

Falls Pond General Biological Survey #521028
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Falls Pond (B-P885) is a remote 37-acre water located in the West Canada Lakes Wilderness in Hamilton County. The maximum depth is 25 feet, the average depth is 9 feet, and there was adequate dissolved oxygen for trout to near the max depth in this late June survey. The flushing rate is 1.8 times per year. Trout stocking began in 1964 but the stocking policy was cancelled following a 1984 ALSC survey in which only one brook trout was caught.

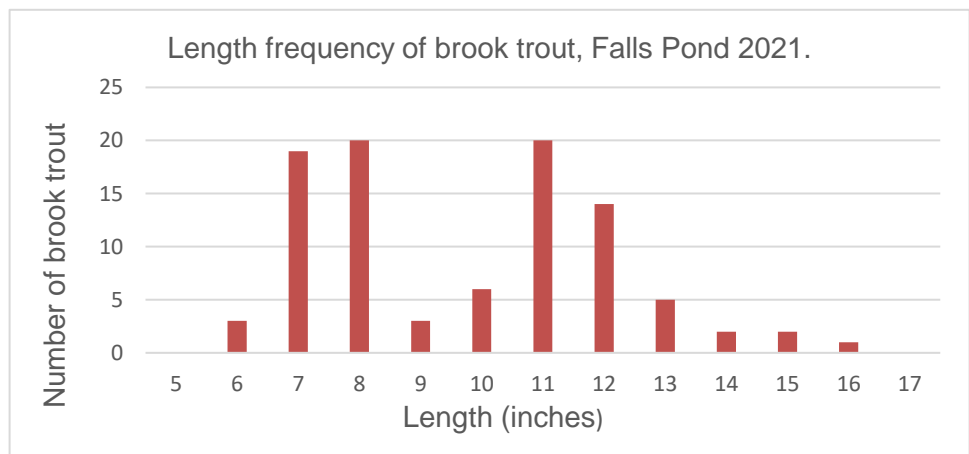
Falls Pond has a complex management history, as it has been limed three times: 1975, 1978, 1980. However, after each lime application, the pond re-acidified quickly. In 2015 a fish survey (#515051) was performed, and surprisingly 32 brook trout were collected. Scale and genetic samples showed that the fish were 2-year-old Temiscamie x Domestic hybrid brook trout, and thus were likely present due to a stocking error. These brook trout almost surely survived due to improvements in water chemistry that have been documented in some Adirondack waters in recent years.

A stocking policy was started in 2016 for brook trout with 1,000 fin clipped Horn Lake strain fish stocked annually. Brook trout have since been caught by multiple anglers and observed by staff during 2019 chemistry surveys. Water chemistry values for Falls Pond and its tributaries are included in the technical brief for the 2018 surveys (#518033, #518086) and the 2019 surveys (#519010, #519059, and #510122). The 2019 series of surveys continued an effort to understand the seasonal variation of the water chemistry in this recovering water, and water chemistry changes since 2019 appear negligible.

Table 1. 2021 Falls Pond water chemistry variables.

| Depth (feet) | Air Equilibrated pH (pH units) | Acid Neutralizing Capacity (µeq/L) | Inorganic Monomeric "toxic" Aluminum (µM/L) | Base Cation Surplus (µeq/L) | BC/RCOOs- | Conductivity (µmhos/cm) | Silica mg L ⁻¹ | Sodium mg L ⁻¹ |
|--------------|--------------------------------|------------------------------------|---|-----------------------------|-----------|-------------------------|---------------------------|---------------------------|
| 5 | 5.67 | 8.8 | 0.15 | -9.4 | 1.8 | 8.6 | 0.7 | 0.36 |
| 20 | 5.35 | 6.9 | 0.15 | -14.3 | 1.8 | 11.3 | 2.8 | 0.36 |

The June 2021 fish survey was undertaken to determine if natural reproduction is occurring in the brook trout population. Three Swedish experimental gill nets, a 30-foot minnow net, and a minnow trap were set overnight. A total of 95 brook trout were collected during the survey, but only two brook trout were unclipped. The average length of a Falls Pond brook trout was



10.2 inches with lengths ranging from 6 to 16 inches. The trout appeared to be in good condition and there were signs of angler use in this remote water. Growth of the brook trout here, while reasonable, should be better, particularly for the 3- and 4-year-old fish. An average 4-year-old here, as determined by scale analysis, was only about 15.5 inches long. This population could still benefit from a reduction in the stocking policy which should result in increased growth. With only 2 unclipped brook trout sampled here, natural reproduction is minimal, and brook trout stocking should continue. There will be no further need to fin clip the stocked fingerling trout, however. The current stocking policy should be reduced from 1,000 fin clipped brook trout fingerlings to 700 unclipped Horn Lake strain brook trout fingerlings.