

**Silver Lake Fall Walleye Survey (Survey #918112)**  
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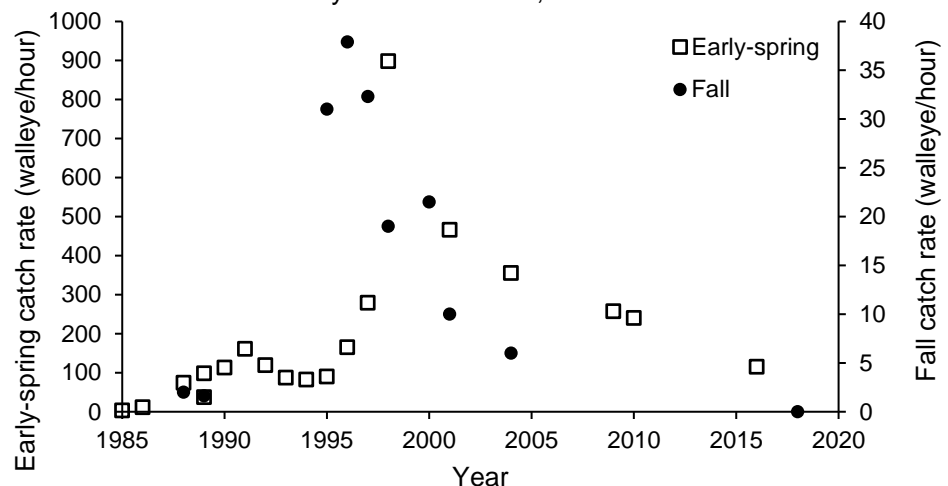
Located in eastern Wyoming County, Silver Lake is an 836-acre lake with a maximum depth of 37 feet. Silver Lake provides year-round angling opportunities for numerous species of gamefish and panfish, including largemouth bass, northern pike, walleye, smallmouth bass, yellow perch, bluegill, pumpkinseed, and black crappie. In mid-October, 2018, Region 9 Fisheries staff conducted a fall electrofishing survey at night, by boat, to evaluate the status of walleye in Silver Lake.

A total of 230 fish were collected, which included largemouth bass, smallmouth bass, and northern pike. Unfortunately, no walleye were collected or observed. Largemouth bass was the most abundant species (n=153), resulting in an adult catch rate of 33 fish/hour, which is well above the statewide average of 17 fish/hour reported by Perry et. al (2014). Additionally, the catch rate of largemouth bass  $\geq 15$  inches was amongst the highest ever recorded in New York State for a fall survey. Lengths ranged from 3.0 to 20.2 inches, with the largest bass weighing 6.3 pounds. Northern pike was the second most abundant species (n=74), resulting in a relatively high catch rate of 18.5 fish/hour. Interestingly, Brooking et al. (2002) noted that the abundance of largemouth bass and esocids (pike, muskellunge, and pickerel) over 15 inches was significantly and negatively correlated with walleye fingerling catch rates. It is likely that the high abundance of northern pike and largemouth bass is having a strong negative effect on the survival of young-of-the-year walleye in Silver Lake.

The abundance of walleye in Silver Lake has varied over the past several decades and appears to be reliant upon stocking, to some extent. Walleye fry were stocked periodically from 1927 to 1979 with limited success and by the mid-1970's walleye were considered virtually extirpated from Silver Lake (Evans 2005). Walleye were subsequently restored to Silver Lake using a stocking rate that

averaged 15 fingerlings/acre from 1983 to 1991 (Evans 1999). This was supplemented with fry stocking from 1992 through 1996, except 1995 when no stocking took place (Evans 1999). Stocking of walleye was eliminated after 1996, to evaluate the contribution of natural reproduction and

Figure 1. Early-spring and fall electrofishing catch rates for walleye in Silver Lake, 1985-2018



determine if the natural population could maintain a viable fishery. Since then, surveys conducted in 2001, 2004 and 2009 concluded that natural reproduction was adequate to maintain the fishery. Recent fall and early-spring surveys indicate that the abundance of walleye has continued to decline since stocking ended in 1996 (Figure 1). Due to these declines, stocking of walleye fingerlings was reinitiated in 2016 and will continue biennially, to increase the abundance of walleye in Silver Lake.

Unfortunately, this survey indicated that the walleye population is at a low density. An early-spring electrofishing survey will be conducted in 2019 to gain additional information on the population status of walleye in Silver Lake. Even though catch rates for early-spring surveys can be extremely high and more variable than late-spring or fall surveys, fish collected at that time will provide important information about age structure, growth rates and success of stocked fish. Stocking of walleye in Silver Lake will continue and this population will be intermittently monitored and reassessed to insure catch rates return to favorable levels.

#### Literature Cited:

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