

Raquette Lake Broodstock Monitoring Survey #521017

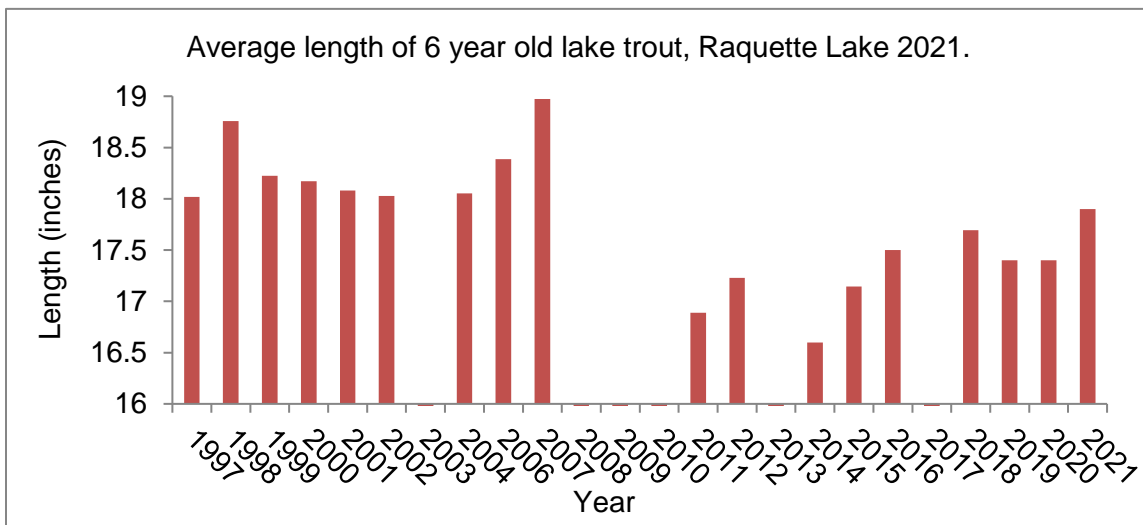
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Raquette Lake (R-P293) is a 5,263-acre water located in Hamilton County. It has been used as the primary egg source for the Adirondack strain of lake trout since 1933. Special lake trout angling regulations are in effect on Raquette Lake, with a creel limit of 2 per day, a minimum length of 21 inches, and a year-round season with ice fishing permitted. This survey was part of the annual monitoring that takes place during the fall egg take, conducted primarily by the staff of the Chateaugay Fish Hatchery. Generally, length and weight information are recorded for about 200 lake trout each fall during the egg take to monitor the spawning population of lake trout.

In October 2021, Oneida trap-nets were set at several historically productive sites in the north end of Raquette Lake. Traditionally egg takes here have persisted for several days (from 2001 to 2018 an average of 63 trap-net/nights) allowing a Modified Schnabel population estimate to be calculated. However, since 2020, due to a shift in stocking strategy, the number of Adirondack strain lake trout eggs needed has been greatly reduced. In 2020 and 2021 trap-nets were only tended twice and the number of recaptures was quite limited, only 2 fish were recaptured in 2021. The 2020 and 2021 egg takes were very successful, easily reaching the target goal of 80,000 green eggs, and the number of ripe females collected per unit effort has been dramatically higher for these years, more than twice the 20-year average. But the short successful egg takes make the use of a Schnabel Population Estimate unworkable. Other metrics will have to be used to monitor this important population.

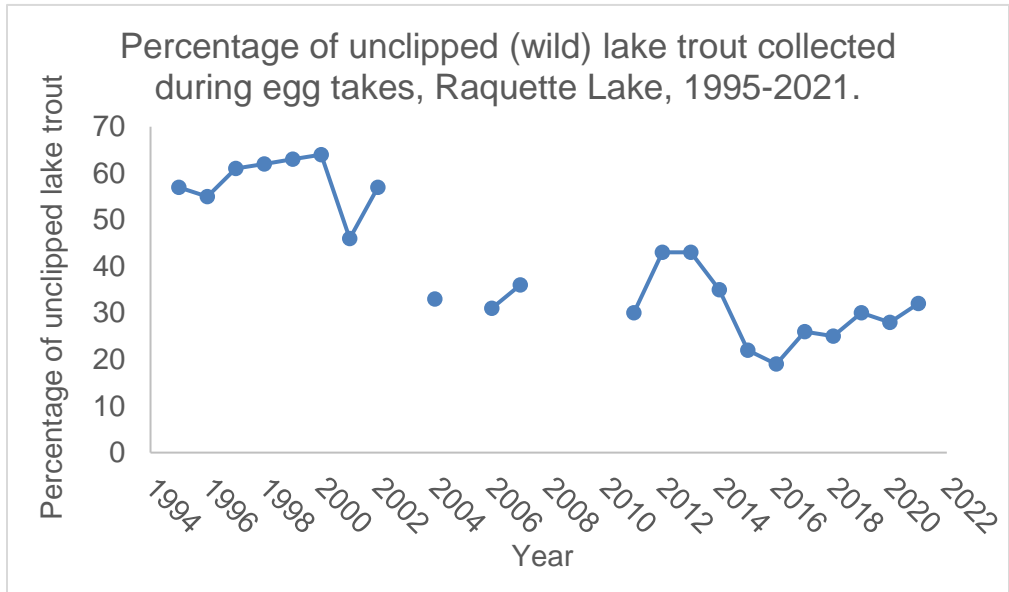
Despite the short duration of the survey, the total 2021 catch per unit effort (CPUE) for lake trout of was 29.9, slightly higher than the 20-year average of 27.1 lake trout per trap-net/night. The length of stocked 6-year-old lake trout is ordinarily used to evaluate growth and to established average target length of spawning 6-year-old lake trout in Raquette Lake, 18.5 ±0.5 inches (Fieroh, 2015). The average 6-year-old lake trout in 2021 was just under this target, at 17.9 inches. This value showed a notable increase of 0.5 inches when compared to the corresponding 2019 and 2020 values. Hopefully this metric will continue to improve from the low that was experienced in 2014. The overall average size of a lake trout measured during the 2021 egg take was 19.3 inches and 1.9 pounds, a notable increase when compared to the 2020 values of 17.8 inches and 1.8 pounds.



In 2021 the percentage of unclipped fish handled during the entire egg take increased slightly, to 32%. Since 2016, it appears that, in general, an increasing number of lake trout from natural reproduction are being caught during the egg take.

It is likely that increased wild fish numbers and the somewhat improved lake trout growth seen in the last few years have resulted, at least in part, from a stocking change initiated in 2012. At that time the stocking rate was reduced from 6,100 to 5,000 spring yearling lake trout per year. With a sharp decrease in the number of eggs taken on an annual basis from the lake trout population of Raquette lake, it is likely that population changes will continue. Monitoring of this important lake trout population with periodic juvenile lake trout surveys and by collecting relevant data during annual fall egg-takes should also continue.

The special angling regulations and current annual stocking rate of 5,000 fin-clipped spring yearling lake trout annually will continue.



Fieroh J. 2015. Raquette Lake 2015 Lake Trout Population Monitoring Report. New York State Department of Environmental Conservation, Ray Brook, NY