

# Cold Brook Rainbow Trout Production Survey 2017 (Survey # 817028)

Brad Hammers, Region 8 Fisheries

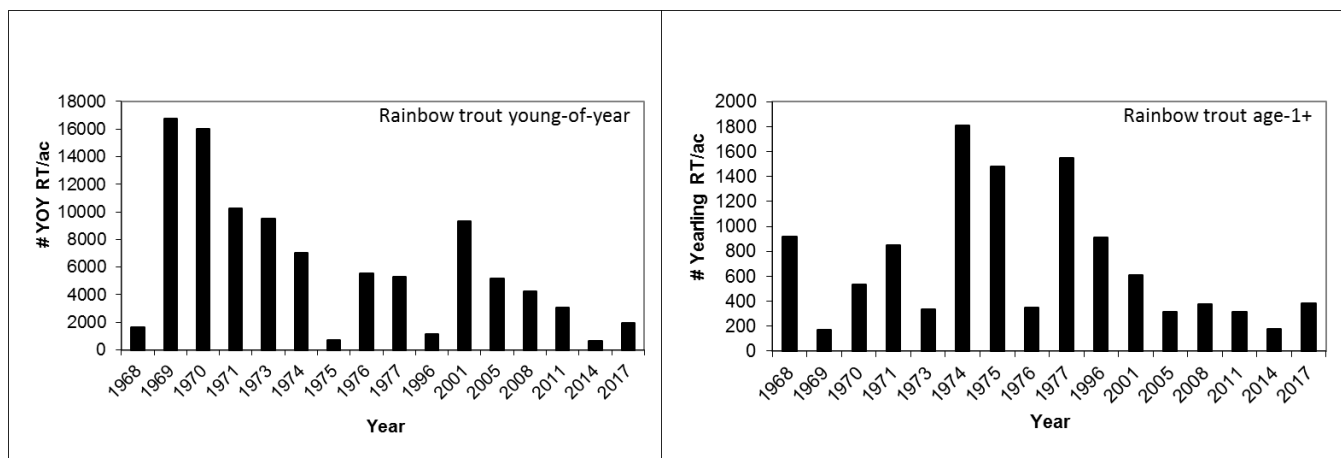
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Cold Brook is the main source of naturally produced rainbow trout in Keuka Lake, as well as supporting a limited but potentially growing population of resident brown trout. It originates north of Bath and flows in a northeasterly direction for approximately seven miles to the Village of Hammondsport, where it enters the southern end of Keuka Lake. The Bath Fish Hatchery is located near its headwaters. As a result of past stream alterations, low stream gradient, and significant beaver activity, the lower reaches of the Cold Brook stream bed have aggraded. In recent years, freshets have breached the bank and flowed out into the adjacent wetland areas resulting in substantial reductions in main channel flow. These events, while not eliminating trout spawning runs, may have limited both rainbow trout in the spring and brown trout in the fall.

Public access is excellent with the majority of the stream enrolled in the Public Fishing Rights program. The stream provides a popular springtime fishery for lake-run rainbow trout. Recent management actions including stocking and more restrictive harvest regulations have been taken to protect and enhance the population of rainbow trout in Keuka Lake.

A total of six sites were sampled with a backpack electrofisher during August 1-2 and September 13, 2017 to evaluate rainbow trout production in Cold Brook. These sites were similar to sites surveyed in the past. A total of 431 young-of-year (YOY) rainbow trout were collected resulting in an average of 1,935 YOY rainbow trout/acre (Figure 1). This was an increase from 2014 estimates, but they remain on the lower end of production records. A total of 87 age-1 and older rainbow trout were collected resulting in an average of 381 age-1 and older trout/acre.

Figure 1. Estimated density (number/acre) of young-of-year and age-1+ rainbow trout from Coldbrook, August 2017.



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A total of 52 young-of-year (YOY) brown trout were collected resulting in an average of 943 YOY brown trout/acre. A total of 9 age-1 and older brown trout were collected resulting in an average of 325 age-1 and older trout/acre. These results are less than half of what was estimated in 2014.

Rainbow trout production in Cold Brook remains below its long-term average. These results are despite more restrictive harvest regulations beginning in 2012 and stocking 4,000 Finger Lakes strain fingerlings in 2010 and 5,000 annually since 2011. Limited spawning runs as a result of low adult rainbow abundance, impediments to upstream migrations to suitable spawning habitat and direct competition with brown trout within Cold Brook are factors that may be negatively impacting rainbow trout fingerlings. Fingerling stocking does not appear to be successful under current stream and lake conditions. Stocking of larger yearling rainbow trout may minimize in-stream and lake predation impacts. Yearling rainbow trout stocking has been successful in Seneca Lake/Catharine Creek and should be attempted in Cold Brook. Additionally, staff continue to monitor downstream channel blockages and breeches and investigate solutions for these issues. 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 Keuka Lake.