



VILLAGE OF ELLENVILLE PROJECTS

Project Title	Project Description
Rondout Watershed Study and improvements	Scoping and implementation of proposed improvements and flood mitigation for the Rondout watershed. This project will advance the 2008 ACOE study. The Town of Wawarsing, Village of Ellenville, Town of Rochester, and Town of Rosendale are all participating in this project. The cost represents the local share of this project. The Committee has allocated \$125 for the study and earmarked 2.5M for implementation.
Stream bank restoration	This project is for stream bank and stream bed restoration along the Village's two main streams, which are in a severely deteriorated condition. After an initial evaluation of the reaches of the streams most in need of restoration, physical measures will be implemented to improve the health of the streams and the resiliency of the stream corridors. Measures could include: "bio walls" with root wads incorporated into the bank to slow the flow before it reaches the bio wall; selected gravel harvesting to clean up the channel and allow the stream to flow in its natural foot print. This project will be coordinated with the Town of Wawarsing, as the streams also travel through, or are adjacent to, the Town. The streams to be targeted include: the Good Beer Kill-east and he Sandberg.
Generator for Ellenville School	This project would provide an emergency power generator for the radio station housed at the Ellenville School, which serves as a critical means of communication during emergencies. This power source could also potentially power the school, or portions thereof, to serve as an emergency shelter.
Permanent Shelter	In conjunction with the Town of Wawarsing, this project proposes to renovate (former medical offices) or build a new emergency shelter (pet friendly) and possible co-use as a community center. The Facility will require construction of handicapped bathrooms with shower facilities and kitchen facilities, In additions, cots, cooking equipment, appliances and food stuffs will have to be purchased and a generator supplied to the building. Will provide sufficient electricity to provide electricity for shelter's O2 machines as needed. This site is to be strategically located in the Village of Ellenville and will have easy accessibility.
Mobile water pumps	Purchase of mobile water pumps to expedite removal of flood water from critical facilities such as banks to have them up and running as quickly as possible. Currently fire companies are using a first-come, first-served list to aid in pumping basements.
Temporary Regional Shelter Located at Ellenville Regional Hospital	While Ellenville's primary focus and priority is streambed restoration and establishment of a permanent shelter, we would consider as a lower priority, the establishment of a shelter for medically vulnerable people to be established at the Ellenville Regional Hospital. The cost associated with this project represents a potential local share towards this project



TOWN AND VILLAGE OF NEW PALTZ PROJECTS

Project Title	Project Description
Sewer Treatment Plant Hardening	This project would install various floodproofing measures to the wastewater treatment plant to minimize the risk of inundation by floodwaters during a 100-yr event. The cost for these improvements has been estimated by the Town's engineer
Inflow and Infiltration Investigation and Permanent Wastewater Collection System Repairs	This project would scope required improvements to the existing collector sewer system and make point repairs and collector sewer replacement as needed. Currently, the wastewater treatment plant is overwhelmed during major storm events because of the large amount of inflow and infiltration that occurs. This project would reduce the I&I associated with these events to safeguard the plant's processes. The cost for these improvements has been estimated by the Town's engineer.
Flood Prevention Strategies and Stormwater management for Wallkill River & waterways (streams, tributaries, etc.)	This project is for a Watershed Management Study. Flood prevention strategies (both upstream & downstream) and cleaning of organic waste in the Wallkill and its streams and tributaries is necessary. However, in order to prioritize these improvements and better understand the causes of the current problems, the Town and Village need to better understand the watershed's operations. This would include reviewing the impact both New Jersey and Central Hudson have on the flooding of the Wallkill. The study would consider alternative implementation strategies to control flooding including but not limited to bios wales, relief channels, flood water storage, reservoirs, rain gardens, using permeable material whenever possible in new construction, replacement of impermeable material wherever possible, raising of buildings, day lighting submerged waterways, protection of wetlands & green space, widening of river banks in critical areas, stream bank reclamation, educating the public ("Where you don't need to mow, let it grow!") ,etc.
Raise Libertyville Low Spot	This project would raise Libertyville Road at its "low spot" along the Wallkill. This is the only spot along Libertyville Road that floods south of the fairgrounds and would greatly improve accessibility - especially if there is an emergency substation placed at the fairgrounds. Libertyville Road is currently a major north/south access road along the western side of the Wallkill.
Springtown Road Study	This project would scope and implement required improvements to address flooding along Springtown Road, from Main Street to Mountain Rest Road. This segment is currently a major access point from the eastern portion of the community to the west. It is also a gateway to areas in western Ulster County. During storm events, this roadway is regularly inundated, shutting off access to and from the Village. This Project was also suggested by Ulster County.



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Project Title	Project Description
Main Street Stormwater Improvements	This project would make stormwater management improvements to Rte 299/Main Street. Current heavy rainfall events cause flooding with associated traffic detours, building flooding and business shutdowns. Stormwater improvements also needed to reduce flooding on main street caused by overflows from manholes.
Springtown road Rail Trail approach reconstruction	This project would reconstruct the approach to the rail trail bridge from Springtown Road. Currently, this approach is not strong enough to carry emergency vehicles. Therefore, when access to the western portion of the community is cut off due to flooding (see Springtown Road project), emergency vehicles are forced to travel a long detour. This project would reinforce this access and provide an emergency means of crossing the Walkill during storm events. The cost of this project was estimated by the Town's Engineer
Emergency Substation West of the Walkill	This project would construct an emergency substation west of the Walkill River that could house a police, fire, and ems apparatus. Currently, when the river floods, residents west of the Walkill become inaccessible to emergency services (through New Paltz). This substation could be located either at the UC Fairgrounds or near Canaan Road. It would provide minimal infrastructure; only enough room to garage the emergency vehicles, house the personal vehicles of the first responders, provide adequate HVAC, provide a kitchenette, sanitary facilities, and room for cots.



TOWN OF OLIVE PROJECTS

Project Title	Project Description
Bushkill Creek Stream Restoration	This project includes extensive stream reconstruction on the Bushkill as outlined by both the Town of Olive and Ulster County. This project would include scoping and implementation of recommended improvements. Implementation will include measures to reduce land erosion on the banks and may include sediment removal, and tree removal. Sediment has aggregated within the Bushkill causing two critical problems. The Watson Hollow Bridge is a two span structure, however, sediment has aggregated under one span which directs all water under the other span, lowering the hydraulic capacity of the bridge and creating scour of the abutment. The second threat is downstream of the bridge where sediment has accumulated within the channel directing flow towards a vulnerable Watson Hollow Road embankment.
Esopus Creek Flood Mitigation and/or Prevention	This project includes scoping (including hydraulic and hydrologic modeling) and implementation of recommended improvements to address repetitive flooding in the Rte 28 corridor and Esopus Creek and Bushkill River in Boiceville. This is the main commercial area of the town and is adjacent to the school. The scoping phase of this project would identify implementable measures to mitigate flooding . Many ideas have been suggested in the past to control this flooding, but scoping needs a thorough analysis of the problem and potential solution is required.
Relocate Boiceville Firehouse Co #5	This project would construct a new firehouse for the Boiceville Firehouse Co. #5 that is outside of the floodplain so that the fire company can continue to provide emergency services during flooding events.
Relocate West Shokan Firehouse Co #3	This project would construct a new firehouse for the West Shokan Firehouse Co. #3 that is outside of the floodplain so that the fire company can continue to provide emergency services during flooding events.
Relocate Town Offices & Highway Complex out of Flood Plain	This project is a needs analysis to determine future space requirements for the Town and Highway offices and equipment. Building plans based on the needs analysis would be drafted and land outside of the flood plain would be obtained to relocate the complex. The facility would then be constructed in its new location with the use of green technology and infrastructure. The new location outside the floodplain would enable the Town and Highway offices to serve as a Command Center during disasters to meet the FEMA'S National Incident Command System requirements.



TOWN OF ROCHESTER PROJECTS

Project Title	Project Description
Rondout Watershed Study and Improvements	Study of Rondout watershed and flood mitigation strategies. This project will advance the 2008 ACOE study. The Town of Wawarsing, Village of Ellenville, Town of Rochester, and Town of Rosendale are all participating in this project. The cost represents the local share of the study, as well as \$2.5M towards implementing the recommendations of the study.
Rochester Creek Immediate Repair	This project will remove debris deposited by recent storms (downed trees, tires etc.) from the Rondout Creek, including at the Route 209 & Rochester Creek bridge abutments. Collection pits, sumps, drains will also be cleared. This will increase the capacity of the Creek to carry stormwater and reduce adjacent flooding caused by the current stream constrictions
Equip Community Center to serve as disaster relief shelter	This project would rehabilitate and make upgrades to the existing community center so that it could be used as a disaster shelter. Improvements would include insulation, showers, ADA accessibility, and alternative power.
Temporary Regional Shelter Located at Ellenville Regional Hospital	This project is for the establishment of a shelter for medically vulnerable people to be established at the Ellenville Regional Hospital. The cost associated with this project represents a potential local share towards this project.



TOWN OF ROSENDALE PROJECTS

Project Title	Project Description
Rosendale Sewer Treatment Plant Stormwater Management Study	This project will scope out protection measures for the Rosendale Sewer Treatment Plant from stormwater inundation and/or Creek flooding, as well as implement the recommendations of that analysis.
Generators for Town Facilities	This project would purchase and install backup power generators for three critical town facilities: the flood control project, town hall, and pool house, which is used for shower use during power outages.
Stormwater mitigation, Route 32/Washington Park	This project would address storm water flooding along Rte 32 at Fann's Plaza and Washington Park. Road routinely floods by Plaza at base of hill. Drainage improvements would reduce or eliminate this flooding and should be combined with improvements to drainage from mobile home park. (Project also suggested by County). In addition, this project would help improve access to the adjacent mobile home park during periods of flooding.
Fann's Plaza redevelopment	This project would conduct a master planning study for Fann's Plaza with the goal of redeveloping the plaza to include a mix of uses and senior housing. Improving the vitality of this area is important to the Town and could help ensure the long-term viability of additional stormwater improvements.
Rosendale Flood Control Project Improvement	This project will install flood control measures on the south side of the Rondout Creek along James Street from Rt 32 toward the Keator Avenue Bridge, focusing on the lower portion of James St. This lower portion currently washes out and collapses during high water events. This project must be coordinated with Army Corps, since Rosendale is currently protected by Army Corps flood control projects in other areas.
Flood mitigation and protection for key intersections in Town	This project would address flooding at several key intersections throughout the Town. The intersections would include: Route 32 at Rifton Bridge (flooding closes Rte 32 and all ingress and regress on the south side of town); 4th Binnewater Lane & Binnewater Road (closes Road and isolates residents from emergency services); and, Hickory Bush Road (closes Road and isolates residents from emergency services).
Flood mitigation and protection to homeowners prone to flooding	This project would scope out measures to address chronic residential flooding in several specific areas of the town. Elevation and relocation are two options that would be considered. Locations to be studied include: Creekside Lane (7-10 houses); Riverview Terrace; Island View Adult Home. In addition, road subsidence along Route 213 west from Route 32 to Town Line and along Creeklocks Road would be studied.



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TOWN OF SAUGERTIES PROJECTS

Project Title	Project Description
Replace Culvert-Wilhelm Road	This project would replace an inadequately sized culvert at Wilhelm Road.
Replace Culvert-Platte Clove	This project would replace an inadequately sized culvert at Platte Clove Road.
Bridge Abutment Replacement	This project would replace the abutment and bridge deck at Drummond Falls Road East.
Storm Sewer Replacement	This project would replace storm sewers at Cotton Tail Lane, which are currently inadequately sized.
Harden Malden Sewer Plant against flooding	This project would install and construct various floodproofing and hardening measures at the Malden Sewer Treatment Plant. Currently, this plant can be overwhelmed during flood events. In addition, backflow valves are to be installed at the plant and in low lying residences to prevent sewage contamination during major flood events.
Stream and Streambank rehabilitation	This project would provide a local match for recent a stream rehabilitation assessment commissioned by the DEC.
Water supply protection: supplemental source exploration	This project would scope the required improvements to identify a secondary water source for the Village and Town. Locating and developing a secondary source to supplement the reservoir would provide an alternative water supply during prolonged turbid events. Areas for ground water exploration have already been identified. The next phase of the study would include test drilling and additional ground water modeling.
Sewer Extension to Creekside Neighborhoods	This project will extend the municipal sewer system to residential properties along the Esopus Creek that currently rely on septic systems. During storm events, these septic systems release pathogens to the Esopus, endangering public health and reducing water quality.



VILLAGE OF SAUGERTIES PROJECTS

Project Title	Project Description
Water supply protection: Pre-filter	This project would install a pre-filter at the current water supply, allowing the treatment plant to continue operating during storm events. Currently water supply is not protected from inflow of turbid water during storms and the treatment plant must be taken off-line during turbid events.
Water supply protection: silt & debris removal	This project would remove accumulated silt and debris from the reservoir. Stormwater from Irene and Lee delivered a heavy load of silt and debris into the reservoir. This project would restore reservoir capacity and protect water quality.
Water supply protection: supplemental source exploration	This project would scope the required improvements to identify a secondary water source for the Village and Town. Locating and developing a secondary source to supplement the reservoir would provide an alternative water supply during prolonged turbid events. Areas for ground water exploration have already been identified. The next phase of the study would include test drilling and additional ground water modeling.
Shoreline stabilization near Tina Chorvas Park	This project would stabilize the shoreline and repair existing bulkheads near Tina Chorvas Park. It will be a public-private partnership with the non-profit cultural resource organization, 'Arm of the Sea'. The cost estimate was developed by the Village.
Housing Flood-proofing Assistance	This project would assess the alternatives for protecting houses along Lighthouse Drive and Ferry Street from flooding. Alternatives to be considered include floodproofing, elevation, and relocation.
Repair Supporting structures adjacent to lighthouse	This project would repair a large gap in the dike that protects the harbor channel and make bulkhead, pier, and dock repairs in and around the Lighthouse. This project is a partnership between the Village and the Saugerties Lighthouse Conservancy. Lighthouse dock, bulkhead and pier are contiguous with north dike. While the dike is important for preventing siltation of the harbor channel, the bulkhead and pier protect the lighthouse, which is a community asset and historic building. The pier and dike are also popular as public fishing sites. This cost estimate was provided by the Village.
Dredging assistance	Waterfront access has been impaired by silt deposition from recent storms. To mitigate shoaling, Village proposes to assist property owners by coordinating dredging along impacted properties. Public-private cost sharing: property owners would cover dredge contractor cost while the Village would assist by handling the engineering, permit process, environmental review costs, work oversight, and contingencies. The cost of permitting and environmental review (sediment testing & bioassays) is often too much for an individual property owner. Organizing a single project to serve multiple properties will help make dredging more affordable for individuals.



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Project Title	Project Description
Parks Restoration	This project would make various repairs at several parks throughout the Village, including Village Beach, Tina Chorvas Waterfront Park, and Seamon Park. These parks suffered damage from each of the recent major floods. Repairs would include the replacement of damaged docks and repair to eroded boat ramps to maintain public access to Esopus Creek. In addition, repairs would be made to the retaining wall in Seamon Park along Sawyer Kill. Landscaping and plantings would also be installed to arrest further erosion.



TOWN OF WAWARSING PROJECTS

Project Title	Project Description
Rondout Watershed Study and improvements	Scoping and implementation of proposed improvements and flood mitigation for the Rondout watershed. This project will advance the 2008 ACOE study. The Town of Wawarsing, Village of Ellenville, Town of Rochester, and Town of Rosendale are all participating in this project. The cost represents the local share of this project. The Committee has allocated \$125 for the study and earmarked 2.5M for implementation.
Oak Ridge Road Flood Mitigation	This is an alternatives analysis for improvements along Oak Ridge Road in and around the intersection of US Route 209. There are currently several stream constrictions, including a house and three footbridges that potentially reduce flow of the stream and cause flooding along the roadway and nearby properties. In addition, this area is adjacent, and provides access to, the Nevele Resort, a significant revenue generator.
Stream bank restoration	This project is for stream bank and stream bed restoration along the Town's several main streams, which are in a severely deteriorated condition. After an initial evaluation of the reaches of the streams most in need of restoration, physical measures will be implemented to improve the health of the streams and the resiliency of the stream corridors. Measures could include: "bio walls" with root wads incorporated into the bank to slow the flow before it reaches the bio wall; selected gravel harvesting to clean up the channel and allow the stream to flow in its natural foot print. This project will be coordinated with the Village of Ellenville, as many of the streams also travel through, or are adjacent to, the Village. The streams to be targeted include: the Good Beer Kill-east and west branch, The Sandberg, The Vernoo Kill, The Rondout, The North and South Gully, and Fantine Kill.
Route 209 Alternative Analysis	This project would identify alternative transportation routes that could provide 2-way traffic flow when Route 209 is closed due to flooding. In a major storm event, Route 209 in Kerhonkson floods prohibiting through access. This project would identify a route that allows 2-way traffic flow, thereby providing a viable secondary access route when 209 is closed.
Permanent Shelter	In conjunction with the Village of Ellenville, this project proposes to renovate (former medical offices) or build a new emergency shelter (pet friendly) and possible co-use as a community center. The Facility will require construction of handicapped bathrooms with shower facilities and kitchen facilities, In additions, cots, cooking equipment, appliances and food stuffs will have to be purchased and a generator supplied to the building. Will provide sufficient electricity to provide electricity for shelter's O2 machines as needed. This site is to be strategically located in the Village of Ellenville and will have easy accessibility.



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Project Title	Project Description
Portable Generators & Transfer Switches	Purchase and distribution of portable generators to be transported where needed, i.e., gas stations, banks, food stores etc to assist in getting vital services up and running until a more permanent solution could be arranged.
Mobile water pumps on trailer	Purchase of mobile water pumps to be used by the DPW and Highway Department to expedite removal of flood water from critical facilities.
Temporary Regional Shelter Located at Ellenville Regional Hospital	While Wawarsing's primary focus and priority is streambed restoration and establishment of a permanent shelter, we would consider as a lower priority, the establishment of a shelter for medically vulnerable people to be established at the Ellenville Regional Hospital. The cost associated with this project represents a potential local share towards this project



TOWN OF WOODSTOCK PROJECTS

Project Title	Project Description
Upgrade Route 212	This project will upgrade the drainage along an approximately 1 mile stretch of Route 212, from Route 375 to the Post Office. Currently, poor drainage leads to roadway inundation, making the Central Business District inaccessible. The cost is an estimate of installing typical green infrastructure features to improve the management of stormwater along this roadway.
John Joy Road Improvements	This project would raise approximately 400 feet of John Joy Road by approximately 2-3 feet, as well as install two culverts (5'x40' and 30"x40') to prevent the road from being inundated during flood events.
Mink Hollow Bridge Protection	This project would Install 175' x 6' to 12' height x 4' to 6' width stacked rock wall sheet piling to protect Mink Hollow Bridge from flood and erosion damage.
Replace culverts- Reynolds Lane and Church Road	Replace existing inadequate 5' metal culverts under the bridge at the intersection of Rte 212 and Reynolds Lane and at intersection of Church Rd and Rte 212 with appropriately sized concrete box culverts.
Replace culverts-Lane Road	Replace inadequately sized culvert at intersection of Lane Road and Silver Hollow Road with appropriately sized concrete box culvert.