

Neversink Reservoir Trout and Salmon Assessment (Survey #:319007)

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Neversink Reservoir is a 1,471-acre reservoir located in the Town of Neversink in Sullivan County. The reservoir has a drainage area of 92 square miles and is part of the New York City reservoir system which is managed by the New York City Department of Environmental Protection (DEP). Shore fishing is found around virtually the entirety of the shoreline, and a free, DEP access permit is required to access the reservoir. The use of canoes and kayaks are permitted from Memorial Day through Columbus Day but must be steam cleaned prior to launching. Additionally, the use of row boats is allowed here and must be stored at the reservoir between uses. A special fishing regulation exists which limits the harvest of trout with a length limit of 12 inches and a daily limit of three. The season is open April 1 through Oct 15. Additionally, smelt fishing and ice fishing is prohibited. The reservoir is managed as a two-story fishery with an annual stocking of 3,000 yearling landlocked Atlantic salmon (LLS) and 3,700 yearling brown trout occurring every spring. The annual brown trout stocking policy was implemented in 2004 while LLS have been stocked almost every year since 1975. Additionally, fingerling (~2 inches) LLS have been sporadically stocked in the tributaries to the reservoir with hopes of recruitment to the reservoir. This fingerling stocking occurred again in 2019. Additionally, due to a shortage of yearling LLS, only 750 were stocked. This was supplemented with a stocking of 1,700 two-year-old LLS during the spring of 2019.

During 2016, Neversink Reservoir was sampled with the use of gill nets to determine LLS abundance. However, none were collected (Angyal 2017). This 2019 survey was conducted using similar methods used during 2016 to determine survival of wild or stocked LLS. A temperature and dissolved oxygen profile was conducted on 7/23/19 (Table 1) to determine the depth of the thermocline prior to setting nets. A total of five gill nets were set on the afternoon of 7/23/19 covering water depths of 25-50 feet. Four gill nets were 270' x 10' with three panels of 2", 3" and 4" stretch monofilament mesh. The fifth net set was 270' x 20' with three panels of 2", 3" and 4" stretch monofilament mesh. All gill nets were set overnight with an average soak time of 23.2 hours.

A total of five species of fish were collected including 29 brown trout, one rainbow trout, 63 LLS, three rainbow smelt and one Alewife. Catch/net night for LLS was 9.3 and 26 for the 270' x 10' and the 270' x 20' nets respectively. LLS lengths ranged from 12.2 inches – 16.5 inches (Figure 1). All LLS caught had a fin clip indicating it was a two-year-old and was stocked as part of the supplemental stocking during the spring of 2019. No salmon caught were from a wild year class or separate stocked year class. Catch/net night for brown trout was 4.5 and 11 for the 270' x 10' and the 270' x 20' nets respectively.

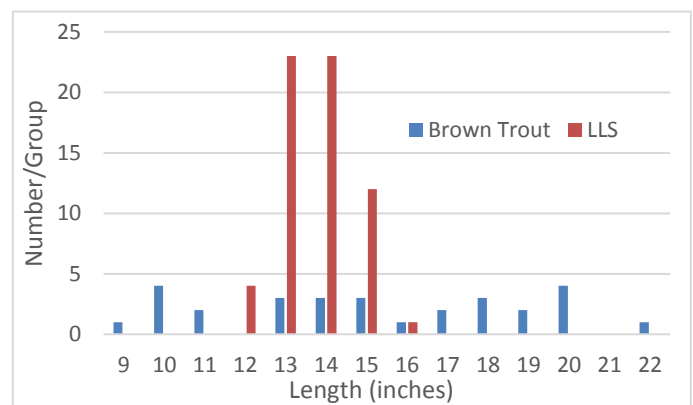


Figure 1. Length frequency of brown trout and LLS caught during the 2019 gill net survey.

This 2019 gill net survey was the first year that catch/net for LLS was greater than two. The stocking of two-year-old LLS has been the only productive stocking seen in the last 30 years. Further sampling should be conducted on Neversink Reservoir with a gill net survey conducted in 2020 and 2021 to determine recruitment of 2019 stocked LLS fingerlings and two-year-olds. If possible, it's recommended that a stocking policy of two-year-old LLS be implemented here. If stocking of two-year-olds is not

feasible, and recruitment of fingerling LLS is not documented, it's recommended that this stocking policy be cancelled and the cold-water fishery in Neversink Reservoir be managed primarily for wild and stocked brown trout.

Table 1: Depth, temperature and dissolved oxygen readings as taken on 7/23/19. Depths at which gill nets were fished are highlighted in blue.

Depth (ft)	Temp (°F)	DO (ppm)	Depth Cont. (ft)	Temp (°F)	DO (ppm)
0	77.5	8.4	42	53.3	9.3
2	77.5	8.4	44	52.3	9.5
4	77.5	8.4	46	50.8	9.9
6	77.6	8.4	48	49.8	10.1
8	77.6	8.4	50	49	10.3
10	77.6	8.4	52	48.4	10.4
12	77.6	8.4	54	47.8	10.5
14	77.5	8.4	56	47.3	10.6
16	74.2	9.1	58	46.8	10.7
18	73.2	9.4	60	46.2	10.8
20	71.2	9.9	62	45.8	10.9
22	69.5	10.2	64	45.3	10.9
24	68.2	10.3	66	44.8	11.2
26	66	10.2	68	44.3	11.3
28	64.7	10	70	43.9	11.3
30	63.2	9.5	75	43.1	11.5
32	60.9	8.7	80	42.5	11.5
34	58.3	8.7	85	42.2	11.7
36	57.7	8.5	90	41.8	11.8
38	56.6	8.6	95	41.6	11.7
40	54.6	8.9	100	41.5	11.7

Literature Cited:

Angyal, R. New York State Department of Environmental Conservation Survey #316007 Abstract. New York State Department of Environmental Conservation, Bureau of Fisheries. New Paltz, NY.