

**Oriskany Creek CROTS Survey (Survey #:722055)**  
 James Everard, Region 7 Fisheries

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A Catch Rate Orientated Trout Stocking (CROTS) electrofishing survey was conducted on Oriskany Creek in Madison County, on September 14, 2022. This survey was part of the Angler Use and Wild Trout Young of Year Recruitment, Evaluating New York’s Inland Trout Stream Catch and Release Season project (NYSDEC 2021). From here on it will simply be referred to as the plan. Prior to April 1, 2021, Oriskany Creek had been managed under an April 1 through October 15 season, with a daily limit of 5 trout with no more than 2 longer than 12 inches, which was the statewide regulation at the time. The creek reach in this study extends from the Chenango Canal downstream to Route 12B in Oriskany Falls. On April 1, 2021 this section of Oriskany Creek had a regulation change to the statewide Wild-Premier classification (NYSDEC 2020) consisting of an April 1 through October 15 season with a daily limit of one trout any size. Plus, an October 16 to March 31, catch and release with artificial lures only season. This Wild-Premier reach has not been stocked since 1998. The section downstream of Route 12B in Oriskany Falls is managed under the statewide trout regulation with the same season dates, but with a daily limit from April 1 to Oct 15 of five trout with no more than two longer than 12 in.

Two sites were electrofished using protocols outlined in the plan which covered 0.44 acres of stream and had a total 0.95 hours of “on-time.” A total of 74 brown trout were collected for a catch per unit effort (CPUE) of 78 trout/hour and 169 trout/acre (Table 1). The CPUE for YOY ( $\leq 125$  mm) trout was 46/h and 101/acre. Using the binomial depletion model (Sullivan et al. 2003) and YOY catches from each sampling pass at site one ( $n_1=27$ ,  $n_2=10$ ) gives an estimated YOY trout population of  $41 \pm 5$  for site 1, and for site 2  $7 \pm 0$  fish ( $n_1=7$  and  $n_2=0$  per pass respectively). Dividing those estimates by acres sampled in each site gives an estimate of  $237 \pm 24$  YOY/acre for site 1 and  $26 \pm 0$  YOY/acre for site 2 (Table 2). The probability of capture (p) for site was 0.679 and 0.999, respectively.

A similar survey was undertaken in 2021 to gather baseline data and comparison of the two YOY population estimates is in Table 2. This is just the second year of a four-year study outlined in the plan, so there are no recommendations at this time and the survey will be repeated in 2023.

*Table 1. Brown trout collected in 2022 in Oriskany Creek, Madison County, and catch per unit effort in trout/hour and trout/acre Young-of-Year (YOY)*

Site	Trout	YOY	Hours	Acres	CPUE ALL		CPUE YOY	
					Trout/Hour	Trout/Acre	YOY/Hour	YOY/Acre
1	59	37	0.55	0.17	107	343	67	215
2	15	7	0.40	0.27	38	57	18	26
Total	74	44	0.95	0.44	78	169	46	101



*Table 2. Brown trout collected in 2021 and 2022 in Oriskany Creek, Madison County, and Young-of-Year (YOY) population estimates by site.*

Year	Trout	YOY	YOY Population Estimates (YOY/Acre)	
			Site 1	Site 2
2021	136	62	256±61	152±13
2022	74	44	237±24	26±0

### **Literature Cited**

- NYSDEC. 2020. New York State Trout Stream Management Plan. Bureau of Fisheries, New York State Department of Environmental Conservation, Albany, NY.
- NYSDEC. 2021. Angler Use of Wild Trout Young of Year Recruitment; Evaluating New York's Inland Trout Stream Catch and Release Season. Bureau of Fisheries, New York State Department of Environmental Conservation, Albany, NY.
- Sullivan, Patrick J. and Boomer, G. Scott. 2003. An Empirical Bayes Approach for Estimating the Binomial N from a Multiple Pass Depletion Survey with Application to Trout Streams in a New York State Watershed. Cornell University.