

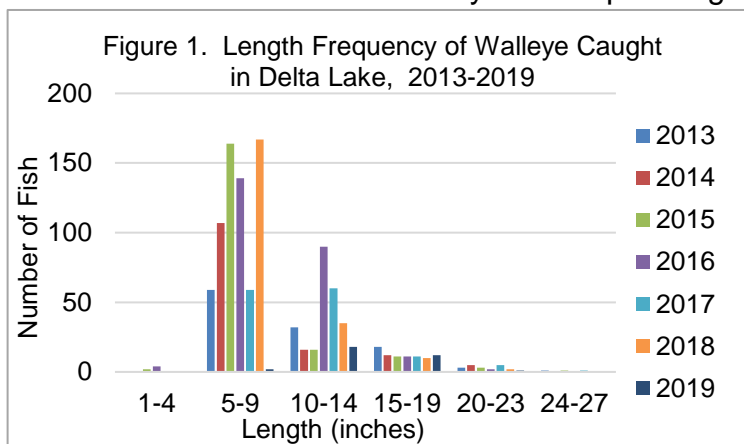
Delta Lake Walleye Survey (Survey #:613207, 614205, 615215, 616213, 617221, 618222, 619201)

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Delta Lake is an impoundment measuring approximately 2,400 acres in the Mohawk River watershed in central Oneida County and was created as a water supply for the Erie Canal. Statewide angling regulations apply in Delta Lake and ice fishing is permitted. The fish community includes walleye, smallmouth and largemouth bass, northern pike, and a variety of panfish.

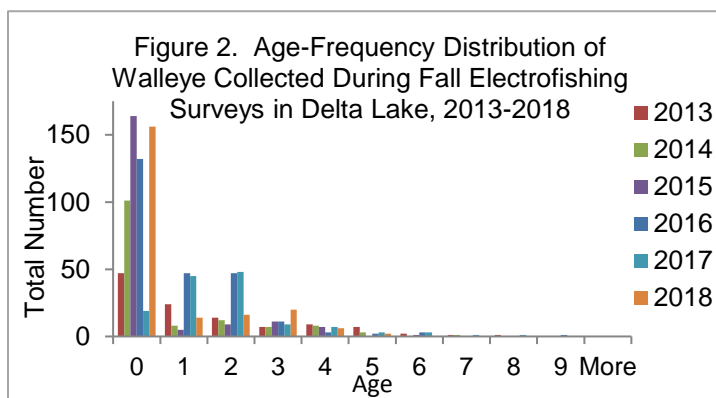
Historically, DEC Bureau of Fisheries managed the walleye fishery in Delta Lake by annually stocking walleye fry. Surveys conducted in 2009 and 2010 found that walleye were spawning in the lake, thus the stocking program was suspended in 2013 to evaluate natural reproduction. Fall boat electrofishing surveys were conducted each year from 2013-2018 to assess natural production of young-of-year (YOY; age-0) walleye. The adult walleye population was assessed with a summer gill net survey in 2019 to assess abundance and age structure and determine if natural production contributes to the fishery.



A total of 1,078 walleye were collected during all surveys combined and total length ranged from 4.4 to 27.1 inches. The largest walleye weighed 6.2 pounds.

During each of the fall electrofishing surveys, the majority of walleye captured were YOY and 5-9 inches total length (Figure 1, Figure 2). The average lengths-at-age were similar to the New York statewide averages through age 3, and indicated walleye reach the minimum harvestable length of 15 inches by age 3 (Figure 3). For age-4 and older walleye, mean length-at-age in Delta Lake were larger than the Statewide average indicating good growth.

Walleye production in Delta Lake was highly variable, similar to observations in other New York waters. The catch rate for the fall electrofishing surveys ranged between 7.6 YOY walleye/hour to a high of 89.6 YOY walleye/hour (Table 1). Electrofishing catch rates for older walleye (age 1+) ranged between 12 walleye/hour to 50.7 walleye/hour. A catch rate of 20 walleye/hour is high for New York waters (Forney 1994), indicating that Delta Lake



has a high abundance of young fish (i.e., the majority caught during electrofishing were \leq age 2; Figure 2).

The gillnetting survey provides information on the older walleye population that is less effectively sampled during fall electrofishing. Forney (1994) suggested ranges for low (1 walleye/net) and high (5 walleye/net) walleye abundance in New York waters. In 2019, Delta Lake had an index of abundance of 3.3 walleye/net indicating a moderate age-3 and older population. Age structure of the walleye caught during 2019 netting was dominated by age-3 and age-4 fish from the relatively strong 2016 and 2015 year classes (Figure 4).

Fall surveys indicated that Delta Lake is among the top New York waters for natural reproduction of walleye. The 2019 gillnetting survey indicated a moderate population of age-3 and older fish with above average growth rates. Monitoring of the Delta Lake walleye population will continue in the future.

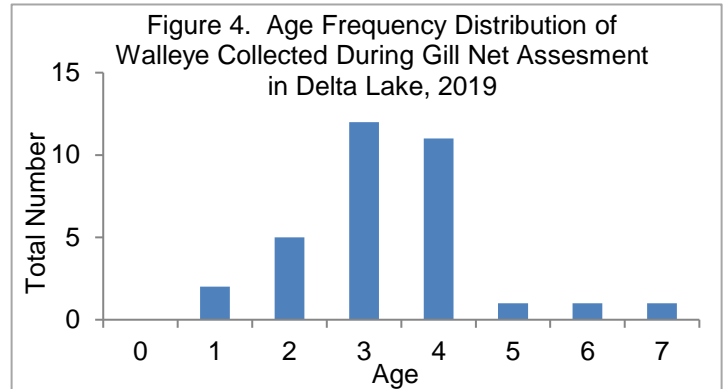
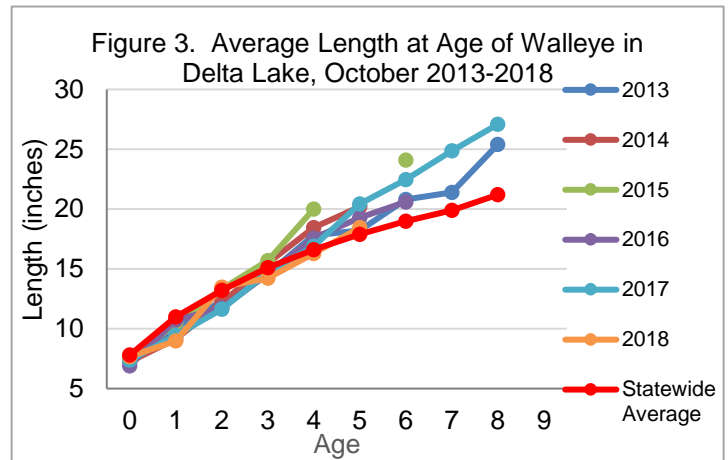


Table 1. Catch rate of walleye during fall electrofishing surveys on Delta Lake, 2013- 2018.

Year	Number of Age 0 Fish/Hour	Number of Age 1+ Fish/Hour
2013	14.7	20
2014	31.1	12
2015	89.6	18
2016	60.4	50.7
2017	7.6	46.8
2018	62.4	23.2

Literature Cited

Forney, J.L., L.G. Rudstam, D.L. Stang. 1994. Percid Sampling Manual. New York State sDepartment of Environmental Conservation, Bureau of Fisheries, Albany, NY.