

Greene County Soil & Water Conservation District
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To: NYCDEP
From: Greene County Soil & Water Conservation District
Date: May 2009
Re: Schoharie Basin Action Plan

To Whom It May Concern,

In 2008, the Schoharie Watershed Advisory Committee (SWAC) was created to establish a locally driven implementation program for the Schoharie Basin. The Greene County Soil and Water Conservation District (GCSWCD) and the NYC Department of Environmental Protection (DEP) have collaborated with the SWAC to develop the 2009 – 2011 Action Plan. The Action Plan is one piece of a three-part package that includes:

1. Schoharie Basin Stream Management Plan Implementation Action Plan 2009 – 2011
2. Completed projects synopsis and
3. Progress tracking sheet that will be updated as action items are completed.

Enclosed you will find each of these documents.

The Action Plan provides summaries of the action items that GCSWCD will be leading between May 2009 and May 2011. The completed projects synopsis provides summaries of the action items that have been completed from the 2007 – 2009 Action Plan. The progress tracking sheet is an Excel document that includes all of the action items from the 2007 – 2009 and 2009 – 2011 Action Plans, and provides a brief description and the current status of each action item. The complete action plan and completed project synopsis are updated annually and revised biannually. The progress tracking sheet serves as a working executive summary that is updated more frequently for the SWAC.

Sincerely,

Greene County Soil & Water Conservation District

SCHOHARIE BASIN STREAM MANAGEMENT PLAN IMPLEMENTATION ACTION PLAN 2009 – 2011

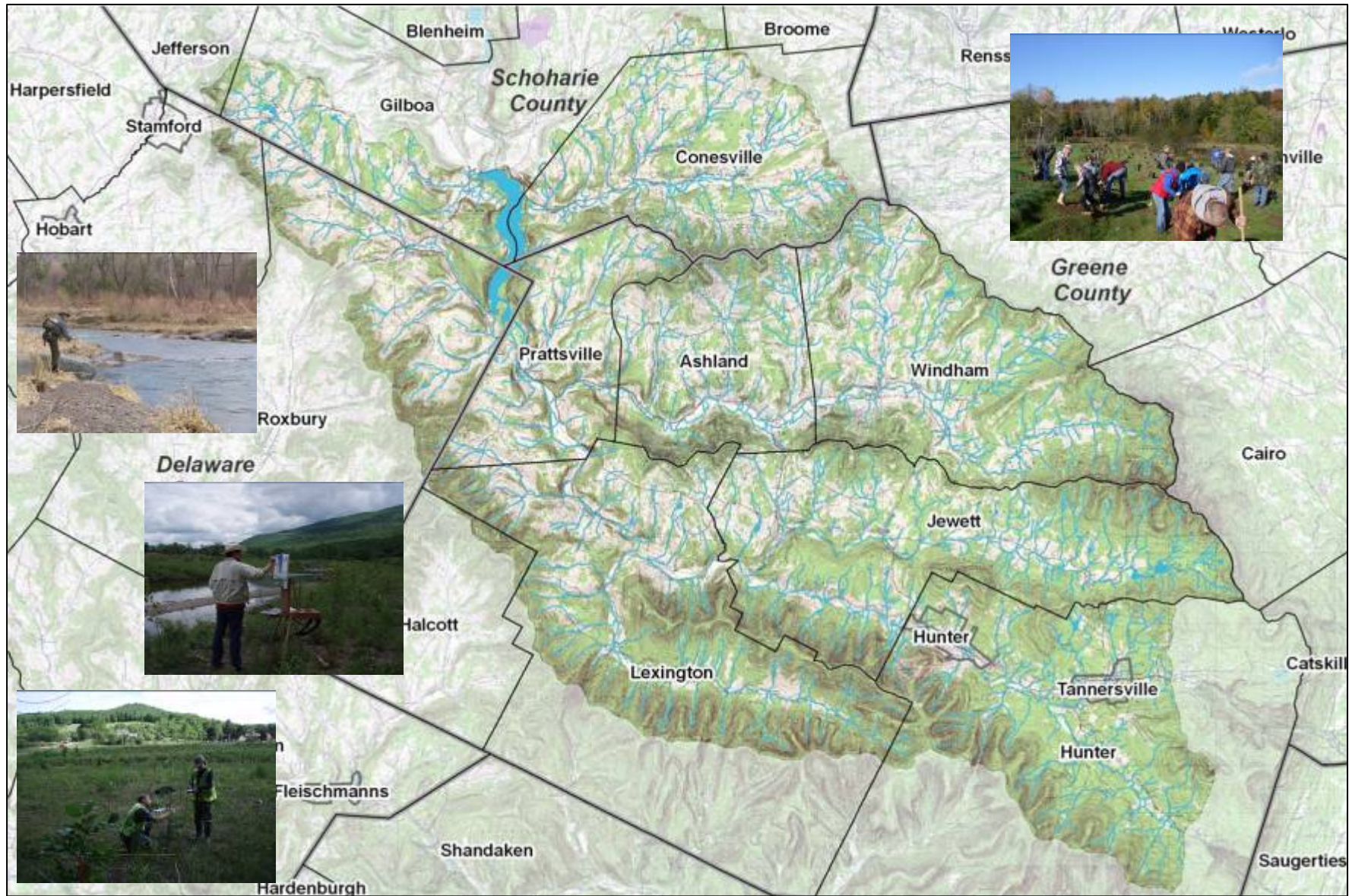


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NYCDEP Stream Management Program

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Greene County Soil & Water Conservation District

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Schoharie Basin Stream Management Plan Implementation

Action Plan 2009 - 2011

The following Action Plan summarizes the programs and projects that GCSWCD will be leading within the Schoharie Basin between May 2009 and May 2011. The GCSWCD will lead the efforts for each action item, and work cooperatively with watershed partners including, but not limited to, the SWAC, NYCDEP, NYSDEC, CWC, and watershed municipalities. Implementation categories include, Program Administration and Implementation, Education on Watershed Protection, Landowner Stream Assistance, Creative Stormwater Practices and Critical Area Seeding, Highway and Infrastructure Improvements, Planning and Assessment, Recreation and Stream Habitat Improvements, and On-going Activities. This is a dynamic document and will be modified annually to include additional action items or to update existing items. Action items may be site specific, community-wide, or basin-wide, and are targeted for the watersheds in which the GCSWCD and NYCDEP have completed Stream Management Plans (SMP). The Action Plan is one piece of a three-part package that includes: this action plan, completed projects synopsis and a progress tracking sheet; all of these documents will be updated in May, 2010. The following items have been identified by GCSWCD, NYCDEP and the Schoharie Watershed Advisory Committee (SWAC) and are consistent with SMP recommendations.

I. Program Administration and Implementation

The GCSWCD will continue to develop and maintain an effective and efficient process for implementation of the stream management plans for Schoharie Creek and its associated tributaries. This process will help to fulfill the NYCDEP FAD and Shandaken Tunnel SPDES permit obligations. Development and implementation of the program is an on-going process. Administration and Implementation action items include, but are not limited to:

A. Local Adoption of SMPs: In 2009-2010, the SCSWCD and NYCDEP will continue to work with the Town of Conesville to adopt the Manor Kill Stream Management Plan by resolution, and execute a Memorandum of Understanding (MOU) for implementation. The SCSWCD will continue to assist with the SEQRA process for adoption of the plan. Additionally, a MOU between the GCSWCD and SCSWCD will be developed to assist with implementation in the Manor Kill.

GCSWCD Staff:	Nichols, Yost
Project Partners:	NYCDEP, GCSWCD, SCSWCD, Local municipalities
Project Funding:	NYCDEP Contract/ Greene County WAP Funding, Others
Project Schedule:	1. Schoharie County SWCD will work with the Town of Conesville towards adoption of the Manor Kill SMP.
SMP Recommendation:	Schoharie/East Kill – SMP-Stakeholders Section
Date Added to Action Plan:	2007
Progress (2009):	All Greene County Towns within the Schoharie Basin and the Batavia Kill, East Kill, and West Kill watersheds, have adopted the relevant SMPs and signed Memoranda of Understanding (MOU) with GCSWCD. The SCSWCD will continue to assist Conesville in undertaking the appropriate SEQRA process for adoption of the Manor Kill SMP.

II. Education on Watershed Protection:

The GCSWCD will continue to work with a wide network of partners to enhance its education and outreach efforts related to stream and floodplain management, sediment and erosion control, and other topics critical to sound watershed management. A priority goal of this action plan is to increase education and outreach activities. Many of the following E/O initiatives were developed by the SWAC E/O Subcommittee. Education and Outreach action items include, but are not limited to:

A. WOH Education & Outreach Strategy: The GCSWCD will continue to work with NYCDEP and others to refine and finalize a detailed education and outreach strategy for the West of Hudson (WOH) watershed area. The GCSWCD will help identify training needs and plan training activities for a wide range of audiences; training activities may be basin-wide or specific to individual sub-basins.

GCSWCD Staff:	Education Coordinator, Yost
Project Partners:	NYCDEP
Project Funding:	NYCDEP SMP Contracts, WAP, CWC
Project Schedule	Complete by 2009
SMP Recommendation:	Batavia Kill – EO-01 (Medium, 1.66); Schoharie/East Kill – EO-6.4.1; West Kill – EO 6.4
Date Added to Action Plan:	2007
Progress (2009):	The Schoharie Watershed Advisory Committee (SWAC) and the Watershed Assistance Program's Schoharie Watershed Strategy (SWS) funds have provided watershed communities (local decision-makers, agency regulators, county government) with opportunities to come together in small focus groups and in large forums to network and learn more about current practices, programs, and regulations governing watershed protection. A detailed E & O strategy exists in the SWS (January 2008). The E & O strategy covers topics universal to water quality initiatives and includes other counties and agencies (SWCD's, Cornell Cooperative Extension).

B. Educational Workshops: While the detailed E&O plan will determine long term training needs, the GCSWCD has identified a number of workshops that are proposed for 2009 – 2010. Potential work shops include:

1. Riparian Buffer workshop for private landowners.
2. Sediment & Erosion control for contractors.
3. Floodplain management for municipalities (CEO, Highway, Planning Board).
4. Floodplain Management for private sector (realtors, lending institutions, developers).

GCSWCD Staff: Education Coordinator, Yost
Project Partners: NYCDEP
Project Funding: NYCDEP/GCSWCD Schoharie SMP Contract, CWC, GCSWCD-WAP, others
Project Schedule: Completed by August 1, 2010, updates as appropriate –

1. Continue to organize training workshops with targeted groups.
2. Identify additional target groups and develop appropriate training workshops.
3. Develop a training calendar and identify funding needs.

SMP Recommendation: Batavia Kill – RB-01 (Very High, 3.33), SC-06 (Very High, 3.46); Schoharie/East Kill – EO-6.4.8; West Kill – EO 6.4
Date Added to Action Plan: 2007
Progress (2009): Workshops have been conducted through annual volunteer riparian planting projects, project site tours and Batavia Kill stream celebrations. The annual Watershed Summits in Hunter, NY have also provided an opportunity to inform attendees about floodplain management, SEQRA, wetland regulations, and stormwater regulations. Municipal planning and zoning board members received credit toward their yearly training requirement. GCSWCD sponsored two Construction Erosion and Sediment Control Training Courses that were attended by approximately 150 people from the Schoharie basin. Participants included watershed developers, planners, code enforcement officers, regulators and contractors. This course focused on the review of new state construction permit, the requirements of stormwater pollution prevention plans, and the proper installation of erosion and sediment control practices.

C. Conduct Watershed Survey: In order to achieve successful implementation of SMPs, it is important to determine the educational needs and interests of various stakeholders and watershed residents. It is also important to know the types of educational resources that already exist. Surveys should be developed and distributed to targeted audiences within the watershed including, but not limited to, Highway Departments, Municipal Officers, members of planning boards, and watershed or streamside landowners.

GCSWCD Staff: Education Coordinator, Yost
Project Partners: Regional Science Teachers, Greene County CCE, CWC, CCCD, others
Project Funding: NYCDEP/GCSWCD Schoharie SMP Contract, CWC, GCSWCD-WAP, others
Project Schedule: Fall/Winter, 2009

1. Determine the audience(s) that will be targeted for survey.
2. Develop appropriate survey(s) for targeted audience(s) with input from educators and relevant agencies.
3. Distribute survey(s).
4. Compile and analyze the results of the survey(s).
5. Identify workshop and curriculum needs and investigate the feasibility and funding availability to conduct identified workshops.

SMP Recommendation: Schoharie/East Kill – EO 6.4.7 and 6.4.8; Manor Kill- EO 5.4.7 and 5.4.8
Date Added to Action Plan: 2009
Progress (2009): None

D. Identify Existing Resources: In order to know where gaps exist and to target educational efforts, GCSWCD will identify and catalog existing resources that are currently available.

GCSWCD Staff: Education Coordinator, Yost
Project Partners: Agencies that provide watershed programming (CWC, GCCCE, CCCD, WAC, basin schools, DEC)
Project Funding: NYCDEP/GCSWCD Schoharie SMP Contract, CWC, GCSWCD-WAP, others
Project Schedule: Fall/Winter, 2009
SMP Recommendation: Schoharie/East Kill – EO 6.4.8
Date Added to Action Plan: 2009
Progress (2009): None

E. Organize a Schoharie Watershed Week: Community involvement and awareness is important for promoting the protection of streams and their watersheds. Hosting a watershed-wide educational and recreational event (Schoharie Watershed Week) will provide an opportunity for watershed residents, students, community groups, tourists, officials, etc. to get to know their stream and the resources available to help provide watershed protection.

GCSWCD Staff: Education Coordinator, Yost
Project Partners: Local schools and colleges, community organizations, CWC (Youth Summit Committee), CCCD, WAC, GCCCE, DEC, NYCDEP
Project Funding: NYCDEP/GCSWCD Schoharie SMP Contract, CWC, GCSWCD-WAP, local sponsors, chambers of commerce
Project Schedule: Winter, 2010
1. Organize Schoharie Watershed educational events, starting with one or two days (Fall, 2010) and building up to a solid week of activities involving schools, community groups, and agencies (2012).
SMP Recommendation: Schoharie/East Kill – EO 6.4.8; Manor Kill- EO 5.4.8
Date Added to Action Plan: 2009
Progress (2009): None

F. Complete Kiosk Series: Kiosks will be based upon categories of water resource-related best management practices.

GCSWCD Staff: Education Coordinator, Hellinga
Project Partners: Organizations, property owners where kiosks will be located
Project Funding: NYCDEP/GCSWCD Schoharie SMP Contract
Project Schedule: 2009
SMP Recommendation: Batavia Kill – EO-08 (High, 2.27), EO-09 (Medium, 1.54), EO-06 (Medium, 1.15), EO-10 (Medium, 0)
Schoharie/East Kill – EO-6.4.2, EO 6.4.3, EO 6.4.4, EO 6.4.5, EO, 6.4.6, EO 6.4.7, EO 6.4.8, FP-6.1.7
West Kill – EO 6.4.3, 6.4.4, 6.4.5
Date Added to Action Plan: 2009
Progress (2009): Kiosks are being constructed by a local contractor in summer, 2009.

G. Japanese Knotweed Mailing: As discussed in SWAC meetings, Japanese knotweed is a basin-wide concern. Managing Japanese knotweed requires active treatment of existing knotweed occurrences and a proactive approach to prevent its spread. In order to inform streamside landowners about Japanese knotweed, its prevention and available treatment methods, an informational brochure will be mailed to landowners with Japanese knotweed free areas.

GCSWCD Staff: Weyeneth, Martin
Project Partners: GCCCE, CCCD, Mountaintop Arboretum, The Nature Conservancy, Catskill Region Invasive Species Partnership
Project Funding: NYCDEP/GCSWCD Schoharie SMP Contract
Project Schedule: 1. Identify properties and landowner addresses that did not have Japanese knotweed at the time of the stream assessments, 2009.
2. Create or update Japanese knotweed informational brochure, 2009
3. Mail brochure to landowners, 2009.
SMP Recommendation: Schoharie/East Kill 6.7.13; Manor Kill 5.7.13
Date Added to Action Plan: 2009
Progress (2009): Many components are complete – need to be mailed in fall, 2009

H. Batavia Kill Stream Celebration: The third annual Batavia Kill Stream Celebration will be held in Ashland. The family-oriented event has music, displays and educational events that celebrate the Batavia Kill and water resources. For more information: <http://www.gcswcd.com/wap/calendar/>

GCSWCD Staff: Yost, Education Coordinator
Project Partners: NYCDEP, GCSWCD, Ashland, CWC, SWAC
Project Funding: NYCDEP, GCSWCD, Ashland, CWC, many local business sponsors
Project Schedule: Organize from February through August with event in August, 2009.
SMP Recommendation: Schoharie 6.4
Date Added to Action Plan: 2009
Progress (2009): Planning and scheduling for the event is well underway.

I. Schoharie Watershed Summit: The third annual Watershed Summit will be held in Hunter in January, 2010. The event, which is targeted for municipal officials, offers training in relevant water resource issues, and offers credits to planning board members. For more information: <http://www.gcswcd.com/wap/calendar/>

GCSWCD Staff: Yost, Education Coordinator
Project Partners: NYCDEP, GCSWCD, SWAC
Project Funding: NYCDEP, GCSWCD
Project Schedule: Organize from September through January; event held in January, 2010.
SMP Recommendation: Schoharie 6.4
Date Added to Action Plan: 2009
Progress (2009): Organization subcommittee exists – will be organized in Fall, 2009

J. Schoharie Watershed Bus Tour: The third annual Watershed bus tour will be held at C.D Lane Park in Windham. The event, which is targeted for landowners, offers training in relevant water resource issues. For more information: <http://www.gcswcd.com/wap/calendar/>

GCSWCD Staff:	Yost, Education Coordinator
Project Partners:	NYCDEP, GCSWCD, SWAC
Project Funding:	NYCDEP, GCSWCD
Project Schedule:	Organize from February through June; event held in June, 2009.
SMP Recommendation:	Schoharie 6.4
Date Added to Action Plan:	2009
Progress (2009):	Planning and scheduling is underway

III. Landowner Stream Assistance

The GCSWCD and NYCDEP recognize the importance of providing assistance to local landowners. The NYCDEP, GCSWCD and SCSWCD have provided the necessary training for project staff to be able to provide state-of-the-art technical assistance throughout the watershed. Technical assistance from staff members will guide the restoration of stream system stability and help to maintain ecological integrity. The technical assistance can range from a landowner consultation to activities that will help to meet the priorities of protecting water quality and establishing riparian buffers. Protection and enhancement of water quality can benefit both the City of New York's water supply and the residents of the Schoharie basin. Landowner Stream Assistance action items include, but are not limited to:

A. Riparian Restoration: An effective riparian buffer program can assist landowners with their efforts to protect and maintain healthy riparian buffers, address invasive species, and improve the condition of unstable or degraded riparian areas. In 2008, the Streamside Assistance Program (SAP) was developed to educate and assist streamside landowners in order to provide for improved stewardship of riparian areas. The GCSWCD and NYCDEP will work with landowners to protect, enhance, manage and restore riparian buffers within the WOH watershed. To help guide implementation of this program, the GCSWCD will continue to work with NYCDEP, other Soil and Water Conservation Districts, the Riparian Buffers Working Group, and the SAP Communications, Program Guidelines and Plant Materials subcommittees.

Streamside Assistance Program Educational Materials: The following items will be developed in 2009: Marketing Strategy, Program Slogan, Program Logo, Introduction Language, Program Brochure, and an Application for funding.

GCSWCD Staff:	Weyeneth, Education Coordinator
Project Partners:	NYCDEP, GCSWCD-WAP, CCE Agroforestry Center, others
Project Funding:	NYCDEP, GCSWCD
Project Schedule:	Complete through 2009
SMP Recommendation:	Batavia Kill – RB-03 (Very High, 3.46), RB-07 (Very High, 3.08), RB-11 (High, 2.69) Schoharie/East Kill – RZM-6.7.1, RZM-6.7.2, RZM-6.7.3, RZM-6.7.4, RZM-6.7.6, RZM-6.7.7, RZM 6.7.8, RZM-6.7.9, RZM-6.7.10, RZM-6.7.11, RZM-6.7.12, RZM-6.7.13, GSMA-6.8.2 West Kill – WQ 6.3.6, EO 6.4, RZM 6.7, 6.7.1, 6.7.3, 6.7.4, 6.7.6, 6.7.7, 6.7.8, 6.7.9, 6.7.10, GSMA 6.8.2,
Date Added to Action Plan:	2009
Progress (2009):	CRSR, Inc. was awarded a contract in February 2009 to conduct a needs assessment, develop a marketing strategy, and develop initial program roll-out with above mentioned educational materials.

Streamside Assistance Program Projects:

Site 1. Evergreen Planting: Develop a planting plan, obtain landowner agreement and deliver plant materials to complete the Evergreen planting in Hunter.

GCSWCD Staff: DuBois
Project Partners: NYCDEP, GCSWCD, Landowner
Project Funding: NYCDEP, GCSWCD, Landowner
Project Schedule: Build in 2009
SMP Recommendation: Schoharie/East Kill – RZM-6.7.1, RZM-6.7.2, RZM-6.7.3, RZM-6.7.4, RZM-6.7.6, RZM-6.7.7, RZM 6.7.8, RZM-6.7.9, RZM-6.7.10, RZM-6.7.11, RZM-6.7.12, RZM-6.7.13, GSMA-6.8.2
Date Added to Action Plan: 2009
Progress (2009): Plant materials were delivered and planted in April 2009.

Site 2. Kastanis Property Planting: Streamside Assistance Program Pilot - Obtain landowner agreement and restore approximately 7.1 acres of streamside vegetation along the Batavia Kill, including hosting school groups in the effort.

GCSWCD Staff: Weyeneth, Mellot
Project Partners: NYCDEP, GCSWCD, Landowner
Project Funding: NYCDEP, GCSWCD
Project Schedule: Build in 2009
SMP Recommendation: Batavia Kill – RB-03 (Very High, 3.46), RB-07 (Very High, 3.08), RB-11 (High, 2.69)
Date Added to Action Plan: 2009
Progress (2009): GCSWCD has a 5 year landowner agreement for this property. Riparian Corridor Management Plan is complete. Student planting is scheduled for May 14, 2009. Joint Application Permit has been submitted to DEC/ACOE.

Site 3. Kane Property Planting: Streamside Assistance Program Pilot - Obtain landowner agreement, create property management plan and restore approximately 120 feet of streamside vegetation along the Batavia Kill.

GCSWCD Staff: Weyeneth, Mellot
Project Partners: NYCDEP, GCSWCD, Landowner
Project Funding: NYCDEP, GCSWCD
Project Schedule: Build in 2009
SMP Recommendation: Batavia Kill – RB-03 (Very High, 3.46), RB-07 (Very High, 3.08), RB-11 (High, 2.69)
Date Added to Action Plan: 2009
Progress (2009): GCSWCD has a 10 year landowner agreement for this property. Riparian Corridor Management Plan is complete.

Site 4. Manor Kill Riparian Planting:

SCSWCD/GCSWCD Staff: Nichols, Weyeneth
Project Partners: NYCDEP, GCSWCD, SCSWCD, Community Volunteers
Project Funding: NYCDEP, GCSWCD, SCSWCD
Project Schedule: Fall, 2009
SMP Recommendation: Manor Kill- 5.7.1, 5.7.2, 5.7.4, 5.7.7
Date Added to Action Plan: 2009
Progress (2009): Landowner has signed landowner agreement and applied for Floodplain Easement Program (NRCS).

Riparian Demonstration Projects:

Site 1. Sugar Maples Riparian Buffer Project, Town of Windham (Batavia Kill). The GCSWCD has received funding from the ACOE (WRDA) for a project that will integrate knotweed management, establishment of a riparian buffer, development of public access and a stormwater retrofit project. The site is ideally located to serve as a site where various riparian buffer plantings can be visited by other landowners. Stormwater management will focus on use of rain gardens and other techniques that can serve as a model for visitors to view.

GCSWCD Staff: Buchanan, Hellinga
Project Partners: NYCDEP (TA) GCSWCD-WAP, Catskill Mountain Foundation, CCE Agroforestry Center, MT Arboretum.
Project Funding: GCSWCD-WAP (WRDA), Catskill Mountain Foundation, CWC (SWR Program)
Project Schedule: Complete the installation, 2009
SMP Recommendation: Batavia Kill – RB-09 (High, 1.81);
Schoharie/East Kill – WQ-6.3.7, RZM-6.7.2, RZM-6.7.4, RZM-6.7.13, GSMA-6.8.2
Date Added to Action Plan: 2007
Progress (2009): Knotweed removal and partial planting were completed in 2008. Project installation will continue in 2009.

Site 2. Carr Road, Town of Jewett (Schoharie Creek) The GCSWCD has been working with several property owners, the Town of Jewett and the CWC to address a repetitive flooding problem. The project will involve several objectives, including the establishment of a riparian buffer along the Schoharie Stream.

GCSWCD Staff: Flack, Mellot
Project Partners: NYCDEP (TA) GCSWCD-WAP, Private landowners, NYSDEC-Operations, Trout Unlimited, CCE Agroforestry Center, MT Arboretum.
Project Funding: GCSWCD-WAP (WRDA), other sources TBD
Project Schedule: 1. Complete DEC parking area and stream access, 2009.
2. Complete kiosk, 2009.
3. Planting in the knotweed areas of the project site, 2009.
SMP Recommendation: Batavia Kill – RB-09 (High, 1.81); Schoharie/East Kill – FP-6.1.10, FP-6.1.11, RZM-6.7.1, RZM-6.7.2, RZM-6.7.4, RZM-6.7.9, RZM-6.7.13, GSMA-6.8.2, GSMA-6.8.3, GSMA-6.8.6, GSMA-6.8.7, GSMA-6.8.8
Date Added to Action Plan: 2007
Progress (2009): With the exception of the knotweed treatment areas, the project plantings were completed in 2008; the knotweed-treated areas will be planted in 2009.

Site 3. Prattsville Riparian Project (O'Hara): Construct a bankfull bench and re-vegetate approximately 3,000 feet of streambank – install fencing and enroll the property in the Conservation Reserve Enhancement Program.

GCSWCD Staff: DuBois, Mellot
Project Partners: NYCDEP, GCSWCD, CWC, NRCS, Delaware Engineering, Landowner
Project Funding: NYCDEP, GCSWCD, CWC, NRCS
Project Schedule: Build in 2009
SMP Recommendation: Schoharie/East Kill – FP-6.1.10, FP-6.1.11, RZM-6.7.1, RZM-6.7.2, RZM-6.7.4, RZM-6.7.9, RZM-6.7.13, GSMA-6.8.2, GSMA-6.8.3, GSMA-6.8.6, GSMA-6.8.7, GSMA-6.8.8
Date Added to Action Plan: 2009
Progress (2009): A CWC Stream Corridor Protection Grant has been applied for in the amount of \$100,000 and has been awarded by CWC. Engineering services have been contracted for this project, and a whole Farm Plan is being developed by NRCS.

Site 4. Windham Golf Course Streambank Project: Remove failed sheet piling, armor toe and slope bank, and plant approximately 155 feet of streambank.

GCSWCD Staff: Dubois
Project Partners: NYCDEP, CWC, GCSWCD, Kaaterskill Engineering, Landowner
Project Funding: NYCDEP, CWC
Project Schedule: Design and Construct in 2009
SMP Recommendation: Batavia Kill – RB-03 (Very High, 3.46), RB-07 (Very High, 3.08), RB-11 (High, 2.69)
Date Added to Action Plan: 2009
Progress (2009): A CWC Stream Corridor Protection Grant has been applied for in the amount of \$100,000 and has been awarded by CWC. Engineering services have been contracted for this project

Site 5. Tompkins Riparian Project: Replant a large section of Batavia Kill adjacent to Tompkins Quarry as part of their restoration/compliance efforts.

GCSWCD Staff: Weyeneth, Mellot
Project Partners: GCSWCD, NYCDEP, Landowner
Project Funding: NYCDEP, GCSWCD, Landowner
Project Schedule: Construct in 2009
SMP Recommendation: Batavia Kill – RB-03 (Very High, 3.46), RB-07 (Very High, 3.08), RB-11 (High, 2.69)
Date Added to Action Plan: 2009
Progress (2009): A planting plan has been developed and has been submitted to NYSDEC for review and approval.

Site 6. Demming Road Riparian Project: Addition of a riparian component to a stream project being conducted by the landowner.

GCSWCD Staff:	Dubois, Weyeneth
Project Partners:	GCSWCD, NYCDEP, Landowner
Project Funding:	NYCDEP, GCSWCD, Landowner
Project Schedule:	Construct in 2009
SMP Recommendation:	Schoharie/East Kill – RZM-6.7.1, RZM-6.7.2, RZM-6.7.3, RZM-6.7.4, RZM-6.7.6, RZM-6.7.7, RZM 6.7.8, RZM-6.7.9, RZM-6.7.10, RZM-6.7.11, RZM-6.7.12, RZM-6.7.13, GSMA-6.8.2
Date Added to Action Plan	2009
Progress (2009):	A stream disturbance permit application has been prepared and submitted to NYSDEC for review and approval.

B. Stream Restoration Projects and Repair: In 2009, the GCSWCD and NYCDEP will finish stream restoration projects that have not been completed, and were scheduled as part of the 2007-2009 Action Plan. The GCSWCD and NYCDEP will also work cooperatively with the Schoharie Watershed Advisory Committee (SWAC) and others to identify additional sites. Projects are contingent on available funding, proper design, landowner cooperation and appropriate environmental and weather conditions. Implementation of these projects may include assessment, design, permitting, contracting, and construction oversight.

Stream Restoration Projects:

Site 1. Schoharie Street Stabilization: (Village of Hunter) Stabilization of approximately 120 feet of high stream bank to protect infrastructure and private property. Project includes stacked and pinned rock riprap as well as vegetated beds. The GCSWCD and NYCDEP also added additional riparian buffer plantings on the opposite bank.

GCSWCD Staff:	DuBois, Mellot
Project Partners:	NYCDEP, Village of Hunter.
Project Funding:	NYCDEP Schoharie Phase II contract, FEMA
Project Schedule:	1. Construction completed, 2008. 2. Riparian plantings will be installed April 2009.
SMP Recommendation:	Batavia Kill – WQ-09 (Very High, 3.33); Schoharie/East Kill – FP-6.1.10, FP-6.1.11, RZM-6.7.1, RZM-6.7.2, RZM-6.7.8, RZM-6.7.9, GSMA-6.8.2, GSMA-6.8.3, GSMA-6.8.6, GSMA-6.8.8
Date Added to Action Plan:	2007
Progress (2009):	Project construction is complete. Riparian plantings along the opposite streambank will be installed in 2009.

Site 2. West Kill Restoration Project, Long Road: (Town of Lexington) The GCSWCD/NYCDEP will complete a full geomorphic restoration of approximately 2400 linear feet of stream on the West Kill in Spruceton valley. The site is characterized by significant bank failure and clay exposures in the banks and stream bed. In addition, the project will be coordinated with the Greene County Highway Department who will be replacing a bridge at the lower end of the reach. Highway has committed to making improvements to the bridge's alignment and hydraulic opening (length) to reduce impacts on stream function through this section of the reach.

GCSWCD Staff: DuBois, Flack
 Project Partners: NYCDEP, Greene County Highway
 Project Funding: NYCDEP, TBD
 Project Schedule: 1. Field survey/data collection completed in 2008.
 2. Construction summer 2009.
 SMP Recommendation: Batavia Kill – WQ-09 (Very High, 3.33); Schoharie – FP-6.1.11, WQ-6-3-11, GSMA-6.8.3, GSMA-6.8.6
 West Kill – MUR 4.13
 Date Added to Action Plan: 2007
 Progress (2009): This project has been targeted for implementation in 2009. Wetland delineation, archaeological investigation and final survey of the site has been completed. Project design work is in progress.

Site 3. Oakwood Pistol Club: GCSWCD is leading this CWC Stream Program streambank protection project in the Town of Prattsville.

GCSWCD Staff: DuBois
 Project Partners: NYCDEP, CWC, GCSWCD, Kaaterskill Engineering, Landowner
 Project Funding: NYCDEP, CWC
 Project Schedule: Design and Construct in 2009
 SMP Recommendation: Schoharie/East Kill – FP-6.1.10, FP-6.1.11, RZM-6.7.1, RZM-6.7.2, RZM-6.7.4, RZM-6.7.9, RZM-6.7.13, GSMA-6.8.2, GSMA-6.8.3, GSMA-6.8.6, GSMA-6.8.7, GSMA-6.8.8
 Date Added to Action Plan: 2009
 Progress (2009): A CWC Stream Corridor Protection Grant has been applied for in the amount of \$99,200 and has been awarded by CWC. Engineering services have been contracted for this project; design plans and specifications are complete and have been submitted for permit.

Site 4. Sugar Maples Stream Restoration: (Batavia Kill Tributary, Town of Windham) This project was designed to restore wetland functions and approximately 700 feet of stream that was historically channelized and confined by mortared stone walls. This area has also flooded several times due to rock walls along this reach collapsing and blocking storm flow. Project goals include: reducing channel erosion, improving water quality, upgrading the farm's infrastructure (new culverts sized to properly convey storm runoff), developing and improving wetlands, improving public access to the site, providing public education on natural channel design and wetlands, improving habitat and protecting the adjacent farm fields.

GCSWCD Staff: Buchanan, Hellinga
 Project Partners: NYCDEP, ACOE
 Project Funding: NYCDEP, ACOE
 Project Schedule: 1. Construction summer 2009.
 SMP Recommendation: Schoharie RZM 6.7.4, GSM 6.8.7
 Date Added to Action Plan: 2009
 Progress (2009): In 2008, GCSWCD completed the topographic survey, hydrology, hydraulics and natural channel design and permitting. Construction will occur in the summer of 2009.

Repair & Modifications of Existing Projects: The GCSWCD/NYCDEP will repair previously constructed stream restoration projects. Repairs and modifications will be undertaken to correct problem areas, to replace vegetation, control invasive species or to make adjustments to stream structures based on monitoring data. Project sites include:

Site 1. Broadstreet Hollow Stream Restoration Project: (Town of Lexington) The GCSWCD, with review and approval of NYCDEP, will undertake repairs and adjustments to rock structures, channel morphology and other features at the Broadstreet Hollow site. Once repairs are identified, the GCSWCD will acquire new permits and undertake repairs using in-house resources.

GCSWCD Staff:	DuBois, Mellot
Project Partners:	NYCDEP
Project Funding:	NYCDEP
Project Schedule:	Complete outreach to landowners in 2009.
SMP Recommendation:	Outside Schoharie watershed
Date Added to Action Plan:	2007
Progress (2009):	Ground water relief wells installed as a component of the original stabilization design have been evaluated for their current capacity. The capacity of the wells has proven to be insufficient to adequately relieve the artesian ground water conditions. Redevelopment of the relief wells was attempted, but damage to the wells has resulted in failure, and redevelopment is not possible. Repair of damaged erosion control and grade control structures is complete.

IV. Creative Stormwater Practices and Critical Area Seeding

In order to reduce runoff and protect groundwater resources in the basin, the GCSWCD and NYCDEP support promoting the infiltration of stormwater through state-of-the-art erosion and sediment control techniques such as hydroseeding of open ditches, stormwater techniques to infiltrate water into the ground, wetland enhancement, filter strips, and creation of rain gardens and bioswales to manage stormwater. The GCSWCD will work with multiple partners to implement stormwater projects within the Schoharie Watershed. Creative Stormwater Practices and Critical Area Seeding action items include, but are not limited to:

A. Windham Mountain: (Town of Windham) The GCSWCD has been working with Windham Mountain ski center to evaluate stormwater impacts at the ski slope and adjacent high density development areas. A detailed assessment of impacts has been completed and a strategy for long term implementation of a series of stormwater retrofit activities has been developed. The GCSWCD is working with Windham Mountain and others to design and implement stormwater management practices that will be installed.

GCSWCD Staff:	Buchanan, Hellinga
Project Partners:	NYCDEP, Windham Mountain, CWC, ACOE, NYSDEC
Project Funding:	CWC, ACOE-WRDA, NYCDEP
Project Schedule:	First set of storm water management practices installed 2007, additional implementation in 2008, 2009 and 2010.
SMP Recommendation:	Batavia Kill WQ-08 (Very High, 4.23) Schoharie – WQ-6.3.7
Date Added to Action Plan:	2007
Progress (2009):	Through the CWC Stormwater Retrofit program, \$280,000 has been approved and a second application will be submitted as a match for ACOE funding (through WRDA). GCSWCD worked with Ski Windham to develop a draft report to document existing impacts from stormwater, a proposed plan for future stormwater management and a proposed strategy for SMP implementation. Additional project funding for stormwater management practice implementation was obtained through ACOE-WRDA. Construction to improve stormwater quality from parking areas, operations areas, and stream work are scheduled for 2009.

B. Hunter Foundation: (Village of Tannersville) The GCSWCD is working with the Hunter Foundation on a stormwater retrofit project that will be completed in conjunction with the Foundation’s rehabilitation of a block of buildings in the Village of Tannersville. The Project will use innovative methods to meet water quality treatment standards for runoff from roofs and parking. The site presents space challenges and will be an excellent demonstration project for integrating stormwater management in an area with limited space. In addition, the project will include the design and construction of a “Creek walk” along a small tributary stream that will link with main street commercial businesses.

GCSWCD Staff:	Buchanan, Hellinga
Project Partners:	NYCDEP, Hunter Foundation, CWC, ACOE,
Project Funding:	CWC, ACOE-WRDA, NYCDEP
Project Schedule:	1. Project construction 2009.
SMP Recommendation:	Batavia Kill WQ-08 (Very High, 4.23); Schoharie – WQ-6.3.7, PR-6.2.3
Date Added to Action Plan:	2007
Progress (2009):	Construction was delayed due to hazardous material removal. Construction to be completed in spring 2009

C. Hunter Mountain: (Village of Hunter) The GCSWCD is in the early stages of planning for a significant project to address stormwater runoff from the Hunter Mountain ski area. The GCSWCD has secured some federal funding, and has held preliminary discussions with the site owner. The GCSWCD will conduct a site assessment and strategy similar to that conducted for Windham Mountain which will result in an implementation strategy. The project will be integrated with some redevelopment activities proposed for the ski center as well as the Town of Hunter GEIS project.

GCSWCD Staff:	Buchanan, Flack
Project Partners:	Hunter Mountain, CWC, ACOE, NYCDEP(TA),
Project Funding:	Hunter Mountain, CWC, ACOE-WRDA, NYCDEP(TA)
Project Schedule:	1. Project planning – 2009. 2. Final site assessment and strategy summer 2009.
SMP Recommendation:	Batavia Kill WQ-08 (Very High, 4.23); Schoharie – WQ-6.3.7
Date Added to Action Plan:	2007
Progress (2009):	Preliminary discussions complete.

D. Sugar Maples Stormwater Project: Town of Windham (Batavia Kill). See companion Riparian Buffer Program (III.A.4.)

GCSWCD Staff:	Mellot, Martin, Buchanan, Hellinga
Project Partners:	NYCDEP, GCSWCD-WAP, Catskill Mountain Foundation, CCE Agroforestry Center, MT Arboretum.
Project Funding:	GCSWCD-WAP (WRDA), Catskill Mountain Foundation, CWC (SWR Program)
Project Schedule:	Complete the installation, 2009
SMP Recommendation:	Batavia Kill – RB-09 (High, 1.81); Schoharie/East Kill – WQ-6.3.7, RZM-6.7.2, RZM-6.7.4, RZM-6.7.13, GSMA-6.8.2
Date Added to Action Plan:	2007
Progress (2009):	Designs are complete, building was demolished, permeable parking area has been installed and the culvert replaced. Project completion expected for 2009.

E. Community Stormwater Planning: : The GCSWCD has initiated a series of projects which will result in detailed Community Stormwater Management Plans for various Towns and Villages within the Schoharie Basin. Due to limited staff availability, completion of these plans has been delayed. The GCSWCD intends to complete planning projects in the Towns of Ashland and Prattsville, and will evaluate additional areas for potential planning projects.

GCSWCD Staff: Buchanan, Yost
Project Partners: CWC, Towns & Villages, HOA's
Project Funding: CWC, GCSWCD-WRDA
Project Schedule: 1. Complete on-going Ashland & Prattsville Plans by 2010.
2. Evaluate additional planning needs, seek grants as necessary.
SMP Recommendation: Batavia Kill – SC-05 (Very High, 3.08), WQ-01 (Very High, 4.23); Schoharie – WQ-6.3.7, GSMA-6.8.5;
West Kill – WQ 6.3.1, 6.3.7
Date Added to Action Plan: 2007
Progress (2009): GCSWCD staff are compiling the stormwater studies that have been completed.

F. Mountain Top Library & Learning Center: (Town of Hunter, Village of Tannersville) The GCSWCD is working with the Mountain Top Library Capital Campaign on a stormwater retrofit project. Located in the Village of Tannersville, this project will be completed in conjunction with the rehabilitation of a building that will be used as a Mountain Top Library and Learning Center. The Project will use innovative methods to meet water quality treatment standards for runoff from roofs and parking. The site presents space challenges and will be an excellent demonstration project for integrating stormwater management in an area with limited space. In addition, the project will offer substantial educational opportunities on stormwater impact and integrating stormwater management practices during the redevelopment project.

GCSWCD Staff: Buchanan, Hellinga
Project Partners: NYCDEP (TA), CWC, Mountain Top Library Capital Campaign
Project Funding: CWC (SR Program), NYCDEP
Project Schedule: 1. Complete site investigation, 2009.
2. Develop a conceptual plan summer 2009.
3. Seek funding through CWC Stormwater Retrofit Program and others TBD.
4. Complete design and permitting during winter 2009.
5. Project implementation spring 2010.
SMP Recommendation: Schoharie/East Kill –
Date Added to Action Plan: 2009
Progress (2009): Completed initial site investigation and meeting with project partners.

V. Highway and Infrastructure Improvements

During development of SMPs for the various sub-basins, the GCSWCD, NYCDEP, and the SWAC Highway and Infrastructure Subcommittee identified a number of recommended actions that would provide water quality protection. Maintaining high water quality in the Schoharie Creek and its associated tributaries will provide multiple benefits including, improved recreational use, supplying quality drinking water, and enhancing the ecological health of the stream systems. Water quality protection activities may be site-specific, community-wide, or basin-wide. Highway and Infrastructure Improvements action items include, but are not limited to:

A. Road Abrasives Program: Winter road abrasive materials, containing a high silt/clay content, can have a direct impact on water quality. The use of high quality washed sand materials may help to minimize the negative impacts of road abrasives. All of the SMPs and the SWAC Highway and Infrastructure Subcommittee recommend a road abrasives program.

GCSWCD Staff:	Flack, Yost
Project Partners:	County and Municipal Highway Departments, GCSWCD, NYCDEP
Project Funding:	Proposed cost share with highway departments and NYCDEP/GCSWCD Schoharie SMP Contract
Project Schedule:	1. Investigate the feasibility of purchasing higher quality road abrasives in bulk, 2009. 2. Investigate the feasibility of establishing a cost-share program for purchasing quality road abrasive material, 2009. 3. Implement a road abrasives program, 2010.
SMP Recommendation:	Batavia Kill – WQ-06; West Kill- WQ-6.3.5; Schoharie/East Kill- WQ- 6.3.5; Manor Kill- WQ- 5.3.5
Date Added to Action Plan:	2009
Progress (2009):	Initial discussions with Highway/Infrastructure Subcommittee have occurred.

B. Driveway/Curb Cut Specifications: Develop a model with standardized driveway/curb-cut specifications that address adequate drainage, connectivity and sight distance to receiving roads. Municipalities may then use this model in its entirety, or use portions of it, to ensure that driveways and other connector roads are constructed using consideration for runoff and property damage.

GCSWCD Staff:	Flack, Yost
Project Partners:	Highway departments, Cornell Local Roads Program,
Project Funding:	N/A
Project Schedule:	1. Research the existing standards of watershed communities, winter 2009.
SMP Recommendation:	Schoharie/East Kill- 6.5.4
Date added to Action Plan:	2009
Progress (2009):	None

C. Street Sweeper with Vacuum: After the winter season, highway crews sweep road abrasives (sand) using different machines. Some communities have their own outdated sweepers (Villages of Hunter and Tannersville), others brush the material aside with a broom. Greene County owns a sweeper with a vacuum that is effective at collecting leftover sand material. Given its limited availability during certain times of the year, purchasing another one for the mountaintop communities would allow more municipalities to effectively collect and store the sand material left on the roads from winter.

GCSWCD Staff:	Flack, Yost
Project Partners:	Highway departments, Cornell Local Roads Program,
Project Funding:	CWC (LTAP grant)
Project Schedule:	1. Research the cost of purchasing a street sweeper with a vacuum. 2. Investigate the feasibility of providing, storing and coordinating shared access to the street sweeper.
SMP Recommendation:	
Date added to Action Plan:	2009
Progress (2009):	None

VI. Planning and Assessment

During development of SMPs for the various sub-basins, the GCSWCD and NYCDEP identified a number of recommended actions that would require additional planning and assessment at various scales. Planning may be site-specific, community-wide, basin-wide or on the county level. Assessments may range from remote assessment of streams and their watersheds to site-specific streambank assessments, and will include survey and monitoring of various locations and project sites. Planning and Assessment action items include, but are not limited to:

A. Mountaintop Recreation Master Plan: Each SMP completed to date has included multiple recommendations related to enhanced public access to the streams for recreational purposes. The GCSWCD will work with a diverse partnership of public and private sector partners to develop a comprehensive master plan that will focus on recreation, but will also include open space, scenic quality and cultural resources. The goal is to develop a final strategy that is highly detailed and which has a strong implementation component.

GCSWCD Staff:	Yost, Miles
Project Partners:	Municipalities, community groups, Greene County, others
Project Funding:	GCSWCD-WAP, NYSDOS Quality Community Grant
Project Schedule:	Completed by fall 2009
SMP Recommendation:	Batavia Kill – PE-03 (High, 2.5); Schoharie – PR-6.2.2, PR-6.2.3, PR-6.2.4; West Kill – PR 6.2
Date Added to Action Plan:	2007
Progress (2009):	Draft completed in December 2008; project results presented to the public at the Watershed Summit in January 2009. Recently closed out grant (March 2009), working with implementation subcommittees on marketing/coordinating and outdoor resource improvement projects

B. Tributary Stream Inventory and Assessment: While existing SMPs cover the main stem of most major stream systems within the Schoharie Watershed, they do not address any tributaries to these systems. Therefore, less than 10% of total stream miles have been inventoried, assessed and planned. Inventory and assessment of tributaries is an on-going priority, although assessment of the tributaries and the subsequent planning efforts may not be at the same level as those efforts conducted along the main stems. In 2009-2010, the GCSWCD/NYCDEP should work to develop a condensed SMP planning process to include assessment of baseline conditions and an abbreviated SMP. This methodology should be applied to prioritized tributaries.

GCSWCD Staff:	Martin, Miles
Project Partners:	NYCDEP, Delaware & Schoharie County agencies, others
Project Funding:	NYCDEP(TA), CWC-LTA Grant, NYSDOS Planning Grants, others
Project Schedule:	1. Develop protocol for inventory & assessment by spring 2009 2. 2008 – Manor Kill 3. 2009 – North Settlement, Furnace Brook, Mitchell Hollow Creek (Madd Brook) 4. 2010 – Two small tributaries TBD
SMP Recommendation:	Schoharie – WQ-6.3.8, WQ-6.3.11; WK – WQ 6.3.8
Date Added to Action Plan:	2007
Progress (2009):	Manor Kill assessment: A geodatabase was created and remote assessment of the Manor Kill began in the fall of 2007 and continued through the winter of 2008. Assessment efforts included riparian vegetation mapping, creation of watershed maps, purchase of historic aerial imagery, georeferencing 2006 aerial pictometry. The stream feature inventory was completed during the summer of 2008, and the Manor Kill Stream Management Plan was completed in February 2009. The GCSWCD and NYCDEP have identified four tributaries that will be assessed during the 2009 field season; these include Brainerd Brook (along North Settlement), Red Falls Creek and Furnace Creek (along Dent Road) and Madd Brook (Mitchell Hollow Brook).

Tributary Assessment and Planning Projects:

1. Historical Alignments: Using the historical aerials, create a centerline for each tributary, Brainerd Brook, Red Falls Creek and Furnace Creek and Madd Brook.

GCSWCD Staff:	Miles, Martin
Project Partners:	NYCDEP, Delaware & Schoharie County agencies, others
Project Funding:	NYCDEP(TA), CWC-LTA Grant, NYSDOS Planning Grants, others
Project Schedule:	1. Order historical aerial imagery- completed, April 2009. 2. Georeference aerial imagery, 2009. 3. Create historical alignments, 2009.
SMP Recommendation:	Schoharie – WQ-6.3.8, WQ-6.3.11; WK – WQ 6.3.8
Date Added to Action Plan:	2007
Progress (2009):	Aerial imagery for Batavia Kill tributaries was received in April, 2009.

2. Riparian Vegetation Mapping: Using the 2006 pictometry, classify the vegetation and impervious surfaces within a 300 ft. buffer of each tributary, Brainerd Brook, Red Falls Creek and Furnace Creek and Madd Brook.

GCSWCD Staff: Weyeneth, Miles
Project Partners; NYCDEP, Delaware & Schoharie County agencies, others
Project Funding: NYCDEP(TA), CWC-LTA Grant, NYSDOS Planning Grants, others
Project Schedule: 1. Vegetation classification for Brainerd Brook, Red Falls Creek and Furnace Creek and Madd Brook, 2009.
SMP Recommendation: Schoharie – WQ-6.3.8, WQ-6.3.11; WK – WQ 6.3.8
Date Added to Action Plan: 2007
Progress (2009): None.

3. Watershed Analysis: Using a Geographic Information System analyze each tributary, Brainerd Brook, Red Falls Creek and Furnace Creek and Madd Brook.

GCSWCD Staff: Miles, Martin
Project Partners; NYCDEP, Delaware & Schoharie County agencies, others
Project Funding: NYCDEP(TA), CWC-LTA Grant, NYSDOS Planning Grants, others
Project Schedule: 1. Watershed boundaries for Brainerd Brook, Red Falls Creek and Furnace Creek and Madd Brook, 2009.
SMP Recommendation: Schoharie – WQ-6.3.8, WQ-6.3.11; WK – WQ 6.3.8
Date Added to Action Plan: 2007
Progress (2009): Additional aerial photography has been purchased.

4. Stream Feature Inventory: Using a Global Positioning System (GPS), record the location and associated attribute information of various stream features, such as erosion, invasive species, bedrock and proposed planting sites for each tributary, Brainerd Brook, Red Falls Creek and Furnace Creek and Madd Brook.

GCSWCD Staff: Martin, Miles
Project Partners; NYCDEP, Delaware & Schoharie County agencies, others
Project Funding: NYCDEP(TA), CWC-LTA Grant, NYSDOS Planning Grants, others
Project Schedule: 1. Inventory Brainerd Brook, Red Falls Creek and Furnace Creek and Madd Brook, 2009.
SMP Recommendation: Schoharie – WQ-6.3.8, WQ-6.3.11; WK – WQ 6.3.8
Date Added to Action Plan: 2007
Progress (2009): Letters to obtain access have been sent.

5. Create Tributary Geodatabase: Create a geodatabase to store GPS data and photographs from the stream feature inventories.

GCSWCD Staff: Miles, Martin
Project Partners; NYCDEP, Delaware & Schoharie County agencies, others
Project Funding: NYCDEP(TA), CWC-LTA Grant, NYSDOS Planning Grants, others
Project Schedule: 1. Create and update geodatabase, 2009 and 2010.
SMP Recommendation: Schoharie – WQ-6.3.8, WQ-6.3.11; WK – WQ 6.3.8
Date Added to Action Plan: 2007
Progress (2009): None.

6. Tributary Management Plans: Develop stream management plans for each tributary, Brainerd Brook, Red Falls Creek and Furnace Creek and Madd Brook.

GCSWCD Staff: Martin, Miles
Project Partners: NYCDEP, Delaware & Schoharie County agencies, others
Project Funding: NYCDEP(TA), CWC-LTA Grant, NYSDOS Planning Grants, others
Project Schedule: 1. Analyze stream feature inventory data- Winter 2009-2010.
2. Develop tributary SMPs- Winter, 2009 -2010.
3. Create maps for tributary SMPs- Winter, 2009-2010.
SMP Recommendation: Schoharie – WQ-6.3.8, WQ-6.3.11; WK – WQ 6.3.8
Date Added to Action Plan: 2007
Progress (2009): None.

C. Lexington Creek Sill (Schoharie Creek): There is a concrete sill that runs completely across the Schoharie Creek in the hamlet of Lexington. In the Schoharie SMP this sill has been identified as having a potential impact on stream morphology along this reach of the stream. The sill remains from past days when flashboards would be installed in the summer creating a popular swimming area. The sill appeared to cause localized aggradation of the channel and decreased channel capacity. The GCSWCD and NYCDEP propose to conduct further field surveys and analysis of the sill to determine if its removal would benefit stream function in this reach.

GCSWCD Staff: DuBois, Buchanan
Project Partners: NYCDEP, Town of Lexington, others
Project Funding: NYCDEP (TA)
Project Schedule: 1. Collect field survey on stream profile through the reach (by winter 2009)
2. Conduct assessment of sill impact, develop recommendations (by spring 2010)
SMP Recommendation: Schoharie – FP-6.1.12, PR-6.2.1, WQ-6.3.11, FH-6.6.5, GSMA-6.8.2, GSMA-6.8.7
Date Added to Action Plan: 2007
Progress (2009): None

D. Town of Hunter Corridor Regional Planning Study (formerly called Generic Environmental Impact Statement): The GCSWCD is working with the Town of Hunter and the Villages of Tannersville and Hunter to undertake a Corridor Study that will take a comprehensive look at potential future development in the Town of Hunter. The Corridor Study is a cooperative, multi-municipality effort and will evaluate all items traditionally considered when doing an Environmental Impact Statement. The GCSWCD will be responsible for overall project coordination and will use a number of consultants to complete various components of the project.

GCSWCD Staff: Yost, Flack
Project Partners: CWC, NYCDEP, Town of Hunter, Villages of Hunter/Tannersville, others
Project Funding: CWC from Shandaken Tunnel SPDES funds
Project Schedule: 1. Complete application, receive funding confirmation by August 2007,
2. Complete GEIS by 12/31/08
SMP Recommendation: Schoharie – PA-6.5.3
West Kill – Section 7 – Implementation
Date Added to Action Plan: 2007
Progress (2009): Consultant hired, working on second step, development analysis.

E. Greene County All Hazards Mitigation Plan: In the past, access to federal Hazard Mitigation Grant funds has helped the GCSWCD to mitigate significant flood related problems in Greene County. Since 1996, the GCSWCD has accessed over \$1,000,000 in funds from this program for major projects in the Village of Hunter (Melody wood condominiums) and Town of Lexington (West Kill Stream restoration). New FEMA program rules prohibit access to these funds unless a community has a FEMA approved All Hazards Mitigation Plan in place. The Greene County Planning Department is the lead on this and GCSWCD will provide assistance as needed. In the NYC watershed, we will work with NYCDEP and others to integrate SMP recommendations and to introduce the concepts of "erosion hazard areas".

GCSWCD Staff:	Flack, DuBois
Project Partners:	Greene County Emergency Preparedness, Greene County Planning, municipalities, NYCDEP, FEMA/SEMO, others
Project Funding:	Greene County, FEMA-HMGP, NYCDEP
Project Schedule:	1. Complete RFP process and retain consultant – July, 1, 2007 2. Complete All Hazards Mitigation Plan – July 1, 2008
SMP Recommendation:	Batavia Kill – FP-13 (High, 2.69), FP-17 (High, 1.92) Schoharie – FP-6.1.9, FP-6.1.11 West Kill – FP-6.1.9
Date Added to Action Plan:	2007
Progress (2009):	The Greene County Planning Department, GCSWCD and NYCDEP interviewed potential subcontractors and awarded the development of the hazard mitigation plan to Tetra Tech, Inc. Tetra tech is working with the various municipalities and partners to gather input for the plan, which should be completed in 2009.

F. Fisheries Assessment & Improvements Strategy: During development of SMPs for the various sub-basins, the GCSWCD and NYCDEP identified the need for further evaluation of fisheries and the importance of developing a comprehensive strategy to improve fish habitat. Improvements to fisheries would also provide economic and water quality benefits. In order to effectively evaluate basin fisheries, the GCSWCD and NYCDEP recognize the need for additional funding, increased coordination with potential project partners, and an understanding of the appropriate field methodologies.

GCSWCD Staff:	Martin, Miles
Project Partners:	NYCDEP, NYSDEC, Greene County Promotions, municipalities, Trout Unlimited, others
Project Funding:	TBD, TA from NYCDEP via GCSWCD contract
Project Schedule:	1. Research potential funding sources, 2009. 2. Identify appropriate field methodologies, 2009. 3. Coordinate fisheries assessment, 2010.
SMP Recommendation:	Batavia Kill – PE-04 (Medium, 0.38), FH-03 (High, 2.31); Schoharie – PR-6.2.1, PR-6.2.2, PR-6.2.4, FH-6.6.1, FH-6.6.2, FH-6.6.3, FH-6.6.4, FH-6.6.5, GSMA-6.8.8; West Kill – 6.6, 6.6.1, 6.6.2
Date Added to Action Plan:	2007
Progress (2009):	None

G. Project Monitoring: The GCSWCD will continue to monitor previously constructed stream restoration sites to document the projects status and performance. Monitoring will include measurements and analysis of geomorphic form, rock structures, and vegetation. Monitoring will be performed in accordance with ACOE permit requirements as well as GCSWCD/NYCDEP annual assessments of the need for additional monitoring. Data will be collected to monitor project stability and vegetation establishment.

1. Monitoring of Restored Stream Reaches (2009): Annual monitoring of restored stream reaches provides valuable information on the effectiveness of restoration practices in addition to fulfilling the permit requirements associated with these projects. Monitoring includes a visual inspection of the reach, photo documentation, pebble counts, and a survey of monumented cross sections and the longitudinal profile. The Conine Stream Restoration Project and the Ashland Connector Stream Restoration Project are priority monitoring sites for 2009.

GCSWCD Staff:	Hellinga, Miles
Project Partners:	NYCDEP, GCSWCD
Project Funding:	NYCDEP, GCSWCD
Project Schedule:	Monitor in 2009
SMP Recommendation:	Schoharie – WQ-6.3.11, RZM-6.7.2; West Kill – MUR 4.10, 4.11
Date Added to Action Plan:	2009
Progress (2009):	Monitoring Plan Completed

2. Monitoring of Restored Stream Reaches (2010): Annual monitoring of restored stream reaches provides valuable information on the effectiveness of restoration practices in addition to fulfilling the permit requirements associated with these projects. Monitoring includes a visual inspection of the reach, photo documentation, pebble counts, and a survey of monumented cross sections and the longitudinal profile. The Conine, Ashland Connector, Shoemaker, Lanesville, and Schoharie Street stream restoration projects are priority monitoring sites for 2010.

GCSWCD Staff:	Hellinga, Miles
Project Partners:	NYCDEP, GCSWCD
Project Funding:	NYCDEP, GCSWCD
Project Schedule:	Monitor in 2009
SMP Recommendation:	Schoharie – WQ-6.3.11, RZM-6.7.2; West Kill – MUR 4.10, 4.11
Date Added to Action Plan:	2009
Progress (2010):	Monitoring Plan Completed

3. Dale Lane Survey and Hydraulic Analysis:

GCSWCD Staff:	Hellinga, DuBois
Project Partners:	NYCDEP, GCSWCD, Town of Hunter
Project Funding:	NYCDEP, GCSWCD
Project Schedule:	Complete in 2009
SMP Recommendation:	Schoharie WQ 6.3.11
Date Added to Action Plan:	2009
Progress (2009):	None

4. Survey of second SPDES stream restoration site:

GCSWCD Staff:	Hellinga, DuBois
Project Partners:	NYCDEP, GCSWCD
Project Funding:	NYCDEP, GCSWCD
Project Schedule:	Complete in 2009
SMP Recommendation:	Schoharie WQ 6.3.11
Date Added to Action Plan:	2009
Progress (2009):	Potential project sites have been visited; and a site on the East Kill is being investigated to measure landowner support and access to the project area.

H. Japanese Knotweed Management Project: Hudsonia will resample Japanese knotweed management plots in 2009, identify specimens, analyze data, and write up summary report to include 2009 plus previous years' data.

GCSWCD Staff:	Weyeneth, Martin
Project Partners:	NYCDEP, GCSWCD, Hudsonia
Project Funding:	NYCDEP, GCSWCD
Project Schedule:	1. Resample, 2009. 2. Project Report, 2009.
SMP Recommendation:	Batavia Kill RB-11
Date Added to Action Plan:	2009
Progress (2009):	Contract with Hudsonia is being negotiated.

I. Restoration Project Wetland Mapping: GCSWCD will hire a subcontractor to remap the wetlands on the Ashland and Conine restoration sites to assure ACOE's wetland mitigation requirements are being met.

GCSWCD Staff:	Weyeneth, Dubois
Project Partners:	NYCDEP, GCSWCD
Project Funding:	NYCDEP
Project Schedule:	Complete in 2009
SMP Recommendation:	Batavia Kill – WQ-09 (Very High, 3.33)
Date Added to Action Plan:	2009
Progress (2009):	The contract to conduct the assessments will be awarded to a private engineering firm in May, 2009.

VII. Recreation and Stream Habitat Improvements

In the general recommendations of all SMPs, enhanced public access to streams for recreational purposes was identified as a priority. The GCSWCD already has a number of these projects underway, and in 2009-2011 will continue to move forward with these projects. Upon completion of the Mountaintop Recreation Master Plan, the GCSWCD and its partners will identify additional opportunities for enhanced recreation access. Assessing, protecting and improving fish habitat have also been recommended in the SMPs, and many of the following action items were developed by the SWAC Recreation and Habitat Improvement subcommittee. Recreation and Stream Habitat Improvements action items include, but are not limited to:

A. Ashland Fishing Access Enhancements: GCSWCD is working with NYCDEP and Trout Unlimited to create a new parking area and access to existing public fishing areas on the Batavia Kill at the Ashland connector Reach. In 2009, the GCSWCD hopes to move forward with creation of this access point.

GCSWCD Staff:	Buchanan
Project Partners:	NYCDEP, Trout Unlimited
Project Funding:	To be determined
Project Schedule:	Contingent on funding availability
SMP Recommendation:	Batavia Kill – PE-01 (Very High, 3.08); Schoharie – PR-6.2.2
Date Added to Action Plan:	2007
Progress (2009):	A site plan and budget for the new parking area and access was completed.

B. Town of Windham (Police Anchor Camp) The GCSWCD will continue to assist the Town of Windham with assessment and planning for public use of a 65 acre parcel located in the Batavia Kill watershed. The final project is expected to provide recreational access to the creek, enhance the riparian buffer, and establish long-term protective easements between the Town and GCSWCD or its partners. The goal in the 2008-2011 action plan is to continue to provide assistance as plans are developed and implemented.

GCSWCD Staff:	Yost, Miles
Project Partners:	Town, NYCDEP, GCSWCD-WAP, Greene Land Trust, others
Project Funding:	Town, GCSWCD-WAP, others TBD
Project Schedule:	Completed site inventory & assessment fall 2007 Completed a conceptual Plan spring 2008
SMP Recommendation:	Schoharie – PR-6.2.2, PR-6.2.3, RZM-6.7.4, RZM-6.7.7
Date Added to Action Plan:	2007
Progress (2009):	Conceptual plans were completed and provided to the Town. A trail committee has been working on a proposed multi-use path along the Batavia Kill (under Recreation Master Plan guidance). Long-term plans for the parcel have not been established yet.

C. Schoharie Creek Park (Town of Lexington): The GCSWCD has been assisting the Town of Lexington with the development of a small “pocket park” to be located on the Schoharie Creek in the Lexington hamlet. The Town owns one parcel. Attempts were made to lease an adjoining property; an agreement was never finalized due to legal concerns. The project will include the permanent removal of a derelict house right on the streambank, cleaning up weedy growth, enhancement of riparian vegetation and installation of low impact improvements such as a kiosk, trail, flower beds and picnic tables/benches.

GCSWCD Staff: Mellot, Flack
Project Partners: NYCDEP (TA), Town of Lexington, Greene County, Trout Unlimited, others
Project Funding: NYCDEP-(TA), Town of Lexington, ACOE-(WRDA) others TBD
Project Schedule: 1. Complete site development plans, 2009.
2. Implement plans, 2010.
SMP Recommendation: Batavia Kill – RB-09 (High, 1.81), EO-11 (Medium, 0.91); Schoharie – PR-6.2.2, PR-6.2.3, RZM-6.7.4, RZM-6.7.7
Date Added to Action Plan: 2007
Progress (2009): Clean up and tree removal were completed during the summer of 2007. Property and building removal completed. Local committee is working on park plans.

D. Water Temperature Impacts on Fisheries Study: All of the stream management plans recommend conducting a study to determine the impact of water temperature on fisheries. In order to determine the location of thermal refugia, which are important to coldwater fish communities during the summer months, the SWAC Habitat and Recreation subcommittee recommends a thermal imaging study. This may be coupled with a new thermograph study (DEC has data from 2008). The studies will help to identify areas that may need to be protected. The information obtained will be helpful to highway departments, streamside property owners and any entity whose activities may impact cold water inputs such as seeps.

GCSWCD Staff: Yost, DuBois
Project Partners: NYCDEP, NYSDEC, USGS, Trout Unlimited, Rod and Gun Clubs
Project Funding: Potential Funding Sources- NYSDEC, NYCDEP, Trout Unlimited
Project Schedule: 1. Research the feasibility of conducting a thermal imaging study, 2009.
2. Conduct a thermal imaging study - contingent on funding availability
SMP Recommendation: Batavia Kill – FH-03; West Kill- PR 6.2.1; Schoharie Creek– PR 6.2.1; East Kill- PR 6.2.1; Manor Kill- PR 5.2.1
Date Added to Action Plan: 2009
Progress (2009): Initial research into feasibility has been completed.

E. Organize Repository of Stream Ecosystem Data: Some of the stream management plans recommend that effort is put forth to characterize the current health of stream ecosystems. In order to determine the health of streams, a variety of data may be useful including food web dynamics, the presence or absence of indicator species and primary producers, and the status of fish populations, among others. Various studies have been conducted by different agencies and colleges over the years (e.g., USGS, NYSDEC, NYCDEP, ESF, Stroud Resource Center, GCSWCD), and organizing a master repository will help integrate existing data and determine where additional field studies are warranted. Monitoring fisheries habitat conditions at restoration sites is also important for determining the impact that these projects have on the localized fish populations.

GCSWCD Staff:	Martin, Miles
Project Partners:	NYCDEP, NYSDEC, USGS, Trout Unlimited, Rod and Gun Clubs
Project Funding:	Potential Funding Sources- NYSDEC, NYCDEP, Trout Unlimited
Project Schedule:	Contingent on funding availability
	<ol style="list-style-type: none"> 1. Compile existing fish and insect population data. 2. Monitor habitat conditions and fish populations at restoration sites. 3. Quantify stocked and natural fish populations and migration patterns.
SMP Recommendation:	Batavia Kill – FH-02; West Kill- PR 6.6.2, 6.6.1; Schoharie Creek/East Kill- PR 6.6.2, 6.6.1; Manor Kill- PR 5..6.2, 5.6.1
Date Added to Action Plan:	2009
Progress (2009):	None

F. Promote Increased Recreational Use of Watershed Streams: All stream management plans recommend enhancing public access of the streams for fishing. Along many of the streams within the Schoharie Watershed, there are public fishing access points. Some streams have limited or no public access. In order to enhance recreational use of the streams, existing access locations have been mapped and additional access points should be identified. Increasing recreational use of fisheries has also been identified as a priority by the SWAC Habitat and Recreation Subcommittee. Providing stocked fish in public still waters (lakes, ponds), in addition to stream stocking efforts, may improve fishing opportunities and provide for enhanced access to fisheries. Supporting and organizing community or basin-wide fishing events, and promoting interest in fishing for wild fish will help increase recreational use of watershed streams.

GCSWCD Staff:	Miles, Education Coordinator
Project Partners:	NYCDEP, Trout Unlimited, NYSDEC
Project Funding:	To be determined
Project Schedule:	<ol style="list-style-type: none"> 1. Conduct an inventory of access points and create a GIS map of existing locations, 2009. 2. Identify locations that may provide additional access, 2009. 3. Investigate the feasibility of increasing the locations of stocked fish to include public still waters (such as Rip Van Winkle Lake or Dolan’s Lake, and others), 2009. 4. Coordinate, organize or support a basin-wide or localized fishing derbies along watershed streams, 2010.
SMP Recommendation:	Batavia Kill – PE-01 (Very High, 3.08); West Kill- PR-6.2.2; Schoharie/East Kil- PR- 6.2.2; Manor Kil- PR-5.2.2
Date Added to Action Plan:	2009
Progress (2009):	NYSDEC recently published <i>Public Fishing Rights Maps</i> that can be obtained on their website. Knowing where the existing public fishing points (also inventoried as part of the Mountaintop Community Resource/Recreation Plan) are located will be used to identify areas that are lacking, such as on the East Kill and along the Batavia Kill.

VIII. On-going Activities

This section includes the on-going action items that began in 2007 and will continue through the duration of stream management plan implementation efforts. This is a dynamic document that will be modified annually to include additional action items or to update existing items. Efforts were made to make each task measurable within the action plan. However, the following items do not have an end, but rather are ongoing throughout the program.

A. Program Administration: GCSWCD will provide overall project administration. Specific activities may include contract administration, book keeping, budgeting, schedule development and reporting.

GCSWCD Staff:	Flack, Carl-Seebode
Implementation Category:	Program Administration and Implementation
Project Partners:	NYCDEP, MSMA
Project Funding:	NYCDEP, Greene County Legislature, Grants, Other funding sources
Project Schedule:	On-going.
Date Added to Action Plan:	2007
Progress:	On-going.

B. Schoharie Watershed Advisory Committee (SWAC): The GCSWCD and NYCDEP have worked cooperatively to develop a single, watershed- wide project Advisory team, the Schoharie Watershed Advisory Committee, to help guide SMP implementation. The process by which this committee will guide implementation and allocate funding continues to be developed.

GCSWCD Staff:	Yost, Martin
Implementation Category:	Program Administration and Implementation
Project Partners:	NYCDEP, Towns, Villages, Counties, local, county, state and federal agencies, NGO's, landowners
Project Funding:	NYCDEP Contract
Project Schedule:	On-going review of applications August 1 st and February 1 st each year.
SMP Recommendation:	Schoharie/East Kill – PA-6.5.8; West Kill - PA 6.5.2
Date Added to Action Plan:	2007
Progress (2009):	The Schoharie Watershed Advisory Committee (SWAC) was formed in 2008 and is designed to represent the collective interests of local government, property owners, watershed agencies, and non-profit organizations during the implementation of stream management plan recommendations. The SWAC consists of appointed representatives from each Schoharie Basin municipality, representatives from three subcommittees (Highway Superintendents, Education and Outreach and Recreation and Habitat), a Greene County Legislator and other local, state and federal agencies. The process for identifying implementation projects and the application procedures continue to be developed.

C. Local Technical Assistance: The GCSWCD and NYCDEP will work cooperatively to develop program resources and policies to provide technical assistance for municipalities, planning boards, highway departments, developers, landowners and other interested parties. Technical assistance may include, but is not limited to, stormwater planning & retrofit, stream management activities and land use planning.

GCSWCD Staff: Flack, Martin
Implementation Category: Program Administration and Implementation
Project Partners: NYCDEP, Greene County Legislature, Local municipalities
Project Funding: NYCDEP Contract/ Greene County WAP Funding, Others
Project Schedule: On-going.
SMP Recommendation: Batavia Kill – SC-01, WQ-08; Schoharie/East Kill – FP-6.1.2, PA-6.5.1, RZM-6.7.4, SMA-6.8.2; West Kill – GSMA 6.8.2
Date Added to Action Plan: 2007
Progress (2009): A contract between DEP and GCSWCD provides staffing for technical assistance through 2013. In addition, the GCSWCD has developed an internal technical assistance tracking form in an attempt to maximize responsiveness.

D. Inter-Agency Coordination: Further coordination between the agencies with stream management responsibilities is a key component of SMP implementation. Specifically, GCSWCD will coordinate with NYSDEC to have all stream disturbance permits (Article 15) undergo an appropriate review by local stream managers; this will help to ensure a high degree of consistency with SMP goals and objectives. To facilitate this process, it is important to provide streamside landowners with resources to help individuals with permit applications and to help develop better alternatives for addressing erosion sites.

1. NYSDEC/ACOE Permit Reviews: The GCSWCD/NYCDEP will continue to work with NYSDEC and the USACE to facilitate review of stream disturbance permits received by the agencies. The permits will be reviewed for their consistency with SMP goals and objectives and to evaluate stream channel morphology issues.

GCSWCD Staff: DuBois, Buchanan
Implementation Category: Program Administration and Implementation
Project Partners: NYSDEC, NYCDEP, ACOE
Project Funding: NYCDEP
Project Schedule: On-going
SMP Recommendation: Batavia Kill – PR-03 (High, 2.5); Schoharie – PA-6.5.1; West Kill – PA 6.5.4, RZM 6.7.1, 6.7.9
Date Added to Action Plan: 2007
Progress (2009): Applications will be reviewed as they come in.

E. Catskill Streams Website – The GCSWCD will continue to provide logistical support in the development and maintenance of the Catskill Streams Website (www.catskillstreams.org) as a valuable tool for sharing information with watershed stakeholders.

GCSWCD Staff: Martin, Education Coordinator
Implementation Category: Education on Watershed Protection
Project Partners: NYCDEP
Project Funding: NYCDEP/GCSWCD Schoharie SMP Contract
Project Schedule: On-going maintenance and updates as appropriate
SMP Recommendation: Schoharie/East Kill – EO-6.4.3; West Kill – EO 6.4.2
Date Added to Action Plan: 2007
Progress (2009): The website, Catskillstreams.org, is a comprehensive information source for streamside landowners in the Catskill Mountains. The website is updated regularly to include current resources and reports, and to provide a list of upcoming events. In 2009, a more detailed site map will be added.

F. Community Outreach: Success of SMP implementation requires community awareness and involvement. In order to keep watershed communities and interested stakeholders informed of SMP implementation progress and activities, the GCSWCD and its partners may use a variety of outreach media including newspaper articles, an “e”-newsletter, program print newsletter, brochures, facts sheets, project announcements, media contacts, press releases and kiosks. In addition, in accordance with the MOU between the GCSWCD and local municipalities, GCSWCD is required to provide the municipalities with a detailed action plan of stream management activities in the beginning of each spring. Furthermore, the GCSWCD will regularly report on the status of the annual action plan, and be available at the request of the municipalities to attend meetings, workshops or similar events when the annual action plan or specific items contained therein, require a more detailed understanding by the municipality or its constituents.

GCSWCD Staff:	Yost, Education Coordinator
Implementation Category:	Education on Watershed Protection
Project Partners:	NYCDEP
Project Funding:	NYCDEP/GCSWCD Schoharie SMP Contract, CWC, GCSWCD-WAP, others
Project Schedule:	1. On-going production of educational and outreach materials for dissemination of information.
SMP Recommendation:	Batavia Kill – EO-08, EO-09, EO-06, EO-10; Schoharie/East Kill – EO-6.4.2, EO 6.4.3, EO 6.4.4, EO 6.4.5, EO, 6.4.6, EO 6.4.7, EO 6.4.8, FP-6.1.7; West Kill – EO 6.4.3, 6.4.4, 6.4.5
Date Added to Action Plan:	2007
Progress (2009):	Outreach through the GCSWCD-WAP occurs regularly in the form of newspaper articles, newsletters, and by disseminating educational materials to property owners, contractors, and municipal officials. Attendance at municipal and planning board meetings allows WAP staff to provide project updates to municipal leaders and to obtain information on specific municipal needs and issues.

G. Critical Area Seeding Program: All of the SMPs and the SWAC Highway and Infrastructure subcommittee recommend that local municipalities, county highway departments and NYSDOT should place priority on vegetation management on critical areas such as roadside ditches and steep slopes.

GCSWCD Staff:	Flack, Mellot
Implementation Program:	Creative Stormwater Practices and Critical Area Seeding
Project Partners:	GCSWCD, NYCDEP, County and Municipal Highway Departments
Project Funding:	To be determined
Project Schedule:	On-going - Provide personnel assistance with operation of the hydroseeder.
SMP Recommendation:	Batavia Kill – WQ-03; West Kill- WQ-6.3.3; Schoharie/East Kill – WQ-6.3.3; Manor Kill- WQ- 5.3.3
Date Added to Action Plan:	2009
Progress (2009):	On-going

H. Plant Materials Program: In 2009-2010 the GCSWCD will continue to produce quality native plant materials for its stream restoration projects and riparian buffer plantings. The GCSWCD will pot and grow out approximately 11,000 trees and shrubs for riparian and stream projects.

GCSWCD Staff:	Mellot, Weyeneth
Project Partners:	NYCDEP, GCSWCD, Community Volunteers
Project Funding:	NYCDEP, GCSWCD
Project Schedule:	1. Produce materials for 2009 restoration season – Spring 2009 2. Continue native seed program.
SMP Recommendation:	West Kill – RZM 6.7.8
Date Added to Action Plan:	2007
Progress (2009):	Native seed program was initiated in 2008.

**Schoharie Basin Stream Management Plan Implementation
Action Plan**

Completed Action Items

Updated - May, 2009

Schoharie Basin Stream Management Plan Implementation Action Plan - *Completed Action Items*

The *Schoharie Basin Stream Management Plan Implementation Action Plan* summarizes the programs and projects of the GCSWCD, NYCDEP and Schoharie Watershed Advisory Committee. The first Action Plan was completed in May of 2007, and is updated annually with a new edition completed every two years. This document summarizes **completed** action items from the previous plan (May, 2007 through May, 2009), and as more projects are finalized from the first Action Plan ('07 – '09) and the current plan ('09 – '11) they will be referenced herein.

I. Program Administration

1. **Program Administration, Staffing Plan (2007):** To manage the many projects and priorities in the action plan, the GCSWCD needs staffing and resources to provide overall project administration. In 2007, a staffing plan was developed along with a new intergovernmental agreement between the GCSWCD and NYCDEP that began in January of 2009 and will fund watershed activities through January, 2014.
2. **Schoharie Watershed Advisory Committee (Organized, May 2008):** The organizational structure of the Schoharie Watershed Advisory Committee (SWAC) was developed in early 2008. After the kick off meeting in May 2008, the SWAC has met regularly throughout the year, developed program materials to initiate a stream management plan implementation funding application process, and identified initial projects for implementation. Although administrative support for the SWAC remains on ongoing activity, the effort to establish local representation and implementation of the SMP, coupled with technical agency support, has been accomplished. For more information: <http://www.catskillstreams.org/SWAC.html>.
3. **Program Office (April 2008):** The GCSWCD and NYCDEP collaborated to establish a project office within the Schoharie watershed. The GCSWCD and WAP identified and secured a Mountaintop project office in Tannersville which, in the short time it has been opened, is being used by various local, regional, and state committees working on watershed protection (e.g., Schoharie Watershed Advisory Committee, subcommittees of the SWAC, Mountaintop Supervisor & Mayors Association, WOH Education & Outreach committee, Stream Restoration Committee for NJ Chapter of AWRA, to name a few). For directions to the office visit: <http://www.gcswcd.com/wap/> or contact Michelle Yost at michelle@gcswcd.com or 518.589.6871.
4. **Local Adoption of SMP's (April 2009):** All eight Greene County Towns within the Schoharie Basin and the Batavia Kill, East Kill, and West Kill watersheds adopted the relevant SMPs in 2008 and signed Memorandums of Understanding (MOU) with the GCSWCD to guide stream management activities. The town of Conesville adopted the Manor Kill SMP in April 2009 and is finalizing the MOU and SEQRA process with the assistance of the SCSWCD.
5. **General Contracting Specification (2009):** The GCSWCD went through an RFP process to develop a list of "pre-qualified" contractors for miscellaneous contract work, including installing stormwater management practices, drainage improvements, and stream projects. Having the four pre-qualified contractors will shorten the contracting process in times of emergency, such as following floods.
6. **Inter-Agency Coordination:** Further coordination between the agencies with stream management responsibilities is a key component of SMP implementation. Although this is an on-going activity in Schoharie basin action plans, and everyday interactions among agencies are difficult to account for, the following measurable items have been completed:

- a. Riparian Buffer General Permit (2009): To successfully implement a multi-year riparian buffer program it was necessary to work with NYSDEC, USACOE and NYCDEP to develop a general permit to allow for rapid planning and installation of riparian buffers. The general permit applies to minor (less than 300-ft), short-term impacts such as bank preparation and planting. To view the GCSWCD general permit [click here](#).
- b. Restoration Project Permits (turbidity controls) (2007): The GCSWCD and NYCDEP worked with NYSDEC to evaluate alternatives and to offer training to address the complexity of achieving turbidity control during construction. The GCSWCD had two staff members trained as Certified Professional Erosion and Sediment Control specialists, one trained as a Certified Professional in Stormwater Quality and the majority of staff were trained as part of the NYSDEC 4-hour erosion and sediment control certification. In addition, the GCSWCD is qualified to teach the 4-hour E/S control certification. Finally, through DEP, GCSWCD purchased dewatering equipment for stream projects and routinely prepares stormwater pollution prevention plans for all size projects.

II. Education on Watershed Protection

The GCSWCD continues to work with a wide network of partners to enhance its education and outreach efforts related to stream management, floodplain management, sediment and erosion control and other topics critical to sound watershed management. A number of successful educational projects were completed under the first Action Plan:

1. **Watershed Summits (January 2007 & 2008)**: initiated under the Schoharie Watershed Strategy noted below, watershed conferences were held in January '07 and '08 to provide local decision makers and officials educational classes and networking opportunities around watershed protection. Interest in the Summits is evident by the number and diversity of attendees, with all eleven communities in the basin being represented.
2. **Watershed Tours (June 2007 & 2008)**: coupled with the GCSWCD annual awards luncheon, watershed tours were organized in June '07 and '08 as a follow up to the successful Summits. Recommended by local officials to continue educational outreach on a basin-scale, the tours are designed to demonstrate best management practices to foster an improved understanding of stewardship practices.
3. **Educational Workshops (2007 and 2008)**: although listed as a separate category, educational workshops are built into the Summits and Tours. Topics covered during the '07 and '08 educational events include basics of hydrology, modern stream management techniques based on current stream science, retrofitting stormwater systems, functions of and threats to riparian buffers, SEQRA and subdivisions, SWPPP and Regulations, importance of wetlands to water quality and federal and NYS wetland regulations, and understanding floodplain functions and how to use the 2008 FEMA digital maps. Targeted audiences included elected and appointed officials, planning boards, code enforcement officers, highway department staff and streamside property owners.
4. **Batavia Kill Stream Celebration (Aug. 2007 & 2008)**: recommended in the BK SMP and organized through a strong partnership of local communities, watershed agencies, non-profit organizations, educators and businesses, the BKSC has become a premier annual environmental event. At its core, the BKSC is about celebrating and promoting the wise use of our natural resources as they relate to water quality and ecosystem functions. Designed to engage people of all ages, especially children, the Celebration offers interactive exhibits, educational displays, and activities promoting understanding of the environment. For more information: <http://www.gcswcd.com/wap/calendar/bataviakillcelebration/>

5. **Websites (2007):** although websites require continuous updating, the www.catskillstreams.org and www.gcswcd.com/wap are established sites that are used to promote project updates and share information on watershed protection issues.
6. **ESC Workshops (2008 and 2009):** sponsored two Construction Erosion and Sediment Control Training Courses that were attended by approximately 150 people from the Schoharie basin. Participants included watershed developers, planners, code enforcement officers, regulators and contractors. This course focused on the review of new state construction permit, the requirements of stormwater pollution prevention plans, and the proper installation of erosion and sediment control practices.

III. Landowner Stream Assistance

The GCSWCD and NYCDEP recognize the importance of providing assistance to local landowners. The NYCDEP, GCSWCD and SCSWCD have provided necessary training for project staff to be able to provide state-of-the-art technical assistance throughout the watershed. Technical assistance from staff members guide restoration of stream system stability and help to maintain ecological integrity. The technical assistance can range from a landowner consultation to activities that will help to meet the priorities of protecting water quality and establishing riparian buffers. Protection and enhancement of water quality can benefit both the City of New York's water supply and the residents of the Schoharie basin. Completed Landowner Stream Assistance action items include:

1. **Riparian Program Development (2008):** In 2007-08, the Streamside Assistance Program (SAP) was developed to educate and assist streamside landowners in order to provide for improved stewardship of riparian areas. The GCSWCD worked closely with NYCDEP and others to establish program guidelines, policies, protocols and other items required to offer a riparian buffer program to watershed landowners. GCSWCD developed a [protocol](#) that utilizes stream feature inventory and vegetation mapping to identify potential riparian planting sites. In addition, GCSWCD, NYCDEP and other agencies and organizations worked together to guide development of the Streamside Assistance Program, develop Streamside Assistance Program Guidelines and GCSWCD hired a program coordinator to guide riparian projects. [Click here](#) for more information on the streamside assistance program.
2. **Plant Materials Program (Progress – 2007 and 2008):** GCSWCD and NYCDEP staff planted RPM trees at the majority of stream restoration projects and are monitoring 10% of the trees at each site. During the Fall of 2007, 202 RPM trees were planted on 8 different sites. Sedges were planted in beds during the spring of 2007 and were over-wintered to establish better root growth. The project team also potted 7950 trees during the spring of 2007 and planted the following project sites: 3200 trees at Conine, Prattsville; 124 trees on the two sites of Shadow Mt. Bridge, Jewett and Holden, Ashland; 1000 trees at Accardi, Jewett; and 400 trees at Ashland Connector, Ashland. The GCSWCD over wintered approximately 3000 trees each year for spring plantings. In addition, the project team utilized balled and burlaped trees that were obtained from the Plant Materials Center. Finally, a native seed program was initiated in 2008.
3. **Riparian Demonstration Projects**
 - a. **County Route 6 (2008):** Town of Lexington (West Kill): The GCSWCD and the Greene County Highway Dept worked together to implement vegetation stabilization methodologies at a site on the West Kill that was previously scheduled for all rip-rap. Along this site, a short section of Vegetation Reinforced Slope Stabilization (VRSS) was installed, and trees and shrubs were planted on the upper bank; willows were inter-planted with the rip rap.

- b. Riparian Buffer Implementation pilot (2007): The GCSWCD/NYCDEP researched a [protocol](#) for identifying potential planting sites based upon stream management planning research. In addition, the GCSWCD approached five of the identified parcel owners and moved forward with the Carr Road riparian restoration project.
- c. Vegetation Enhancements (2008): (Batavia Kill, West Kill, Schoharie Creek and Manor Kill): Root Production Method (RPM) trees were planted at Big Hollow, Brandywine and Ashland Connector. A certified herbicide applicator treated Japanese knotweed at Big Hollow, Carr Rd., Schoharie Ave. and Long Rd. project sites. DEP conducted monitoring of vegetative techniques on a majority of these projects. Vegetation was installed as an enhancement to a Greene County Highway project in the West Kill (County Route 6) and at a FEMA project along the mainstem of the Schoharie Creek (Faulkeys). Sedges were added to the County Route 13 culvert project that was completed in 2007. Sedges are excellent at holding soil. Finally, a volunteer planting was conducted in the Manor Kill behind the Conesville town hall.
- d. Shadow Mountain (2007): Town of Jewett (East Kill): The GCSWCD planted 124 trees and shrubs, hydroseeded and interplanted the rip rap at the Greene County Highway Department bridge replacement in Jewett over the East Kill.

4. Stream Restoration Projects and Repair

- a. County Route 13a Culvert Upgrade (2007): Town of Lexington: The GCSWCD/NYCDEP worked with the Greene County Highway Department to upgrade a significantly undersized culvert that was the source of repetitive flooding in the Hamlet of Lexington. The project had excellent community and landowner support and demonstrated floodplain drainage concepts, proper conveyance sizing to allow fish migration and a riparian buffer component. For a complete project report [click here](#).
- b. Conine Farm Stream Restoration (2008): (Town of Prattsville (Batavia Kill): The GCSWCD/NYCDEP completed a full geomorphic based restoration of a +/-1800 foot reach on the lower Batavia Kill. The project addressed severe slope instability, reduced sediment loading and protected private property. For a complete project report [click here](#).
- c. Holden Stream Restoration (2007): (Windham (Batavia Kill): In 2007, a NYS DOT Article 15 stream disturbance permit was flagged by DEC Region 4 for potential inclusion of a natural channel design approach. NYS DOT welcomed the design and implementation assistance of GCSWCD for this sensitive reach. The project established a geomorphically appropriate channel and floodplain bench and included riparian plantings which restored floodplain function in an area that would have simply been armored with rock.

5. Completed Repair & Modifications of Existing Projects: The GCSWCD/NYCDEP will undertake additional work on projects completed under previous FAD(s). These activities are undertaken to correct problem areas, to replace vegetation, control invasive species or to make adjustments to stream structures based on monitoring data. Tasks completed under this action item include:

- a. Ashland Connector Reach (2008): (Town of Ashland (Batavia Kill): The GCSWCD completed planting on the streambanks and floodplains at the lower end of the project reach. Additionally, compensatory wetland areas were planted with appropriate species. Limited site cleanup work on access/staging areas was also completed, and the project was surveyed as part of the routine project monitoring schedule.

- b. Farber Farm Stream Restoration (2008): (Town of Jewett (East Kill): Following flooding in 2005 and 2006, excessive erosion resulted in damage to the Farber farm project grading and rock structures. Several rock structures experienced damage as a result of the flood flows which peaked at over 3000 cfs. The damaged structures include 4 rock vanes and 2 cross vanes. The site was originally revegetated through the Conservation Reserve Enhancement Program (CREP). The CREP seedlings never became established, which limited project success and, the lack of vegetation may have contributed to the overall project damages. This project included: repair, removal, or modification of damaged rock and cross vanes; treatment of the back channel area to reduce frequency of flows in the back channel and to promote the use of the primary channel; bank grading and vegetative stabilization to reduce erosion; and establishment of a riparian buffer along the restored reach. In addition to the vane retrofits, a bankfull bench was added, 1,179 larger trees were planted, willow stakes and approximately 1000 feet of willow fascines were installed, and numerous shrubs, sedges and herbaceous seed were planted throughout the site. For a complete project report [click here](#).
- c. Broadstreet Hollow Stream (BSH) Restoration Project Repairs (2008): (Town of Hunter, (Esopus Basin): The January 1996 flood caused excessive erosion along a 1,100' section of BSH. The initial restorative action by the USDA Natural Resource Conservation Service (NRCS) resulted in considerably more damage to this unstable reach. In addition to the damage to streamside residential property, extensive exposures of glacial lake clays and a "mudboil" caused chronic turbidity in BSH from continually entrained suspended sediment. The "mudboil" is a "relief valve" for artesian groundwater conditions, originating in the adjacent failing hillslope. In 2000, the GCSWCD restored the project reach again. There were two main components to the project: (1) stream channel restoration using natural channel design techniques to address erosion and channel instabilities; and (2) a geotechnical investigation of the adjacent hillslope with installation of dewatering wells to reduce the potentiometric pressure driving the artesian conditions. The April 2-3, 2005 flood caused damage to both project components. Two of the three dewatering wells were damaged and now fail to relieve the artesian conditions. Consequently the mudboil has returned and has been present off and on since then. In 2008, the GCSWCD repaired the damaged rock structures, and hired a well drilling subcontractor to attempt to rehabilitate the dewatering wells. The subcontractor found the well heads had been broken and that they couldn't be rehabilitated. After reviewing options, the decision was made to abandon the wells and monitor the project's stability. Installing new wells would have required a large disturbance to the existing forest and continual maintenance, this wasn't the most palatable option for the landowners. The GCSWCD and DEP will continue to monitor the project's stability. For a complete project report [click here](#).
- d. Lanesville Stream Restoration Project Repairs (2008) (Town of Hunter (Esopus Basin): In 2008, repairs were made on the Lanesville Demonstration Stream Restoration Project. Most repairs were associated with gullyng on a high slope failure caused by poor drainage on the terrace above the slope, which had not been addressed as part of the restoration project. Some adjustments were made in the elevation of rock vanes protecting the base of this slope, and additional bioengineering was added to mitigate the gullyng.

IV. Creative Stormwater Practices and Critical Area Seeding

Completed stormwater and critical area seeding projects include:

None completed at this time

V. Highway and Infrastructure Improvements

During development of SMPs for the various sub-basins, the GCSWCD, NYCDEP, and the SWAC Highway and Infrastructure Subcommittee identified a number of recommended actions that would provide water quality protection. The following were completed between 2007 and 2009:

1. **Hydraulic Analysis (2008):** Provided technical assistance including hydrology and hydraulic assessment to better size culverts for Greene County Highway Department.

2. **Stormwater Maintenance**
 - a. **Hunter Highway (2008):** Provided Operation and Maintenance Plan and implemented stormwater maintenance and cleaning of the stormwater controls at the Hunter Highway Garage. Annual maintenance in 2008 captured 6.3 tons (3.6 cubic yards) of sand and salt from entering the downstream Schoharie Creek.

VI. Planning and Assessment

Completed Planning and Assessment action items include:

1. **Schoharie Watershed Strategy (2008):** Report complete. Engaged multiple watershed partners and agencies, municipal officials, and departments (highway, planning, code enforcement) in the strategy's development which focused on landscape sources that contribute to water quality impairments. Some recommendations have been identified as implementation activities within the 2009 - 2011 action plan and the Schoharie Watershed Advisory Committee will review proposals in September 2009 to allocate implementation funding to support those activities. Copy of report can be found here [Schoharie Turbidity Reduction Strategy](#).

2. **Manor Kill Stream Management Plan (2009):** In 2008, a stream feature inventory, riparian vegetation mapping and significant portions of a stream management plan were completed. The [Manor Kill Management Plan](#) was completed in early 2009, and the Town of Conesville adopted it and signed an MOU for implementation with the Schoharie County SWCD. This project also offered an opportunity to expand partnerships, and planning area, to include the Schoharie County Planning Department and Soil and Water Conservation District.

3. **Mountaintop Recreation Plan (March, 2009):** Project completed, report available on [WAP website](#). Two implementation subcommittees are working on marketing and coordinating projects and outdoor resource improvements that promote access to, and appreciation of, the mountaintop's natural environment including stream systems.

4. **Restoration Project Monitoring (2008):** Restoration project performance monitoring was completed at five sites in 2008.

VII. Recreation and Stream Habitat Improvements

In the general recommendations of all SMPs enhanced public access to streams for recreational purposes was identified as a priority. The GCSWCD already has a number of these projects underway, and in 2009-2010 will continue to move forward with these projects. Upon completion of the Mountaintop Recreation Master Plan, the GCSWCD and its partners will identify additional opportunities for enhanced recreation access. Assessing, protecting and improving fish habitat have also been recommended in the SMPs. Completed Recreation and Stream Habitat Improvements action items include:

1. **Windham Creamery Pond (2008):** The GCSWCD assisted the Town of Windham with the development of a public access area on a NYCDEP owned parcel in the hamlet of Windham. The GCSWCD completed a site design, Stormwater Pollution Prevention Plan and other documents. The design included the construction of parking area and athletic fields and was left to the town to complete.
2. **Prattsville Conine Park (2008):** The GCSWCD worked with the Town of Prattsville on a master plan for redevelopment of Conine Field. Key conservation issues under consideration included fishing access point, knotweed management, a riparian buffer planting and a conservation easement on sections of the property adjoining the Batavia Kill and Schoharie Creek, and a stormwater pollution prevention plan retrofitting the site to meet current standards for new construction. Preliminary designs were completed for the park by GCSWCD and provided to the Town of Prattsville for completion.

Schoharie Basin Stream Management Plan Implementation Action Plan

Progress Tracking Sheet

Updated - May, 2009

SCHOHARIE BASIN STREAM MANAGEMENT PLAN IMPLEMENTATION ACTION PLAN Executive Summary, 2009-2011

Update For the Schoharie Watershed Advisory Committee - April, 2009 (note - this summary includes a summary of all 2007 through 2009 action items, as well as newly added items from the 2009-2011 update - please see the full *2009-2011 action plan* and/or the *completed action items* summary for more detail.)

Action Item *	Progress						Notes
	Not Started	Just Started	In-Progress	Near-Complete	Complete	On-going	
<i>Program Administration</i>							
Program Administration Staffing Plan					X		Staffing plan developed in 2007, began in 2009, funded through January 2014
Program Office					X		Open in Tannersville
Local Adoption of Stream Management Plans				X			All towns in Greene Cty have adopted and signed MOU with GCSWCD. Schoharie SWCD working with Conesville towards adoption.
Riparian Buffer Permits					X		General permit has been drafted and is awaiting final approval
Restoration Project Permits					X		All necessary permits were obtained - purchased dewatering equip.
Schoharie Watershed Advisory Committee development					X		SWAC officially created in May, 2008
General Contracting Specification					X		Created pre-qualified contractor list for quick turnaround for emergency projects
Restoration Project Permits (turbidity controls)					X		Had staff trained in E/S Control and purchased equipment for proper dewatering
<i>Education on Watershed Protection</i>							
West Of Hudson Education & Outreach Strategy			X				Covers topics universal to water quality initiatives and includes other counties and agencies (SWCD's, Cornell Cooperative Ext.)
Catskill Streams Website					X		Site development complete

Action Item*	Progress						Notes
	Not Started	Just Started	In-Progress	Near-Complete	Complete	On-going	
Educational Workshops			X				riparian buffers, sediment and erosion controls, wetland protection, floodplain management - E/S Control complete
Conduct Watershed Survey	X						Survey to determine educational needs and interests of stakeholders and watershed residents
Identify Existing Resources	X						identify existing educational programs
Schoharie Watershed Week	X						educational and recreational event for community involvement and awareness
Complete Kiosk Series			X				BMP kiosks
Japanese Knotweed Mailing			X				distribute knotweed informational brochure to streamside landowners
Batavia Kill Stream Celebration			X		X		annually plan and hold streamside educational event - held in 2007 and 2008 - scheduled for 8/1/09
Schoharie Watershed Summit			X				annually plan and hold training and educational event for municipal officials - held in January 2007, 2008 and 2009
Schoharie Watershed Bus Tour			X				annually plan and hold watershed bus tour - held in 2007 and 2008, schedule for 6/20/09
Websites					X		Schoharie pages have been created on www.catskillstreams.org and www.gcsxcd.com/wap to guide information sharing
<i>Landowner Stream Assistance</i>							
Riparian Program Development					X		Streamside Assistance Coordinator currently hired and program guidelines have been set forth. Pilot materials created in 2007
Streamside Assistance Program Educational Materials			X				CRSR contracted to develop educational materials
Evergreen Planting					X		SAP planting project
Kastanis Property Planting			X				SAP planting project

Action Item*	Progress						Notes
	Not Started	Just Started	In-Progress	Near-Complete	Complete	On-going	
Kane Property Planting			X				SAP planting project
Manor Kill Riparian Planting			X				SAP planting project
Sugar Maples Riparian Buffer Project (Windham, Maplecrest)				X			Knotweed removal and partial planting completed in 2008
Carr Road (Jewett)				X			Plantings complete - work on DEC parking area/access, kiosk, planting in knotweed treated areas not done
Prattsville Riparian Project (O'Hara)			X				Riparian demonstration project for approximately 3,000 feet of stream
Windham Golf Course Streambank Project			X				Riparian demonstration project for approximately 155 feet of stream
Tompkins Riparian Project			X				Riparian demonstration project; planting plan has been submitted to NYSDEC for review
Demming Road Riparian Project			X				Riparian component to landowner project
Schoharie Street Stabilization (Village of Hunter)				X			Plantings on opposite bank to be done in 4/09
West Kill Restoration Project (Long Road)			X				On schedule for spring/summer 2009 - wetland delineation and final survey complete
Oakwood Pistol Club			X				CWC streambank protection project
Sugar Maples Stream Restoration			X				Restoration of wetland and 700ft of stream
County Route 6 (West Kill)					X		Partnership with GCHD to add vegetation to road stabilization
County Route 13 Culvert Upgrade (Lex.)					X		Sedges added in 2008
Conine Stream Restoration Project (Batavia Kill)					X		Full channel restoration of Batavia Kill
Ashland Connector Reach (Batavia Kill)					X		Additional plants added in 2007
Broadstreet Hollow (Lexington) Repairs				X			Rock structure repaired, relief wells studied - still need outreach to landowners

Action Item*	Progress						Notes
	Not Started	Just Started	In-Progress	Near-Complete	Complete	On-going	
Farber Farm Repairs					X		Volunteer planting day on 10/4/08 wrapped up planting - rest of work complete
Faulkeys					X		Vegetation added to large FEMA project
Shadow Mountain					X		Riparian component added to a GCHD bridge replacement - including interplanted rip rap
Holden Project					X		Added natural channel components to a NYSDOT project along Batavia Kill
Lanesville Project Repairs					X		Addressed slope that wasn't addressed during initial full channel restoration project
<i>Creative Stormwater Practices and Critical Area Seeding</i>							
Windham Mountain			X				Scheduled for construction in 2009 for parking area, stream work and operations area
Hunter Foundation, Tannersville office					X		Construction to be completed in Spring 2009 - delayed due to hazardous material removal
Hunter Mountain		X					Preliminary discussions complete
Sugar Maples Stormwater Project			X				Designs complete, building demolished, permeable parking area installed, culvert replaced - remainder to be finished in 2009.
Community Stormwater Planning		X					
Mountain Top Library & Learning Center			X				stormwater management demonstration project
<i>Highway and Infrastructure Improvements</i>							
Road Abrasives Program	X						a program to help minimize the negative impacts of road abrasives

Action Item*	Progress						Notes
	Not Started	Just Started	In-Progress	Near-Complete	Complete	On-going	
Driveway Specifications	X						develop a model of standardized driveway specifications
Street Sweeper with Vacuum	X						investigate cost and storing options
Hydraulic Analysis					X		Assisting with culvert sizing by providing hydraulic analysis
Hunter Highway Stormwater					X		Provided O&M plan and maintenance in 2008 that removed 6.3 tons of sand
<i>Planning and Assessment</i>							
Schoharie Watershed Strategy					X		Also called the Schoharie Turbidity Reduction Strategy. Planning and report complete; implementation of tasks ongoing for some.
Manor Kill SMP					X		
Mountaintop Recreation/Resource Master Plan					X		First draft due in December, 2008. Unveiling to the public will be part of the Watershed Summit in Jan. 2009.
Restoration Project Monitoring, 2007 and 2008					X		
Restoration Project Monitoring, 2009 and 2010				X			
Lexington Sill (Schoharie Creek)	X						
Tributary Stream Inventory and Assessment				X			Manor Kill Assessment Complete - Stream management plan complete. Develop streamlined SMP process for tributaries.
Historical Alignments		X					stream alignments for four tributaries, 2009
Riparian Vegetation Mapping		X					vegetation classification for four tributaries, 2009
Watershed Analysis		X					GIS- watershed boundaries for four tributaries, 2009

Action Item*	Progress						Notes
	Not Started	Just Started	In-Progress	Near-Complete	Complete	On-going	
Stream Feature Inventory	X						Stream inventory for Brainerd Brook, Red Falls Creek, Furnace Creek and Madd Brook (tributaries to the Batavia Kill).
Create Tributary Geodatabase	X						create one geodatabase for the four tributaries
Tributary Management Plans		X					complete simplified plans for four tributaries
Town of Hunter Corridor Study			X				Renamed the Hunter Corridor Regional Planning Study, project is in the first phase, has hired a consultant, and is refining the scope of work for implementation.
Greene County All Hazards Mitigation Plan				X			Tetra Tech completing for Greene Cty
Fisheries Assessment & Improvements Strategy	X						assess fisheries and develop habitat improvement strategy
Dale Lane Survey and Hydraulic Analysis	X						
Survey of second SPDES site		X					potential project sites have been visited
Japanese Knotweed Management Project			X				contracting with Hudsonia to assess management plots and produce a report
Restoration Project Wetland Mapping			X				subcontractor to map wetlands at Ashland and Conine restoration sites
<i>Recreation and Stream Habitat Improvements</i>							
Windham Creamery Pond					X		GCSWCD provided final plans and permits to the Towns Engineer - up to town to complete
Prattsville Conine Park					X		Designs were completed for the park, provided to the town. Up to town to complete
Ashland Fishing Access Enhancements			X				Site plan and budget for the new parking area and access was completed

Action Item*	Progress						Notes
	Not Started	Just Started	In-Progress	Near-Complete	Complete	On-going	
Town of Windham (Police Anchor Camp)			X				Conceptual plans were completed and provided to the Town. Trail committee working on proposed multi-use path along the Batavia Kill (under Recreation Master Plan guidance). Long-term plans for parcel not established yet.
Schoharie Creek Park (Town of Lexington)			X				Dilapidated building next to park removed.
Water Temperature Impacts on Fisheries Study		X					thermograph study to locate thermal refugia
Schoharie Creek Access Improvement				X			See Carr Road Project
Organize Repository of Stream Ecosystem Data	X						
Promote Increased Recreational Use of Watershed Streams			X				
Ongoing Activites							
Program Administration						X	
Schoharie Watershed Advisory Committee (SWAC)						X	SWAC established, working on initial program development (application procedures, program information, and engaging technical advisors)
Local Technical Assistance						X	GCSWCD has developed process for tracking and responding to stakeholders
NYSDEC/ACOE Permit Reviews						X	Review as they come in - on-going type of initiative
Catskill Streams Website						X	Site development complete - maintenance constant
Community Outreach						X	develop plan for basic outreach activities - newspaper articles, e-newsletters, brochures, media contacts. Some happening, not meant to be "complete."

Action Item*	Progress						Notes
	Not Started	Just Started	In-Progress	Near-Complete	Complete	On-going	
Critical Area Seeding Program						X	program to help highway departments with vegetation management on critical areas
Plant Materials Program						X	Native seed program initiated - other components in place.
* - For more information refer to the complete action plan - available at http://www.catskillstreams.org/majorstreams_sc.html (bottom of page)							