



NY Rising Community Reconstruction Program

Recover from yesterday, plan for tomorrow

Storm Recovery Projects for **ONEIDA COUNTY**



March 2014



NY Rising Community Reconstruction Oneida County Committee

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This document was developed by the NYRCR Oneida County Planning Committee as part of the NY Rising Community Reconstruction (NYRCR) Program and is supported by NYS Department of State. The document was prepared by the following consulting firms:



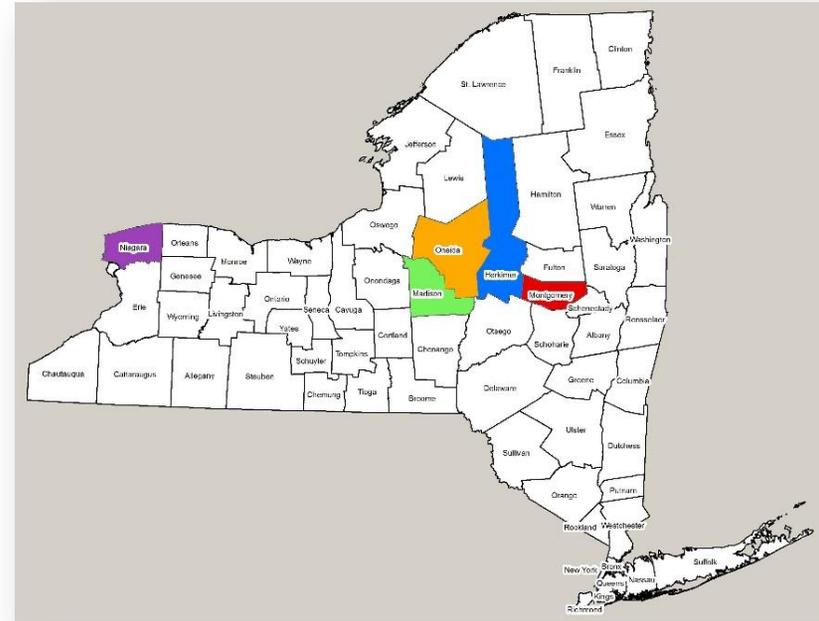


Foreword

The NY Rising Community Reconstruction (NYRCR) program was established by Governor Andrew Cuomo to provide additional rebuilding and revitalization assistance to communities severely impacted by Superstorm Sandy, Hurricane Irene, Tropical Storm Lee, and the severe summer storms of 2013. With assistance from the State, communities have been empowered to create and implement local strategies for rebuilding and strengthening their communities against future extreme weather events.

By July 2014, plans will be completed in the five upstate counties impacted by severe flooding in 2013: Niagara, Madison, Herkimer, Oneida, and Montgomery counties. The approach in these five counties is two-pronged, focusing first on identification of remaining recovery needs, and then on developing countywide long-term resiliency strategies and actions. Locally-driven resiliency plans will consider current damage, future threats, and economic opportunities. Each county is eligible to receive up to \$3 million in State capital funds to support the implementation of recovery projects.

NYRCR Planning Committees in the five counties consist of representatives from county planning and economic development agencies, human service organizations, soil and water conservation districts, emergency services, highway services, local governments, educational institutions, business and other organizations, who incorporate their community's unique needs into their resiliency strategies.



Above: Map of the five upstate counties impacted by severe flooding in 2013.

NYRCR Planning Committees are taking the lead in developing Countywide Resiliency Plans. The State has provided each NYRCR Planning Committee with a consulting team to help prepare the plan. Planning experts from the New York State Department of State have been assigned to each committee to provide technical assistance and help oversee the planning consultants.



NYRCR Countywide Resiliency Plans will describe actions needed to become a more resilient and economically strong community. Plans will include:

- Overview of storm damage, critical issues, and vision for the future
- Assessment of needs and opportunities
- Assessment of risk to key assets
- Strategies to restore and increase the resilience of key assets
- A schedule of implementation actions

In keeping with the National Disaster Recovery Framework, NY Rising plans consider the needs, risks, and opportunities related to assets in the following categories: community planning and capacity building; economic development; health and social services; housing; infrastructure; and natural and cultural resources.

Plans are being developed with input from the public. Each NYRCR Planning Committee will hold at least two sessions to specifically engage the public; allow the public to attend Planning Committee meetings; and may provide other public engagement opportunities.

The plans will contain strategies and actions to address current damage, future threats, and economic opportunities. The storm recovery projects presented in this document are actions that will be included in the NYRCR Countywide Resiliency Plan.



*Above: Flooding of a creek on a residential street.
Below: Flooding at Parkway Middle School.*





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1. Overview

Oneida County is a 1,257-square mile area, located in the central portion of New York State almost 100 miles west of Albany. The total population of Oneida County is estimated at 233,556 according to 2012 U.S. Census population estimates.¹

Background

Severe rainstorms hit upstate New York counties from June 26 to July 4, 2013, causing massive flooding, erosion, property damage, long-term power outages for more than 13,000 residents, long-term unavailability of potable water, and even loss of life. The affected counties included Broome, Chenango, Clinton, Essex, Delaware, Franklin, Herkimer, Madison, Montgomery, Oneida, Otsego, Schoharie, St. Lawrence, Tioga, and Warren. The federal government declared a state of emergency for seven of these counties (including Oneida County), and 15 local municipalities.

In addition, Governor Andrew M. Cuomo issued a Disaster Declaration in response to the devastating floods and announced the creation of the *Mohawk Valley and 2013 Upstate Flood Recovery Program*. This Recovery Program was created to provide assistance to homeowners, small business owners, and farmers who were victims of the floods and is intended to provide immediate recovery assistance to victims and to address gaps in disaster-related coverage, such as insurance. Five impacted counties eligible for this assistance were also designated as Community Reconstruction Areas.

This document represents the first phase of the NY Rising Program in Oneida County and is focused on identifying remaining recovery needs and projects from the Summer 2013 storms.

“I applaud and thank Governor Cuomo for his leadership and partnership in rebuilding communities in Oneida County and the Mohawk Valley that have been impacted by storms from the last few years, and most recently the last few weeks. By funding locally driven recovery plans, the NY Rising Community Reconstruction Program will allow communities to implement reconstruction based on their own needs and resources. This means localities will have individualized plans that will more effectively



Above: Flooding at Big Apple Plaza.



a. Description of Storm Damage

Tremendous rainfall events swept across Oneida County from June 26 to July 4, 2013. The sheer volume of water, combined with culvert and bridge failures, caused the Sauquoit, Oriskany, Big, and Mud Creeks, and their tributaries, to overflow their banks and flood surrounding areas. The impact of these storms was significant across the entire region, with severe flood damage to, or complete destruction of, electric substations, water systems, wastewater treatment plants, roads, bridges, homes, senior living facilities, schools, and municipal buildings. The storms' impacts were exacerbated by the area's incomplete recovery from the catastrophic damage caused by Tropical Storm Lee (September 2011), Hurricane Irene (August 2012), Winter Storm Nemo (February 2013), and continuous rain throughout the month of June 2013.

In fact, New York had the second wettest June in 119 years, receiving 181% of normal rainfall levels. Record flooding occurred on the Oneida Creek in both Oneida and Madison Counties. The highest preliminary observed flood value was 17.23 feet on June 28, 2013. The previous record was approximately 15.5 feet. Across the region, floodwaters washed out bridges and roads and caused significant personal property damage. A number of water rescues were performed throughout this span as individuals became stuck in rising waters in their cars and homes.²

Since July 2013, the effects of the storms have been well documented. Nevertheless, it is important to characterize the effects from the storms, and the impact on the land, the people, and the economy in order to understand the recovery needs for the community, and the projects identified by the Oneida NYRCR Planning Committee.

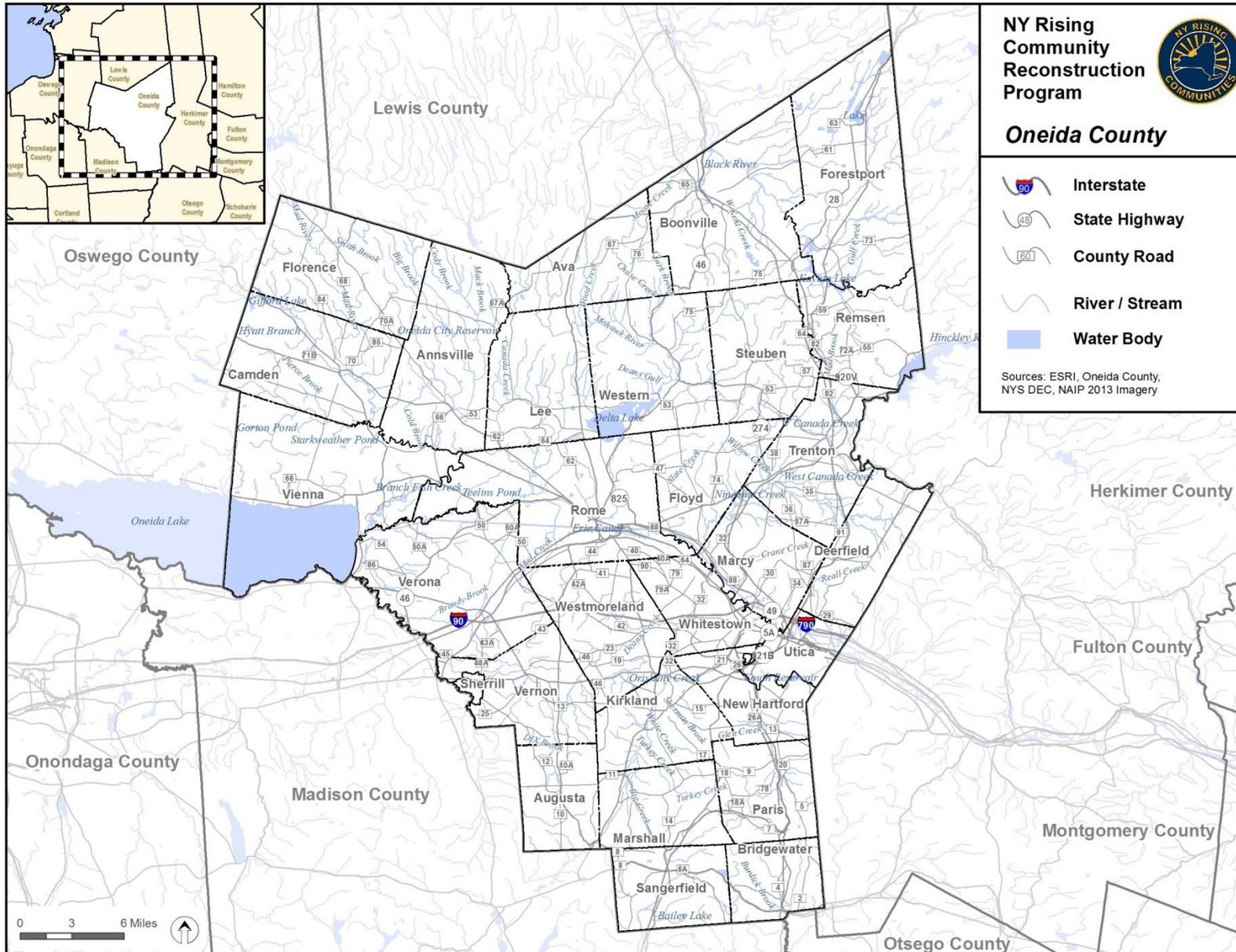
Storm Damage in Oneida County

On June 28, 2013, multiple communities in Oneida County were affected by approximately six inches of rain in the early morning hours. Across the County, the ground was already saturated from the previous month's persistent rains and it could not accept the downpours that were unleashed from June 26 to July 4, 2013. The stormwater surged over the land to the already swollen creeks. The tremendous volume of water flowing at a high velocity easily loosened, undercut, and eroded the waterlogged soils and stabilization structures that make up Oneida County's creek banks.

The bulk of the damage in Oneida County was located south of the New York State Thruway where the record flooding quickly undid major repairs to the creeks that the County had undertaken following the 2011 flooding. Torrents of water dislodged large stones used for creek bank armoring and carried them downstream like pebbles. Trees and other debris were caught in bridge piers or clogged culverts, leaving the floodwaters with nowhere to go but over roads and into properties. The power of the water was so tremendous that many culverts and bridges were damaged and a few were completely washed away.

The Oriskany Creek and Big Creek affected localities of Sangerfield, Waterville, Augusta, Marshall, Kirkland, Clinton, Westmoreland and Whitestown as well as the Village of Oriskany. The Sauquoit Creek and Mud Creek affected the municipalities of Paris, Clayville, New Hartford Town and Village, New York Mills, Yorkville, Whitesboro and Whitestown.

The map below displays Oneida County and the major waterways that were impacted by the Summer 2013 flooding.





Many residents awoke to find bridges washed out, dams breached, roads impassable, and several inches of water in their homes and businesses. Oneida County Emergency Services reported that at least 20 boat rescues had to be conducted for residences completely engulfed by rising waters. Municipal officials throughout Oneida County spent wakeless hours keeping close track of the damage caused by the unprecedented volume of water surging through their communities. Municipal stormwater and wastewater treatment plants and pump stations were overwhelmed with the floodwaters and could not keep up with the inflow. Hamilton College's drinking water supply failed when a creek bank in Clinton collapsed, taking part of the water main with it.

The floodwaters rose unexpectedly and quickly, sometimes stranding drivers who did not realize the depths of flooding on the roads. Residents of two mobile home parks had to be evacuated as several are located in low-lying areas immediately adjacent to creeks. A mobile home park in Vernon was almost entirely destroyed and in Oneida Castle, 14 of 18 mobile homes were condemned. Residents of the Presbyterian Home and Services, a nursing home in New Hartford, were evacuated and the facility lost 15 apartments to flood damage. Businesses in the Big Apple Plaza in the Town of New Hartford and Washington Mills were devastated by the flooding of Mud Creek and Sauquoit Creek. Clinton residents had been inundated only days before and had to face additional, compounding damages caused by torrential rains and flooding. The Clinton and Whitesboro School Districts suffered extensive damages to their educational facilities, particularly Whitesboro's Parkway Middle School adjacent to the Sauquoit Creek. It was worse for the properties on Gardner Street in the Village of Whitesboro where severe repetitive damages were documented.



Above: Overwhelmed sewer infrastructure in a residential area.

According to NOAA data, sample impacts reported during just one day of the flooding on June 28, 2013 included:

- Chadwicks: Major flash flooding of the Sauquoit Creek caused damage to and subsequent closure of Oneida Street in Washington Mills.³
- Clinton: There was significant flooding of village roads, including up to four feet of water on College Street. Oriskany Creek, Sherman Brook and other un-named streams were all out of bank in the village.⁴
- Yorkville: Major flooding occurred along Sauquoit Creek with water surrounding homes in the Whitesboro area.⁵
- Durhamville: Record flooding occurred on the Oneida Creek with significant damages to the City of Oneida and surrounding areas. A makeshift levee was overtopped and breached by flood waters. The crest on the river gauge was 17.23 feet which occurred at 10:45 AM.⁶
- Sconondoa: Record flash and river flooding caused the evacuation of a large trailer park in Oneida Castle.⁷



Daily Disaster Awareness Reports released during and after the floods reported that 290 people were evacuated in Oneida County.⁸ In four Oneida County municipalities, 44 homes were destroyed, 75 homes incurred major damage, and greater than 750 homes had minor damage. In addition, 50 multi-family residents or apartments were condemned.⁹

Floodwaters and standing water after the storms led the Oneida County Health Department to urge residents to take precautions when dealing with floodwater. These included boiling water to avoid drinking contaminated water, keeping clear of ponding water and downed power lines, and warnings related to potential waterborne illnesses.¹⁰ A multitude of other local and State agencies deployed resources to help with everything from search and rescue to assistance with distribution of water, MREs (meals ready to eat), and public assistance checks to keep people going during this most difficult time.



Above: Eroded creek bank as a result of the Summer 2013 flooding.



Above: A flooded backyard in the Royal Brook neighborhood at Mud Creek.

When the floodwaters subsided, major stream bank erosion could be seen in all streams from Vernon to Paris and from Bridgewater to Whitesboro, including the Sauquoit, Oriskany, Mud, and Big Creeks and their tributaries. However, much of the damage was not immediately evident and has slowly emerged in the months since the Summer 2013 flooding. The creek bank erosion has undercut roadways and pipelines, evidence of which is surfacing as roadway shoulders settle and crack and pipelines fail. In some cases, the flooding accelerated existing problems: on Bleachery Place in New Hartford sinkholes are developing in the backyards of residents whose homes back onto the creek as a retaining wall is slowly being undermined.



b. Recovery Efforts

New York State Homes and Community Renewal (HCR) administered the Mohawk Valley and 2013 Upstate Recovery Program created by Governor Cuomo. The \$29.8 million Recovery Program was created to provide assistance to homeowners, small business owners, and farmers who were victims of the floods. It was intended to provide immediate recovery assistance to victims, and to address gaps in disaster related coverage, such as insurance. The program is a coordinated effort between the NYS Department of Homeland Security and Emergency Services, HCR, and the NYS Department of Agriculture and Markets.

As of March 2014, Oneida County’s disbursements from this program total nearly \$7 million, as presented in the table below.

Mohawk Valley and 2013 Upstate Flood Recovery Program in Oneida County		
Category	Checks Issued	Total Amount
Homeowners	485	\$4,945,096.60
Renters	22	\$85,553.97
Small Businesses	62	\$1,394,090.68
Farms	15	\$440,672.21
Total	145	\$6,865,413.46

Source: NYS HCR, March 2014

In the weeks after the storms, Governor Cuomo deployed local flood assistance teams to help residents apply for storm-related financial assistance. Four such centers opened in July 2013: one each in Oneida, Herkimer, Madison, and Montgomery counties. The center in Oneida County was based out of the New Hartford Fire Department at 4 Oxford Road in New Hartford. At the center, State and County representatives were available to help local residents

apply for flood assistance, answer questions, and facilitate home inspections that would lead to grants and benefits.

At the local level, members of the public reported that the Voluntary Organizations Active in Disaster (VOAD) and the Herkimer Oneida Voluntary Organizations Active in Disaster (HOOAD) were very active coordinating volunteers and the collection of donations, feeding and sheltering families in the affected areas, and distributing services and goods to the areas that needed it most. These organizations included the United Way, Mohawk Valley Red Cross, and Salvation Army. The American Red Cross operated three shelters in Oneida County, including at the Oneida YMCA and Mohawk Valley Community College. These organizations also provided clean-up kits, food, and water via mobile units and roving canteens. By August 15, 2013, the United Way of the Valley and Greater Utica Area had collected \$188,000 of pledges.¹¹

The State has also been proactive about storm preparedness via early warning systems and use of the State’s canal system. The canal system runs through Oneida County as well as a number of other counties affected by the Summer 2013 flooding. This inland waterway spans upstate New York connecting the Hudson River with Lake Champlain, Lake Ontario, Cayuga Lake, Seneca Lake and Lake Erie by way of the Niagara River. In order to improve the resiliency of the Canal System, the New York State Canal Corporation worked with the Federal Emergency Management Agency (FEMA) to design movable dams that will cost \$28 million, and an *Upstate Flood Warning System* that will cost \$8.5 million, a total cost of \$36.5 million. The *Upstate Flood Warning System* was approved by FEMA in November 2013, and is scheduled for completion in 2015. The project covers 13,000 square miles in 27 upstate counties (the Oswego, Mohawk, and Upper Hudson River Basins).



The State also announced it would spend \$834,000 helping communities clean debris from several streams that flooded in Herkimer and Oneida Counties. This is in addition to the State providing New York State Department of Environmental Conservation (NYS DEC) "stream experts" to advise local communities on the best ways to improve water flow in Sauquoit Creek, Oriskany Creek, Mud Creek, and Big Creek.

In addition, Governor Cuomo announced \$500,000 would be allocated to undertake comprehensive watershed assessments of several high flood risk streams, including Sauquoit Creek, Oriskany Creek, Mud Creek, and Big Creek. To complete these assessments, the New York State Department of Transportation (NYS DOT), in cooperation with NYS DEC, contracted with an engineering firm to prepare a detailed report for each of these sub-basins that will identify the cause(s) of flooding and include specific recommended projects for reducing flood water elevations in the communities most affected by flooding. Project recommendations will be based on sound stream science and hydraulic engineering to ensure that the most effective projects are identified. These reports are expected to be released in May 2014. As new information becomes available, it will be incorporated into the NYRCR Countywide Resiliency Plan.



Above: Bridge at Oriskany Blvd. Below: Parkway Middle School in the vicinity of the Sauquoit Creek and Oriskany Boulevard during the Summer 2013 flooding.





2. Public Input

A public open house was held March 24, 2014 at the Whitesboro Fire Department. The purpose of the open house was to introduce members of the public to the NY Rising Community Reconstruction (NYRCR) Program for Oneida County, and to seek input on the recovery projects that the Planning Committee had identified for inclusion in this report. Several different stations were set up, and each person who attended was greeted at the door so that the NYRCR Program could be explained, as well as the format for seeking his or her input on this initiative.

Stations at the Open House included:

- A presentation for the public to watch that provided background on the overall NYRCR Program.
- Display boards that identified potential recovery projects. These boards included a photo and brief description of each project. The New York State Department of State (NYS DOS), planning consultants, and Oneida County Planning Committee members were available to answer questions and seek input on these projects, as well as any other recovery efforts the public thought should be considered.
- An opportunity for the public to contribute to the development of a vision statement for making the County stronger and more resilient moving forward.
- A map of the county that identified community assets that require protection from future storm events and an opportunity for the public to add any assets that may have been missed.

In addition to the one-on-one interaction at the different stations, the public was also invited to provide written feedback on the proposed recovery projects or to submit additional projects that they wanted to be considered by the Committee.

Additional opportunities for public input will be provided. Members of the public may also attend and listen to Planning Committee meetings, and may access planning documents on the NY Rising website at <http://stormrecovery.ny.gov/nyrccr/community/oneida-county-communities>.



Above: A member of the public points out flooding to a Committee member at a public event.



3. Project List

Source of Project Ideas

Municipal leaders from the communities affected by the Summer 2013 storms are aware of what still needs to be done as part of their recovery efforts. The NYRCR Oneida County Committee, with the assistance of the planning consultants, actively sought out information on projects that are still needed from municipal leaders, as well as County officials. Some of these projects are already designed and ready to go if funding is secured. Others need to be designed and permitted prior to construction, and require funding for all elements. A few projects are being primarily funded by FEMA Public Assistance and the community is seeking the required 25% local match. Additional projects will be considered over the coming months, as part of the NYRCR Countywide Resiliency Plan.

The following table presents all of the proposed projects and brief project descriptions. These descriptions are expanded upon in Section 4. "Project Profiles." Projects proposed by the Committee on the following pages were also reviewed by New York State agencies to help ensure coordination efforts in the future.

Storm Recovery Projects for Oneida County			
Project ID	Project	Brief Description	Estimated Cost
P1	North Rd/ Knoxboro Rd Culvert Upgrade and Bank Stabilization	The summer flooding of 2013 damaged a culvert on a tributary to the Sconondoa Creek near the intersection of North Road and Knoxboro Road in the Town of Augusta, causing erosion of the bank upstream and flooding of nearby houses. This project would fund the clearing of debris and replacement of the culvert with one of appropriate size, as well as stabilization of the bank upstream from the culvert.	\$300,000
P2	Grant Road Bridge Upgrade	Grant Road Bridge, which crosses White Creek, a tributary to Oriskany Creek, was destroyed in the Summer 2013 flooding on Grant Road in the Town of Kirkland. This project would upgrade the bridge with one of appropriate size to allow for transportation and water flow.	\$43,750



Storm Recovery Projects for Oneida County (cont'd)			
Project ID	Project	Brief Description	Estimated Cost
P3	College Street Bridge Creek Realignment and Bank Stabilization	Immediately upstream of the College Street Bridge in the Town of Kirkland on the western bank, destabilization of rock riprap and erosion, caused by the Summer 2013 flooding, has resulted in sedimentation that is causing the creek current to flow predominantly and rapidly under the eastern half of the bridge, causing severe erosion downstream. This project would stabilize the bank upstream of the bridge, clear debris to realign the creek to its previous alignment, and conduct bank stabilization as necessary downstream of the bridge to stem erosion.	\$300,000
P4	Pillmore Drive Embankment	Due to the severe flooding in late June/early July of 2013, the bank along a spillway in a creek bed adjacent to Pillmore Drive in the Town of Lee was washed out. This project would secure the embankment through excavation of debris, stabilization of the bank, and installation of rock riprap.	\$40,000
P5	Bridge, Culvert, and Earl Manor Road Improvements	The Summer 2013 flooding created a deluge in the small creek that runs under Earl Manor Road in the Hamlet of Deansboro, in the Town of Marshall. The volume and velocity of the water washed out half of the culvert, taking with it half of the bridge, roadway, and guardrails. This project would improve the bridge and roadway with appropriate long-term materials and methods. While the road is torn up, the Town would also like to install French drains to improve drainage and mitigate future flooding from the creek.	\$100,000
P6	Sauquoit and Palmers Creek Stabilization and Armoring, Multiple Locations	The Town of New Hartford has an urgent need to complete bank stabilization and improvements to three locations on the Sauquoit Creek and one on Palmers Creek that were damaged by the Summer 2013 Flooding: Along the Sauquoit Creek at Hand Place, Hillside Gardens, and from Kellogg Road to the Gingerbread Bake Shop and along Palmers Creek from Oneida Street to the creek's outfall into Sauquoit Creek.	\$775,000



Storm Recovery Projects for Oneida County (cont'd)			
Project ID	Project	Brief Description	Estimated Cost
P7	Washington Mills Park Bank Stabilization and Improvements	The stream bank adjacent to Washington Mills Park in the Town of New Hartford, which includes an athletic park and fishing pier with handicap access, was severely destabilized by the Summer 2013 flooding. This project would take measures to stabilize the bank, expand the floodplain, restore the flow of the creek to its original course, and reconstruct the damaged fishing access point.	\$20,000
P8	Bleachery Place/ Brookside Mobile Manor Creek Restoration - Phase 1	The homes on Bleachery Place that back onto the Sauquoit Creek have a 10-foot tall retaining wall that protects the properties from eroding or collapsing into the creek below. Long-term degradation of the wall was significantly worsened from the Summer 2013 Flooding as the velocity of the swift waters undercut the retaining walls. This project would fund the reconstruction of the wall to protect what remains of the residential properties and conduct any associated stabilization of the bank in front of the retaining wall as needed.	\$450,000
P9	Paris Dam Removal and Bank Stabilization	The Paris Dam, originally built in the 1800s, breached as a result of the volume of water and sediment carried to Sauquoit Creek in the Summer 2013 flooding. This project in the Town of Paris would fund the removal of the dam and storm debris, realignment of the creek (as recommended by the U.S. Fish and Wildlife Service), and bank stabilization.	\$300,000
P10	Removal of Seven Dams on Sauquoit Creek	Several low head dams can be found along the Sauquoit Creek in varying states of disrepair, a remnant of the factories and mills that previously lined the waterway. These dams pose a flood risk to adjacent properties by holding water back, as well as an environmental hazard if their failure led to the uncontrolled release of sediments downstream. This project would fund the removal of seven dams and proximate bank restoration along Sauquoit Creek.	\$2,100,000



Storm Recovery Projects for Oneida County (cont'd)			
Project ID	Project	Brief Description	Estimated Cost
P11	Box Culverts and Retention Pond Improvements in Sauquoit	The Summer 2013 flooding caused Tuckers Creek and two unnamed creeks to flood at their crossings with Oneida Street in the Hamlet of Sauquoit, Town of Paris. The massive deluge created large plunge pools on the outlet end of three concrete box culverts and caused extensive erosion of the creek bank below the roadway. In the same area, the torrents of water caused extreme erosion on the upstream side of a retention pond in a housing development. This project would fill in the plunge pools with heavy stone fill and stabilize the banks of the creeks and retention pond.	\$200,000
P12	Fraser Road Culvert Upgrades in Steuben	The flooding and severe storms during the summer of 2013 caused significant damage to Fraser Road in the Town of Steuben. Three culverts in three separate locations along a span of about 1,900 feet along Fraser Road were damaged beyond repair and will have to be upgraded. This project would fund the upgrade of the three culverts with larger ones to help prevent future clogging and flooding. This project would also fund some bank stabilization as needed with rock riprap.	\$120,000
P13	North Utica Park Bank Stabilization	The banks of an unnamed creek were severely destabilized by the Summer 2013 flooding adjacent to North Utica Park and several residential properties, resulting in erosion, destabilization of the subbase, and loss of several trees. This project, located in the City of Utica, would restore and stabilize the banks to prevent further erosion.	\$300,000
P14	Skinner Road Bridge Upgrade	The Skinner Road Bridge in the Town of Vernon, which crosses Deans Creek, was significantly damaged in the Summer 2013 flooding and remains closed to traffic. This project would upgrade the bridge with one of appropriate size to allow for transportation and water flow and improve the adjacent retaining wall.	\$62,500
P15	Main Street Bridge Storm Sewer Improvements	At the Main Street Bridge in Whitesboro, where a storm sewer line meets the creek, the elevated floodwaters damaged the pipe as well as backed the stormwater up into Main Street. This project would fund cleaning of debris that washed into the storm sewer system, realignment and elevation of the pipe to mitigate future flooding and backups, and other associated improvements.	\$100,000



Storm Recovery Projects for Oneida County (cont'd)			
Project ID	Project	Brief Description	Estimated Cost
P16	Oriskany Creek Dam Removal	A dam on Oriskany Creek adjacent to Valley Road in the Village of Oriskany, Town of Whitestown, causes water to back up behind it and raises surface water levels to an elevation that can sometimes overflow the creek's banks. This project would fund the removal of the dam and proximate bank restoration along Oriskany Creek.	\$500,000
P17	Sauquoit Creek Bank Stabilization	This project would include bank stabilization in three key locations that were damaged severely in the Summer 2013 flooding, employing a mixture of techniques using vegetation, rock riprap, in-stream rock structures, and other stabilization measures. The project locations include the Paris Highway Garage site in Paris, Williams Tool site in New Hartford, and Dunham Park site in Whitestown.	\$689,000
TOTAL			\$6,400,250



4. Project Profiles

The following projects are a compilation of recovery projects that were identified by the Oneida County Committee over the course of the planning process. These projects, outlined below, were those that the Committee considered most crucial for their recovery from the summer 2013 flood events. The projects have not been prioritized and appear in alphabetical order by municipality.

All of the projects presented in this plan could be implemented within 12 to 24 months of project approval. However, this implementation timeline would depend on whether the project lead was able to start the project at the beginning of construction season, which generally runs between May and October. After October, the project lead would not be able to continue work during the winter months due to weather conditions. There is a limited window to work in certain streams and creeks due to the pending expiration of general work permits granted by the New York State Department of Environmental Conservation (NYS DEC) after the Summer 2013 flooding. Additional implementation considerations would have to be made depending on the type of funding provided by the NYRCR program. If the funding were in the form of a reimbursement, the project lead would most likely need to acquire a bond or other low-interest loan to complete the project first, which is anticipated to add three to six months to the overall project timeline.



Above: Flooding at Big Apple Plaza in New Hartford.

Below: Flooding of auto dealership on Commercial Drive in Whitestown.





P1

North Road/Knoxboro Road Culvert Upgrade and Bank Stabilization Town of Augusta



Above: Project location map

Project Description

In the Town of Augusta at the intersection of North Road and Knoxboro Road is a culvert in a small creek (Standards “C” tributary¹² to the Sconondoa Creek) that was badly damaged by the Summer 2013 flooding. Debris from upstream bank erosion, the destabilization of which was also caused by the Summer 2013 flooding, clogged the culvert and caused the creek to overflow so severely that at least two nearby homes were condemned due to flood damage. The culvert failures and the extreme velocity of the resultant flooding also damaged the highway, which had to be repaved following the event, ripped out residents’ driveways, and flooded basements. This project would fund the clearing of debris and the installation of an upgraded culvert, as well as stabilization of the bank upstream from the culvert.

Project Location

A culvert that runs under North Road, which is an Oneida County road, near the intersection with Knoxboro Road in the Town of Augusta, as well as locations upstream for bank stabilization.

Estimated Costs

The total estimated cost for this project of \$300,000 was based on comparable project costs and includes \$100,000 for culvert upgrade and \$200,000 for debris clearing and bank stabilization for approximately 400 linear feet upstream.

Project Benefits

The culvert upgrade, once implemented, would protect an estimated 10 homes in the vicinity of the culvert, as well as a single-engine firehouse and a few commercial establishments. The upstream bank stabilization would benefit all downstream areas by minimizing the sedimentation and associated hazards that result from the upstream erosion.

Implementation Timeline

This project could be implemented within 6-12 months from project approval depending on design and permitting.

Project Status

The project is in the conceptual/planning phase and would require engineering design and permit approvals prior to construction. The project falls under the jurisdiction of the U.S. Army Corps of Engineers (USACE) and requires authorization and permitting from that agency. If permitted by USACE, the project will require review and authorization under an individual Water Quality Certification.

Project Lead(s)

The anticipated project leads are the Town of Augusta and Oneida County.



P2

Grant Road Bridge Upgrade Town of Kirkland



Above: Project location map

Project Description

Grant Road Bridge, which crosses White Creek (Standards “C(T)” tributary¹³ to Oriskany Creek), was destroyed in the Summer 2013 flooding on Grant Road in the Town of Kirkland. The debris from the bridge’s collapse clogged the creek and exacerbated the creek’s flooding of nearby homes. The road has yet to reopen and residents face the hardship of driving several miles out of the way to access the Town, and face much longer response times by critical emergency services. This project would replace the bridge with one of appropriate size to allow for transportation and water flow. The Town is currently in negotiations with FEMA for the total bridge replacement cost of \$175,000.

Project Location

Grant Road approximately 500 feet east of the intersection with State Route 12B, in the Town of Kirkland.

Estimated Costs

The total project cost to upgrade the bridge is \$175,000, which is based on project costs negotiated between the Town and FEMA. This includes procurement of the bridge components, assembly, installation, and testing. The Town is negotiating with FEMA for the bridge replacement, which would require a 25% local cost share. This project would fund the local 25% cost share, or \$43,750.

Project Benefits

The project, once implemented, would reopen Grant Street and reconnect the residents east of the bridge to the town and to emergency services.

Implementation Timeline

This project could be implemented immediately within three months of project approval and NYS DEC authorization.

Project Status

The bridge components for the upgrade have been procured by the Town. The materials require assembly and installation for completion of the project.

Project Lead(s)

The anticipated project lead is the Town of Kirkland.



Above: Grant Road Bridge was completely washed away in the Summer 2013 flooding.



P3

College Street Bridge Creek Realignment and Bank Stabilization Town of Kirkland



Above: Project location map

Project Description

In the Town of Kirkland is a bridge on College Street that crosses Oriskany Creek. Upstream of the bridge on the western bank, destabilization of rock riprap and erosion, caused by the Summer 2013 flooding, has resulted in sedimentation that is causing the creek current to flow predominantly and rapidly under the eastern half of the bridge. This increased velocity of flow on the eastern side has resulted in erosion to the eastern bank downstream of the bridge, where a house has lost significant land area to erosion. The summer flooding also inundated the downstream homes on Cleveland Place and eroded the bank beneath a water main that serves Hamilton

College, causing it to fail. The water main has since been replaced and moved inland. However, the downstream erosion also threatens a sewer pumping station adjacent to the creek on Cleveland Place. This project would stabilize the bank upstream of the bridge and clear debris to realign the creek to its previous alignment.¹⁴



Above: Destabilized rock riprap and resulting sedimentation below.

Project Location

College Street near the intersection with Cleveland Place in Kirkland.

Estimated Costs

The total estimated cost for this project of \$300,000 was provided by the Town of Kirkland and includes planning and design, permitting, and construction for bank stabilization upstream and downstream of the bridge and realignment of the creek to reduce further downstream erosion.

Project Benefits

The project, once implemented, would benefit three residences and two commercial establishments immediately adjacent to the bridge



on College Street, a sewer pumping station on Cleveland Place and 14 residences on that street; and the Hamilton College water main.

Implementation Timeline

This project would be implemented within 6-12 months from project approval depending on design and permitting.

Project Status

The project is in the conceptual/planning phase and would require engineering design and permit approvals prior to construction. Bank stabilization techniques should be developed with input from USACE, the U.S. Fish and Wildlife Service (USFWS), NYS DEC, NYS Soil and Water Conservation District (NYS SWCD), and Oneida County Soil and Water Conservation District.

Project Lead(s)

The anticipated project lead is the Town of Kirkland.



Above: Sewer pumping station on Cleveland Place.

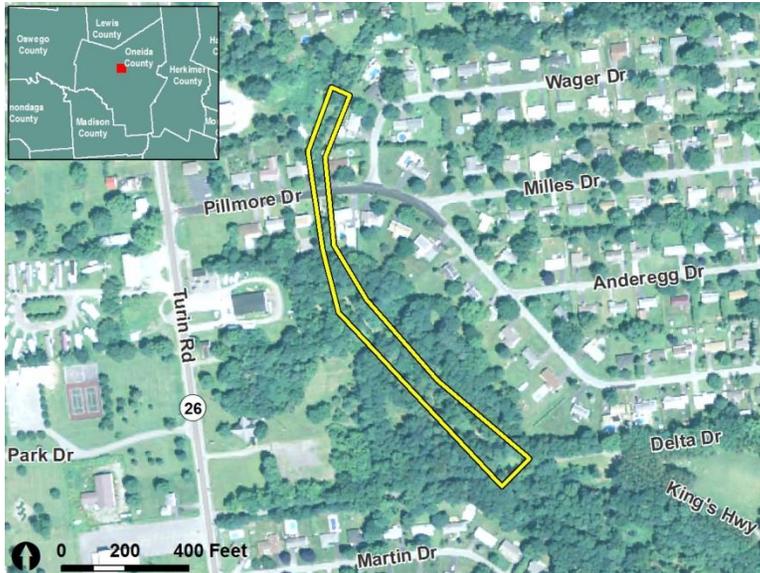


Above: Severe erosion of creek bank downstream due to new creek alignment following Summer 2013 flooding.



P4

Pillmore Drive Embankment
Town of Lee



Above: Project location map

Project Description

Due to the severe flooding in late June/early July of 2013, the bank along a spillway in an unnamed creek bed adjacent to Pillmore Drive in the Town of Lee was washed out. This project would secure the embankment through excavation of debris, stabilization of the bank and installation of rock riprap for approximately 50 to 80 linear feet.

Project Location

Creek adjacent to Pillmore Drive in the Town of Lee.

Estimated Costs

The total estimated cost for this project of \$40,000 was provided by the Town of Lee and includes equipment rental, materials (rock riprap), excavation, and labor for the stabilization of the creek bank.

Project Benefits

The project, once implemented, would help to mitigate future flooding of the residential neighborhood adjacent to the creek. The stabilization of the bank also benefits the functionality of the creek downstream and downstream assets in the creek's vicinity.

Implementation Timeline

This project would be implemented within 6-12 months from project approval depending on design and permitting.

Project Status

The project is in the conceptual/planning phase and would require engineering design and permit approvals prior to construction. This creek is a tributary to Delta Lake and categorized and regulated as Standards "A" water;¹⁵ bank stabilization designs must be submitted to NYS DEC for review.

Project Lead(s)

The anticipated project lead is the Town of Lee.



Right: Culvert on Pillmore Drive.



P5

Bridge, Culvert, and Earl Manor Road Improvements
Town of Marshall



Above: Project location map

Project Description

The Summer 2013 flooding created a deluge in the small, unnamed creek (Standards “C” tributary to Oriskany Creek) that runs under Earl Manor Road in the Hamlet of Deansboro, in the Town of Marshall. The volume and velocity of the water washed out half of the culvert, taking with it half of the bridge, roadway, and guardrails. The creek flooded Earl Manor Road with a reported 2 feet of water, inundating adjacent neighbors' properties, flooding garages, seeping into doorways and low windows, and leaving two feet of sediment and debris on the yard of the neighbor immediately adjacent to the

creek. The flooding also tore up about 75 to 100 feet of asphalt on Earl Manor Road from the bridge heading north toward the cul-de-sac. The Town conducted emergency repairs to make the road and bridge passable for residents and emergency services. The patchwork repairs were done with cold patch pavement and were not intended to be long-term fixes. This project would improve the bridge and roadway with appropriate long-term materials and methods. While the road is torn up, the Town would also like to install French drains to improve drainage and mitigate future flooding from the creek.

Project Location

Bridge on Earl Manor Road in the Hamlet of Deansboro.



Above: The culvert failure and subsequent road failure and flooding occurring on Earl Manor Road on June 28, 2013.



Estimated Costs

The total estimated cost for this project of \$100,000 was provided by the Town of Marshall and includes planning and design, permitting, improvements to the culvert, bridge, and roadway, and installation of French drains.

Project Benefits

The project, once implemented, would benefit 13 residences on Earl Manor Road. The residences will have improved drainage, reduced risk to future flooding, and reliable access for emergency services.

Implementation Timeline

This project would be implemented within 6-12 months from project approval depending on design and permitting.

Project Status

The project is in the conceptual/planning phase and would require engineering design and permit approvals prior to construction. The project falls under the jurisdiction of USACE and requires authorization and permitting from that agency. If permitted by USACE, the project will require review and authorization under an individual Water Quality Certification.

Project Lead(s)

The anticipated project lead is the Town of Marshall.



P6

Sauquoit and Palmers Creek Stabilization and Armoring in Multiple Locations Town of New Hartford

Project Description

The Town of New Hartford has an urgent need to complete bank stabilization and improvements to three locations on the Sauquoit Creek and one on Palmers Creek that were damaged by the Summer 2013 flooding.

(1) Sauquoit Creek, Hand Place: The Town of New Hartford has worked to armor their sewer system against creek bank erosion that can destabilize and break the sewer infrastructure. Flooding undermined the armoring of a sewer pipe that crosses the Sauquoit Creek between Oneida Street and Hand Place. The velocity of the stormwater was so great that large boulders that armor the creek bank and line the cross veins were completely displaced. This has led to severe erosion of the creek bank and destabilization of the ground under and around the sewer line. The bank stabilization is also critical for the roadway, which is very close to the bank and has high potential for becoming destabilized as well. This project component would repair the damage and complete improvements to the bank and stabilization structures, including pinning of the stone armoring, and improve the bank stabilization design to better withstand future storm events. Pending the improved design, it may be estimated that approximately 200-300 linear feet of the bank requires stabilization.



Above: Sewer infrastructure adjacent to the creek.

Below: Project location map





(2) Sauquoit Creek, Hillside Gardens: Similarly, destabilization of the creek bank armoring along the Sauquoit Creek below the Hillside Garden housing development is leading to erosion of the bank and seriously threatening the housing development's sewer infrastructure. The creek bank was previously stabilized following 2011 flood events that broke the sewer line and resulted in the Town pumping sewage for eight months until the pipe could be repaired. The 2011 stabilization measures, however, did not include pinning the rock riprap to the creek bank; the unprecedented deluge in the Summer 2013 flooding undercut the armoring and the stone can be seen pulling away from the bank. This project component would repair the damage and implement improvements to the bank and stabilization structures, including pinning of the stone armoring, of approximately 200 to 300 linear feet.



Above: Hillside Gardens creek bank armoring that is pulling away from bank.



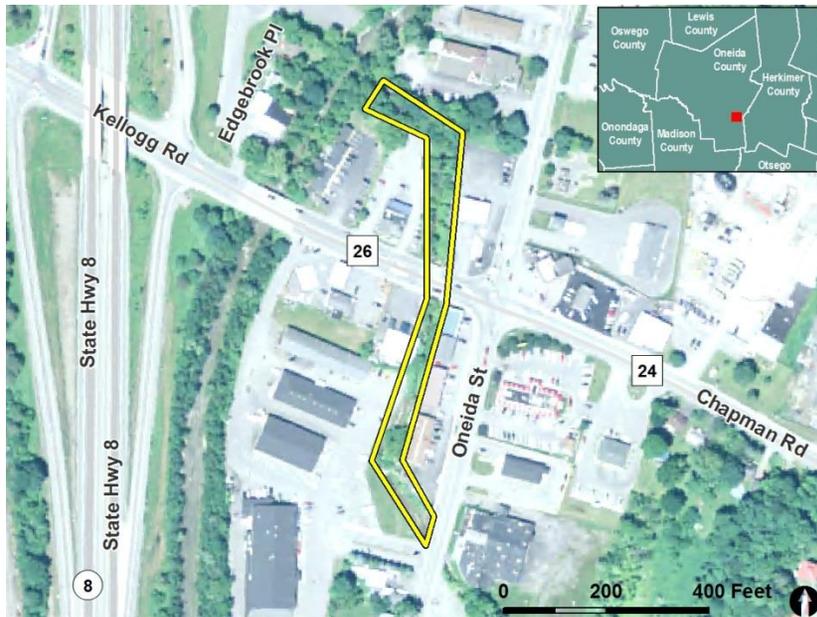
Above: Project location map

(3) Palmers Creek: The Fish and Wildlife Service, along with the Sauquoit Creek Basin Commission and the Town of New Hartford, walked the length of the Sauquoit Creek and major tributaries following the Summer 2013 flooding and recommended several areas for bank stabilization. The first phase is underway to stabilize the bank of Palmers Creek behind the Creekside Café. This project represents the second phase of the recommended project and is also located on Palmers Creek. Palmers Creek is a tributary to Sauquoit Creek that frequently floods the Hamlet of Washington Mills along Oneida Street where a dense collection of several commercial establishments are impacted. The banks of Palmers Creek were shored up several decades ago using an assortment of unsuited riprap material that has not held up over time. The long-term erosion was seriously exacerbated by the June/July 2013 flooding and loss of creek bank is threatening surrounding infrastructure and commercial properties. The flooding was exacerbated by the tremendous

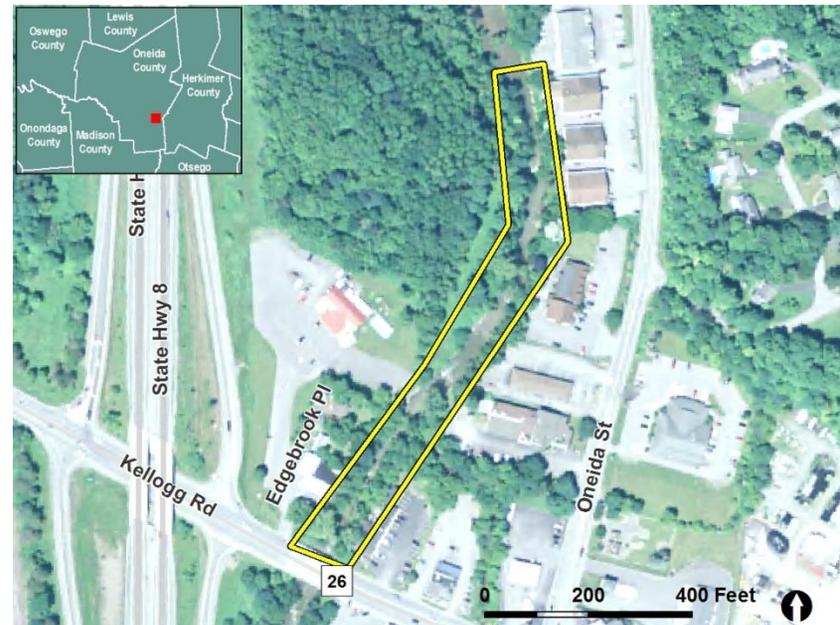


amount of debris that clogged the creek. This project would remove the debris created by the Summer 2013 flooding, stabilize the bank, where needed, along approximately 800 linear feet of bank, and armor the bank with appropriate materials to prevent further erosion.

Street. This project would repair and upgrade the retaining walls and stabilize the eroding creek bank to prevent further loss of sediment. The location of this site is just downstream from the intersection of Sauquoit Creek and Palmers Creek, which ties into the Palmers Creek phase 2 proposed project described above.



Above: Project location map



Above: Project location map

(4) Sauquoit Creek, Kellogg Road to Gingerbread Bake Shop: The Fish and Wildlife Service, Sauquoit Creek Basin Commission and the Town of New Hartford, recommended that bank stabilization occur on this near the intersection of Oneida Street and Kellogg Road to the Gingerbread Bake Shop in New Hartford. Approximately 600 feet of stream bank was severely undercut, which led to the collapse of retaining walls and shifting of the bank’s edge dangerously close to commercial properties along the eastern creek bank along Oneida

Project Locations

- Sauquoit Creek at Hand Place and Oneida Street
- Sauquoit Creek, Hillside Gardens
- Palmers Creek, Oneida Street & Kellogg Road
- Sauquoit Creek, Kellogg Road to Gingerbread House



Estimated Costs

The total estimated cost for this project of \$775,000, which was provided by the Sauquoit Creek Basin Intermunicipal Commission, includes \$150,000 for the Hand Place segment; \$100,000 for the Hillside Gardens segment; \$100,000 for the Palmers Creek segment; and \$425,000 for the Kellogg Road to Gingerbread Bake Shop segment. These costs include planning and design, permitting, and construction.

Project Benefits

The project, once implemented, would protect sewer infrastructure at Hand Place and Hillside Gardens, benefitting 350 apartments at Hillside Gardens and the adjacent apartment complex; mitigate flooding for dozens of commercial properties in Washington Mills along Oneida Street and Kellogg Road; protect access routes along Oneida Street and Kellogg Road; and generally mitigate creek bank erosion and downstream sedimentation.

Implementation Timeline

The Sauquoit Creek Basin Commission has a standing permit to complete creek bank stabilization in the Sauquoit Creek basin; because these projects are essentially repairs to existing infrastructure, they could be completed under this permit. These projects could, therefore, be designed and implemented within 12 months of project approval.

Project Status

The project is in the conceptual/planning phase and would require engineering design and permit approvals prior to construction.

Project Lead(s)

The anticipated project lead is the Town of New Hartford.



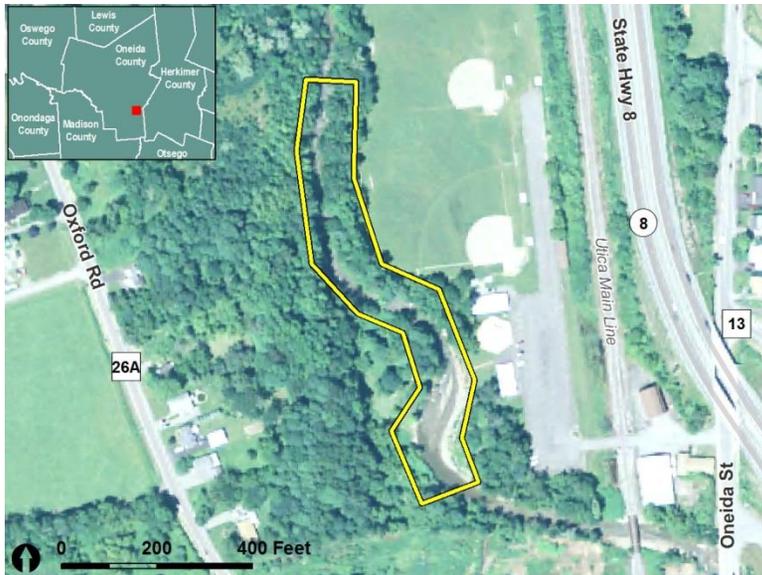
Above: Steep creek bank in foreground immediately behind Gingerbread Bake Shop.



P7

Washington Mills Park Bank Stabilization and Improvements
Town of New Hartford

creek to its original course, and reconstruct the damaged fishing access point. This project leverages in-kind services donated from the Sauquoit Creek Basin Commission and the local sportsmen's organization Trout Unlimited.



Above: Project location map

Project Description

The Sauquoit Creek bank adjacent to Washington Mills Park in the Town of New Hartford, which includes an athletic park and fishing pier with handicap access, was severely destabilized by the Summer 2013 flooding. The extreme increase in bed load deposition that resulted from the June/July 2013 flooding actually caused the creek to change course, moving the creek completely away from the fishing pier. The USFWS, in conjunction with Trout Unlimited under the Partners for Fish & Wildlife, has recommended that the creek be realigned to its previous course. This project would take measures to stabilize the bank, expand the floodplain, restore the flow of the

Project Location

Washington Mills Park, Oneida Street, Town of New Hartford

Estimated Costs

The total estimated cost for this project of \$20,000 was submitted by the Sauquoit Creek Basin Intermunicipal Commission and includes materials only for the bank stabilization, creek realignment, and fishing pier reconstruction. Additional expenses of this project that are not included in the cost are in-kind donations of design work from Trout Unlimited and labor from the Sauquoit Creek Basin Commission.



Above: The sign at the entrance to the park area.



Project Benefits

The project, once implemented, would protect a local natural and cultural resource and restore a recreational amenity that is used by the entire community, including residents with disabilities.

Implementation Timeline

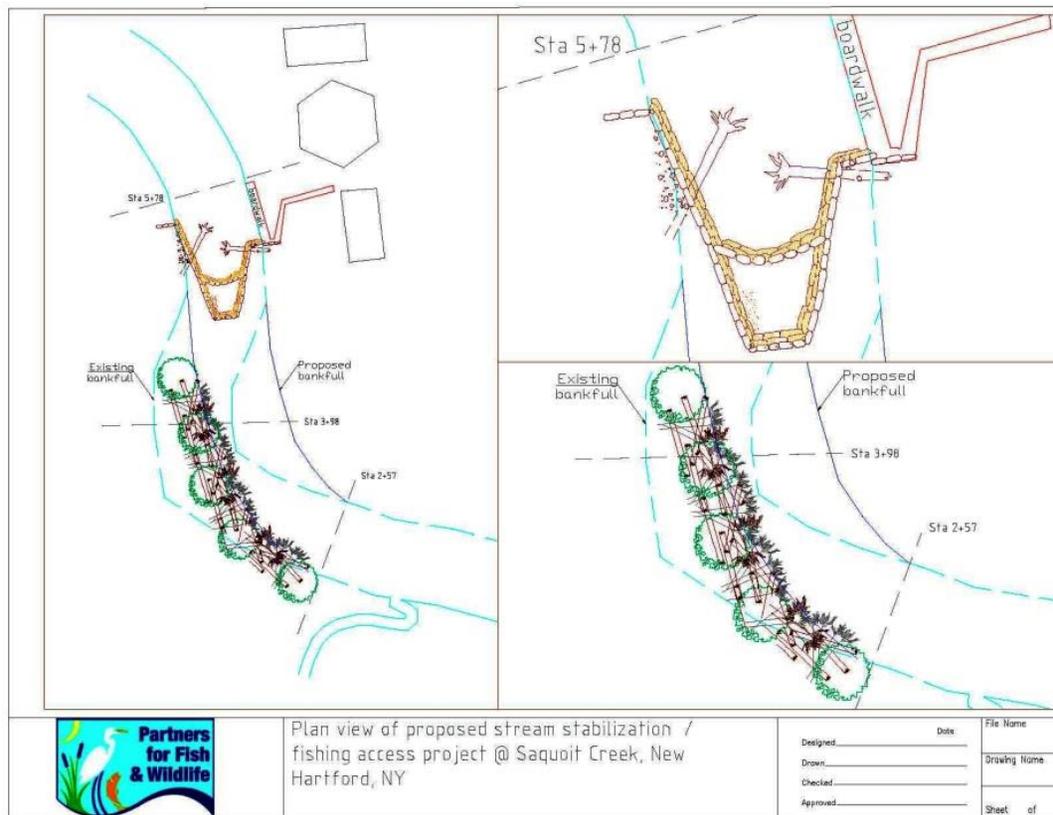
The Town has permits in hand for this project and it could be implemented within three months.

Project Status

Design is complete for this project and will undergo permitting review for the design developed by the USFWS and Trout Unlimited. The next step is procurement of a construction contractor.

Project Lead(s)

The anticipated project lead is the Town of New Hartford.



Above: Preliminary drawings of work to be completed at Washington Mills Park.



P8

Bleachery Place/Brookside Mobile Manor Creek Restoration – Phase 1 Town of New Hartford



Above: Project location map

Project Description

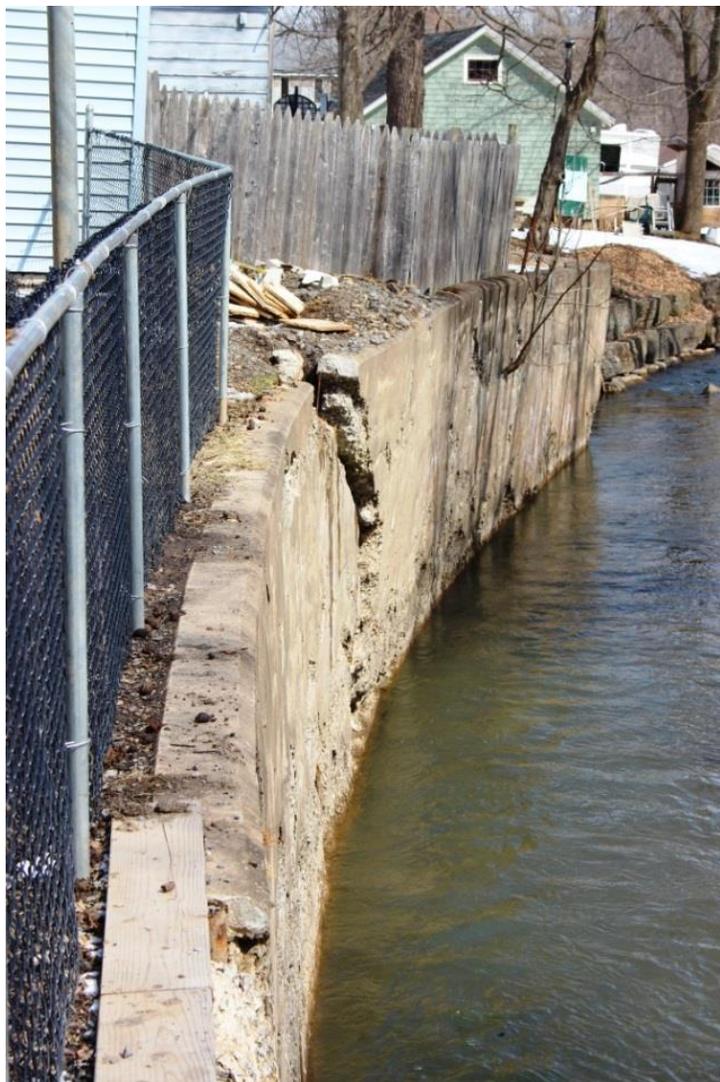
The section of the Sauquoit Creek between Bleachery Place and Oneida Street in the Town of New Hartford has been narrowed over time by development on both sides of the creek. The encroachment of residential development on either bank, which in some cases encroaches on the FEMA designated floodway,¹⁶ as well as undersized creek crossings at Bleachery Place and the railroad, have narrowed the channel and raised the water level to the point that flooding over the creek banks is a frequent occurrence, particularly of Brookside Mobile Manor on the eastern bank.

Across the creek, the homes on Oneida Street were built in the late 1800s as worker housing for the nearby mills. These homes back onto the creek with a 10-foot tall retaining wall that protects the properties from eroding or collapsing into the creek below. Long-term degradation of the wall was significantly worsened from the Summer 2013 flooding as the velocity of the swift waters undercut the retaining walls. Not only is the wall detaching from the banks and leaning into the creek, the eroded subbase beneath the wall is causing soil from the residential properties to leak out below the wall, creating dangerous sink holes in backyards. Following the Summer 2013 flooding, residents lost a swimming pool and a vehicle due to the degradation of the wall and sinkholes. The entire 250-foot length of retaining wall may be ready to cave in, potentially taking the ten houses with it.

It has been recommended that restoration of the creek's floodplain is the preferred long-term solution to the repetitive flood damages incurred by properties adjacent to Sauquoit Creek at this location. This floodplain restoration can be completed in a series of phases that would, over time, include improvements to the retaining wall, increasing the spans of the creek crossings at Bleachery Place and the railroad, removal of the dam just upstream of Bleachery Place, and widening of the floodplain. This project would fund Phase 1 of the creek restoration project and consists of repairs and improvements to the retaining wall along the Oneida Street residences that border the creek.

Project Location

Sauquoit Creek between Bleachery Place and Brookside Mobile Manor, Hamlet of Chadwicks, Town of New Hartford.



Above: Crack in retaining wall on Sauquoit Creek.

Estimated Costs

The total estimated cost for this project of \$450,000 was submitted by the Sauquoit Creek Basin Intermunicipal Commission and includes planning, design, permitting, and construction. The retaining wall is approximately 250 feet in length and 10 feet high.

Project Benefits

The project, once implemented, would protect approximately ten residential properties from collapsing into the creek.



Above: Brookside Mobile Manor adjacent to Sauquoit Creek.



Implementation Timeline

This project would require review and permit approval from NYS DEC.

Project Status

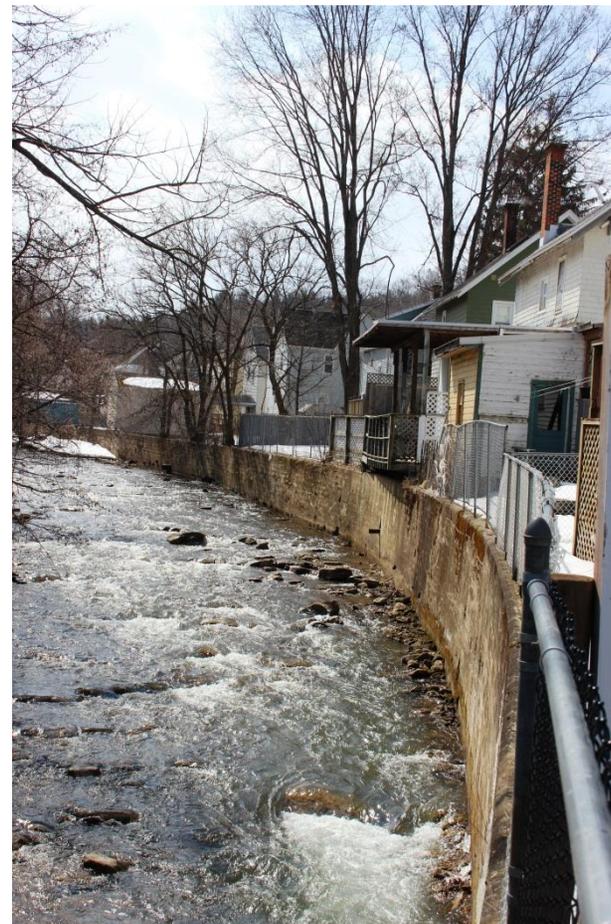
The project is in the conceptual/planning phase and would require engineering design and permit approvals prior to construction.

Project Lead(s)

The anticipated project lead is the Town of New Hartford.



Above: Fresh dirt indicating filled in sinkhole in backyard of Bleachery residence.



Above: Retaining wall behind Bleachery Place homes.



P9

Paris Dam Removal and Bank Stabilization Town of Paris



Above: Project location map

Project Description

The Paris Dam, originally built in the 1800s, breached as a result of the volume of water and sediment carried to Sauquoit Creek in the Summer 2013 flooding. The dam spans the creek between two structures at each bank. The sudden release of water and debris when the breach occurred sent a surge of water, rocks, and trees downstream, shifting the course of the creek, flooding State Route 8, and flooding Clayville’s water supply and treatment wells. The location of the breach has also resulted in a chute of water flowing rapidly toward a downstream private property and causing

significant erosion. Phase 1 of this project, designed in conjunction with USFWS is already underway and entails repairs to creek banks upstream. This project would fund Phase 2 including removal of the dam and storm debris, realignment of the creek (as recommended by the Fish and Wildlife Service), and bank stabilization.

Project Location

Breached dam on the Sauquoit Creek near State Route 8 and Latus Road in the Town of Paris.

Estimated Costs

The total estimated cost for this project of \$300,000 was submitted by the Sauquoit Creek Basin Intermunicipal Commission and includes design, engineering, and construction. The cost is subject to change if it is found that impounded sediment from the dam is contaminated and requires specialized removal.



Above: Paris Dam breach and bedload sedimentation.



Project Benefits

The project, once implemented, would restore the natural alignment of the creek and reduce flooding and erosion of private property immediately downstream of the dam; help to protect State Route 8 as an access route; help to reduce erosion and destabilization of the downstream berm on which the railroad tracks run; and minimize flooding and potential contamination of the downstream Clayville water supply and treatment system.

Implementation Timeline

This project would be implemented within 12 months of project approval depending on design, permitting, and environmental testing.

Project Status

The Sauquoit Creek Basin Commission, in coordination with USFWS, decided on the concept to remove the dam and realign the creek. This portion of the project is conceptual and requires planning and design. The design will complement the Phase 1 work that is currently being designed for bank stabilization work upstream. Dam removal will require a design that withstands the 100-year storm event, certification by an engineer, and review by NYS DEC Dam Safety Unit.

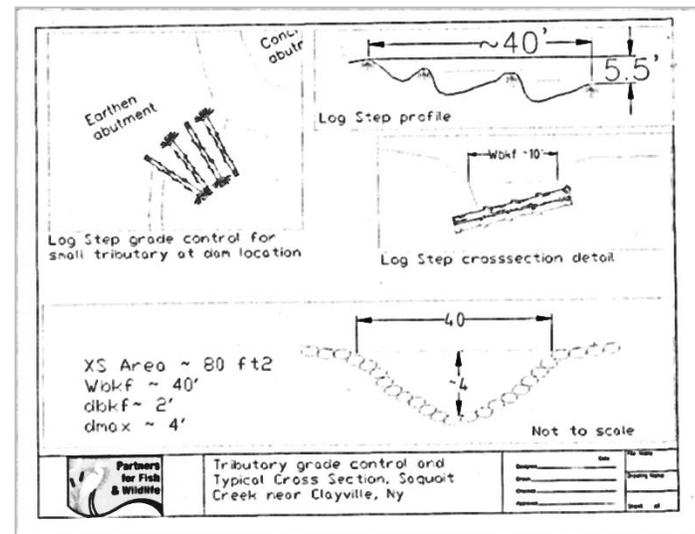
Project Lead(s)

The anticipated project lead is the Town of Paris.



Above: Paris Dam breach.

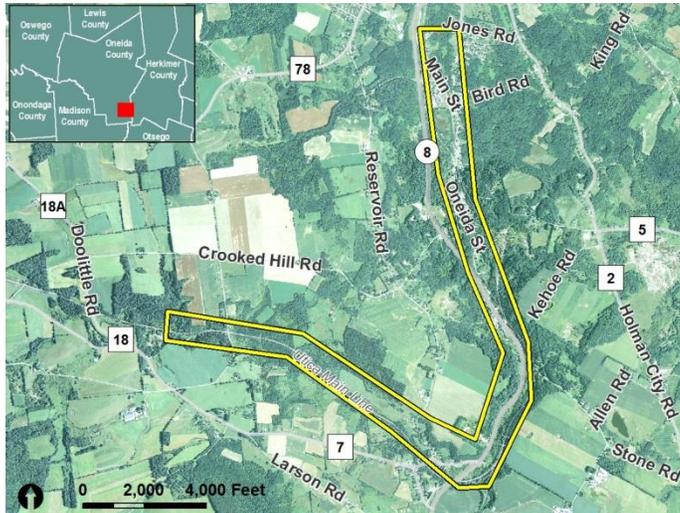
Below: Preliminary designs for Paris Dam project.





P10

Removal of Seven Dams on Sauquoit Creek Town of Paris



Above: Project location map

Project Description

Several low head dams can be found along the Sauquoit Creek, a remnant of the factories and mill that previously lined the waterway. The dams, many of which were built in the 1800s and serve little purpose today, are in varying states of disrepair and flooding such as that which occurred in the Summer 2013 may have further destabilized them.

It has been recommended that these dams be removed, along with the sediment that has accumulated behind them over time. This would help to restore the natural flow of the creek and reduce the risk of flooding to adjacent areas when the dams back up the flow of floodwaters during high rain events. Furthermore, given the state of the dams and the risk of them breaching, a systematic program of

dam removal would prevent the uncontrolled release of potentially contaminated sediment downstream. Such a release would pose a hazard to fish and other wildlife that inhabit the creek. This project would fund the removal of seven dams and proximate bank restoration along Sauquoit Creek.

Project Location

Seven dams on the Sauquoit Creek in the Villages of Cassville and Clayville, Town of Paris. Four of the dams are associated with a factory building along Main Street in Clayville and three are near a factory on Oneida Street opposite Crooked Hill Road.

Estimated Costs

The total estimated cost for this project of \$2,100,000 includes design, engineering, and construction, or approximately \$300,000 per dam removal, based on comparable project costs. The cost is subject to change if it is found that impounded sediment from each dam is contaminated and requires specialized removal.

Project Benefits

The project, once implemented, would restore the natural flow of the creek at seven locations and help to mitigate flooding.

Implementation Timeline

Each dam removal project could be implemented within 12 months of project approval depending on design, permitting, and environmental testing.

Project Status

The project is in the conceptual/planning phase and would require engineering design and permit approvals. Dam removal will require a design that withstands the 100-year storm event, certification by an engineer, and review by NYS DEC Dam Safety Unit.

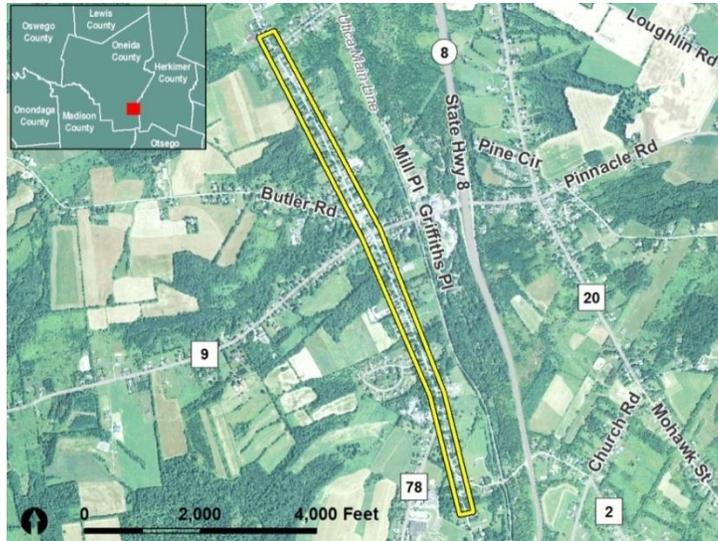
Project Lead(s)

The anticipated project lead is the Town of Paris.



P11

Box Culverts and Retention Pond Improvements in Sauquoit Town of Paris



Above: Project location map

Project Description

The extreme precipitation from the Summer 2013 storm event caused Tuckers Creek and two other unnamed creeks to flood at their Oneida Street crossings in the Hamlet of Sauquoit in the Town of Paris. The massive deluge created large plunge pools on the outlet end of three concrete box culverts and caused extensive erosion of the creek bank below the roadway. In the same area, the torrents of water caused extreme erosion on the upstream side of a retention pond in a housing development. The pond has filled with sediment since as a result of the erosion and now threatens to clog the Hamlet’s downstream drainage infrastructure. This project would fill

in the plunge pools with heavy stone fill and stabilize the banks of the creeks and retention pond.

Project Location

Three culverts along Oneida Street and one retention pond in the Hamlet of Sauquoit.

Estimated Costs

The total estimated cost for this project of \$200,000 was submitted by the Town of Paris and includes planning, design, permitting, and construction.

Project Benefits

The project, once implemented, would protect residential housing in the vicinity of the three culverts and the retention pond, as well as protect the Town’s Hamlet’s downstream drainage infrastructure.

Implementation Timeline

This project would be implemented within 12 months of project approval depending on design and permitting.

Project Status

The project is in the conceptual/planning phase and would require engineering design and permit approvals prior to construction. Designs must be submitted to NYS DEC for review.

Project Lead(s)

The anticipated project lead is the Town of Paris.

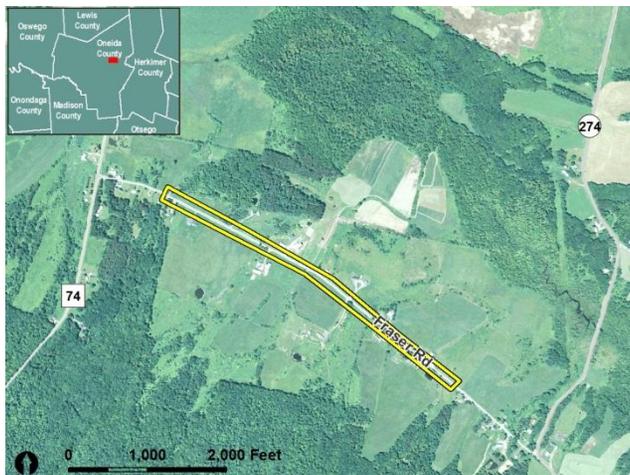


Above: Culvert outfall and eroded plunge pool.



P12

Fraser Road Culvert Upgrades and Bank Stabilization Town of Steuben



Above: Project location map

Project Description

The flooding and severe storms during the Summer of 2013 caused significant damage to Fraser Road in the Town of Steuben. Three culverts in three separate locations along a span of about 1,900 feet along Fraser Road were damaged beyond repair and will have to be replaced. The culverts were clogged with trees, brush, debris, and sediment that ran off the nearby hills during the storms. The damage done in the 2013 storms was significantly more than what that area in Steuben had experienced in the past. The resulting flooding caused a tremendous amount of debris to clog a small unnamed creek that eventually empties into a swampy area in the southeastern part of Steuben off of NYS Route 274. The flooding also resulted in flooding of basements and yards of residences along that stretch of the road.

The Town temporarily addressed the road damages to make the route passable for residents. The damaged culverts on Fraser were five foot culverts and considered to be undersized. This project would fund the upgrade of the three culverts with larger ones to help prevent future clogging and flooding. This project would also fund some bank stabilization as needed with rock riprap.

Project Location

Three culvert locations along approximately 1,900 linear feet of Fraser Road in the Town of Steuben.

Estimated Costs

The total estimated cost for this project of \$120,000 was provided by the Town of Steuben and includes planning, design, permitting, and construction.

Project Benefits

The project, once implemented, would protect the three small creeks that flow beneath Fraser Road from further clogging and consequent flooding, stream bank erosion, and damage to downstream areas. The project would also help to protect residences in the vicinity of the creeks from future flooding and protect Fraser Road as an access route for residents and emergency services.

Implementation Timeline

This project would be implemented within 12 months of project approval depending on design and permitting.

Project Status

The project is in the conceptual/planning phase and would require engineering design and permit approvals prior to construction. Designs must be submitted to NYS DEC for review.

Project Lead(s)

The anticipated project lead is the Town of Steuben.



P13

North Utica Park Bank Stabilization
City of Utica



Above: Project location map

Project Description

The banks of an unnamed creek were severely destabilized by the Summer 2013 flooding adjacent to North Utica Park in the City of Utica and several residential properties, resulting in erosion, destabilization of the subbase, and loss of several trees. The bank erosion now presents erosion and flood hazards to the park and backyards of several residential properties on Homestead Drive, Jimmy Boulevard, Brody Drive, and Herkimer Road.

This project would restore and stabilize the bank at locations along approximately 2,000 linear feet of creek bank to prevent further erosion.

Project Location

Locations along the creek corridor adjacent to North Utica Park and residential properties on Homestead Drive, Jimmy Boulevard, Brody Drive, and Herkimer Road in the City of Utica.

Estimated Costs

The total estimated cost for this project of \$300,000 was based on comparable project costs and includes planning and design, permitting, and construction.

Project Benefits

The project, once implemented, would protect the creek from further erosion at the project site, and as a result help to reduce sedimentation and improve water quality downstream of the site. These benefits will further protect the creek as a fish habitat. The project would also protect North Utica Park as a recreational asset and natural resource to the community and the backyards of several residential properties from erosion.

Implementation Timeline

This project would be implemented within 12 months of project approval depending on design and permitting.

Project Status

The project is in the conceptual/planning phase and would require engineering design and permit approvals prior to construction. Designs must be submitted to NYS DEC for review.

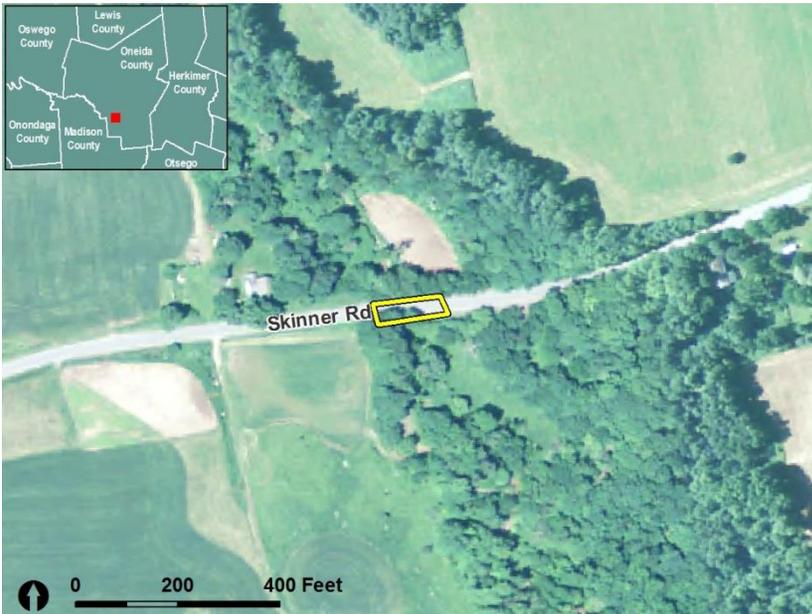
Project Lead(s)

The anticipated project lead is the City of Utica.



P14

Skinner Road Bridge Upgrade Town of Vernon



Above: Project location map

Project Description

The Skinner Road Bridge in the Town of Vernon, which crosses Deans Creek, was significantly damaged in the Summer 2013 flooding and remains closed to traffic. The existing structure was compromised along with the stone retaining wall. This project would upgrade the bridge with one of appropriate size to allow for transportation and water flow, as well as improve the retaining wall. The total estimated cost for this project of \$250,000 is eligible for FEMA Public Assistance funding. The Town of Vernon is in negotiations with FEMA, but no costs have been approved by FEMA to date.

Project Location

Skinner Road in the Town of Vernon where Deans Creek passes underneath, one mile west of Fancett Road. Skinner Road is a County road.

Estimated Costs

The Town of Vernon has a pending FEMA application for \$250,000 for this bridge upgrade on which the cost of this project is based. The FEMA grant would require a 25% local cost share. The \$250,000 total project cost would include planning, engineering, permitting, and construction costs. This project would fund the local 25% cost share, or \$62,500.

Project Benefits

The project, once implemented, would reopen Skinner Road and reconnect the residents to the Town and to emergency services.

Implementation Timeline

The project has been designed and the Town has received three bid proposals. The Town is ready to begin construction as soon as funding has been secured. This project could be completed within three months of project approval.

Project Status

The Town of Vernon has put this project out to bid and permits have been obtained. This section of creek is trout spawning water and required NYS DEC permits.

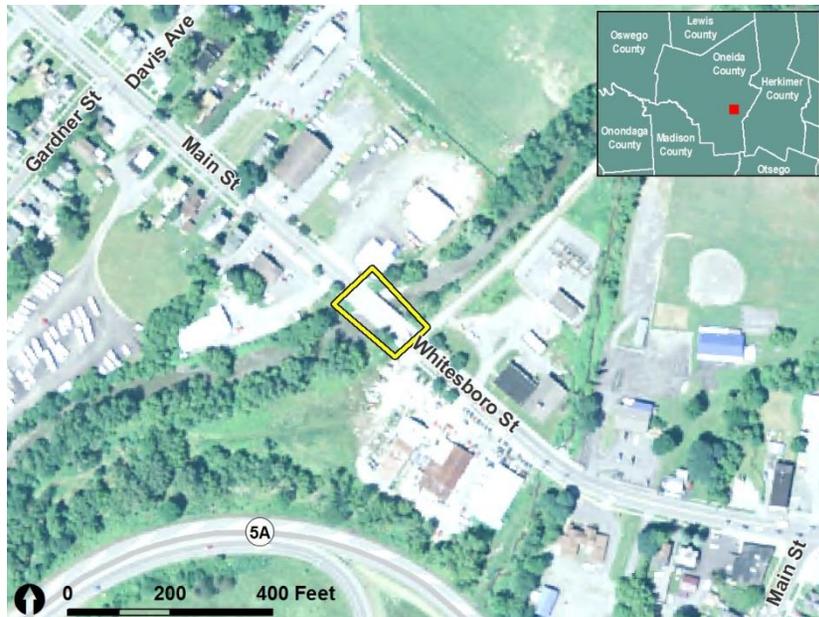
Project Lead(s)

The anticipated project leads are the Town of Vernon and Oneida County.



P15

Main Street Bridge Storm Sewer Improvements Town of Whitestown



Above: Project location map

Project Description

The Sauquoit Creek became a raging river during the Summer 2013 flooding, carrying stone and trees downstream and clogging culverts and bridges. At the Main Street Bridge in the Village of Whitesboro, Town of Whitestown, where a storm sewer line meets the creek, the elevated floodwaters damaged the pipe as well as backed the stormwater up into Main Street. The pipe needs to be repaired as well as elevated so that future flood events are less likely to cause

storm sewer backups and flood Main Street. This project would fund cleaning of debris that washed into the storm sewer system, realignment and elevation of the pipe to mitigate future flooding and backups, and other associated improvements.

Project Location

Main Street Bridge over Sauquoit Creek in the Village of Whitesboro.

Estimated Costs

The total estimated cost for this project of \$100,000 was provided by the Town of Whitestown and includes planning, design, permitting, and construction costs.

Project Benefits

The project, once implemented, would repair and harden the storm sewer infrastructure along Main Street in Whitesboro. The project would also mitigate flooding on Main Street that can occur from backups in the sewer infrastructure of the type that occurred in the Summer 2013 flooding, thereby protecting an access route.

Implementation Timeline

This project would be implemented within 12 months of project approval depending on design and permitting.

Project Status

The project is in the conceptual stage with some design work completed. The project will require further design and permit approvals prior to construction. Designs must be submitted to NYS DEC for review.

Project Lead(s)

The anticipated project lead is the Town of Whitestown.



P16

Oriskany Creek Dam Removal Town of Whitestown



Above: Project location map

Project Description

A dam on Oriskany Creek adjacent to Valley Road in the Village of Oriskany, Town of Whitestown, causes water to back up behind it and raises surface water levels to an elevation that can sometimes overflow the creek's banks. A recent hydraulic study indicated that the surface water levels can rise more than five feet behind the dam during a 10-year flood event, causing flooding and flood-related damages to Valley Road (Route 32).¹⁷

It has been recommended that this dam be removed,¹⁸ along with the sediment that has accumulated behind it over time. Removal of the dam would help to restore the natural flow of the creek and

reduce the risk of flooding to adjacent areas, particularly Valley Road, when the dam backs up the flow of floodwaters during high rain events. This project would fund the removal of the dam and proximate bank restoration along Oriskany Creek.

Project Location

Dam on Oriskany Creek in the Village of Oriskany near Valley Road.

Estimated Costs

The total estimated cost for this project of \$500,000 was based on comparable project costs and includes design, engineering, and construction. The cost is subject to change if it is found that impounded sediment from each dam is contaminated and requires specialized removal.

Project Benefits

The project, once implemented, would restore the natural flow of the creek at seven locations and help to mitigate flooding. The project would also protect a significant transportation route on Valley Road from road flooding and roadway destabilization.

Implementation Timeline

The dam removal project could be implemented within 12 months of project approval depending on design, permitting, and environmental testing.

Project Status

The project is in the conceptual/planning phase and would require engineering design and permit approvals prior to construction. Dam removal will require a design that withstands the 100-year storm event, certification by an engineer, and review by NYS DEC Dam Safety Unit.

Project Lead(s)

The anticipated project lead is the Town of Whitestown.



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Sauquoit Creek Bank Stabilization
Towns of Whitestown, Paris, & New Hartford

Project Description

As runoff increases due to land use changes and climatic cycles, flooding occurs along the Sauquoit Creek and water quality is suffering. There were large amounts of gravel, dislodged trees, and other sediment, trash and debris introduced into the stream during the Summer 2013 flooding. The creek banks must be stabilized to repair damage and to prevent further erosion. This project would include bank stabilization and natural stream channel modifications in three key locations that were damaged severely in the Summer 2013 flooding. Wherever possible, Sauquoit Creek would be returned to its natural or stable dimensions, pattern, and profile and provisions would be made for normal sediment transport. A variety of techniques would be used including incorporation of native riparian vegetation and degradable geotextiles, in-stream rock diversion structures, and other stabilization measures. The project locations include the Paris Highway Garage site in Paris, Williams Tool site in New Hartford, and Dunham Park site in Whitestown.



Left: Bank erosion at the Williams Tool site.

Project Locations

The Paris Highway Garage Site in the Town of Paris would include 1,600 feet of armor and one rock vein.



Above: Project location map

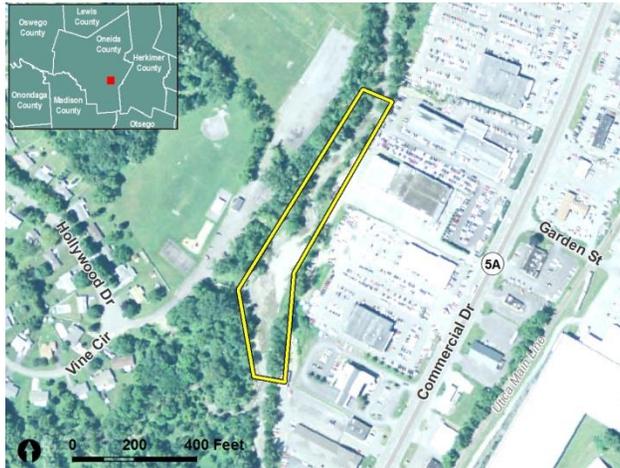
The Williams Tool Site in the Town of New Hartford would include two rock veins and 200 feet of armored bank with 400 feet of vertical armoring.



Above: Project location map



The Dunham Park Site in the Town of Whitestown would include three rock veins and 800 feet of armored bank.



Above: Project location map

Estimated Costs

The total estimated cost for this project of \$689,000 was provided by the Oneida County Department of Planning and includes \$236,000 for the Paris Garage Site; \$220,000 for the Dunham Park Site; and \$233,000 for the Williams Tool Site. These estimates include planning, design, permitting, and construction costs.

Project Benefits

The project, once implemented, would prevent further erosion of the creek banks at the project locations and protect the adjacent Paris Highway Garage, Williams Tool, and Dunham Park properties. The project would also help to reduce erosion and flood hazards to downstream creeks and assets from sedimentation.

Implementation Timeline

This project would be implemented within 12 months of project approval depending on design and permitting.

Project Status

The projects have preliminary designs, but require full engineering and permit approvals prior to construction. Designs must be submitted to NYS DEC for review.

Project Lead(s)

The anticipated project leads are the Town of Paris, the Town of New Hartford, and the Town of Whitestown.



Above: Bank erosion at the Paris Highway Garage site.



5. Next Steps

The NYRCR Oneida County Planning Committee has identified recovery projects that could be funded with the \$3 million in State capital funds pledged to the County. This list of projects is the initial step in a process that will now focus on making the County more resilient to future storms, ultimately culminating in the development of a Countywide Resiliency Plan.

Through the assistance provided by the NY Rising Community Reconstruction (NYRCR) Program, the NYRCR Planning Committee will look more closely at where storm damages occurred; what assets are at risk; and how the risk to those assets can be reduced or eliminated. How to avoid future damages will be expressed in terms of a set of strategies and a list of actions to implement those strategies.

The planning process should seek to identify additional funding sources for the remainder of the capital projects, as well as non-capital projects, as funding needs will surpass the capital funding pledged to the County by the State.

In order to ensure tangible progress on Oneida County's NYRCR Countywide Resiliency Plan, the plan will include an implementation schedule that identifies each strategy; actions to be taken to implement the strategy; potential funding sources; target dates; and responsible parties. Included in that schedule will be the list of recovery projects presented in this document, among others.



Above: An inadequate bank stabilization technique being undertaken to stem erosion.

Below: Example of a stabilized and armored creek bank with pinned rock riprap.





¹ U.S. Census Bureau: State and County QuickFacts. Data derived from Population Estimates, American Community Survey, Census of Population and Housing, State and County Housing Unit Estimates, County Business Patterns, Non-employer Statistics, Economic Census, Survey of Business Owners, Building Permits

² National Oceanic And Atmospheric Administration (NOAA). *National Overview – June 2013*. <https://www.ncdc.noaa.gov/sotc/national/2013/6>

³ NOAA. National Climatic Data Center. *Storm Events Database*.

<https://www.ncdc.noaa.gov/stormevents/eventdetails.jsp?id=452001>

⁴ NOAA. National Climatic Data Center. *Storm Events Database*.

<https://www.ncdc.noaa.gov/stormevents/eventdetails.jsp?id=452002>

⁵ NOAA. National Climatic Data Center. *Storm Events Database*.

<https://www.ncdc.noaa.gov/stormevents/eventdetails.jsp?id=452007>

⁶ NOAA. National Climatic Data Center. *Storm Events Database*.

<https://www.ncdc.noaa.gov/stormevents/eventdetails.jsp?id=452115>

⁷ NOAA. National Climatic Data Center. *Storm Events Database*.

<https://www.ncdc.noaa.gov/stormevents/eventdetails.jsp?id=452011>

⁸ Parsons Brinckerhoff, Disaster Awareness Report, July 3, 2013.

(http://www.pbdisasterservices.com/pdfs/news_publications/daily_dart/daily%20dart_20130703.pdf)

⁹ Parsons Brinckerhoff, Disaster Awareness Report, July 3, 2013.

(http://www.pbdisasterservices.com/pdfs/news_publications/daily_dart/daily%20dart_20130715.pdf)

¹⁰ Oneida County. *Health Department Urges Precautions in Aftermath of Flooding*. Posted July 2, 2013. <http://www.ocgov.net/node/1786>

¹¹ United Way, Status Report: 2013 Flood Recovery Fund, 15 August 2013. <http://www.unitedwaygu.org/status-report-2013-flood-recovery-fund/>

¹² 701.8 Class C fresh surface waters: The best usage of Class C waters is fishing. These waters shall be suitable for fish, shellfish, and wildlife propagation and survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.

(<http://www.dec.ny.gov/regs/4592.html#15987>)

¹³ 701.8 Class C fresh surface waters: The best usage of Class C waters is fishing and this class specifically refers to trout. These waters shall be suitable for fish, shellfish, and wildlife propagation and survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes. (<http://www.dec.ny.gov/regs/4592.html#15987>)

¹⁴ The College Street Bridge was identified by as being undersized, though not a critical cause of flooding. As future funding for bridge replacements becomes

available, this bridge should be replaced with a wider span to accommodate greater flow of floodwaters during high precipitation events. Milone & BacBroom. *Water Basin Assessment and Flood Hazard Mitigation Alternatives – Oriskany Creek, Oneida County, New York*, April 2014.

¹⁵ 701.6 Class A fresh surface waters: The best usages of Class A waters are: a source of water supply for drinking, culinary or food processing purposes; primary and secondary contact recreation; and fishing. The waters shall be suitable for fish, shellfish, and wildlife propagation and survival.

(<http://www.dec.ny.gov/regs/4592.html#15987>)

¹⁶ Milone & BacBroom. *Water Basin Assessment and Flood Hazard Mitigation Alternatives – Oriskany Creek, Oneida County, New York*, April 2014.

¹⁷ Milone & BacBroom. *Water Basin Assessment and Flood Hazard Mitigation Alternatives – Oriskany Creek, Oneida County, New York*, April 2014.

¹⁸ This project was recommended by Milone & BacBroom. *Water Basin Assessment and Flood Hazard Mitigation Alternatives – Oriskany Creek, Oneida County, New York*, April 2014.