

# Muscoot Reservoir Gill Net Survey

Ryan Coulter, Region 3 Fisheries Unit

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Muscoot Reservoir is a 1,263-acre reservoir located in the Town of Somers, Westchester County, NY. The reservoir has roughly 30.5 miles of shoreline and has a maximum depth of 32 feet. Public access is provided by New York City Department of Environmental Protection. Although mostly known for its warm water fish species, reports of some sizeable trout from anglers prompted us to start an experimental trout stocking program. Muscoot receives cold water from five upstream reservoirs helping the thermal and dissolved oxygen conditions in this relatively shallow and weedy reservoir. Since many of these tributaries are stocked with trout it is likely that the trout being caught in the reservoir entered it from them. Roughly 1,000 of both rainbow and brown trout have been stocked annually since 2010 (the appropriate statewide fin clip has been applied to all these fish). A special regulation exists for trout: open all year, 12" size minimum, daily limit of three, ice fishing permitted. On 7/24/18, gill nets were set at four different locations and were retrieved the following day. These nets fished for an average of 25.07 hours each. The nets used were 270 ft by 10 ft with 5 inch, 6 inch and 7 inch monofilament mesh. All four nets were set 5 feet below the surface, effectively fishing from 5 to 15 feet deep. The purpose of this survey is to monitor the trout population and to see if the experimentally stocked fish are surviving into summer and holding over.

A total of eight species were caught during this survey including five largemouth bass, seven white perch, three yellow perch, 12 bluegill, 12 alewife, 53 white sucker, 19 brown trout and six rainbow trout. Brown and rainbow trout lengths ranged from 9.4 to 31.7 inches (Figure 1). Only one brown trout had a fin clip while three rainbow trout had fin clips.

Although Muscoot Reservoir has exhibited a small trout zone, as defined by dissolved oxygen of  $\geq 5$  mg/L and temperature  $\leq 70$  ° F (Table 1), this netting survey has proven it can sustain a decent population of rainbow and brown trout. The addition of stocked rainbow and brown trout surviving into the summer, as well as the following year, supports our intent of stocking these trout to help supplement the trout population and possibly increase angler catch rates. We will continue to stock annually and discontinue fin clipping. DEC Fisheries Unit will continue to monitor the fishery.

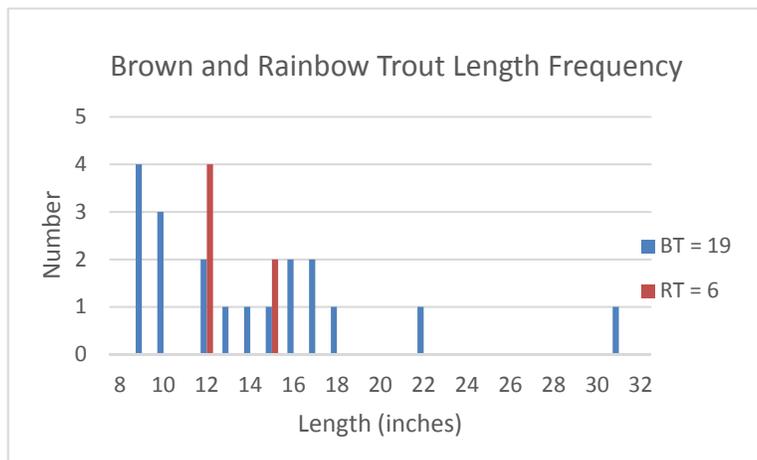


Table 1: Depth, temperature and dissolved oxygen reading recorded prior to setting gill nets. Depths and readings where nets were set are highlighted in blue.

Depth (ft)	Temp (F)	DO
0	77.6	6.3
2	77.5	6.1
4	76.5	6.4
6	74.7	7.7
8	71.6	7.1
10	69.4	6.4
12	67.8	5.8
14	65.7	2.8
16	63	0.3
18	59.1	0.5
20	55.5	0.5
22	52.5	0.5
24	51.6	0.5