

**South Otter Pond General Biological Survey # 519015:
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South Otter Pond (SC-P159) is a remote 8-acre water located in the Saint Regis Canoe Area of Franklin County. The maximum depth is 10 feet, with a mean depth of 7.5 feet. South Otter Pond was reclaimed in 1953 and was stocked from that time until 2005 when a DEC survey found no fish. A 1984 ALSC survey collected 28 fish of 5 different species. A summer 2005 DEC survey found sufficient dissolved oxygen for trout was absent at a depth of 5 feet and below, while the spring 2019 DEC survey found sufficient dissolved oxygen for trout was found down to 9 feet. The 1984 ALSC survey found silica levels in excess of 4 mg/L, a high value which warranted further investigation. Water chemistry data drawn from the 3 surveys can be found in Table 1.

The 2019 survey was undertaken to determine if a brook trout population had persisted despite the lack of stocking. High silica levels can be indicative of groundwater input which in turn can be associated with natural reproduction of brook trout. Silica and sodium values have remained high.

Table 1. South Otter Pond water chemistry variables 2019, 2005 and 1984.

	Year	Depth (feet)	Air Equilibrated pH (pH units)	Acid Neutralizing Capacity (μ eq/L)	Conductivity (μ mhos/cm)	Silica mg/L	Sodium mg/L
DEC	2019	5	5.69	28.1	16.5	5.5	0.66
DEC	2005	5	5.56	50.92	24.0		
ALSC	1984	5	5.55	25.88	28.0	7.10	0.75

In 2019, one 150-ft Swedish experimental gill net, a 30-ft minnow net, and a minnow trap were set overnight. No brook trout were collected during the 2019 survey, but 75 fish from six different species were collected. Brown bullhead and white sucker comprised the bulk of the fish population and golden shiner were also present. All three of these species are known to be serious competitors with brook trout.

Table 2. Number and length ranges of fish collected at South Otter Pond, May 2019.

Species	Number collected	Minimum length (in)	Maximum length (in)
White sucker	20	6.4	15.4
Brown bullhead	39	4.1	8.4
Pumpkinseed	5	1.3	2.9
Northern redbelly dace	3	2.2	3.1
Brook stickleback	3	1.9	2.0
Golden shiner	5	3.2	4.6



It now appears that the competitive species in the current fish community, along with the possibly problematic summer dissolved oxygen levels, have made this water unsuitable for brook trout reproduction despite the high silica levels. However, fish survival is obviously occurring, despite any problematic water chemistry. A brook trout stocking policy will not be initiated. There is no site for a fish barrier on the outlet, before it flows into St. Regis Pond and so it is not feasible to reclaim the pond in the future. However the barrier dams on St. Regis Pond and Little Fish Pond provide protection from the further introduction of undesirable species including yellow perch.