most species and serves to justify accommodation of angler harvest in 2023.

Nighttime Electrofishing – Largemouth Bass

Biologists from the PFBC Area 6 fisheries management office conducted a nighttime electrofishing survey of the Speedwell Forge Lake Largemouth Bass population on June 8, 2022. Four 15-min electrofishing transects were conducted, totaling 1 hour of sampling effort. All Largemouth Bass captured were weighed, measured, and released alive. A total of 87 Largemouth Bass were captured, ranging in length from 5 in to 18 in (Figure 1). The largest Largemouth Bass captured weighed 4.0 lbs.

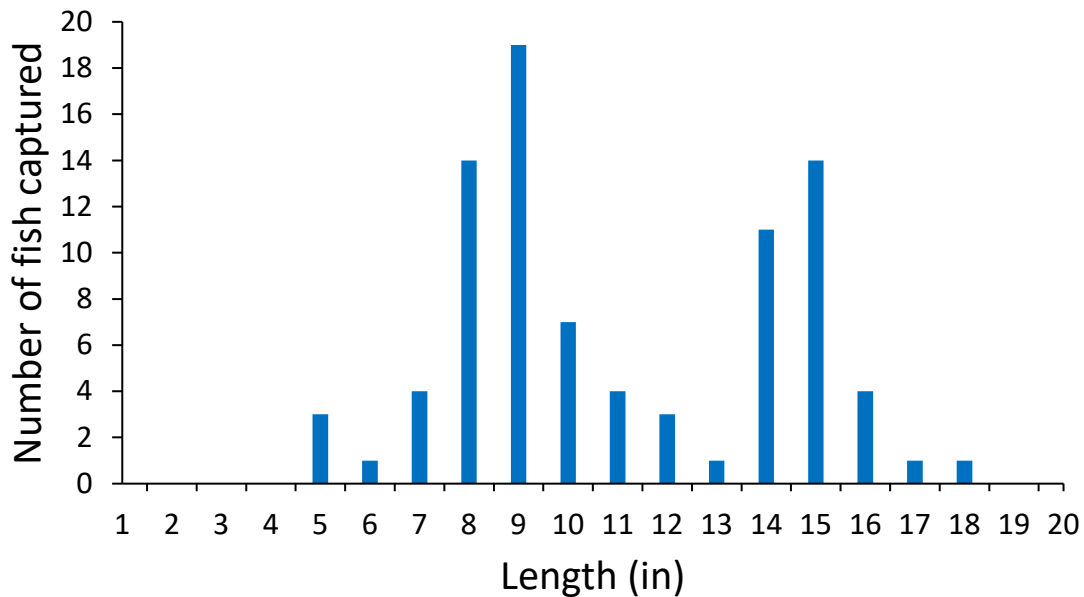


Figure 1. Length frequency distribution of Largemouth Bass collected at Speedwell Forge Lake on June 6, 2021.

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The total catch rate of Largemouth Bass has varied across the three surveys (Figure 2). The variability in total catch rates, particularly during September 2020, is likely due to the presence of young-of-the-year Largemouth Bass during that survey that were not sampled during 2017 and 2021. The catch rate of fish ≥ 12 in (36 fish/hr) in 2021 was considerably higher than catch rates observed during 2017 (16.4 fish/hr) and 2020 (10 fish/hr) surveys. The catch rate of fish ≥ 15 in steadily increased across the three surveys. The steady increase in fish greater than ≥ 15 in suggests a robust Largemouth Bass population has established at Speedwell Forge Lake that should provide anglers with high-quality fishing opportunities.



Figure 2. Catch rates of three size classes of Largemouth Bass collected from Speedwell Forge Lake during June 2017, Sept. 2021, and June 2022. The Big Bass Program catch rate objectives are 35, 7, and 2 fish/hr for total catch, catch ≥ 12 in, and catch ≥ 15 in, respectively.

Trap Net Evaluations

Biologists from the PFBC Area 6 fisheries management office conducted trap net surveys at Speedwell Forge Lake during March 30 to April 1, 2021, and April 4 - 6, 2022. Seven trap nets were set during each survey, and each net was set overnight for approximately 24 hours. Nets were sets at locations throughout the lake to ensure that all available habitats were evaluated. Captured fish were counted, measured, and released. White Crappie, Black Crappie, and Bluegill were the most encountered species in each survey. The other species collected across the two surveys were Brown Bullhead, Brown Trout,

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Green Sunfish, hybrid sunfish, Largemouth Bass, Pumpkinseed, Rainbow Trout, tiger muskellunge, White Sucker, and Yellow Bullhead (Table 1).

Table 1. Summary of fish species captured during trap net surveys at Speedwell Forge Lake in 2021 and 2022.

Fish	2021		2022	
	Count of Species	Size Range (in)	Count of Species	Size Range (in)
Black Crappie	190	3 -12	163	3 -12
Bluegill	93	3 -9	637	3 -8
Brown Bullhead	105	8 - 14	155	8 - 13
Brown Trout	-	-	3	8 - 24
Green Sunfish	6	4 - 7	6	6
Hybrid sunfish	3	7 - 8	4	4
Largemouth Bass	6	9 - 19	11	7 - 17
Pumpkinseed	3	4 - 5	6	4 - 5
Rainbow Trout	-	-	1	13
Tiger muskellunge	2	35 - 37	-	-
White Crappie	932	3 -14	1772	4 -14
White Sucker	89	6 - 15	134	7 - 16
Yellow Bullhead	25	8 - 12	6	9 - 12

White Crappie was the most abundant species captured during both surveys (Table 1). The majority of White Crappies ranged from 3 to 9 in, but fish approaching 15 in were captured (Table 2). Black Crappies were also captured frequently during both surveys (Table 1). Most Black Crappies ranged from 6-8 in, but fish up to 13 in were captured (Table 3). The higher composition of White Crappies compared to Black Crappies is not surprising, as White Crappies tend to predominate in turbid (muddier) environments like Speedwell Forge Lake. Although crappie abundance can be highly variable as a result of inconsistent annual recruitment, the Speedwell Forge Lake crappie populations appear to have produced multiple strong year classes. These data suggest that anglers should expect to encounter intermediate-sized crappies when fishing at Speedwell Forge Lake, however some larger fish are present in the population.

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Area 6 Fisheries Manager Mike Porta displaying a quality-sized White Crappie captured at Speedwell Forge Lake.

Table 2. Length distribution of White Crappie captured during trap net surveys at Speedwell Forge Lake in 2021 and 2022.

Size	2021	2022	Total
1	0	0	0
2	0	0	0
3	29	0	29
4	225	5	230
5	42	449	491
6	1	1057	1058
7	298	136	434
8	311	102	413
9	10	4	14
10	6	1	7
11	5	3	8
12	3	6	9
13	1	4	5
14	1	5	6

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Table 3. Length distribution of Black Crappie captured during trap net surveys at Speedwell Forge Lake in 2021 and 2022.

Size	2021	2022	Total
1	0	0	0
2	0	0	0
3	5	2	7
4	2	0	2
5	0	23	23
6	87	30	117
7	85	100	185
8	3	4	7
9	0	1	1
10	4	0	4
11	2	1	3
12	2	2	4

Bluegill was the second most frequently captured species during trap net efforts at Speedwell Forge Lake (Table 1). The majority of Bluegill captured were between 5 and 7 in, but some larger fish were also encountered (Table 4).

Table 4. Length distribution of Bluegill captured during trap net surveys at Speedwell Forge Lake in 2021 and 2022.

Size	2021	2022	Total
1	0	0	0
2	0	0	0
3	2	18	20
4	10	57	67
5	18	293	311
6	47	252	299
7	15	14	29
8	0	3	3
9	1	0	1

During the 2021 trap net survey, two tiger muskellunge ranging 35 to 37 in were captured. This equates to a catch rate of 0.01 fish/hr, which meets the PA Musky Plan Benchmark (0.01 fish/hr). Because catch rate benchmarks have been met, the PFBC will continue to stock yearling tiger muskellunge into

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Speedwell Forge Lake in alternating odd years. The goal of these stockings is to provide additional sport fishing opportunities, and to potentially control White Sucker numbers in the lake.



Area 6 Fisheries Manager Mike Porta displaying a tiger muskellunge captured at Speedwell Forge Lake.

For anglers and boaters visiting Speedwell Forge Lake, be advised that only electric motors can be used. There are two boat ramps on Speedwell Forge Lake located on either side of Brubaker Valley Road. This lake provides great opportunities for recreationists preferring the 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.

2023 Regulation Changes

The following represent changes to the Speedwell Forge Lake fishing regulations beginning January 1, 2023:

- The Speedwell Forge Lake black bass population will be managed under the Big Bass Program Special Regulations, which allows a 4 fish per day creel limit with a 15 in minimum size limit.
- All other species will be managed under Commonwealth Inland Regulations.

Area 6 Fisheries Management Staff

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