

## Lake trout (*Salvelinus namaycush*) population status in Otsego Lake

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The NYSDEC Region 4 Fisheries Office has been netting Otsego Lake since 1969 to monitor the status of lake trout. The type of gill net and the six net locations have been the same over the 38 year monitoring period. The net consists of three 150 foot long multifilament gill nets sewn together to create one 450 foot net. Each 150 foot net consists of six 25 foot panels of 1.5, 2, 2.25, 2.5, 3, and 3.5 inch stretch mesh. The nets are set overnight in mid-September in water up to 140 feet deep. Typically, three nets are set one day, pulled the next day with the catch processed, and the nets reset in new locations.

During the September 2006 netting, a total of 104 lake trout were captured in five nets (a sixth net was vandalized and removed from the lake by persons unknown) for an average catch of 20.8 fish per net. The lake trout ranged in size from 7.3 to 31.9 inches with the largest fish weighing 11.3 pounds. Twenty seven lake trout were legal (>21 in) size. Of the 104 lake trout collected, 78 were wild fish and 26 were hatchery fish. All hatchery fish stocked since 1994, approximately 5,000 annually, are marked with a fin clip. The catch of 20.8 lake trout (Figure 1) and 5.4 legal size fish (Figure 2) per net are both record catches. These values suggest that the lake trout population in Otsego Lake is at a record high. It is not known if the current high population is sustainable or the result of increasing lake trout abundance that began around 1992.

The current high population can probably be attributed in part to the unauthorized introduction of alewives (*Alosa pseudoharengus*) into the lake sometime in the late 1980s. Alewife were first collected in 1988 and were abundant by 1991. In the pre-alewife period (1969-86) the catch of lake trout ranged from 3.0 to 7.7 fish per net compared to 9.2 to 20.8 fish per net since 1992 (Figure 1). The pre- and post-alewife catch rate averaged 4.9 and 12.9 fish per net, respectively. The quality of the lake trout population has also improved over the last 40 years. From 1969 through 1986, the catch of lake trout 21 inches and larger ranged from an average of 0.1 to 0.9 fish per net compared to the 1.8 to 5.4 fish per net observed since 1992 (Figure 2). This represents an eight fold increase from the average of 0.4 legal fish per net during the pre-alewife period compared to 3.2 legal fish per net in the post alewife period.

The current lake trout population is at record levels. To maintain angling quality in Otsego Lake, NYS DEC changed the fishing regulations for salmonids effective October 1, 2006. The creel limit was changed from two fish (brown trout, lake trout, landlocked Atlantic salmon) in combination to one fish each. The catch of brown trout and landlocked Atlantic salmon is very low with most of the harvest being lake trout. To reduce the harvest of large lake trout, especially by ice anglers, the limit was reduced to one fish. The size limit on lake trout was also increased to 23 inches but this regulation will not take effect until October 1, 2007. The increased size limit is intended to protect almost all lake trout through their first spawning season. The current 21 inch size limit only protects about half the spawning population.

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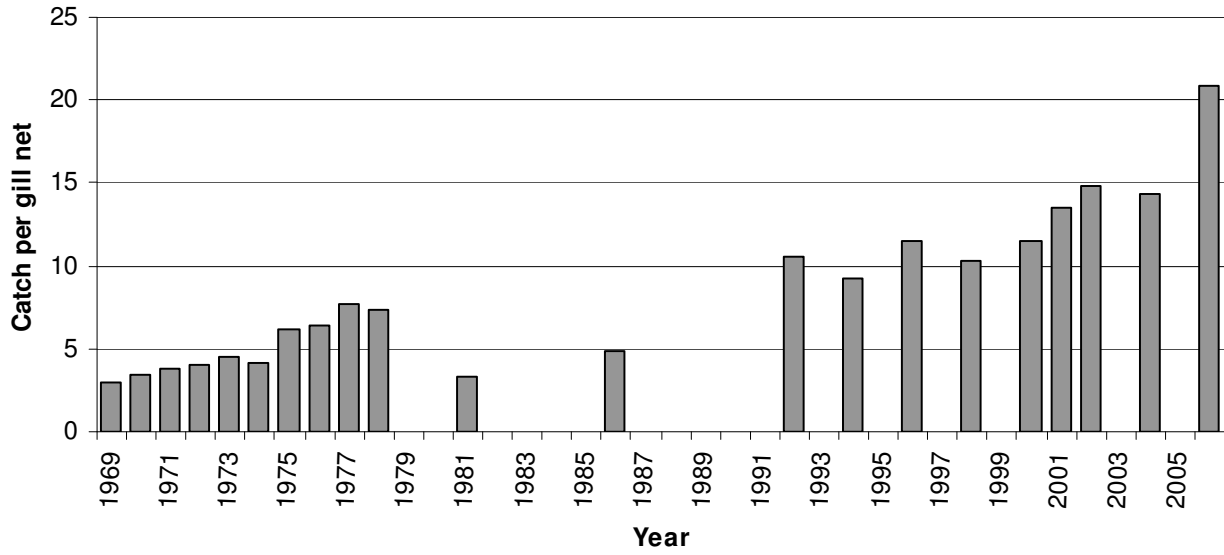


Figure 1. Lake trout netting history of Otsego Lake, 1969-2006.

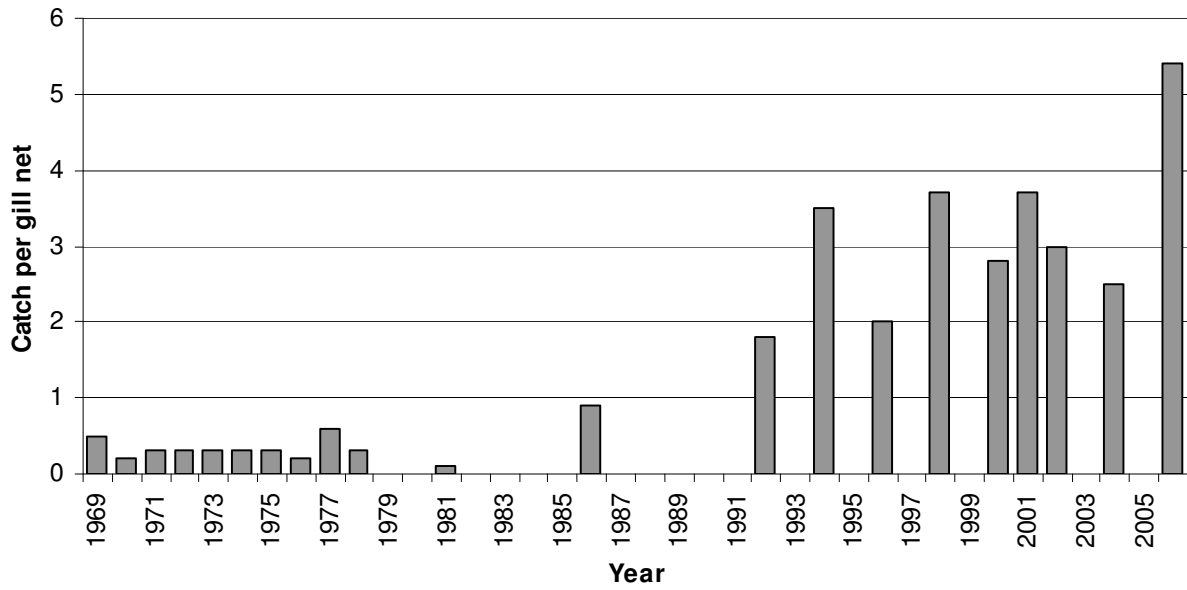


Figure 2. Lake trout netting of legal fish (>21”) in Otsego Lake, 1969-2006.