

Upper Delaware River Basin Tailwaters

Delaware County, New York

Wayne County, Pennsylvania

Volunteer Trout Redd Count Surveys, Spring 2018

Fisheries Investigation Plan

The Pennsylvania Fish and Boat Commission (PFBC) and the New York State Department of Environmental Conservation (NYSDEC) have agreed to support joint fishery monitoring surveys (JFIP) in the Delaware tailwaters over the next three-year term, 2018 – 2020. One component includes quantification of trout redd occurrences in the upper Delaware River tailwaters, inclusive of both mainstem and coldwater tributaries.

Timing of trout spawning is species-specific. Brown Trout spawning (i.e., redd formation) occurs during the fall, typically October; whereas, Rainbow Trout spawning occurs during the spring, typically April. Both trout species utilize shallow, fast flowing waters, and gravel substrate that ranges from 1 – 3 inches in diameter. Female trout dig out a depression, building a small elevated gravel bar, these depressions/bars are termed “redds”. Trout often form redds over pre-existing redds. Most of the eggs reside in the formed gravel bar and the fry emerge from the gravel bar once hatched.

Occurrences of Rainbow Trout redds formed during the 2018 Spring spawning season were documented as a voluntary collaboration with interested sportsmen’s clubs and individual citizens. Based on previous experiences of presumed Brown Trout spawning locations, potential spawning locations were identified within the first 0.5 miles of tributaries to the upper Delaware River tailwaters. A total of 21 tributaries were assessed for redd occurrences within the first half-mile of each tributary (Table 1). Eighty-two redds were observed in total. Oquaga Creek, tributary to the West Branch, had the single highest redd count. Read Creek, tributary to East Branch, had the second highest redd count. Most of the other tributaries surveyed typically had less than 10 redds observed. Assessment of potential Rainbow Trout redd construction in the East and West branches main stem reaches were not completed. Unfavorable river conditions (i.e., high flows) prevented any possibility for positive redd identification.

Volunteers noted several tributaries surveyed had unsuitable bottom substrates (i.e., large cobble) for redd construction within the first 0.5 miles surveyed. This condition was found in Roods Creek, Sands Creek, Cadosia Creek, Campbell Brook, and Hoolihan Creek. All future redd assessments within these tributaries will exclude the first 0.5 mile of stream, allowing the volunteers to focus on more favorable redd habitats further upstream.

The next scheduled voluntary redd count survey is anticipated to occur in late October 2018 for targeting Brown Trout redd development. We encourage any interested sportsmen’s clubs and individual citizens to participate. Notices of training and survey dates will be coordinated through the Friends of the Upper Delaware, as we approach the fall months.

Table 1. Counts of Rainbow Trout redd April 2018.

Water	Redd Counts
West Branch	
Cold Spring Creek	1
Oquaga Creek	22
Sherman Creek	0
Roods Creek	0
Balls Creek	5
Sands Creek	0
Shehawken Creek	1
<i>Total</i>	29
East Branch	
Campbell Brook	0
Trout Brook	2
Baxter Brook	4
Morrison Brook	1
Read Creek	17
Fish Creek	6
Peas Eddy Brook	0
Cadosia Creek	6
<i>Total</i>	36
Delaware River	
Equinunk Creek	0
Abe Lord Creek	9
Bouchoux Brook	4
Hoolihan Creek	0
Basket Creek	4
Hankins Creek	0
<i>Total</i>	17
<i>Grand Total</i>	82

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