

Clear Creek-Ellington Trout Habitat Enhancement Survey

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On July 25, 2023, Clear Creek, located near Ellington in eastern Chautauqua County, was sampled at two locations by NYSDEC Region 9 Fisheries staff and angler volunteers. The purpose was to evaluate the effectiveness of two types of in-stream structures for supporting a high adult wild trout abundance in a section of stream where cooperative projects between Chautauqua County SWCD and NRCS occurred between 2010 and 2015. The projects stabilized stream banks and provided grade control. This section of stream, located between Leach Hill Road and Waterboro Hill Road is where, in dry summers, the stream flow emerges from being underground and the water remains at an ideal temperature for supporting trout. The adult wild brown trout population living in this section was compared to an adjacent section just downstream of the SWCD/NRCS work, and another site upstream of Wade Hill Road, which both contained high-quality natural trout habitat. The two types of structures that we sampled in the SWCD/NRCS work section were large rock riprap along the banks and engineered rock riffles (Figure 1). These structures were installed in conjunction with considerable stream channel alignment and extensive stream bank riparian plantings. This high-quality wild trout stream is managed with Wild-Premier fishing regulations and nearly the entire stream has Public Fishing Rights easements.

This survey utilized one-pass electrofishing to assess the trout populations. Sampling at a 120-foot natural habitat site just downstream of the SWCD/NRCS project produced 34 adult (yearling-and-older) wild brown trout. A total of 74 adult wild brown trout were captured in a 460-foot site within the SWCD/NRCS work, and 76 adult wild brown trout in a 320-foot natural habitat site located upstream of Wade Hill Road. Sampling conditions were good and estimated capture efficiencies were good to excellent at all sites (70-90%). Substantial numbers of large wild brown trout exceeding 15-inches were captured in both the SWCD/NRCS structures and the natural habitat (Figure 2) during our survey.

Based on our electrofishing catch, the estimated adult wild trout abundances in this survey were 2,130 wild brown trout/mile for the downstream natural habitat site, 1,149 wild brown trout/mile at the SWCD/NRCS project site and 1,459 wild brown trout/mile at the site with high-quality natural habitat upstream of Wade Hill Road. These results indicate that while all three sections supported very high densities of adult wild trout, the high-quality natural habitat sections were holding more adult wild trout than the “restored” habitat site. This emphasizes the importance of protecting the existing quality habitat. It additionally shows that, when done well, these type of in-stream structures are also capable of holding a high density of adult wild trout where restoration work is needed.

Figure 1. SWCD/NRCS restoration site on Clear Creek - Ellington, 2023.



Figure 2. Large wild brown trout captured in Clear Creek sampling, 2023.

