

# **West Branch Delaware River**

## **Delaware County, New York**

## **Wayne County, Pennsylvania**

### **2018 Wild Trout Electrofishing Survey**

### **Fisheries Investigation Plan**

The New York City (NYC) reservoir tailwaters in the upper Delaware River Basin are an increasingly popular destination water for wild trout fishing. The need for present date trout population data has been identified by the Joint Fisheries Investigation Plan for the Delaware tailwaters. The Pennsylvania Fish and Boat Commission (PFBC) and the New York State Department of Environmental Conservation (NYSDEC) have agreed to support joint fishery-independent electrofishing monitoring surveys in the Delaware tailwaters over the next three-year term, 2018 – 2020.

Springtime night-boat electrofishing was originally planned to start in April 2018, but sampling efforts were delayed due to high flows. Night-boat electrofishing monitoring for adult-sized trout resumed in May 2018 in the main stem reaches of the West Branch. In total, at all four sample sites, there were 178 Brown Trout and 25 Rainbow Trout captured (Table 1). Size distribution varied, but a majority of the fish captured were 12-inch to 18-inch in length. A 24.1-inch Brown Trout (caught at Laurel Bank) and 19.1-inch Rainbow Trout (caught at Shehawken) were the largest trout captured. High flows potentially reduced electrofishing efficiency resulting in a perceived low total catch for May. Yearling (fish hatched in 2017) and older trout were PIT tagged. The goal of this tagging effort is to identify critical spawning and nurse habitats within the West Branch and its tributaries. A total of 145 trout were PIT tagged and 24 trout captured were previously tagged.

Night-boat electrofishing efforts in June 2018, resulted in the capture of a total of 474 Brown Trout and 49 Rainbow Trout (Table 1). Greatest numbers of trout were captured at the Laurel Bank site, with fewer total numbers of trout captured at further downriver sites. Overall, total catches observed in our June collections were greater than previous months.

Size distributions observed in June varied. Most of the total catch (Brown Trout: 71%; Rainbow Trout: 59%) was composed of 12-inches or larger sized trout. Sixteen to 19-inch trout were also present (Brown Trout: 26%; Rainbow Trout: 10%) in combined catches; but 20-inch or larger trout were relatively infrequent (Brown Trout: 2%; Rainbow Trout: 0%). A 26.2-inch Brown Trout (caught at Laurel Bank) and 19.1-inch Rainbow Trout (caught at Shehawken) were the largest trout captured. A total of 419 trout were PIT tagged and 103 trout captured were previously tagged.

The improved catches of trout observed in June likely reflect better electrofishing catchability rather than an increasing trout population in the West Branch, as lower flows experienced during the June sampling allow for an easier capture of trout. Furthermore, the late Spring air temperatures during May through mid-June were seasonably mild. Main stem water temperatures throughout the tailwaters, well downriver in the Delaware River remained cooler than average, likely not forcing trout to seek upriver thermal refugia within the West Branch.

Sampling will continue throughout the summer and into the fall months in 2018. The next scheduled sampling event is anticipated to occur in mid-July 2018. Electrofishing targeting young-of-the-year trout within selected tributaries and main stem reaches of the West Branch will also occur in mid-July.

**Table 1. Catch of Brown Trout and Rainbow Trout from night-boat electrofishing April – June 2018.**

Site	Size	Brown Trout			Rainbow Trout		
		Apr	May	Jun	Apr	May	Jun
Laurel Bank	Total	n/a	103	228	n/a	8	12
	≥12"	n/a	70	149	n/a	5	6
	≥16"	n/a	12	27	n/a	1	1
	≥20"	n/a	2	5	n/a	0	0
Airport Rd	Total	n/a	34	130	n/a	2	8
	≥12"	n/a	27	100	n/a	2	7
	≥16"	n/a	10	44	n/a	1	2
	≥20"	n/a	0	2	n/a	0	0
Balls Eddy	Total	n/a	27	76	n/a	8	13
	≥12"	n/a	20	55	n/a	5	7
	≥16"	n/a	12	33	n/a	0	1
	≥20"	n/a	1	2	n/a	0	0
Shehawken	Total	n/a	14	40	n/a	7	16
	≥12"	n/a	13	33	n/a	4	9
	≥16"	n/a	7	18	n/a	1	1
	≥20"	n/a	0	1	n/a	0	0

Staff Biologists  
 Pennsylvania Fish and Boat Commission, Area 5  
 NYS Dept. of Environmental Conservation, Bureau of Fisheries, Region 4