

**RONDOUT/NEVERSINK
STREAM MANAGEMENT PROGRAM
BIENNIAL ACTION PLAN
May 2012 – April 2014**



East Branch Rondout Creek Stream Bank Stabilization, November 2011



Hurricane Irene Bank Erosion Repair, December 2011

Rondout and Neversink Stream Management Planning Program Action Plan 2012-2014

Executive Summary

Sullivan County Soil & Water Conservation District is currently under contract to NYC DEP to collaboratively deliver the Rondout Neversink Stream Management Planning Program through 2014. The broad goals of this contract are to support watershed stewardship through assessment, planning, education and stream and floodplain restoration activities. FAD deliverables associated with this contract include completion of stream management plans for the upper Rondout and upper Neversink basins, with prioritized recommendations for the major rivers in the basin, the construction of a demonstration restoration project in each basin, and development of a streamside assistance program for landowners, predominantly focused on vegetative stabilization of banks and floodplains (Catskill Streams Buffer Initiative).. Additionally, non-FAD contract deliverables include educational programming, and development of a Watershed Advisory Group to advise program development.

The effects of Hurricane Irene and Tropical Storm Lee the week of August 28, 2011 were felt in the extreme at higher elevations in the Rondout and Neversink basins. Fortunately, contractors were able to proceed with the stream bank stabilization pictured on the front cover; and areas just upstream of the site were repaired at the same time. In addition to this extra work, assessment of flood damage was conducted on 28 miles of East, West and Main Stem of Neversink River and on many reach-level areas of the Rondout Creek and tributaries during the mild December that followed the storms.

In addition, countless calls for site visits by landowners resulted in over 40 site visits to flood-damaged areas; and at least six major sites where technical assistance was provided by program staff with support from Milone and Macbroom, Inc. Post-flood response work and planting projects were implemented in both Denning and Neversink; many of the private contractors involved attended Post-Flood Emergency Response Training by Ashokan Watershed Stream Management Program in spring 2012 as a follow-up activity.

Seven landowners will participate in the Debris Removal grant offered by Catskill Watershed, administered through the Rondout Neversink Stream Program office in Grahamsville. This flood debris will be removed from sites mainly on the Neversink during low flow in 2012.

In accordance with the model developed elsewhere in the WOH Watershed, following the completion of the Stream Management Plans, and of their adoption by resolution in the Towns of Neversink and Denning, a Stream Management Implementation Grants (SWIG) Program will commence. This grants program will be supported through funding in a contract to be negotiated and executed by Summer 2013. The Watershed Advisory Group will oversee the development of the grants program, and has begun meeting in Sub-Committees to initiate its direction under the current contract. This 2012-2014 Action Plan follows on the previous Plan, developed for the period 2010-2011, and will bridge the two contracts.

Each section of this Action Plan reflects a category of the current contract scope of work, followed by the specific stream management plan recommendations addressed by the tasks for Year 1 and 2 of the Plan. A proposed calendar (to be used as a general guide) is included in each section and summarized in a table for each year at the end of this report.

Category: Stream Management Plans

Stream Management Plan tasks address these General Recommendations:

6.1.1 Annual Action Plans

6.1.5 Advisory Committees General & Technical

6.1.6 Updating & Revision of Rondout Creek Management Plan

6.1.7 Town Adoption of Management Plan

6.1.6 Future Update and Revision of Chestnut Creek Management Plan

6.1.10 Post-Flood Technical Assistance

6.4.9 Hazard Mitigation Plans

6.5.4 Watershed Association Upper Rondout

6.8.2 Digital FIRM Maps

6.8.3 Flood Ordinance Review

6.8.4 Community Rating System

6.8.5 SFHA Notification

General Actions Year 1: 2012-2013

Program staff will host Watershed Advisory Group meetings in May & December to review the Action Plan through 2014; initiate grants program for Stream Management Implementation Program; and review the first two implementation grants. Informational meetings that gather input and prioritize recommendations from all stakeholders will coincide with landowner outreach about Neversink and Chestnut Creek Stream Management Plans. Once adopted by the Towns, Stream Management Plans will be distributed in summary format. Sub-Committees in Highways & Infrastructure and Education are meeting regularly.

Schedule for Actions:

May: WAG Meeting May 7; Finalize Action Plan

June-September: Distribute Neversink and Chestnut Creek SMPs

September: Prioritize Recommendations for Implementation Plan

September-December: Public Meetings on Neversink and Chestnut Creek SMPs and Town Adoption of Plans and Principles

June, August, Oct, and Dec: Bi-monthly meetings of Highways & Infrastructure Sub-Committee

June, December: Bi-annual meetings of Education Sub-Committee

December: WAG Meeting; Annual Report

General Actions Year 2: 2013-2014

Watershed Advisory Group meetings are planned for May, 2013 and January, 2014. The Stream Management Implementation Grants Program will be developed further so that established guidelines and process are in place. Workshop meetings on Floodplain Management will be convened as the next step in coordinating with Town and County-level code enforcement, zoning and planning departments. A Research Sub-Committee will be established in 2013.

Frost Valley YMCA and Winton Waters, representing over 20 miles of stream on East and West Branch Neversink, have expressed interest in partnering on fisheries research. Together with these landowners, the Neversink Association, and the Winnisook Club, a Research Sub-Committee will be initiated to identify and prioritize studies to illuminate stream conditions affecting fisheries.

Schedule for Actions:

May: WAG Meeting

June & October: Convene Floodplain Management Workshops to review FEMA mapping models of key reaches with the public and stakeholders (data to be made available by FEMA 5/13)

December: Newsletter/Annual Report; WAG Meeting

Category: Stream Assessment

Stream Assessment tasks address these General Recommendations:

6.2.1 Identify Locations of Water Quality Impairment

6.2.4 Watershed Assessment of Major Rondout Creek Tributaries

6.2.8 Highway Activities & Infrastructure for Water Quality Improvement

6.3.12 Documentation of Eroding Banks

6.3.2 Establish Riparian Reference Reaches

6.3.3 Inventory Watershed Wetlands

6.5.1-6.5.3 Fisheries Research, Detailed Fisheries Assessment, Restoration Project Fisheries Assessment

6.8.7 Flood Damage Database

General Actions Year 1: 2012-2013

Bank Erosion Hazard Index (BEHI) will be assessed on the Rondout, Neversink and Chestnut Creeks to detail post-Irene stream conditions and to inform future implementation grants. Mapping of invasive Japanese Knotweed sites will be added to reflect post-Irene conditions. Stream and Riparian Reference Reach sites will be established.

Schedule for Actions:

April-ongoing: Rondout Demo project will be monitored during Establishment Period

June 2012-May 2013: BEHI Surveys and Reference Reach Reconnaissance

May-October: Japanese Knotweed mapping and suppression plan

General Actions Year 2: 2013-2014

June 2013-May 2014: Stream feature inventory will be conducted on two major tributaries. Reference reach stream and riparian surveys will be conducted in each of the three basins.

Schedule for Actions:

June 2013: A Fisheries Study will be initiated on the Rondout Creek and/or Neversink River by hired consultant. A Wetlands Inventory for the two basins will be initiated by consultants or Program staff.

Category: Demonstration Projects

Demonstration tasks address these General Recommendations:

6.1.3 Debris Management

6.1.8 Public Lands

6.2.4 Critical Area Seeding Program

6.2.8 Highway Activities

6.2.9 Stream Stability Restoration

6.5.4 Habitat Improvement Project

General Actions Year 1: 2012-2013

Project planning is underway to meet DEP's FAD deliverable of completing a major stream restoration on the Neversink River this year. Rondout Neversink Stream Management Program will be providing technical and funding assistance to complete an NRCS restoration project on the Rondout Creek at Clair Road, sponsored by Town of Denning. Denning and Neversink highway departments continue to identify locations for critical area seeding with SC SWCD's hydroseeder (2012 sites include Peekamoose Road ditches; Greenville Road slides; and flood response and debris recovery areas).

A debris removal grant from Catskill Watershed Corporation is being administered to assist private landowners with stream clean-up and to demonstrate best practices to stakeholders including equipment operators in addressing debris jams and invasive species control during stream restoration projects. Rondout Demonstration project will be monitored during the establishment period.

Schedule of Actions

May: Neversink Restoration and Clair Road NRCS Project Restoration Planning; Critical Area Seeding; CWC Flood Debris Removal Project

June: Neversink Restoration Final Design and project letting

August-September: Neversink Restoration, Clair Road Project Construction

November: Neversink Restoration Demo Project and Clair Road EWP Project As-builts

December: Neversink Demo Final Report

General Actions Year 2: 2013-2014

A stream bank restoration project on Chestnut Creek at Route 55, per prior contract deliverable, will be reevaluated, redesigned and constructed as appropriate. As demonstration pilots are completed, an annual cycle of funding and implementation of stream management projects in the Rondout & Neversink Basins will evolve based on the annual Action Plan for the program. Monitoring of the Rondout and Neversink demonstration projects will continue throughout the establishment period.

Stream Management Implementation Program begins with annual grant funding cycle to identify projects via Sub-Committee for approval by Watershed Advisory Group:

Highways & Infrastructure Sub-Committee

Streamside Assistance for Landowners (Program Staff)

Education Sub-Committee

Research Sub-Committee

Category: CSBI (Catskill Streams Buffer Initiative)

CSBI tasks address these General Recommendations:

6.3.1 Riparian Vegetation Mapping

6.3.5 Catskill Streams Buffer Initiative

6.3.6 Knotweed Eradication/Suppression

6.3.7 Invasive Species-Free Area and Spread Prevention

6.3.9 Participate in CRISP

General Actions Year 1: 2012-2013

Riparian Corridor Management Plans (RCMPs) will be written for 6 streamside landowners in the program area this year, each resulting in planting projects to be planned and implemented in fall 2012 and spring 2013. CSBI will offer full planting support to the Neversink Demonstration Project and the Clair Road NRCS Stream Restoration in 2012.

Outreach for the recruitment of CSBI grant applicants will continue to take place year round through a variety of forums. Grant applications will be received by June 1st for implementation in the Fall of 2012, and November 1st for implementation in Spring 2013, with the flexibility to roll potential projects into future rounds when appropriate and necessary to ensure project success. Invasive species control is an integral part of this program; a long-term suppression strategy for suppression of target species will be developed. Native willow (*salix spp.*) planting beds will be established on NYC DEP land; expanded permissions will be pursued for willow harvesting on private lands.

A seasonal intern will initiate a seed collection program with students and landowners for plants native to the Catskills; assist with propagation and instruction for Plant Materials Center; and initiate a study of plant communities in Rondout Neversink basins to inform stream buffer planting plans and plant material production.

Schedule for Actions:

May-September: Receive CSBI grant applications by June 1st; Develop RCMPs (6); Establish native willow beds at NYC DEP property; year one vegetation monitoring of the 5 projects installed in 2011, Complete RCMP's for Fall projects

June-October: Submit Japanese Knotweed plots to CRISP/partners database; develop JKW protocol for project contractors

July - October: Complete planting plans for Fall projects, CSBI Project Planning and Implementation

September: Initiate seed collection program for Catskill native plants

October: Receive and inventory plant materials delivery from Greenbelt

November: CSBI grant applications due for potential Spring 2013 projects, CSBI Project Planning for Spring 2013

February: Complete RCMPs for Spring projects

Ongoing: Japanese Knotweed Control through partnership with private landowners, Town and County DPWs, Maintain an accurate inventory of the plant materials center, Outreach for CSBI Applicants

General Actions Year 2: 2013-2014

Riparian Corridor Management Plans will be written again to target the goal of 6 streamside landowners in the program area this year, each resulting in a planting project to be planned and implemented in fall 2013 and spring 2014. CSBI will also offer full planting support to the Chestnut Creek Demonstration Project and pilot stream restoration projects that result from projects initiated by the grants program for Highways and Infrastructure.

Outreach for the recruitment of CSBI grant applicants will continue to take place year round through a variety of forums. Grant applications will be received by June 1st for implementation in the Fall of 2013,

and November 1st for implementation in Spring 2014, with the flexibility to roll potential projects into future rounds when appropriate and necessary to ensure project success.

Invasive species control is an integral part of this program; action items will be in place for the long-term suppression strategy for suppression of target species. The goal of establishing more native willow planting beds on NYC DEP land will be pursued, in addition to property at Tri Valley Central School; expanded permissions for willow harvesting on private lands will continue to be pursued.

Schedule for Actions:

May- September: CSBI Project Implementation for Spring projects, Receive and inventory plant materials from Greenbelt, complete RCMPs for Fall projects

June: CSBI Grant Applications due by 1st for potential Fall projects; Vegetation Monitoring for year 1 of projects installed in 2012

October: Quarterly Meeting; Receive and inventory plant materials from Greenbelt, Complete planting plans for Fall 2013 projects

November: CSBI grant applications due by 1st, CSBI project Planning for Spring 2014

February: Complete RCMP's for Spring Projects

Ongoing: Continue to identify partners for native willow harvest and bed planting establishment.

Japanese Knotweed control through partnership with private landowners, Town and County DPWs ,

Maintain an accurate inventory of the plant materials center; Outreach for CSBI Applicants

Category: Education & Outreach

Education & Outreach tasks address these General Recommendations:

- 6.1.2 Selective Stream Gravel Management*
- 6.1.4 Historic and Current Condition Analysis and Documentation*
- 6.3.4 Watershed Forestry Program*
- 6.3.8 Early Detection & Rapid Response to Invasives*
- 6.4.2 Flood Response Technical Resources*
- 6.4.5 Flood Damage Prevention Library*
- 6.4.9 Hazard Mitigation Plans*
- 6.6.1 Education & Outreach Working Group Strategy*
- 6.6.2 Educational Workshops*
- 6.6.3 Training of Stream Program Staff*
- 6.6.4 Volunteer Opportunities*
- 6.6.5 Web-based Outreach*
- 6.6.6 Stream Management Publications*
- 6.6.7 News Media Outreach*
- 6.6.8 Training Opportunities*
- 6.6.9 Stream Management Guidelines*
- 6.5.5 Wildlife and Biodiversity Assessments*
- 6.7 Public Recreation*
- 6.8.6 Flood Hazard Education Sessions*

General Actions Year 1: 2012-2013

The Source newsletter has been printed twice and is mailed to all residents in Rondout Neversink Basin. A direct mail list was established to address absentee landowners and agency partners and stakeholders. An e-news format will be developed in summer to aid Neversink SMP outreach, and a full web-site is in progress with November launch date planned; A Twitter feed is planned to provide project updates this construction season for restoration projects. A field training with Chris Hoag of Hoag Riparian and Wetland Design is planned for fall to include the program staff, agency partners, town and county highway staff, private contractors, interns and students. Educational workshops are planned for DPW staff and equipment operator in best management practices for streams using case studies from flood response emergency work across the watershed region.

The Education Sub-Committee meets bi-annually to plan partnership projects. Major participants include Time and the Valleys Museum, Tri Valley Central School, NY State Covered Bridge Society, Frost Valley YMCA, Cornell Cooperative Extension of Sullivan County and Catskill Watershed Corporation.

Program staff will attend Rosgen training Levels 1 & 2 to increase knowledge in natural stream processes and how work in streams can help or hurt our stream management goals; and US Forest Service training on Aquatic Organism Passage Design (culverts). A National Geographic photographer will return to Rondout and Neversink Rivers to document large woody debris function in the floodplain; this material will be used in an exhibit and web-based slide show to enhance distribution of the fact sheet produced for managing LWD.

Stream Program Coordinator will seek certification as Floodplain Manager with NY State in 2013; Rondout Neversink full-time staff to make this goal in 2014. Field staff to aim for completing Rosgen Levels 3 & 4.

Public informational meetings will be held in conjunction with the release of Neversink and Chestnut Creek SMPs, including expansion of these scheduled presentations to include Claryville Fire District Commissioners and volunteers. Using a stream modeling exhibit, Tri Valley conservation students, 4H

and Future Farmers of America participants will conduct outreach about stream health at the local summer Fair and New York State Fair. Time-lapse video documentation of restoration projects will be created to be released in 2013-2014 following post-production..

Schedule for Actions:

May: Japanese Knotweed site identification mailing; Tri Valley Partnership awards press campaign; E&O Plan

June: *The Source* Newsletter #3 mailed; E-newsletter Launch Debris Management fact sheet distributed

July: Twitter feed launch

August: Tri Valley students bring Stream Table at Grahamsville Fair; video recording of WB Neversink restoration project at Winton Waters

September: Elected Officials Site Tour; Landowner's Site Tour (weekend version)

October: Bioengineering Training Part II with Chris Hoag at Neversink Demo and CSBI planting sites

November: Web-Site Launched; Large Woody Debris slide show launched

December: Newsletter #4 Mailed; Annual Report

Ongoing: River Bag sale to benefit Halls Mills Covered Bridge (NY State Covered Bridge Society)

General Actions Year 2: 2013-2014

Bi-annual newsletters and web updates continue. An annual landowner event about stream buffers is developed for the pre-planting season. Assess needs for supporting the creation of an Upper Rondout Watershed Association. Develop a Floodplain Management Committee to meet on workshop topics that inform stakeholders about specific topics of interest to flood hazard mitigation (i.e. precipitation trends), encourage Town zoning, planning and Code Enforcement officers to attend and maintain certification in New York State Floodplain Management.

Schedule for Actions:

February: Neversink Demo Project Final Report; Demo Video Released

April: Landowner Workshop

May: E&O Plan

June: Newsletter #5 Mailed

August: TBD Tri Valley students exhibit to promote healthy streams

December: Mail Newsletter #6; Annual Report

Program Team:

Brian Brustman, District Manager, SC SWCD

Stacie Howell, Catskill Streams Buffer Initiative, SC SWCD

Karen Rauter, Stream Program Coordinator, SC SWCD

Lisa Schick, Bookkeeper, SC SWCD

Chris Tran, Catskill Streams Buffer Coordinator, NYC DEP

Mark Vian, Contract Manager, NYC DEP

Brenden Wagner, Riparian Field Technician, SC SWCD

Seasonal Intern (TBA) to initiate native plant seed collection program and document native plant communities to inform buffer planting implementation..

Rondout Neversink Stream Management Planning Program

Action Plan 2012-2013

	May	June	July	August	September	October
SMPs	WAG Meeting 5/7	Distribute Neversink and Chestnut Creek SMPs WAG Education Sub-Committee Meeting WAG Highways & Infrastructure Meeting CWC Debris Removal Project Begins	BEHI Assessment Reference Reach Identification (Ongoing)	WAG Highways & Infrastructure Meeting BEHI Assessment Riparian Plant Communities Inventory	Highways & Infrastructure Committee Meeting WAG Reviews Neversink SMP Priority Recommendations	Public Meetings and Town Adoption of Neversink & Chestnut SMPs WAG Highways & Infrastructure Meeting
Assessment		BEHI Assessment Japanese Knotweed Mapping and Suppression (Ongoing)				
Demonstration Project	Rondout Demo Restoration Monitoring Continues (Ongoing) Critical Area Seeding Town Sites	CWC Flood Debris Removal Begins Neversink Restoration & Clair Road Final Design & Bid		Neversink Demo Construction	Neversink Demo Construction	Neversink Demo Planting CSBI Project Implementation
CSBI	6 RCMPs Native Willow Bed Planting CSBI Project Planning Fall 2012	Distribute LWD Publication JKW Plots to CRISP	Year 1 Vegetation Monitoring SMP Neighborhood Meetings Launch Twitter feed for Demos Photo Documentation of LWD		Complete RCMP's for Fall Projects Native Seed Collection Pilot Program	Fall Plant Delivery and Inventory
E&O	Education/Outreach Plan	Mail Newsletter #3		Stream Table Grahamsville Fair	Project Site Tour Elected Officials & Landowners	Bioengineering Training Part II
SMPs						
Assessment						
Demonstration Projects						
CSBI						
E&O						

Rondout Neversink Stream Management Planning Program									
Action Plan 2013-2014									
	May	June	July	August	September	October			
SMPS	WAG Meeting	WAG Highways & Infrastructure Sub-Committee Meeting		WAG Highways & Infrastructure Sub-Committee Meeting		WAG Highways & Infrastructure Sub-Committee Meeting			
		WAG Education Sub-Committee Meeting							
Assessment		Floodplain Management Workshop Meeting #1	Stream Feature Inventory of Tributaries	Stream Feature Inventory of Tributaries		Floodplain Management Workshop Meeting #2			
		Stream Feature Inventory of Tributaries	Wetlands Inventory Initiated						
Demonstration Project	Neversink Demo Monitoring								
CSBI	CSBI Outreach, Install CSBI Plantings	CSBI Grant Applications Due June 1 st		Vegetation Monitoring of 2012 Projects	Complete RCMP's for Fall Projects				
E&O	Education & Outreach Plan	Mail Newsletter #5		Tri Valley Exhibit					
SMPS	November	December	January	February	March	April			
	WAG Meeting	WAG Meeting		WAG Highways & Infrastructure Sub-Committee Meeting		WAG Highways & Infrastructure Sub-Committee Meeting			
Assessment	LWD Photography Exhibit Opening	Annual Report	Newsletter			Action Plan 2014-2016			
Demonstration Projects									
CSBI	CSBI Grant Applications Due Nov. 1 st , CSBI Planning for Spring 2014			Complete RCMP's for Spring Projects					
E&O		Mail Newsletter #6 (Annual Report)							Landowner Workshop

