

Greene County Soil & Water Conservation District



2019 ANNUAL REPORT

In 2019, GCSWCD continued to assist Greene County landowners, municipalities and others in meeting their natural resource management objectives. The District continues to focus on multiple benefit programs that help achieve a balance between community growth and conservation. Over the years, the District has positioned itself as a respected agency that is known for its ability to address complex natural resource issues. The District continues to expand its technical capabilities and uses them to help constituents throughout the County. While the District continues to increase its natural resource planning activities, it still maintains its primary strength as an agency that implements effective on the ground conservation. The following sections summarize some of the diverse activities undertaken in the previous year.

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East Kill Stream Restoration Project in Jewett

Jewett, NY—This past summer and fall, GCSWCD completed a stream restoration project on the East Kill in the Town of Jewett. The restoration included structural, bioengineering, and revegetation components to reduce hillslope erosion and decrease fine sediment inputs into the East Kill. The East Kill is a tributary to the Schoharie Reservoir, part of the New York City drinking water supply.

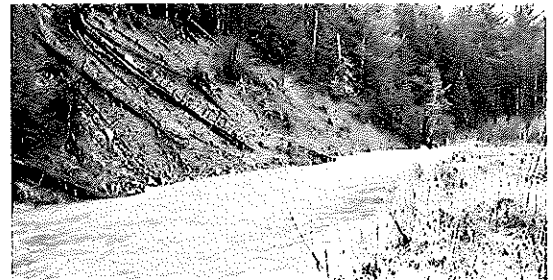
The project location was identified in the 2007 East Kill Stream Management Plan (SMP) as a priority site which contributed to water quality impairment. The SMP noted that the eroding hillslope contained clay which increased turbidity, or cloudiness, in the water. Turbidity can degrade fish habitat and the individual soil particles can transport pollutants and pathogens which is a serious threat to a drinking water supply.

This project site experienced extensive erosion during Hurricane Irene and Tropical Storm Lee in 2011. The floods worsened the instability of the hillslope, as well as the turbidity at this site. This site was monitored until the project was completed this year.

This past summer, approximately 600 feet of the East Kill was regraded and rip rap revetment was installed on the freshly graded streambanks. Willow stakes were planted between the rocks.

To increase the structural stability and function of the stream, wood was incorporated within the streambank. Root wads are a stream stabilization technique using large wood, inserted in the streambank below the water surface, with the root ball of the tree protecting the streambank. The root wad redirects flow from the bank, decreasing the chance of erosion. This technique also provided fish habitat in the locations where they were installed.

Along with the structural components of the



Hillslope erosion prior to construction (top) and after construction (bottom).

restoration, bioengineering was completed. Three rows of willow fascines, a total of 850 feet, were installed in front of the eroding hillslope. Additionally, nearly 1,500 willow stakes were placed at the top of the bank. Willow is a native shrub which thrives in wet areas, has a rapid growth rate, and reproduces prolifically. The willow can reproduce from live cuttings, making it ideal for streambank restoration and revegetation.

The final step in the restoration project was revegetating the riparian areas with 1,000 native trees and shrubs. Tree tubes were installed on the tree species to prevent deer browse and increase the chance of survival.

Funding for this project was provided by the Schoharie Watershed Stream Management Implementation Program (SMIP), a collaborative program between GCSWCD, New York City Department of Environmental Protection (NYCDEP), and the Schoharie Reservoir drainage basin municipalities.

Catskill Point Ferry Slip Stabilization

Catskill, NY— During the summer of 2019 GCSWCD partnered with Greene County Highway Department and Greene County Buildings and Grounds to stabilize the bank of the ferry slip at Historic Catskill Point.

Issues with the stability of existing concrete, stone and wood bulk heads were identified as an issue in the fall of 2018. Sections of stone revetment had slumped leaving the bank exposed to erosive currents and wave action. A concrete wall section had tilted toward the water and damaged the chain link fencing around the slip.

Necessary site clearing was completed by GC Buildings and Grounds to prepare the site for design and construction.

A survey of the site was conducted to provide the information needed to prepare a design of the stabilization measures. Design drawings and permit application documents were prepared by GCSWCD staff and submitted to NYSDEC and US Army Corps of Engineers for regulatory review.

After regulatory review was complete and permits were issued, temporary erosion and sediment controls were

installed. A turbidity boom was deployed across the mouth of the slip to prevent sediment from escaping the work area. With the site isolated from the Hudson River, work on permanent stabilization measures began.

Stone materials, equipment rental fees, as well as some labor costs were funded by GCSWCD. Stone was hauled to the site by GC Highway Department, and machines were operated by GC Buildings and Grounds personnel.

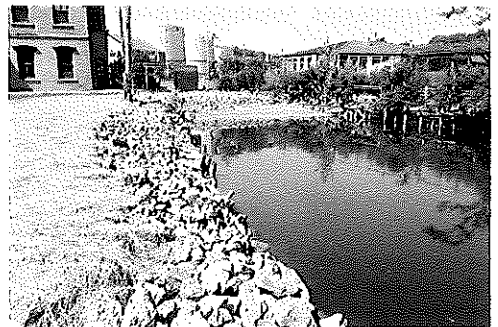
Damaged existing bulkheads were removed, the bank was graded and prepared for installation of the stone revetment. Stone materials were installed to the grades and elevations proposed in the project design.

Upon completion of project construction temporary erosion and sediment controls were removed and seed and mulch was applied to restore the site.

Additional shoreline stability issues were identified in other areas of the County owned park. GCSWCD intends to work cooperatively with various county agencies to pursue stabilization and improvements to the amenities available to the public at this historic site.



Site survey conducted prior to stabilization



Stone revetment after stabilization

Waste Tire Program

NYS Department of Environmental Conservation recently modified regulations for Part 360 (Solid Waste Management), including limits on storage of waste tires while allowing for "beneficial use" of tires to hold down covers with certain restrictions for on-farm uses.

With increasing public health concerns about diseases that can be transmitted by mosquitos, addressing the shallow water that collects in tires and provides ideal mosquito breeding conditions has become an important environmental management objective.

Limitations on the use and storage of

waste tires in agricultural settings has resulted in large numbers of tires that need to be removed from ag sites.

To this end, GCSWCD has worked cooperatively with agricultural operators in the county to load the waste tires into waste containers and have them removed at no cost to the farm. The removal mitigates the health and safety concerns associated with the tires while also resulting in a notable improvement to the aesthetics of the farms.

The program has been very popular, with tires removed from several farms in 2019. GCSWCD is continuing with this program in 2020.



Waste tire pile prior to removal

GCSWCD Celebrated Earth Day and Arbor Day with Hunter Elementary School and Coxsackie-Athens Schools

Hunter, NY—On April 24th, the GCSWCD partnered with the 2nd grade team at the Hunter Elementary School to plant a red maple tree on school property.

Coxsackie, NY—On May 3rd, the GCSWCD partnered with the 4th grade students at the Coxsackie Elementary School to plant a new sugar maple tree on the school playground. The goal for the tree is to provide shade for the playground area in future years. River birch seedlings were distributed to 2nd grade and 4th grade students to take home for planting.

The GCSWCD also partnered with the Garden Club at the Coxsackie Middle School on May 3rd to plant a flowering white dogwood tree in the middle school courtyard. River birch seedlings were distributed to the middle school garden club students to take home for planting.

Athens, NY—On June 4th, the GCSWCD partnered with the 3rd grade at the Edward J. Arthur Elementary School in Athens to plant a new sugar maple near the school playground. Wildflower seed packets were distributed to the 3rd grade students to take home for planting.



GCSWCD staff planting a sugar maple tree at the Edward J. Arthur Elementary School in Athens.

Sawmill Creek and East Kill Stream Feature Inventories (SFIs) Conducted in Summer 2019

During summer 2019, GCSWCD staff and interns began conducting stream feature inventories on the Sawmill Creek and East Kill. The stream feature inventory (SFI) is a field evaluation of the current condition of a stream and its surrounding riparian zone, which can be used for continued stream study and restoration project identification. Common features recorded during the inventory included active erosion, fine sediment, and revetment such as riprap, stacked rock walls, or log cribbing.

EAST KILL SFI

The East Kill is a tributary to the Schoharie Creek, located primarily in the Town of Jewett. The stream is approximately 16 miles long and has a drainage area of 36.4 square miles. East Kill's SFI was previously conducted in 2006 and findings were compiled in the 2007 East Kill Stream Management Plan. The 2019 East Kill SFI will allow GCSWCD to evaluate how the stream has changed over the 13 year period since its first assessment. The SFI data will be summarized in a report that identifies areas which will require continued evaluation or issues that must be addressed.

Over the course of the SFI, 13.9 miles of stream were viewed and assessed, starting at the Colgate Lake Dam. It was discovered that there was about 11,278ft (8%) of the streambanks eroding at the time of the walkover,

some of which had little to no vegetation at the top of the bank. Around 30% of the eroded banks were considered mass failures, which are highly unstable and large scale streambanks. About 2,134ft of fine sediments, such as clay, were found within the streambed and banks. This accounted for about 25% of eroding streambank and 1.5 % of the entire stream length. Clay can easily become suspended in water and degrade water quality. Finally, around 12,560ft (8.6%) of the streambanks were hardened with revetment, of which 99% were in acceptable functional condition.

SAWMILL CREEK SFI

This was the first SFI conducted on the Sawmill Creek, a tributary running through Tannersville into the Gooseberry Creek, which then flows into the Schoharie Creek. It has a total drainage area of 3.2 square miles. By conducting SFIs on tributaries to the main streams, we can monitor for issues that may affect the watershed and local communities on a finer scale.

The Sawmill Creek channel assessment was performed, at the request of the Village of Tannersville, based on a recommendation in the Local Flood Analysis completed in 2018. The assessment was focused on the impact of wood debris and streambank erosion.

The Sawmill Creek SFI covered 2.8 miles of stream. It was found that the majority of wood debris which had an impact on stream function was located in the

upstream areas of the Sawmill Creek. There was approximately 2,085ft (7%) of the streambanks eroding at the time of the walkover. About half of the eroding banks were in the more urbanized portion of the village.

Continued analysis of data collected on both streams will inform GCSWCD of stream health and potential management needs.



GCSWCD staff and interns observing fine sediment in the East Kill.



GCSWCD staff and interns collecting wood debris data on the Sawmill Creek.

GCSWCD Watershed Assistance Program Updates

The GCSWCD Watershed Assistance Program (WAP) supports mountaintop communities and residents advocating for public and private interests to exist in the NYC watershed and maximizing watershed, federal and state program and resource opportunities for the benefit of Greene County's mountaintop region. Highlights for 2019 include:

Flood Mitigation Assistance

- Assisted the Village of Hunter in completing a Local Flood Analysis and beginning implementation of two recommendations – relocation of the Hunter Fire Department (secured \$10,000 feasibility grant) and enlarging Bridge Street bridge (future project). Relocation working group meetings, identifying parcel out of the floodplain and applying for Flood Hazard Mitigation Implementation grant currently underway.
- Secured funding for three Lexington property owners to conduct property protection feasibility studies for their buildings.
- Provided ongoing support to the Village of Tannersville with LFA-recommended projects involving highway garage relocation, voluntary buyouts of abandoned and dilapidated buildings in the floodplain and securing funding for an analysis of the Sawkill Creek fail-

Trail Updates

- Advanced phases 3 and 5 of the Kaaterskill Rail Trail extension including securing \$196,000 from NYS, NYC and private funds for the Hunter Branch Rail Trail pedestrian bridge project (ph. 5) and construction on two of the five properties for the KRT3 connector (linking the Mountain Top Historical Society trail head to Huckleberry Trail in Tannersville).
- Worked with Consultant (River Street Planning), Town of Hunter and NYSDEC to amend 2016 Smart Growth grant to direct \$35,000 toward implementation of KRT3
- Revived a dormant trail project from 2015 on NYCDEP property in the Town of Prattsville that will be regionally significant given the town's efforts to restore Pratt Rock. Organized current town board, local volunteers, DEP, Catskill Center, Catskill Mtn. Club and GCSWCD to advance the project and secured \$8,000 in Stream Management Plan funding for the town to create the Huntersfield Creek Falls trail in 2020.

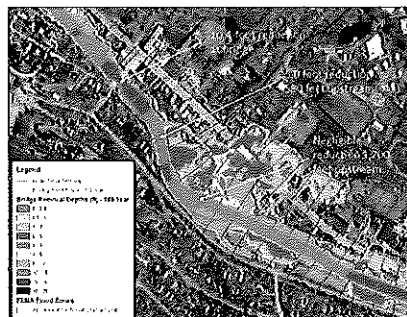
- Assisted the Town of Lexington in formalizing *Bonnie's Trails*, a 3.45 mile self-contained loop trail system on NYCDEP property on South Beech Ridge Rd. Work to begin in 2020. Trail is named after Bonnie Blader, a highly respected town resident who passed away in August 2019.
- Continued coordination of the Hunter Area Trail Coalition, 12-member organization working to enhance outdoor recreation throughout the Town of Hunter.



Hunter Area Trail Coalition.

Advocacy For Greene County

- Participated on intra-agency Catskill Park committees to advocate for Greene County projects including expanding outdoor recreation and funding for trail projects (KRT extension recipient),
- Monitored and advocated for Greene County interests with respect to NYC Watershed programs including commenting on quality and quantity of ongoing land acquisition and streamside acquisition projects, opening more City land for multi-use recreation including mountain biking, and participating in the National Academies of Science forums, forthcoming report which will influence future programming



Hunter Flood Reduction Depth Grids

- Continued attendance Catskill Park Advisory Committee, Kaaterskill Clove Working Group and Catskill Park Transportation Working Group meetings to represent Greene County's issues with respect to improving coordination with NYSDEC and NYSDOT of transportation and recreational management

Mountain Cloves Scenic Byway, Inc. (MCSB)

- Worked with Silver Hollow Audio and MCSB, Inc. to complete the Audio Tour of the MCSB
- Interpretive kiosk panels installed along five gateways (Palenville, Platte Clove, Rte. 214, 23A/Village of Hunter and Tannersville)
- Participated in regional byway meetings with Catskill Mountain Scenic Byway (Ulster, Delaware Counties, Rte. 28) to coordinate efforts of the two byways and promote advertising and marketing materials.
- Provided assistance to consultant in preparing a scenic byway nomination to extend the MCSB along state routes 23A and 42 and County Route 23C in the towns of Jewett and Lexington.

Education & Outreach Efforts

Municipal



The 2019 Schoharie Watershed Summit at the Windham Mountain Resort.

2019 Schoharie Watershed Summit (Saturday, April 27, 2019) - This was the 13th annual Schoharie Watershed Summit, which took place at the Windham Mountain Resort in Windham, NY. The 2019 theme was *"Digging Deeper: Understanding how geology affects the Schoharie Basin."* The program took the audience on a journey through geologic history, focusing on both bedrock and glacial geology, and concluding with information about how the geology affects modern streams and our stream management strategies. As always, the summit continued to provide a forum for discussion about water quality. Afternoon sessions included a choice of three workshops that gave two hours of municipal credits for planning and zoning board members. There were a total of 82 attendees at this event.

Youth and General Public

Streamside Landowner Workshop (Saturday, April 13, 2019) - In an effort to connect with streamside landowners and promote the Catskill Stream Buffer Initiative (CSBI) program, a Streamside Landowner Workshop was held at the Mountain Top Library in Tannersville. The goal of the workshop was to educate interested streamside landowners about the importance of riparian buffers. The EnviroScape® watershed model was used as a visual tool to further demonstrate how riparian buffers are beneficial in preventing or slowing erosion and helping filter pollutants out of stormwater runoff. There were a total of 15 attendees at this event.

Schoharie Watershed Month (May 2019) - This was the 10th annual Schoharie Watershed Month, which involves a series of watershed-focused educational programs throughout the month of May. This year's programs included: Spring in Spruceton Photography Walk with Francis X. Driscoll along the West Kill (Saturday, May 4), "Arresting the Floodwaters: Hold your Ground with Native Plants" workshop with author and landscape designer Carolyn Summers at the Mountain Top Library (Saturday, May 4), "Planting Hope: The Work of the CCC in the Catskills" illustrated talk with author Diane Galusha at the Windham Civic Center in partnership with the Windham Public Library (Thursday, May 9), "Becoming a Citizen Scientist with iNaturalist" workshop at the Mountain Top Arboretum (Saturday, May 11), "Glacial Geology of the Schoharie Creek Valley" lecture at the Zadock Pratt Museum and hike up nearby Pratts Rock (Saturday, May 11), the "Hemlock Woolly Adelgid Primer: What's Happening with Hemlocks in New York?" presentation by Mark Whitmore (Saturday, May 18), and the annual Trout in the Classroom Student Trout Release with Hunter Elementary School (Wednesday, May 29). These events reached a total of 93 participants.



Group photo from the Spring in Spruceton Photography Walk.
Photo Credit: Francis X. Driscoll

Ashland Farm Machinery Show and Tractor Pull (Saturday, June 1, 2019) - GCSWCD set-up a display table and interacted with attendees at the annual Ashland Farm and Machinery Show. Native plants were on display to show visitors the types of plants used in riparian planting projects. Plant giveaways were offered to visitors at the display table.

Greene County Youth Fair (July 25-28, 2019) - The GCSWCD team set-up a display table and the EmRiver stream table at the annual Greene County Youth Fair. The stream table is an interactive model stream that allows visitors to see how streams form, how erosion occurs, test different stabilization techniques, and create their own stream features. Youth-focused activity sheets and colored pencils were offered to visitors to the GCSWCD booth.

Summer Camp Outreach (August 13, 2019) - GCSWCD staff and interns visited Twilight Park Day Camp to offer a program focused on the water cycle. The camp students refreshed their memories about the water cycle and learned about the various places water can end up in the environment. This outreach day reached a total of 34 camp students.

CCE's Environmental Awareness Days (September 10 & 11, 2019) - GCSWCD set-up the Ward's® Stormwater Floodplain Simulation System as a station for Cornell Cooperative Extension's Environmental Awareness Days. The floodplain model simulated rainfall on different upland scenarios: wetlands, pavement, and a retention pond. The demonstration showed how each of these three landscapes has a different impact on the amount of runoff and, therefore, the amount of water that flows into the stream and onto the floodplain below. There were 233 students who attended this program.

School Visits (January-December 2019) - GCSWCD offered free visits to schools in Greene County and the Schoharie Reservoir watershed. Programs offered included demonstrations with the EnviroScape® watershed model, the Augmented Reality (AR) sandbox, the EmRiver stream table, and the new Ward's® Stormwater Floodplain Simulation System. In 2019, GCSWCD staff and interns visited 3rd-4th grades at both the Coxsackie Elementary School and the Edward J. Arthur Elementary School in Athens as well as various elementary and middle school students and parents during the afterschool component of the Coxsackie-Athens Central School District's STEM Expo Day.

Kaaterskill United Methodist Church Stormwater Project

Tannersville, NY—The Kaaterskill United Methodist Church (KUMC) and the GCSWCD worked together to develop a plan to implement stormwater practices at the KUMC. These practices were designed to measurably improve water quality and reduce and attenuate stormwater quantity from the KUMC drainage.

The fundamental project goal was to have an overall increase in water quality by providing point and non-point source mitigation from the impacts of pollutants associated with stormwater runoff from the site.

The project involved the installation of a gutter system, an aboveground cistern to capture the runoff and serve as a water source for the community garden, and two rain gardens to provide stormwater filtration and infiltration.

The gutter system and the aboveground cistern comprise the rooftop rain harvesting component of the project.

The gutter system was installed on the existing building and captures rooftop runoff and delivers it to the cistern and rain gardens. The aboveground cistern is able to capture and store up to 1,000 gallons of stormwater runoff to be used for garden irrigation systems during the summer months. Stormwater runoff from larger storm events will either be stored or bypassed to an adjacent rain garden when the system is at capacity or during winter months.

In addition to the rain harvesting component, rain gardens were also used as a stormwater management practice at this site. The rain gardens are designed to promote infiltration, which will reduce stormwater runoff volumes. Runoff from larger storm events will bypass the rain gardens safely through outlet structures that lead to storm drainage systems.

The plantings for the rain gardens were designed in collaboration with a professor of landscape architecture at Cornell University. Members of the KUMC assisted GCSWCD with the installation of the plants.

Project partners include KUMC members, GCSWCD, and New York City Department of Environmental Protection (NYCDEP) Stream Management Program. Project funding was provided by the Stream Management Implementation Program (SMIP). The Schoharie Watershed SMIP is a collaborative program between GCSWCD, NYCDEP, and Schoharie Reservoir drainage basin municipalities.



One of the newly planted rain gardens is located in front of the Kaaterskill United Methodist Church.

Culvert Replacement Project on County Route 2

Lexington, NY—A culvert replacement project was completed in fall 2019 on an unnamed tributary to the Little West Kill in the Town of Lexington. The culvert, located on County Route 2, was previously undersized and in poor condition.

The long-term objective of the project was to improve the resiliency of Greene County's transportation infrastructure to future flood events while also reducing the impacts of the transportation system on the stability and ecological integrity of the county's waterways. Specific project goals included the improvement of road stability, flow conveyance, sediment transport continuity, habitat connectivity, and aquatic organism passage.

The existing structure was limited in the amount of water that it was capable of conveying, which resulted in streambed instability upstream and downstream of the structure. The results of a hydraulic assessment showed that the existing culvert was capable of accommodating 2-year storm events, but any larger storm events would cause streamflow to

overtop the structure. By increasing the flow conveyance with the replacement structure, there should be a reduction in the frequency of backwater, a lessening of streambank instability near the culvert, and a better chance of accommodating large storm events without overtopping the road.

The new box culvert also resulted in a structure with fewer impacts to habitat connectivity and aquatic organism passage. This structure allows for natural substrate on the bottom of the culvert as well as a wider opening for animals passing through the structure.

This project involved the collaboration of the Greene County Highway Department, the GCSWCD, and the New York City Department of Environmental Protection (NYCDEP). Funding for this project was provided by the Greene County Highway Department and the Stream Management Implementation Program (SMIP). The Schoharie Watershed SMIP is a collaborative program between GCSWCD, New York City Department of Environmental Protection (NYCDEP), and Schoharie Reservoir drainage basin municipalities. This project was located on a tributary to the Schoharie Reservoir, which provides water to the New York City drinking water supply system.



Top: Photo shows the original culvert on County Route 2 prior to replacement. Bottom: Photo shows the replacement box culvert after construction.

Hunter Brook Aquatic Habitat Enhancement Project

Lexington, NY—A habitat enhancement project was completed in fall 2019 on the Hunter Brook, a tributary to the West Kill. This project was organized by the GCSWCD, Trout Unlimited, and the New York State Department of Environmental Conservation (NYSDEC). The primary goal of the project was to improve the recreational access along this stream, which is available for public fishing, while also enhancing the diversity of habitat available for wild brook trout.

Prior to this project, fisheries studies had determined that a population of brook trout existed in this area. It was recognized that the presence of suitable habitat for brook trout was limited in this area of the Hunter Brook. With this

knowledge, plans came together to develop a habitat enhancement project in this location.

For the habitat enhancement project, trees were harvested from the nearby NYSDEC Vinegar Hill Wildlife Management Area in the Town of Lexington. These trees were used as grade control and pool digger structures, which means they were placed with the intention of creating scour pools in the stream. In addition to providing streambed diversity, the deeper areas of the stream created by these scour pools may provide areas with cooler water temperatures.

This project was located in the Schoharie Reservoir drainage basin (also referred

to as the “Schoharie Watershed”). Funding for this project was provided by Trout Unlimited and the Stream Management Implementation Program (SMIP). The Schoharie Watershed SMIP is a collaborative program between GCSWCD, New York City Department of Environmental Protection (NYCDEP), and Schoharie Reservoir drainage basin municipalities. The Hunter Brook is a tributary to the Schoharie Reservoir, which provides water to the New York City drinking water supply system.

Future work related to this project may include a genetic study to learn more about the trout in the area. This study would be supported by funds provided by Trout Unlimited.

Manor Kill Floodplain Enhancement Project

Conesville, NY—In 2017, the Town of Conesville completed a Local Flood Analysis (LFA) to determine the existence of flood hazards and the potential feasibility of flood hazard mitigation projects in the hamlet areas of Conesville. A floodplain restoration and enhancement project on a section of the Manor Kill was identified and listed as a recommendation in the LFA. This project was completed in fall 2019.

The goal of the project was to address an issue with flooding and erosion that affected this area along the Manor Kill for many years. Prior to construction, a geomorphic study and design was completed. The study showed that this part of the stream had been confined as a result of years of encroachment and

filling in of critical floodplain areas. By restoring and enhancing this section of the floodplain, the intent is to have a reduction in streambank erosion, lower flood heights, and less flooding on Potter Mountain Road.

As recommended by the LFA, the first step involved the demolition and removal of an abandoned structure located within the floodplain on a parcel acquired by the New York City Department of Environmental Protection (NYCDEP) as part of the New York City-Funded Flood Buyout Program. The Catskill Watershed Corporation (CWC) coordinated and funded the demolition and removal of the structure.

Following the removal of the structure, the project proceeded with floodplain restoration on the former site of the

structure and streambank stabilization on the opposite side of the stream. The completed project reconnected the stream with its natural floodplain, provided streambank stabilization, and revegetated the riparian (streamside) area as needed.

The project involved the collaboration of the Schoharie County Soil & Water Conservation District (SCSWCD), the GCSWCD, and the NYCDEP. Funding for this project was provided by the Stream Management Implementation Program (SMIP). The Schoharie Watershed SMIP is a collaborative program between GCSWCD, NYCDEP, and Schoharie Reservoir drainage basin municipalities. The Manor Kill is a tributary to the Schoharie Reservoir, which provides water to the New York City drinking water supply system.

Riparian Buffer Restoration along the Schoharie Creek

Lexington, NY—The Catskill Streams Buffer Initiative (CSBI) works with streamside landowners to protect, enhance, or restore forested areas along streams. When the existing vegetation is primarily herbaceous, non-woody cover such as a mowed lawn, improvements to the riparian (streamside) area can be made by planting trees to promote a more mature vegetative community along the streambank and in the floodplain. GCSWCD planted 1,476 native trees and shrubs along the Schoharie Creek in Lexington to restore the riparian buffer. This planting will increase streambank stability over time and help slow or prevent future erosion.

Additional benefits will include increased shade for the nearby waterbody, and increased wildlife habitat for aquatic and terrestrial animals (including birds and pollinators). Native maple, oak, cherry, and birch trees will be protected for the first five years with tree tubes to prevent deer browse and give them a greater chance of survival.

If you own property along a stream in the Schoharie watershed and would be interested in having a riparian buffer planted on your property, please call Laura Weyeneth, CSBI Coordinator, at 518-622-3620 or e-mail laura@gcswcd.com for more information.



The riparian buffer restoration project along the Schoharie Creek involved the planting of 1,476 native trees and shrubs.

GCSWCD Assisted with NAACC Assessments in Town of Catskill

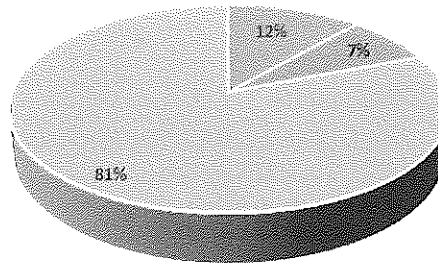
Catskill, NY—This summer, GCSWCD, in cooperation with Cornell Cooperative Extension (CCE) of Columbia and Greene Counties and the Lower Hudson Coalition of Conservation Districts (LHCCD), assessed road-stream crossings in the Town of Catskill.

The North Atlantic Aquatic Connectivity Collaborative (NAACC) is a network of organizations, universities, state, and federal departments working to improve aquatic passage in the northeast. NAACC's focus is on the assessment of road-stream crossings, such as culverts. The assessments are compiled into a database, where high priority crossings are identified for upgrade and replacement.

District Funding

In 2019, the District received \$2,199,401.18 in total funding. Included in that amount is \$165,595.22 from New York State for reimbursement of technical services and conservation projects, a \$254,538.00 allocation from Greene County, and \$1,779,267.96 through the District's partnership with NYC Department of Environmental Protection.

While the District's allocation from Greene County has remained consistent at \$254,583.00 for the period spanning 2018—2020; our overall funding grew by over 15% from 2018 to 2019.



■ Greene County
■ New York State
■ New York City



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Greene County Soil & Water Conservation District

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District Staff

Joel DuBois	Executive Director
Laurie Deyo	Administrative Assistant/Executive Secretary
Jake Buchanan	Conservation District Program Specialist
Abbe Martin	Conservation District Program Manager
Chris Langworthy	Conservation District Program Technician
Michelle McDonough	Conservation District Program Technician
Michelle Yost	Watershed Assistance Program Coordinator
Laura Weyeneth	Catskill Streams Buffer Initiative Coordinator
Samantha Root	Education & Outreach Coordinator
Michael Butler	Heavy Machine Equipment Operator
Ryan Mitchell	Heavy Machine Equipment Operator/Operations Tech

2019 Student Conservation Association Intern

Nathan Horstman	SCA Stream Stewardship Assistant
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Website: www.gcswcd.com

Facebook: www.facebook.com/gcswcd

GCSWCD Watershed Assistance Program
PO Box 996, Tannersville, NY 12485, Phone (518) 589-6871

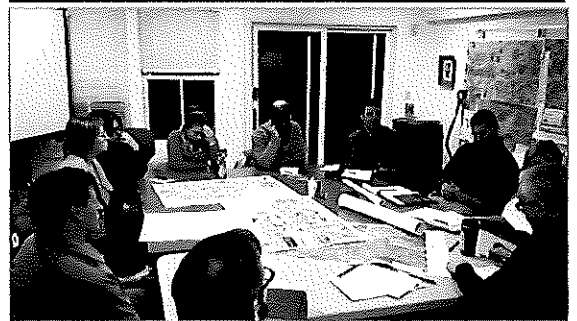
2019 WAP Annual Report

The GCSWCD Watershed Assistance Program (WAP) supports mountaintop communities and residents advocating for public and private interests to exist in the NYC watershed and maximizing watershed, federal and state program and resource opportunities for the benefit of Greene County's mountaintop region. Highlights for 2019 include:

Trail updates

- Advanced phases 3 and 5 of the Kaaterskill Rail Trail extension including securing \$196,000 from NYS, NYC and private funds for the Hunter Branch Rail Trail pedestrian bridge project (ph. 5) and construction on two of the five properties for the KRT3 connector (linking the Mountain Top Historical Society trail had to Huckleberry Trail in Tannersville).
- Worked with Consultant (River Street Planning), Town of Hunter and NYSDEC to amend 2016 Smart Growth grant to direct \$35,000 toward implementation of KRT3
- Revived a dormant trail project from 2015 on NYCDEP property in the Town of Prattsville that will be regionally significant given the town's efforts to restore Pratt Rock. Organized current town board, local volunteers, DEP, Catskill Center, Catskill Mtn. Club and GCSWCD to advance the project and secured \$8,000 in Stream Management Plan funding for the town to create the Huntersfield Creek Falls trail in 2020.
- Assisted the Town of Lexington in formalizing *Bonnie's Trails*, a 3.45 mile self-contained loop trail system on NYCDEP property on South Beech Ridge Rd. Work to begin in 2020. Trail is named after Bonnie Blader, a highly respected town resident who passed away in August 2019.
- Continued coordination of the Hunter Area Trail Coalition, 12-member organization working to enhance outdoor recreation throughout the Town of Hunter.

Hunter Area Trail Coalition meeting



Flood Mitigation Assistance

- Assisted the Village of Hunter in completing a Local Flood Analysis and beginning implementation of two recommendations – relocation of the Hunter Fire Department (secured \$10,000 feasibility grant) and enlarging Bridge Street bridge (future project). Relocation working group meetings, identifying parcel out of the floodplain and applying for Flood Hazard Mitigation Implementation grant currently underway.
- Secured funding for three Lexington property owners to conduct property protection feasibility studies for their buildings.
- Provided ongoing support to the Village of Tannersville with LFA-recommended projects involving highway garage relocation, voluntary buyouts of abandoned and dilapidated buildings in the floodplain and securing funding for an analysis of the Sawkill Creek failing embankment.

Mountain Cloves Scenic Byway, Inc. (MCSB)

- Worked with Silver Hollow Audio and MCSB, Inc. to complete the [Audio Tour of the MCSB](#)
- Interpretive kiosk panels installed along five gateways (Palenville, Platte Clove, Rte. 214, 23A/Village of Hunter and Tannersville)
- Participated in regional byway meetings with Catskill Mountain Scenic Byway (Ulster, Delaware Counties, Rte. 28) to coordinate efforts of the two byways and promote advertising and marketing materials.
- Provided assistance to consultant in preparing a scenic byway nomination to extend the MCSB along state routes 23A and 42 and County Route 23C in the towns of Jewett and Lexington.

Advocacy for Greene County

- Participated on intra-agency Catskill Park committees to advocate for Greene County projects including expanding outdoor recreation and funding for trail projects (KRT extension recipient),
- Monitored and advocated for Greene County interests with respect to NYC Watershed programs including commenting on quality and quantity of ongoing land acquisition and streamside acquisition projects, opening more City land for multi-use recreation including mountain biking, and participating in the National Academies of Science forums, forthcoming report which will influence future programming
- Continued attendance Catskill Park Advisory Committee, Kaaterskill Clove Working Group and Catskill Park Transportation Working Group meetings to represent Greene County's issues with respect to improving coordination with NYSDEC and NYSDOT of transportation and recreational management