

Barber Stream Restoration and Bank Stabilization Project



The Barber property is located at the intersection of NY Route 396 and the Onesquethaw-Coeymans Creek, in the Town of Bethlehem. Changes in the stream's course above and below the site had resulted in destabilization of approximately 160 linear feet of streambank on the outside of a tight bend. Rapid lateral channel migration jeopardized the driveway and home, with the stream encroaching to within eighteen feet of the Barber house. Flooding and bank erosion were also responsible for the loss of a farm outbuilding on the northeast side of Coeymans Creek. The stream was also moving closer to NY Route 396.

In 1999 the Albany County Soil and Water Conservation District (ACSWCD) was contacted to provide assistance with emergency streambank stabilization. The ACSWCD was granted funds in 2000 to address the problem, a portion of which was immediately used to pay for large rock riprap on the eroded bank. This emergency work, which armored the bank with large rock, started to fail, and the stream continued to threaten the home and NY Route 396. In 2005, ACSWCD completed the Onesquethaw Creek/Coeymans Creek Stream Stability Assessment and Conceptual Restoration Design. This document details procedures and conclusions drawn from a stream stability assessment and presents four possible alternatives for stream management.

Referencing this document and current geomorphic measurements taken by the ACSWCD and Trout Unlimited (TU) volunteers, Carl Schwartz of the US Fish & Wildlife Service (USFWS) designed a project using natural stream design.

Roy Lamberton, a volunteer from TU and the Onesquethaw-Coeymans Watershed Council (OCWC), coordinated the project and obtained necessary permits from the NYS Department of Environmental Conservation (DEC) and the US Army Corps of Engineers. The Albany County SWCD funded the excavator, Clearwater Chapter of TU funded the liability insurance, and the excavator operator was provided by USFWS. The NYS Department of Transportation provided the large rock, including delivery, needed for the structures. Volunteers from TU and the OCWC, and staff from ACSWCD and the Town of Bethlehem assisted during construction. The Barbbers provided fuel and other materials. DEC's "Trees for Tribs" program of the Hudson River Estuary Program provided and planted over 200 trees and shrubs with assistance from TU and OCWC volunteers. The ACSWCD provided and planted additional sandbar willow seedlings on the banks of the stream.

The project was completed the week of August 23, 2010. The project is intended not only to stabilize this section of the stream and reduce sediment input, but will provide significant trout habitat. The final stream restoration and habitat project includes 2 rock vanes with J-hooks, 3 straight rock vanes, a bankfull-high vegetated bench, and 3 root wads. The function of the rock vanes is to push the energy of the stream away from the bank and stabilize the site, making the stream deeper and narrower. The rock vanes and root wads create habitat and hiding places for aquatic wildlife, including trout. The stable banks and increased riparian vegetation provide habitat for terrestrial wildlife while reducing erosion. The combined resources provided by all of the partners greatly reduced the cost of this relatively large project.

