Bureau of Fisheries Technical Brief #tbm1350

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

Catharine Creek Rainbow Trout Production Survey 2019 (Survey # 819019 and 819020)

Brad Hammers, Region 8 Fisheries **6/8/19**

Catharine Creek and its' tributaries are the main source of naturally produced rainbow trout in Seneca Lake. Catharine Creek originates near Horseheads and flows in a northerly direction for approximately 13 miles to the Village of Montour Falls, where it enters the Catharine Canal which flows an additional 2 miles to the southern end of Seneca Lake at Watkins Glen. Sleepers Creek, near the Chemung/Schuyler County line, is one of the main rainbow trout producing tributaries to Catharine Creek.

Public access is excellent with nearly eight equivalent miles of the stream and its tributaries enrolled in the Public Fishing Rights program. The stream provides a popular springtime fishery for lake-run rainbow trout. Management actions beginning in 2012, including stocking and more restrictive harvest regulations, have been taken to protect and enhance the population of rainbow trout in Seneca Lake and it's tributaries.

A total of nine sites in Catharine Creek and two sites in Sleepers Creek were sampled with a backpack electrofisher August 12-15, 2019 to evaluate rainbow trout production. These sites were similar to sites surveyed since the 1970's, except for a second site that was added to Sleeper Creek in 2010. In Catharine Creek, a total of 569 young-of-year (YOY) rainbow trout were collected resulting in an average of 1,098 YOY rainbow trout/acre (Figure 1). A total of 11 age-1 and older rainbow trout were collected resulting in an average of 22 age-1 and older trout/acre. Overall, density estimates for Catharine Creek were on the lower end of production estimates, with age 1+ and older numbers the lowest recorded. In Sleepers Creek, a total of 320 young-of-year (YOY) rainbow trout were collected resulting in an average of 8,302 YOY rainbow trout/acre. A total of 13 age-1 and older rainbow trout were collected resulting in an average of 350 age-1 and older trout/acre. When comparing YOY (5,234/acre) and age-1+ (169/acre) density from the one site in Sleepers Creek that has been historically surveyed, it appears that density estimates remain within historical averages but on the lower end of production record for that site (Figure 1).

This survey was to occur summer 2018, however, significant flooding in the watershed approximately two weeks prior to the scheduled survey resulted in postponement. Despite extensive damage throughout the watershed the preceding year, habitat within most sites appeared to be similar to past surveys. The exception was the upper site in Sleepers Creek where a bank adjacent to a long- standing pool sloughed off and filled in some of the pool, slightly degrading the habitat. Additionally, several DEC-constructed pool digger structures have been destroyed and pools filled in over the last five years as a result of significant rainfall events.

SPORT FISH RESTORATION

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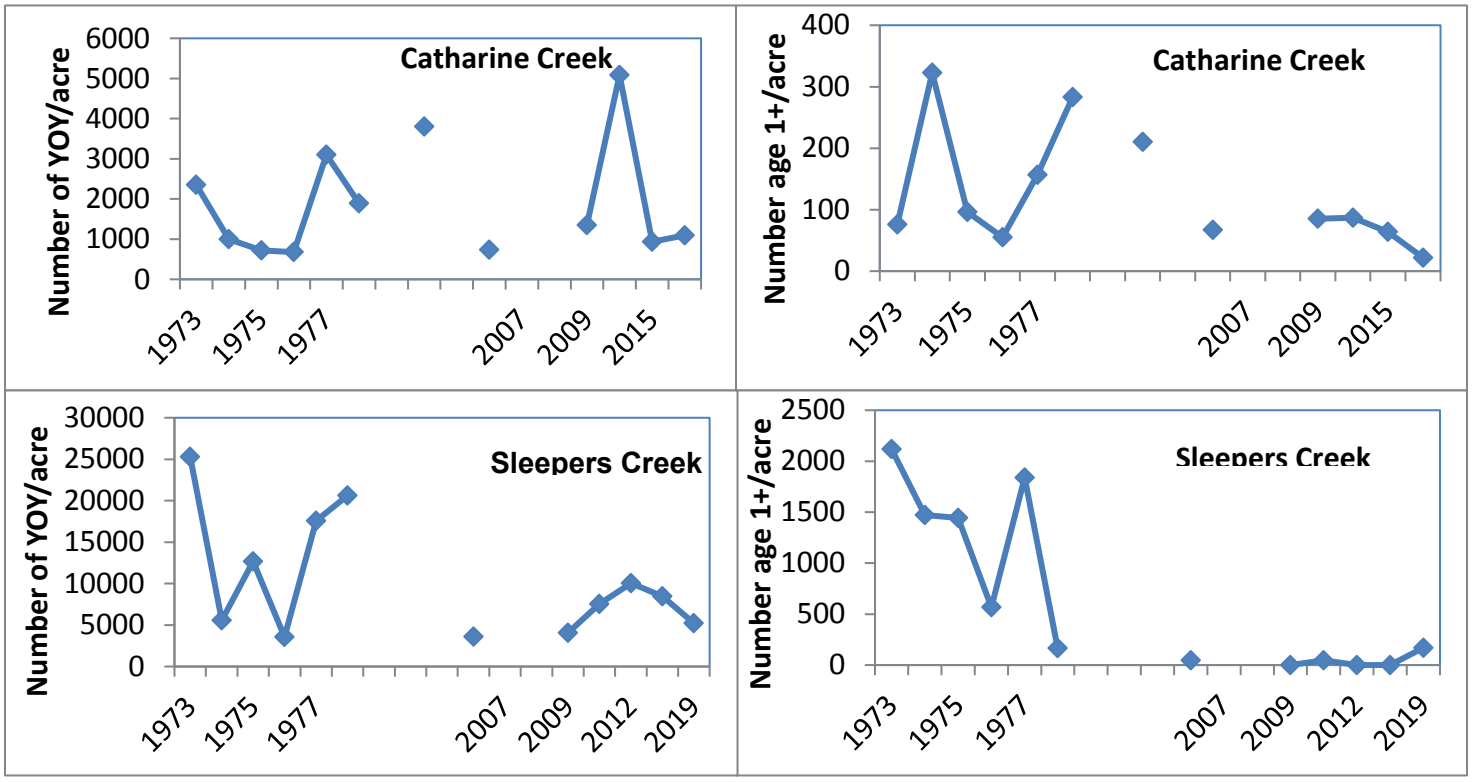

Figure 1. Estimated density (number/acre) of young-of-year and age-1+ rainbow trout from Catharine and Sleepers Creek, August 2019.

Rainbow trout production in Catharine Creek remains below its long-term average. Beginning in 2012, more restrictive harvest regulations and annual stocking of 10,000 Finger Lakes strain yearling rainbow trout was initiated. Stocking appears to have been successful with stocked trout accounting for 15-25% of the spawning stock within recent years. Hammers and Austerman (2019) suggest that the adult tributary fishery for rainbow trout may have improved since recent management actions. However, results from production survey suggest that yearling trout numbers remain low and likely migrate to the lake prior to these late summer surveys. Loss of pool habitat throughout the stream as a result of recent storms and subsequent damaging flows may have impacted yearling numbers. Staff will continue to monitor rainbow trout production rates as well as evaluate ongoing management actions intended to increase the adult rainbow trout population in Seneca Lake.

Hammers, B.E. and P. Austerman. 2019. Western Finger Lakes tributaries creel survey, 2017. NYS Department of Environmental Conservation, Bureau of Fisheries, Avon, NY. 42 pp.

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