

**Chestnut Creek
Town Hall Demonstration Site
Project Report**

Sullivan County Soil & Water
Conservation District
64 Ferndale-Loomis Road
Liberty, NY 12754
November 12, 2003

Site Description

The Chestnut Creek Demonstration Restoration Project site is located directly behind the Town of Neversink Town Hall, in the hamlet of Grahamsville at 273 Main Street. The Sullivan County Soil and Water Conservation District (SCSWCD) identified a scoured bank that allowed riprap to slip into the channel, which was directing the force of the high flows towards the unstable bank (Photo 1). The left stream bank on the Town's property was also afflicted with an invasive species, multiflora rose. In the Town's effort to remove this species, the bank was left under-vegetated and therefore more susceptible to erosion, increased water temperatures in the stream and pollutants from overland runoff (Photo 2). The bank was also susceptible to re-establishment of multiflora rose. A dry hydrant, which no longer functioned, was located at the site and sat on top of an eroded area (Photo 3). If the bank was left unprotected, it may have continued to scour towards the parking lot. The Project Advisory Committee to the Chestnut Creek Stream Management Program voted this site as a top priority for the location of the Demonstration Restoration site.

Site Preparation

In September 2003, SCSWCD staff visited the Town Hall site and removed the existing Multiflora Rose. They accomplished this by digging around the base of each plant and removing as much of the roots and stems as possible. Plants and roots were removed from the site and disposed of in a manner that will prevent them from regenerating. Holes



Photo 1. Erosion – left bank behind Town Hall. View looking downstream, dislodged riprap visible in right front corner of photo.



Photo 2. Top of bank before construction. Damaged Black Cherry on right, dry hydrant shown in the distance; both were removed.



Photo 3. Dry hydrant behind Town Hall parking lot. View looking toward left bank from center of stream.



Photo 4. Dislodged riprap removed from the creek and keyed into the eroded bank to create a bankfull bench on September 26, 2003.



Photo 5. View looking downstream from swale towards stacked rock bankfull bench with new shrubs and native plants.

were filled with topsoil to the original ground elevation. If needed, the site will be assessed for use of DEP-approved herbicides in the spring.

The hollow Cottonwood and dying Black Cherry tree were removed from the site in the beginning of September 2003.

Project Construction

On September 26, 2003 construction at the Town Hall Demonstration Site began. It was not necessary to divert water from the jobsite because construction was occurring mostly on the upper portions of the bank.

- 1.) A stacked rock wall was constructed of medium sized flat native stones as support under the dislodged rip rap that was relocated.
- 2.) The dislodged riprap was removed from the creek and keyed into the stream bank horizontally over the stacked



Photo 6. Swale expanded and filled with cobble; September 26, 2003.



Photo 7. View looking downstream from parking lot. Shows completed swale and planted buffer.

rock wall (Photo 4&5). Soil was placed to build a bankfull bench modeled on the upstream bench at reference monitoring cross-section XS 03-01.

- 3.) The non-functioning dry hydrant was removed and the bank was graded. An area of about 25' in width was left unplanted for emergency access to the stream at this location.
- 4.) The existing runoff swale from the parking lot was expanded and filled with cobble four feet in depth to improve percolation from parking area runoff (Photos 6&7).



Photo 9. October 16, SCSWCD and DEP volunteers planting at Town Hall Demonstration

- 5.) The sod layer along top of bank where the riparian buffer would be planted was removed with the excavator.
- 6.) On October 14 & 15, 2003 top soil and peat moss was imported to the site as a soil test revealed organic matter at the site was only 1 percent. The remaining vegetation was weeded from the



Photo 8. Topsoil/compost distributed at site. View looking downstream from parking lot; October 15, 2003.

bed and the topsoil/compost was spread and graded (Photo 8).

- 7.) Quick growing rye seed was applied to the lower banks to protect the initial restoration work until sections of the low bank is planted in the spring.
- 8.) On October 16, 17 & 20, 2003 planting and mulching was conducted on the top of the bank under the supervision of Landscape Architect Barbara



Photo 10. Looking downstream at extent of completed riparian buffer, from just above willow tree. Project ends at tree line property boundary in background.

Restaino. Native trees, shrubs and herbaceous materials were planted on the left bank, adjacent to the Town Hall parking lot, over approximately a 300' x 10' to 15' area, as a riparian buffer (Photo 9). Many volunteers helped prepare this project including AmeriCorps, Natural Resource Conservation Service, Watershed Agricultural Council, SCSWCD, Neversink residents, Catskill Watershed Association, Cornell Cooperative Extension.

9.) As additional native plants that were hard to locate have arrived through October, they have also been planted.

10.) All of the planted vegetation was sprayed with an organic deer repellent, which will serve as an invisible fence through the winter.

11.) Ample rainfall throughout the month has kept the plants well watered, and although there have been several frosts, the temperature have remained mild, giving the young plants a chance to establish their roots.



Photo 11. Looking upstream towards River Road Bridge at extend of completed riparian buffer, from just below willow tree. Project ends by Norway Spruce before picnic table in background.