

**RONDOUT/NEVERSINK  
STREAM MANAGEMENT PROGRAM  
ACTION PLAN May 2013 – APRIL 2015**

Town of Denning E.W.P. Streambank Stabilization, November 2012



Catskill Streams Buffer Project, November, 2012



## Rondout and Neversink Stream Management Planning Program Action Plan 2013-2015

### 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. A follow-up contract for Stream Management Implementation Program grants (SMIP) is in negotiation to provide funds to implement recommendations planned in the current contract. The broad goals of this contract are to support watershed stewardship through assessment, planning, education, and stream and floodplain restoration activities.

FAD deliverables completed in this contract were 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 focused on vegetative stabilization of banks and floodplains (Catskill Streams Buffer Initiative). Additionally, non-FAD contract deliverables include educational programming; development of a Watershed Advisory Group to advise program development; and initiation of Subcommittees of this group to meet more frequently and guide project planning and coordination.

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. A demonstration project was completed in each basin, in addition to an EWP/FEMA partnership project to address damage from Irene & Lee was completed to restore a Town Road and floodplain. On September 18, 2012, the Neversink Demonstration project suffered damage before final completion during an unnamed local storm, which created near-Irene conditions solely on the Neversink River. This project was repaired in April 2013 and is presently undergoing final site restoration planting.

Eight landowners participated in the Debris Removal grant offered by Catskill Watershed Corporation, administered through the Rondout Neversink Stream Program office in Grahamsville. To date, about a dozen landowners are participants in the program to vegetate buffers on their property, many of which include bioengineering design components to repair and/or improve stream stability along the banks.

Due to the severity of the September 18 storm, a new round of response was undertaken to those in flood-damaged areas, and coincided with the release of the Neversink Stream Management Plan in the community. Though overwhelming at the time due to repeat losses on main roads, bridges and homes, participation in the planning process was at an all-time high! Meetings were held in December with special outreach focused on the need for enhancing public understanding of the relationship between bank erosion/streambank restoration and flood hazard mitigation.

A Stream Management Implementation Program (SMIP) will commence in 2014, following the 2013 adoption by resolution of the Stream Management Plans in the Towns of Neversink and Denning. The Watershed Advisory Group oversees the development of the SMIP grants program, and has begun meeting in subcommittees for Highways & Infrastructure and Education to initiate its direction under the current contract. 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.

**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*

*6.5.4 Habitat Improvement Project*

**General Actions Year 1: 2013-2014**

Program staff will host Watershed Advisory Group meetings in April & December to review the Action Plan through 2014 and to report on annual accomplishments. Initiate grants program by releasing Education grant applications in September. Piloting one Highways & Infrastructure grant for Town of Denning in 2013. Distribute Neversink Stream Management Plan in summary format. Release update of Chestnut Creek Stream Management Plan. Hone Stream Stewardship Principles document in preparation for a grants program MOU with Towns. Initiate e-blast and establish regular schedule for newsletters mailed in June and December. Subcommittees in Highways & Infrastructure and Education are meeting regularly.

**Schedule for Actions:**

May: Finalize Action Plan

June-September: Distribute Neversink summary plan; Newsletter mailed

September: Prioritize Recommendations for Implementation Plan

December: Release update of Chestnut Creek Stream Management Plan; Public Meetings on Chestnut Creek MUs to landowners. Town Adoption of Plans and Principles

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

May, December: Bi-annual meetings of Education Subcommittee

November: Presentation about Community Flood Analysis to Town Boards

December: WAG Meeting; Annual Report/ Newsletter mailed

**General Actions Year 2: 2014-2015**

Watershed Advisory Group meetings are planned for April and December to review the Action Plan through 2015 and to report on annual accomplishments. Coordinate with Towns to support their Community Flood Analysis (LFHMA) through RFP to engineering firms for 3 population centers. 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 in preparation for their founding Flood Commissions and/or assigning the tasks of LFHMA to elected officials and residents.

Frost Valley YMCA and Winton Waters, and Winisook Club, representing over 20 miles of stream on East and West Branch Neversink, have expressed interest in partnering on fisheries research. A Research subcommittee will be initiated to identify and prioritize studies to illuminate stream conditions affecting fisheries.

**Schedule for Actions:**

Jan-June: Convene Floodplain Management Workshops to review FEMA mapping models of key reaches with the public and stakeholders. Coordinate with Towns to support their Community Flood Analysis through RFP to engineering firms for 3 population centers.

Jan: Initiate a Research Subcommittee

May: WAG Meeting; Updated Chestnut Creek Stream Management Plan Adoption

June & December: Newsletter mailed.

December: Newsletter mailed; 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/Neversink River 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: 2013-2014**

Bank Erosion Hazard Index (BEHI) will continue to 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 submitted to IMAP Invasives. Stream and riparian reference Reach site will be established.

**Schedule for Actions:**

Ongoing: Rondout and Neversink Demo project will be monitored during establishment period

May-September 2013: BEHI Surveys and reference reach survey

May-October: Japanese Knotweed mapping and suppression plan in coordination with CRISP (Catskill Region Invasive Species Partnership).

**General Actions Year 2: 2014-2015**

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 2014: Research Subcommittee will identify projects to be initiated this year to address issues in fisheries, suspended sediment loading

**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

6.3.6 Knotweed Eradication/Suppression

6.3.7 Invasive Species-Free Area and Spread Prevention

6.3.9 Participate in CRISP

6.2.8 Highway Activities

6.2.9 Stream Stability Restoration

### **General Actions Year 1: 2013-2014**

Complete vegetation components of Neversink Demo project and Clair Road EWP project early spring. Pilot a culvert replacement project to initiate SMIP grants program to Town of Denning. Explore whether equipment steam-cleaning requirement for contractors is feasible to reduce the importation of invasive species on the streams. Support critical area seeding as requested by Towns. Adjustments made to Demo projects as needed during their establishment period.

### **Schedule of Actions**

May: Highway Staff Training on Japanese Knotweed prevention. As-built survey of Neversink Demo.  
June: Initiate pilot SMIP grant to replace culvert in Town of Denning. Explore partnership project with Sullivan County DPW for rock vane installation at County Road 19.

### **General Actions Year 2: 2014-2015**

An annual cycle of funding and implementation of stream management projects in the Rondout & Neversink Basins will evolve with execution of the successor contract. 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 subcommittees for approval by Watershed Advisory Group:

- Highways & Infrastructure Subcommittee
- Education Subcommittee
- Research Subcommittee

### **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*

### **General Actions Year 1: 2013-2014**

Riparian Corridor Management Plans (RCMPs) will be written for a minimum of 6 streamside landowners in the program area this year, each resulting in planting projects to be planned and implemented in fall 2013 and spring 2014.

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 1<sup>st</sup> for implementation in the Fall of 2013, and November 1<sup>st</sup> 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; a long-term suppression strategy for suppression of target species will be developed and implemented in the fall of 2013. Existing native willow (*salix* spp.) planting beds will be expanded on NYC DEP land; expanded permissions will be pursued for willow harvesting on private lands; Alternate Plant Material Center locations will be explored.

A seasonal intern will assist with the care and maintenance of the Plant Materials Center stock and holding center; and provide necessary plant maintenance to projects that have been installed in previous years throughout the summer months and as needed into the fall of 2013.

### **Schedule for Actions:**

May-September: Receive CSBI grant applications by June 1<sup>st</sup>; Develop RCMPs (3); year one vegetation monitoring of the 3 remaining projects installed in 2012, Complete RCMP's for Fall projects  
June-October: Submit Japanese Knotweed plots to CRISP/partners database; assist with enforcement of JKW prevention protocol for project contractors  
July - October: Complete planting plans for Fall projects, CSBI Project Planning and Implementation  
October: Receive and inventory plant materials delivery from Greenbelt  
November: CSBI grant applications due for potential Spring 2014 projects, CSBI Project Planning for Spring 2014  
February: Complete RCMPs (3) 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: 2014-2015**

Riparian Corridor Management Plans will be written 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 2014 and spring 2015. CSBI will also offer full planting support to the 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 1<sup>st</sup> for implementation in the Fall of 2014, and November 1<sup>st</sup> for implementation in Spring 2015, 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, 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 (3) for Fall projects; Vegetation Monitoring for year 1 of projects installed in 2013; Vegetation Monitoring for year 3 projects installed in 2011  
June: CSBI Grant Applications due by 1<sup>st</sup> for potential Fall projects  
October: Quarterly Meeting; Receive and inventory plant materials from Greenbelt, Complete planting plans for Fall 2014 projects  
November: CSBI grant applications due by 1<sup>st</sup>, CSBI project Planning for Spring 2015  
February: Complete RCMP's (3) 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: 2013-2014**

Initiate trainings for Highway DPW staff in Towns, partnering Counties and potentially NY State DOT. *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 to increase outreach efforts. A Twitter feed is planned to provide the community with more timely updates. Educational workshops are planned for DPW staff and equipment operators in best management practices for streams using case studies from flood response emergency work across the watershed region.

The Education subcommittee 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. Initial outreach for Research subcommittee. Stream Program Coordinator participates in Interbasin Education and Outreach quarterly meetings and new program initiatives such as LFHMA.

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 . 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: E&O Planning
- June: Mail Newsletter #3
- July: Stream History intake at Old Time Fair Grahamsville; River Bag sale to benefit Halls Mills Covered Bridge (NY State Covered Bridge Society)
- August: Arm of the Sea Theater performance of River Rejuvenary Circus at Grahamsville
- September: Release applicant packet for Round 1 Education SMIP Grants
- October: Site Tour
- December: Mail Newsletter #4 Annual Report; E-newsletter development

**General Actions Year 2: 2014-2015**

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 and coordinate a Floodplain Management Committee to meet on workshop topics that inform stakeholders about 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.

Stream Program Coordinator will seek certification as Floodplain Manager with NY State in 2014; Rondout Neversink full-time staff to make this goal in 2015. Field staff to aim for completing Rosgen Levels 3 & 4 in 2014. Staff will participate in new interbasin trainings on watershed hydraulics.

**Schedule for Actions:**

January: Review of Round 1 SMIP Education Grant applications  
April: Twitter feed launch; Production and release of short project videos  
May: E&O Plan  
June: Newsletter #5 Mailed  
September: Release applicant packet for Round 2 Education SMIP Grants  
December: Mail Newsletter #6/Annual Report

**Rondout Neversink Stream Program Team:**

***Sullivan County Soil & Water Conservation District:***

*Brenden Wagner, Riparian Field Technician*  
*Brian Brustman, District Manager (Liberty Office)*  
*Jesse McCarthy, SUNY Ulster Seasonal Intern*  
*Karen Rauter, Stream Program Coordinator*  
*Lisa Schick, Bookkeeper(Liberty Office)*  
*Stacie Howell, Catskill Streams Buffer Initiative*

*Additional assistance provided by Liberty Office staff: John Kline, Les Kirby*

***NYC DEP:***

*Chris Tran, Catskill Streams Buffer Coordinator, NYC DEP*  
*Mark Vian, Contract Manager, NYC DEP*



<b>Rondout Neversink Stream Management Planning Program</b>						
<b>Action Plan 2013-2014</b>						
	<b>May</b>	<b>June</b>	<b>July</b>	<b>August</b>	<b>September</b>	<b>October</b>
<b>SMPs</b>	Hwys & Inf Mtg 3/28 WAG Meeting 4/4 Education Mtg 4/16 Finalize Action Plan	Mail Newsletter #3 Distribute Neversink Stream Mgt Plan		Hwys & Inf Mtg	Release Round 1 Education Grants Application	Hwys & Inf Mtg
<b>Assessment</b>		BEHI Assessment Japanese Knotweed Mapping	BEHI Assessment Identify Reference Reaches(Ongoing)	BEHI Assessment		
<b>Demonstration Projects</b>	Rondout Demo Restoration Monitoring Continues (Ongoing) Neversink Demo Restoration Repair & Monitoring (Ongoing)	Pilot SMIP Grant Culvert/Denning Plan Pilot SMIP Rock Vane/Sullivan County DPW Japanese Knotweed Suppression (Ongoing)				
<b>CSBI</b>	6 RCMPs CSBI Project Planning Fall 2013	Plan Plant Materials Expansion	Year 1 Vegetation Monitoring		Complete RCMP's for Fall Projects	CSBI Project Implementation  Fall Plant Delivery and Inventory
<b>E&amp;O</b>	Highway Staff Training #2 (Invasive Species)	Mail Newsletter #4/Annual Report	Old Time Fair Stream History Intake Exhibit	River Rejuvenary Circus/Arm of the Sea Theater	Highway Staff Training #3	Project Site Tours
	<b>November</b>	<b>December</b>	<b>January</b>	<b>February</b>	<b>March</b>	<b>April</b>
<b>SMPs</b>	Education SMIP Mtg Hwys & Inf SMIP Mtg	Release Updated Chestnut Creek Stream Mgt Plan WAG Meeting		Education Mtg Hwys & Inf Mtg SMIP Grants Cycle Begins	Floodplain Mgt Workshop Release RFP for Community Flood Analysis (LFHMA)	Hwys & Infr Mtg
<b>Assessment</b>			Initiate Research Subcommittee			
<b>Demonstration Projects</b>						
<b>CSBI</b>	CSBI Grant Applications Due Nov. 1st  CSBI Planning for Spring 2014			Complete RCMP's for Spring Projects		
<b>E&amp;O</b>	Launch E-News & Web Site	Mail Newsletter #5 (Annual Report)				Release Demo Videos

<b>Rondout Neversink Stream Management Planning Program</b>						
<b>Action Plan 2014-2015</b>						
	<b>May</b>	<b>June</b>	<b>July</b>	<b>August</b>	<b>September</b>	<b>October</b>
<b>SMPs</b>	WAG Meeting  Towns Adopt Updated Chestnut Creek Stream Mgt Plan	WAG Highways & Infrastructure Sub-Committee Meeting  Floodplain Management Workshop Meeting #2		WAG Highways & Infrastructure Sub-Committee Meeting		WAG Highways & Infrastructure Sub-Committee Meeting  Floodplain Management Workshop Meeting #2
<b>Assessment</b>		Stream Feature Inventory of Tributaries Initiate Fisheries Study Initiate Suspended Sediment Loading Study	Stream Feature Inventory of Tributaries	Stream Feature Inventory of Tributaries		
<b>Demonstration Project</b>	Neversink Demo Monitoring					
<b>CSBI</b>	CSBI Outreach, Install CSBI Plantings	CSBI Grant Applications Due June 1 <sup>st</sup>		Vegetation Monitoring of 2013 Projects	Complete RCMP's for Fall Projects	
<b>E&amp;O</b>	Education & Outreach Plan	Mail Newsletter #6				
	<b>November</b>	<b>December</b>	<b>January</b>	<b>February</b>	<b>March</b>	<b>April</b>
<b>SMPs</b>		WAG Meeting  Annual Report  Highways & Infrastructure Sub-Committee Meeting  Education Subcommittee Meeting	Newsletter	Highways & Infrastructure Subcommittee Meeting		WAG Highways & Infrastructure Sub-Committee Meeting  Action Plan 2015-2017
<b>Assessment</b>						
<b>Demonstration Projects</b>						
<b>CSBI</b>	CSBI Grant Applications Due Nov. 1 <sup>st</sup> , CSBI Planning for Spring 2015			Complete RCMP's for Spring Projects		
<b>E&amp;O</b>		Mail Newsletter #7 (Annual Report)				Landowner Workshop