

Executive Summary: Schoharie Basin Stream Management Program Action Plan 2015-2017 Updated May 15, 2015

NYCDEP Stream Management Program

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Action Plan Executive Summary, 2015-2017*

* - For more information, including projects completed prior to 2009, refer to the complete action plan available at <http://catskillstreams.org/major-streams/schoharie-creek/>

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Introduction

The Schoharie Watershed Stream Management Program (SWSMP) was established in partnership with the Greene County Soil & Water Conservation District (GCSWCD) and NYC Department of Environmental Protection (DEP) in 1997 as part of the Filtration Avoidance Determination (FAD) issued to DEP by the Environmental Protection Agency. Stream Management Plans have been completed for each major river corridor in the Schoharie Watershed and each plan includes a set of general recommendations and project specific recommendations which provide a “road map” for improved stream and floodplain management.

The following Action Plan Executive Summary summarizes the programs and projects that GCSWCD will be leading within the Schoharie Basin between May 2015 and May 2017, as well as programs and projects completed from May 2009 to present. The SWSMP seeks to advance state-of-the-art watershed management projects, policies and programs to improve and protect the Schoharie Watershed. Initiatives include the Stream Management Implementation Program (SMIP), the Catskill Streams Buffer Initiative (CSBI), Stream and Floodplain Restoration Projects, Stream and Watershed Assessments, and Education and Outreach programs. The funding source for each item is noted in the right column with “General” referring to the item as being a program or project of the GCSWCD/DEP Schoharie Watershed Stream Management Program.

^ - SMIP = Stream Management Implementation Grant Program, CSBI = Catskill Streams Buffer Initiative, WAP = Watershed Assistance Program, WRDA = Water Resources Development Act (ACOE), CWC = Catskill Watershed Corporation, General = DEP/GCSWCD SWSMP

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Education on Watershed Protection

The Schoharie Watershed Stream Management Program will be administering four annual events focused on education and awareness and twelve Education and Outreach projects between 2015 and 2017. 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.

Annual Projects				
Project	Progress	Notes	Year Added to AP	Program [^]
Schoharie Watershed Month	Annual	Annually plan and hold action-focused educational and recreational event for community involvement and awareness- held May 2010, 2011, 2012, 2013 and scheduled for 2014.	2009	SMIP/General/WAP
Batavia Kill Stream Celebration	Annual	Annually plan and hold streamside educational celebratory event - held in August 2007, 2008, 2009, 2010 and 2011; celebration was not held in 2012, 2013 or 2014 due to local need to focus on recovery from the impacts of Hurricane Irene.	2009	General/Other/WAP
Schoharie Watershed Summit	Annual	Annually plan and hold seminar-based training and educational event for municipal officials - held in January 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014 and 2015.	2009	General/WAP
Schoharie Watershed Tour	Annual	Annually plan and hold Watershed Tour - held in June 2007, 2008, 2009, 2010. SWT put on hold for 2011, 2012, 2013 and 2014 due to flood recovery and limited staff availability.	2009	General/WAP

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2015-2017 Projects				
<i>Project</i>	<i>Progress</i>	<i>Notes</i>	<i>Year Added to AP</i>	<i>Program^</i>
Town of Lexington Watershed Awareness Workshops	Contracting	A series of four educational workshops for children in the Town of Lexington. The proposed workshops will teach local children, using hands-on experiences, about the insects and animals that play important roles in the watershed, and the role that streams play in the environment.	2015	SMIP Round 11
Riparian Buffer Workshop	In-Process	GCSWCD's CSBI will host a workshop for streamside landowners that will highlight the importance of buffers and demonstrate management practices to maintain healthy stream buffers.	2011	CSBI/General
Schoharie Watershed Stream Crossing Workshop	Contracting	GCSWCD staff will develop and implement a culvert design workshop for local highway departments.	2010	SMIP Round 3
Completed Projects				
<i>Project</i>	<i>Progress</i>	<i>Notes</i>	<i>Year Completed</i>	<i>Program^</i>
Complete Kiosk Series	Complete	The kiosk series highlights the various restoration projects throughout the Schoharie Watershed. Three have been installed (Sugar Maples, Conesville, Ashland Connector Reach).	2011	General
Post Flood Stream Intervention Training	Complete	GCSWCD presented and/or contributed to five Post Flood Stream Intervention Trainings, held in Ulster, Greene, and Dutchess counties. The training was tailored to local highway departments, excavation contractors, and other involved in stabilizing streams following flood events.	2012 & 2013	General
Post Flood Emergency Stream Work Training	Complete	The flooding and damage caused by Tropical Storms Irene and Lee led to the coordination and presentation of the emergency stream work training. Three sessions were held and over 200 attendees were trained in the basic considerations that should be addressed when planning an emergency intervention in a stream system.	2012	General

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Mountain Top Arboretum Outdoor Classroom Construction	Complete	An outdoor classroom was designed and constructed at the arboretum. Design plans and bid specifications for the classroom construction were developed through SMIP Round 2. The classroom accommodates approximately 45 people for year-round outdoor programming on a range of ecological and natural history topics relating to the watershed.	2011	SMIP Round 4
Environmental Film Series	Complete	Watershed Agricultural Council hosted an environmental film series, in 2011 & 2012, at the Doctorow Center in Hunter during Schoharie Watershed Month. The films highlighted watershed issues, pollution mitigation, and watershed, food shed, and view shed topics.	2011 & 2012	SMIP Round 4
Roadside Ditch Maintenance Workshop	Complete	GCSWCD held a workshop for highway departments and NYSDOT in 2011. The workshop covered water quality impacts from roadside ditches, ditch characteristics and conditions, and maintenance options, erosion control, and prioritization.	2011	SMIP Round 4
Water Quality at Home Workshops	Complete	Greene County Cornell Cooperative Extension held two action-based educational workshops to help raise awareness about stewardship of water quality. The workshops, building rain barrels and holistic pond management, were held during Schoharie Watershed Month 2011.	2011	SMIP Round 3
CD Lane Family Day	Complete	Community of Windham Foundation sponsored a Family Day as part of the 2011 Schoharie Watershed Month. Activities were intended to encourage responsible use of water and nearby land areas. Approximately 60 individuals participated along Main Street in Windham.	2011	SMIP Round 3
Manor Kill Information Kiosk	Complete	GCSWCD provided a kiosk for Conesville, and a general Schoharie Watershed and Schoharie County SWCD educational panel was produced in conjunction with GCSWCD's kiosk series.	2011	SMIP Round 2
Manor Kill Environmental Study Team	Complete	The Manor Kill Environmental Study Team program provided experientially based, hands on environmental education and stream monitoring program for youth (ages 13-18). The program served 20 youth from the Gilboa-Conesville School District and an additional 40 youth from Schoharie, Montgomery and Schenectady Counties from August 2009 – June 2011.	2011	SMIP Round 1
Identify Existing Resources	Complete	GCSWCD identified and cataloged existing resources that are currently available. The website was revamped in 2011, to provide web-based documentation of existing resources and links to additional resources.	2011	General/WAP

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Floodplain Management and Wetland Protection Workshops	Complete	Trainings were conducted by DEC and EPA at the annual Watershed Summits in January 2008, 2009, 2010 and 2011.	2011	General/WAP
Japanese Knotweed Mailing	Complete	Distributed knotweed informational brochure to streamside landowners.	2010	General
Riparian Buffer Workshop	Complete	CSBI sponsored workshop July 10, 2010 that showed participants the characteristics of healthy vs. degraded buffers and different management practices to maintain healthy stream buffers.	2010	CSBI
Erosion and Sediment Control Workshops	Complete	Trainings on sediment and erosion control for compliance with SPDES General Permit for construction activities were held in December 2008, January 2009 and March 2010.	2010	General
Mountain Top Arboretum Outdoor Classroom Design	Complete	Design plans and bid specifications for an accessible outdoor classroom were completed in 2010.	2010	SMIP Round 2
Rain Barrel Workshop	Complete	Cornell Cooperative Extension workshop took place during Schoharie Watershed Week May, 2010. Fifteen people took part in building their own rain barrels.	2010	SMIP Round 2
Mountaintop Arboretum Wet Meadow – Interpretive Kiosk, Signage and Brochures	Complete	A kiosk was installed and brochures were developed to describe the wet meadow including the historical background of the historic pump house, an explanation of the site’s hydrology, and other information about wetland plants and wildlife.	2010	SMIP Round 1
SWAC and Schoharie Watershed Week Logos	Complete	Logos were developed for the Schoharie Advisory Committee and Watershed Week/Month.	2010	SMIP Round 1
Conduct Watershed Survey	Complete	Survey to determine educational needs and interests of stakeholders and watershed residents.	2009	
Websites	Complete	Schoharie pages have been created on www.catskillstreams.org and the revised www.gcswcd.com to guide information sharing.	2009	General

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Landowner Stream Assistance

The Schoharie Watershed Stream Management Program is currently administering twelve Landowner Stream Assistance projects of which four are funded through SMIP and seven through CSBI. Several Stream Restoration projects are a product of the Stream Restoration Program that GCSWCD that has been overseeing in the Schoharie Watershed since 1996. Landowner Stream Assistance projects are prioritized as those that improve and protect water quality by enhancing stream stability and establishing riparian buffers.

2015 – 2017 Projects				
Project	Progress	Notes	Year Added to AP	Program [^]
Catskill Streams Buffer Initiative Projects				
Manor Kill Colangelo Riparian Planting	In-Process	CSBI planting project on the Manor Kill in Conesville - need to add willow clumps to previous planting.	2009	CSBI
Tompkins Riparian Project	In-Process	Riparian demonstration project in Ashland; delayed due to change of ownership. Purchased by town for well head protection. GCSWCD plans to proceed with Town of Ashland in 2014.	2009	CSBI
Benjamin Property Planting	In-Process	CSBI planting project on the East Kill in Jewett.	2012	CSBI
Windham Country Club Riparian Planting	In-Process	CSBI planting project on the Batavia Kill in Windham. Project on hold due to change of ownership.	2013	CSBI
Police Anchor Camp Riparian Project	In-Process	CSBI planting project along tributaries of the Batavia Kill in Windham.	2013	CSBI
Prattsville Ball Field	In-Process	CSBI planting project along the Batavia Kill in Prattsville.	2014	CSBI

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Former Kastanis Property Planting Phase 2	In-Process	CSBI planting project along the Batavia Kill in Ashland.	2014	CSBI
Chase Property Planting	In-Process	CSBI planting project along a tributary to the Batavia Kill in Hensonville.	2014	CSBI
Grossman Property Planting	In-Process	CSBI planting project along a tributary to the Schoharie Creek in Hunter.	2014	CSBI
Saenger Property Planting	In-Process	CSBI planting project along a tributary to the Schoharie Creek in Hunter.	2015	CSBI/SWM
Stream Restoration Projects				
Kozak Streambank Stabilization and Riparian Planting	Assessment	Bank stabilization on the Schoharie Creek in Jewett.	2011	SMIP Round 4
Big Hollow Project Repairs	In-process	Repair of the Big Hollow Stream Restoration Project on the Batavia Kill in Maple Crest.	2012	General/FEMA
Shoemaker Project Repairs	In-Process	Repair of the Shoemaker Stream Restoration Project on the West Kill in Lexington.	2012	General/ FEMA
Manor Kill Stream Restoration	In-Process	Full-channel restoration project adjacent to the Conesville Town Park.	2015	SMIP Round 11
Completed Projects				
<i>Project</i>	<i>Progress</i>	<i>Notes</i>	<i>Year Completed</i>	<i>Program[^]</i>
Catskill Streams Buffer Initiative Projects				

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Manor Kill Dahlberg Property Planting	Complete	CSBI planting project on the Manor Kill in Conesville.	2014	CSBI
Dodson/McCloskey Property Planting Phase 2	Complete	CSBI re-planting project on the East Kill in Jewett.	2013	CSBI
Wilkie Riparian Project	Complete	CSBI planting project on a Schoharie Creek tributary in Prattsville.	2013	CSBI
Donnelly Riparian Project	Complete	CSBI planting project on a Schoharie Creek tributary in Prattsville.	2013	CSBI
Enochty Property Planting	Complete	CSBI planting project on the West Kill.	2013	CSBI
Mayo Property Planting	Complete	CSBI planting project on the Batavia Kill in Hensonville.	2013	CSBI
Higgins Property Planting	Complete	CSBI planting project on the Batavia Kill in Windham.	2013	CSBI
Cole Property Planting	Complete	CSBI planting project on the West Kill in Lexington.	2012	CSBI
Bardfield Property Planting	Complete	CSBI planting project on the East Kill in Jewett.	2011	CSBI
Rivera Property Planting	Complete	CSBI planting project on the East Kill in Jewett.	2011	CSBI
Slutzky Property Planting	Complete	CSBI planting project on the Schoharie in Jewett.	2011	CSBI

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Kelly Property Planting	Complete	CSBI planting project on the Schoharie in Hunter.	2011	CSBI
Cervini Property Planting	Complete	CSBI planting along North Settlement Creek.	2011	CSBI
Torsiello Property Planting	Complete	CSBI planting project along North Settlement Creek.	2011	CSBI
Hegner Property Planting	Complete	CSBI Planting project along North Settlement Creek.	2011	CSBI
Manor Kill Gentile Property Planting	Complete	CSBI planting project on the Manor Kill in Conesville.	2010	CSBI/WRDA
Manor Kill Brandow Property Planting	Complete	CSBI planting project on the Manor Kill in Conesville.	2010	CSBI/WRDA
Manor Kill Quinn Property Planting	Complete	CSBI planting project on the Manor Kill in Conesville.	2010	CSBI/WRDA
Dodson/McCloskey Property Planting	Complete	CSBI planting project on the East Kill in Jewett.	2010	CSBI
Rappleyea Property Planting	Complete	CSBI planting project on the East Kill in Jewett.	2010	CSBI
Avella Property Planting	Complete	CSBI planting project on the Batavia Kill in Windham.	2010	CSBI
Brunsdan Property Planting	Complete	CSBI planting project on the Batavia Kill in Windham.	2010	CSBI
Grossman Property Planting	Complete	CSBI planting project on the Schoharie Creek in Hunter.	2010	CSBI
Silver Property Planting	Complete	CSBI planting project on the Schoharie Creek in Hunter.	2010	CSBI
Evergreen Planting	Complete	CSBI planting project in the Schoharie Creek in Hunter.	2009	CSBI
Kastanis Property Planting	Complete	CSBI planting project on the Batavia Kill in Ashland.	2009	CSBI/WRDA
Kane Property	Complete	CSBI planting project in the Batavia Kill in Ashland.	2009	CSBI/WRDA

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Planting				
Manor Kill Grogan Riparian Planting	Complete	CSBI planting project on the Manor Kill in Conesville.	2009	CSBI/WRDA
McRoberts Property Planting	Complete	CSBI planting project on the Batavia Kill in Windham.	2009	CSBI/WRDA
Catskill Streams Buffer Initiative (CSBI) Educational Materials	Complete	CRSR was contracted to develop educational materials. Marketing strategy, slogan, logo, introduction language, brochure and application for funding have been developed.	2009	CSBI/General
Additional Riparian Buffer Pilot Projects				
Carr Road	Complete	Riparian project on Schoharie Creek in the Town of Jewett.	2009	General
Deming Road Riparian Project	Complete	Addition of riparian component to a landowner project in Jewett.	2009	General/WRDA
Stream Restoration Projects				
Ashland Well Heads Protection Project	Complete	Repair of Ashland drinking water wells along the Batavia Kill.	2014	General/Ashland/NRCS
Lanesville Project Repairs	Complete	Repair of the Lanesville Stream Restoration Project on the Stony Clove.	2014	General/FEMA
Long Road Project Repairs	Complete	Repair of the Long Road Stream Restoration Project on the West Kill in Lexington.	2014	General/FEMA
Ashland Connector Reach Project Repairs	Complete	Repair of the Ashland Connector Reach Stream Restoration Project on the Batavia Kill in Ashland.	2014	General/FEMA
Brandywine Project Repairs	Complete	Repair and replace several rock structures and re-grade. Project located in Ashland.	2014	General/ACOE/FEMA
Maier Farm Project Repairs	Complete	Repair of the Maier Farm Stream Restoration Project on the Batavia Kill in Ashland.	2013	General/FEMA
Conine Project Repairs	Complete	Repair of the Conine Stream Restoration Project on the Batavia Kill in Prattsville.	2013	General/FEMA

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NYS Route 42 West Kill Slope Failure	Complete	Restoration of slope failure along the West Kill, below Pushman Bridge.	2013	General/Lexington/NRCS
East Kill Restoration at Apple Hill	Complete	Stream restoration on the East Kill in Jewett.	2012	SMIP Round 4/General
Windham Country Club Repairs	Complete	Restoration of streambank along Batavia Kill at the Windham Country Club. Put on hold due to change in ownership.	2012	General/FEMA
Nikolaidis Stream Restoration Project	Complete.	Stream restoration on the East Kill in Jewett, combined with Kirk/Rotella SMIP projects into the East Kill at Apple Hill Stream Restoration.	2012	SMIP Round 4
Holden Stream Restoration Project	Complete	Full channel restoration of the Batavia Kill in Ashland in compliance with the Filtration Avoidance Determination (FAD) and the Shandaken Tunnel SPDES Permit.	2012	SMIP Round 1/General
Vista Ridge Stream Restoration	Complete	Stream restoration on the East Kill in Jewett in compliance with the FAD.	2011	SMIP Round 1/General
Wright Stream Bank Stabilization/Riparian Project	Complete	Stream restoration and planting along the Schoharie Creek; site of SCA service project.	2010	SMIP Round 4/CSBI
Prattsville Riparian Project (Wright)	Complete	Restoration and stabilization of approximately 3,000 feet of the Schoharie Creek.	2010	General/CWC/WRDA
Sugar Maples Stream Restoration	Complete	Restoration of wetland and 700ft of a tributary of the Batavia Kill in Windham.	2010	General/CWC/WRDA
Windham Golf Course Streambank Project	Complete	Bank Stabilization and riparian demonstration project for approximately 155 feet of stream.	2009	CWC/General
West Kill Restoration Project (Long Road)	Complete	Full channel restoration of approximately 3,000' of the West Kill in Lexington in compliance with the FAD and the Shandaken Tunnel SPDES Permit.	2009	General/WRDA
Oakwood Pistol Club	Complete	CWC streambank protection project in Prattsville.	2009	CWC/General
Schoharie Street Stabilization	Complete	Stabilization of high bank and plantings in the Village of Hunter.	2009	General/FEMA

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Creative Stormwater Practices and Critical Area Seeding

The Schoharie Watershed Stream Management Program is currently administering four Creative Stormwater Practices and Critical Area Seeding projects of which two are funded through SMIP. The GCSWCD will continue to work with multiple partners to implement stormwater projects that reduce runoff and protect groundwater resources within the Schoharie Watershed.

2014-2016 Projects				
Project	Progress	Notes	Year added to AP	Program [^]
Kaaterskill United Methodist Church Stormwater/Rain Harvesting Project	In-process	Several SMP's are proposed to treat the water quality volume from the drainage and provide storm water infiltration. These include rooftop rain harvesting (gutter system), and above ground cistern to capture the runoff and serve as a water source for the community garden, and four rain gardens to provide stormwater filtration and infiltration.	2015	SMIP Round 10
Completed Projects				
Project	Progress	Notes	Year Completed	Program [^]
Hunter Foundation, Tannersville office	Complete	Porous gravel parking area and bioswale were installed in 2009. Rain gardens and the creek walk will be installed in 2014.	2014	General/WRDA/CWC
Windham Mountain	Complete	Pond expansion, parking lot terraces and stormwater conveyance improvements were installed 2010. Maintenance facility improvements will be scheduled once additional funding is attained.	2011	General/WRDA/CWC
Mountain Top Library & Learning Center	Complete	Stormwater management demonstration project. Design has been completed, construction is scheduled for 2011.	2011	SMIP Round 1/WRDA/CWC
Sugar Maples Stormwater Project	Complete	GCSWCD installed stormwater treatments including the installation of a permeable grass parking lot, rain gardens, wetland, porous walkways and riparian planting beds. Supplemental plantings performed in the rain gardens and wetland in spring 2011.	2010	General/WRDA/CWC
Hunter Mountain	Complete	Following preliminary discussions, it was determined that Hunter Mt. already received funding through CWC and completed stormwater retrofits. No further action is expected.	2009	General

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Community Stormwater Planning	Complete	Stormwater structure GIS information and Community Stormwater Management Plans are available for various communities.	2009	General/CWC
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Highway and Infrastructure Improvements

The Schoharie Watershed Stream Management Program is currently administering nine Highway and Infrastructure Improvement projects of which seven are funded through SMIP. Proper highway and infrastructure management are a vital component to managing streams for natural stability and ecologic integrity. It was observed that a number of recommended actions would provide water quality enhancement or protection such as properly sizing culverts to reduce flooding and increase stream stability both up and downstream, and minimizing the introduction of road abrasives. Culverts addressed through this program must pose a threat to water quality to be eligible for funding.

2014-2016 Projects				
Project	Progress	Notes	Year added to AP	Program [^]
South Gilboa Road Stormwater Mitigation Project	In-Process	Replace a culvert that conveys stream flow from an unnamed tributary to the Schoharie Reservoir under South Gilboa Road. Culvert that will provide for the appropriate alignment and structure to convey flow and provide better continuity of the floodplain associated with the wetlands and stream channel.	2015	SMIP Round 11
Glen Avenue Culvert Upgrade	In-Process	GCSWCD will work with the Village of Hunter Highway Department to design a properly sized culvert with a buried bottom for improved conveyance, stream stability and habitat enhancement and oversee the installation.	2011	SMIP Round 4
Cranberry Road Culvert Upgrade	In-Process	GCSWCD will work with the Town of Hunter Highway Department to design a properly sized culvert with a buried bottom for improved conveyance, stream stability and habitat enhancement and oversee the installation.	2011	SMIP Round 3
Schoharie Watershed Stream Crossing/Culvert Design	In-Process	\$50,000 to be set aside for engineered design services on retainer to work with towns to ensure prioritized culverts are designed properly.	2010	SMIP Round 3
Mitchell Hollow Rd (CR 21) Stormwater Upgrade	In-Process	370' of stormwater conveyance with catch basins and sumps will be installed along Mitchell Hollow Rd. to mitigate stormwater flooding in area along NYS Route 23 and will be treated for water quality by the creation of a filtering wetland.	2010	SMIP Round 3
Street Sweeper with	Pending	CWC application submitted with SMIP funds providing the cost share match.	2009	SMIP Round 1/

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Vacuum		On CWC wait list.		CWC
Completed Projects				
<i>Project</i>	<i>Progress</i>	<i>Notes</i>	<i>Year Completed</i>	<i>Program[^]</i>
County Route 6 Slope Failure	Complete	Project involves the stabilization of a slope failure along CR6 and the West Kill in the Town of Lexington.	2014	SMIP Round 4
Flood Response	Complete	A Critical Response Plan is being developed for a culvert replacement along Griffin Road in the Town of Jewett. Three-sided concrete culvert was installed, which will pass flows above the 100-year runoff event.	2012	General
Partridge Road Culvert Replacement	Complete	GCSWCD worked with the Town of Ashland Highway Department to design and install a properly sized culvert.	2011	SMIP Round1/ FEMA
Village of Tannersville Highway Dept. Technical Assistance	Complete	GCSWCD assisted Tannersville in sizing a culvert under Spring Street.	2011	General
Driveway Specifications	Complete	Permit specifications from GC Highway Department were provided to watershed communities to use as a model.	2009	General/WAP

Planning and Assessment

The Schoharie Watershed Stream Management Program is currently administering six Planning and Assessment projects of which three are funded through SMIP. Planning and Assessment projects range from land use planning, assessment of streams and their watersheds, and the survey and monitoring of various locations and project sites.

2014-2016 Projects				
<i>Project</i>	<i>Progress</i>	<i>Notes</i>	<i>Year added to AP</i>	<i>Program[^]</i>
Town of Hunter Land Use Regulation Review & Development	In-Process	Community of Natural Resource Solutions will conduct a detailed review of current land use regulations with the intent of adopting revisions, new regulations &/or guidelines promoting low impact design, climate smart and smart growth principles. Town changed consultants and will begin the project in	2010	SMIP Round 2/ WAP

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Guidelines		2014.		
Tributary Management Plans	In-Process	Complete simplified plans for three Batavia Kill tributaries.	2007	General
Fisheries Assessment & Improvements Strategy	Not Started	Assess fisheries and develop habitat improvement strategy.	2007	General
Annual Projects				
<i>Project</i>	<i>Progress</i>	<i>Notes</i>	<i>Year added to AP</i>	<i>Program^</i>
Restoration Project Monitoring	Annual	Restored stream reaches were monitored annually between 2008-2014. Project monitoring is scheduled for 2015.	2008	General
Vegetation Monitoring	Annual	Restored Stream reaches were monitored annually between 2008-2014. Project monitoring is scheduled for 2015.	2014	General/CSBI
Completed Projects				
<i>Project</i>	<i>Progress</i>	<i>Notes</i>	<i>Year Completed</i>	<i>Program^</i>
Water Temperature Impacts on Fisheries Study	Complete	Thermograph study to locate thermal refugia. Imagery collection flight conducted in 2012 and report expected in 2014.	2014	SMIP Round 1
Mountaintop Better Site Design Plan Workshops	Complete	Kendall Stormwater Services and Morris Associates guided each community through a comparison of the local codes against model development principles using a consensus building approach.	2011 & 2012	SMIP Round2/ CWC/WAP
Town of Hunter Corridor Study	Complete	Assessment of future development along State Route 23A corridor was completed in 2010.	2010	CWC/WAP
Dale Lane Survey and Hydraulic Analysis	Complete	Site survey was completed in 2009 and hydraulic analysis in 2010.	2010	General
Mauro Residence Bank Stabilization	Complete	Geotechnical assessment of a failing streambank in relation to a private residence completed in April 2010. Engineer's report was provided to the home	2010	SMIP Round 1

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		owner and the bank was seeded and mulched.		
Lexington Sill (Schoharie Creek)	Assessed	Upon assessment it was determined that removal of sill would have little impact on the stream. No further action is expected.	2010	General
Tributary Assessment and Planning Projects	Complete	Historical alignments, riparian mapping, watershed analysis, stream feature inventory and Geodatabases have been completed for 3 tributaries to the Batavia Kill.	2010	
Manor Kill SMP	Complete	Stream Management Plan for the Manor Kill.	2009	General
Mountaintop Recreation/Resource Master Plan	Complete	GCSWCD WAP worked with public and private partners to develop plan in 2009.	2009	NYS DOS /WAP
Greene County All Hazards Mitigation Plan	Complete	Tetra Tech completed plan for Greene County in 2009.	2009	General
Survey of second SPDES site	Complete	Landowner is unwilling to allow access for survey work. No further action is expected.	2009	General
Japanese Knotweed Management Project	Complete	Hudsonia submitted report to GCSWCD in December of 2009.	2009	General
Restoration Project Wetland Mapping	Complete	Wetland mapping and reporting were completed in 2009.	2009	General
Catskill Riparian Reference Study	Complete	New York Natural Heritage Program completed a final report for the West Kill Watershed	2009	General

Recreation and Stream Habitat Improvements

The Schoharie Watershed Stream Management Program is administering five Recreation and Stream Habitat Improvement projects of which three are funded through SMIP. Recreation and Stream Habitat Improvement projects include enhanced public access to streams for recreational purposes on the basis that public access will promote an appreciation of the stream while increasing user awareness of proper stream management.

2014-2016 Projects				
Project	Progress	Notes	Year added to	Program [^]

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			AP	
Schoharie Creek Park (Town of Lexington)	Near-complete	Building was removed in 2007; demonstrative plantings and fencing installed in 2012. Working with town to add signage.	2010	SMIP Round 3
Windham Path Phase 2	In-Process	Expand Windham Path to the South Street Business district in Windham.	2015	SMIP Round 10
Conesville Walking Path	In-Process	Rehabilitation of existing walking path in the Conesville Town Park.	2015	SMIP Round 10
Lexington Riverfront Access Park	In-Process	Expansion of Lexington Pocket Park, contingent on FEMA approvals to develop properties acquired through the FEMA Property Acquisition Program.	2015	SMIP Round 11
Completed Projects				
Project	Progress	Notes	Year Completed	Program^
Organize Repository of Stream Ecosystem Data	Complete	The Stream Ecosystem Data Repository – Upper Schoharie Creek Watershed is complete and available at: http://dspace.gcswwcd.com/	2013	General
Windham Path (Police Anchor Camp)	Complete	GCSWCD is assisting the Town of Windham with installing a public, non-motorized, multi-use trail at a 65 acre town owned parcel along the Batavia Kill. Construction of boardwalk and foot bridges complete.	2013	SMIP Round 2
Promote Increased Recreational Use of Watershed Streams	Complete	Worked with SWAC Habitat and Recreation Subcommittee to identify and implement opportunities.	2010	General/WAP
Ashland Fishing Access Enhancements	Complete	Parking area, stream access and kiosk are complete.	2010	General
Town of Windham (Police Anchor Camp)	Complete	Conceptual plans were completed and provided to the Town.	2010	General

Flood Hazard Mitigation

Flooding produces a variety of hazards and impacts to public safety, homes and businesses, infrastructure (roads, utilities, etc.) and the natural environment. It can have direct impacts on water quality, including contamination from dislodged fuel and chemical storage tanks, mobilization of household waste and toxic substances, excessive riverine erosion and massive hill slope failures. As such, flood hazard mitigation – the work of reducing the impacts from flooding - supports the social, economic and environmental interests of communities in the NYC watershed.

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2014 – 2016 Projects				
Project	Progress	Notes	Year added to AP	Program [^]
Local Flood Analysis	In-Process	LFA is undertaken to determine the causes of flooding, investigate and analyze the overall potential of specific projects, and projects in combination, in an attempt to mitigate flood damages and hazards. It is anticipated this analysis will prioritize projects for further SMIP and CWC funding. LFA projects underway in Lexington and Windham. The Prattsville LFA is complete and can be found at http://catskillstreams.org/major-streams/schoharie-creek/ . Windham and Lexington LFAs are underway.	2013	SMIP, General
Hazard Mitigation Grant Program Flood Buyout Program	In-Process	2013 – appraisals and preliminary soft costs (title report and insurance, environmental assessment, property survey) 2014 – demolition plan for properties which still have structures. For vacant properties, commence closings.	2013	FEMA/NYCDEP
Completed Projects				
Manor Kill Acquisition (Town of Conesville)	Complete	The Town of Conesville is assisting a landowner by acquiring a floodplain parcel approved for FEMA Pre-Disaster Mitigation funding (75%) and demolishing and removing the home. The SMIP grant is being used to assist the Town in meeting the required 25% match.	2013	SMIP Round 6

Ongoing Activities

On-going action items began in 2007 and will continue through the duration of stream management plan implementation efforts. The following items do not have an end, but rather are ongoing throughout the program.

Project	Progress	Notes	Year added to AP	Program [^]
Program Administration	On-going	Maintain an effective and efficient process for implementation of the stream management plans for Schoharie Creek and its associated tributaries	2007	General

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Schoharie Watershed Advisory Committee (SWAC)	On-going	SWAC established, assists with funding and programmatic decisions associated with the SMIP. SWAC met 3 times in 2013 and three subcommittees (Education and Outreach, Habitat and Recreation, Highway Superintendents) each met 2-3 times per year.	2007	General/WAP
Local Technical Assistance	On-going	GCSWCD has developed process for tracking and responding to stakeholders.	2007	General
NYSDEC/ACOE Permit Reviews	On-going	Technical review provided as needed.	2007	General
Catskill Streams Website	On-going	Site development complete and site continues to be maintained.	2007	General
Community Outreach	On-going	Basic outreach activities - newspaper articles, newsletters, brochures, media contacts.	2007	General
Critical Area Seeding Program	On-going	Program to help highway departments with vegetation management on critical areas.	2007	General
Plant Materials Program	On-going	Native seed program initiated - other components in place to annually provide native plant materials for CSBI and restoration projects.	2007	General
Annual Education & Outreach Plan	On-going	Covers topics universal to water quality initiatives and includes other counties and agencies (SWCD's, CCE, DEP.) in the WOH watershed.	2007	General
Operation & Maintenance	On-going	Maintenance of project sites throughout the Schoharie Watershed.	2015	General/CSBI

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