

Pine Kill Trout Survey (Survey #: 321004)
 Michael DiSarno, Region 3 Fisheries

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Pine Kill is a seven-mile-long tributary to the Basha Kill in the Town of Mamakating, Sullivan County. Public access is present via 0.6 miles of Public Fishing Rights and as the creek flows for 0.4 miles through the Basherkill Wildlife Management Area. The stream has not been stocked by the NYSDEC and has been mostly managed as a wild brown trout stream. Private stockings have occasionally been permitted but have been limited to the lower reaches of the stream. Statewide fishing regulations apply. This survey was conducted to determine the best management strategy as part of the Trout Stream Management Plan (NYSDEC 2020). The stream is currently managed as 'Wild' and statewide fishing regulations apply. The stream was most recently sampled in 1997 to determine trout abundance at three locations. Results from that survey indicated an excellent wild brown trout population was present (Table 1). This 2021 survey was conducted as a depletion estimate on 6/29/21, 6/30/21 and 8/4/21 to estimate current trout abundance. Two backpack electrofishing units were used with two additional scappers. Four sites, which averaged 391 feet, were sampled from the upstream end of the PFR segment downstream to the Basherkill Wildlife Management Area (Figure 1). Three passes were made at three of the four reaches, while only one pass was made at the lower most site due to the low catch of trout. Blocking seines were set at the upstream and downstream end of each site. All trout collected were measured to the nearest millimeter and then released outside of the sample reach.

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A total of 212 trout were caught during this survey including 207 brown trout and five brook trout. All trout caught were determined to be wild. Fifty-nine of the 207 brown trout caught were young of year with no young of year brook trout observed.

Lengths of brook trout ranged from 5.5 to 7.8 inches. Lengths of yearling and older brown trout ranged from 4.5 to 17 inches, with most (67%) at six to eight inches long (Figure 2). Only three young of year

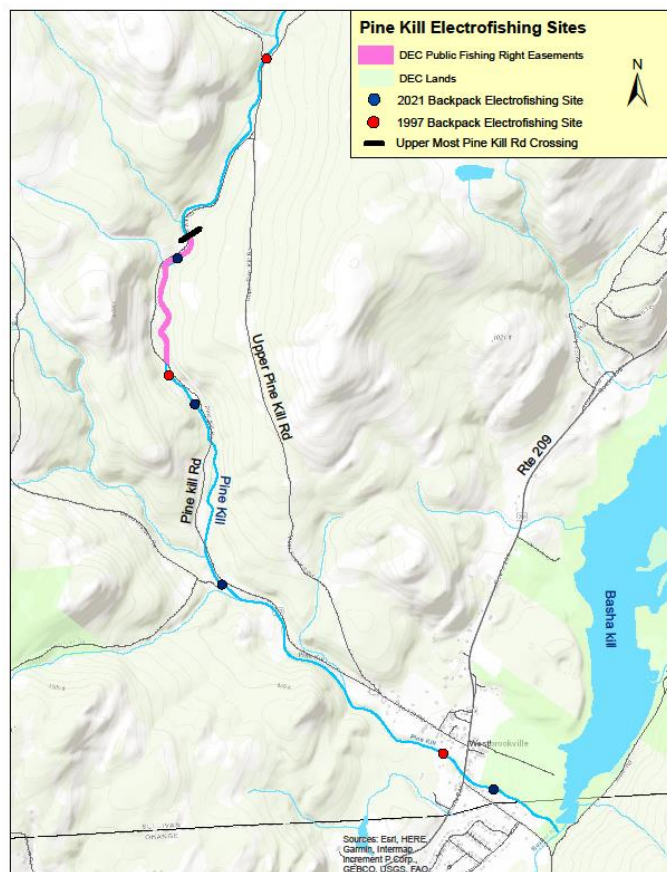
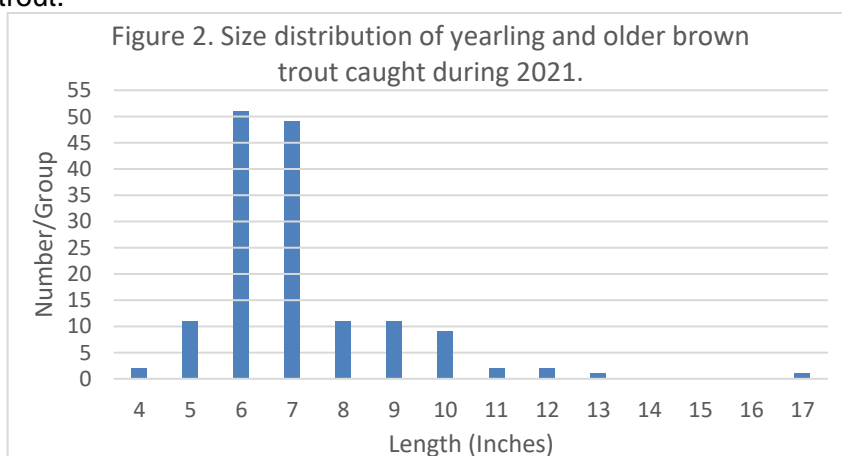


Figure 1. Backpack electrofishing locations from 1997 and 2021.



trout were caught at the lower-most site with no adult trout seen or caught. The estimated pounds/acre for all wild trout from the remaining three sites was 48, while wild, yearling and older trout/mile was estimated at 671. These results were similar to the 1997 observed pounds/acre and yearling and older trout/mile at 64 and 671, respectively.

The Trout Stream Management Plan specifies target numbers for the 'Wild Quality' category for wild trout at 40 lbs/acre or yearling and older wild trout of 300/mile. The estimated pounds/acre was well above the threshold for 'Wild Quality' at four of the seven sites sampled from 1997 and 2021, and yearling and older trout/mile met the threshold at six of the seven sites sampled. Therefore, it is recommended that Pine Kill be managed as 'Wild Quality' from the Rte. 209 bridge upstream to the upper most Pine Kill Rd crossing. It is recommended that wild trout abundance be sampled again in three to five years to determine if the 'Wild Quality' category is the appropriate designation.

Table 1. Total wild trout caught with actual and estimated pounds/acre and yearling and older trout/mile.

Year	Site	Site Length	Total Caught	Pounds/Acre	Yearling and Older/Mile
1997	1	259	28	54.3*	408*
1997	2	385	80	38.1*	576*
1997	3	190	56	100.1*	1028*
2021	1	430	59	37.6	642
2021	2	405	73	53.1	675
2021	3	415	77	53.9	709
2021	4	312	3	0	0

*Only one sampling run was conducted at each site in 1997. Therefore, no estimate was attempted and these numbers are actual observed pounds/acre and trout/mile. Sufficient data was collected during 2021, and these numbers are estimates of pounds/acre and trout/mile.

Literature Cited:

NYSDEC. 2020. New York State Trout Stream Management Plan. Albany: New York State Department of Environmental Conservation.