



SECTION 6. MITIGATION STRATEGY AND COUNTYWIDE CAPABILITY ASSESSMENT

This section presents mitigation actions for Cayuga County to reduce potential exposure and losses identified as concerns in the Risk Assessment (Section 5). The Steering Committee reviewed the Risk Assessment to identify and develop these mitigation actions, which are presented herein.

This section includes:

- (1) Background and Past Mitigation Accomplishments
- (2) General Mitigation Planning Approach
- (3) Review and Update of Mitigation Goals and Objectives
- (4) Goals and Objectives
- (5) Capability Assessment
- (6) Mitigation Strategy Development and Update

Hazard mitigation reduces the potential impacts of, and costs associated with, emergency and disaster-related events. Mitigation actions address a range of impacts, including impacts on the population, property, the economy, and the environment.

Mitigation actions can include activities such as: revisions to land-use planning, training and education, and structural and nonstructural safety measures.

6.1 BACKGROUND AND PAST MITIGATION ACCOMPLISHMENTS

In accordance with the DMA 2000 requirements, a discussion regarding past mitigation activities and an overview of past efforts is provided as a foundation for understanding the mitigation goals, objectives, and activities outlined in this HMP. The county, through previous and ongoing hazard mitigation activities, has demonstrated that it is pro-active in protecting its physical assets and citizens against losses from natural hazards. Examples of previous and ongoing actions and projects include the following with more detailed actions completed by jurisdictions summarized in Section 9 (Jurisdictional Annexes):

- The county is working on a multijurisdictional municipal water project with the City of Auburn and Water and Sewer Authority to reduce water quality impact caused by HABs in Owasco Lake. The project is a mitigation action to increase resilience to HABs by developing backup water supply.
- The county has worked with the County Soil and Water Conservation District to reduce stormwater erosion in county, especially along county roads located near streams. Mitigation strategy includes changing ditch management practices, increasing vegetative growth, and rightsizing stormwater infrastructure.
- The county has worked with the County Soil and Water Conservation District to conduct shoreline restoration, especially along the tributaries to Owasco and Cayuga Lakes to decrease riverine flooding and subsequent erosion. The purpose of this work was to reduce sediment accumulation and decrease nutrient levels to reduce the chances of HABs.
- The county worked with the SWCD to stabilize the shoreline of Owasco Lake in Emerson Park in the area of the sailboat launch and Deauville Island. Sediment and nutrients were being washed into the lake as this area underwent major erosion, especially in the winter. The sediment and nutrients from this erosion affected the water quality in the north end of Owasco Lake. This decline in water quality could negatively affect the drinking water for the City of Auburn and the Town of Owasco since their water intakes are in the north end of Owasco Lake. It could also affect the use of the lake as a swimming beach and cause sedimentation in the original outlet channel in the park. As this area is a public access



point to Owasco Lake, not only water quality is being affected by the erosion, but public perception of the lake as well.

- The county has been working closely with the County Soil and Water Conservation District to increase water sources and resilience to droughts for farms.
- The county conducted a flood study of the 3-4 blocks around the Cayuga County Office Building and implemented green infrastructure and other changes to mitigate and prevent flooding of the basement of the County Office Building which contains the County's Emergency Operations Center. Additionally, the City of Auburn redesigned their parking areas in this section as well.
- The North Division Street Bridge in the City of Auburn was replaced in 2019
- The county has worked with the Village of Moravia to explore potential options to reduce flooding along Aurora Street and Long Hill Road. Structural mitigation measures have been taking place in 2020.
- The county has been working closely with the City of Auburn on increasing the safety of the railroad crossing across North Division Street.

6.2 GENERAL MITIGATION PLANNING APPROACH

The overall approach used to update the county and local hazard mitigation strategies are based on FEMA and NYS regulations and guidance regarding local mitigation plan development, including:

- DMA 2000 regulations, specifically 44 CFR 201.6 (local mitigation planning).
- FEMA Local Mitigation Planning Handbook, March 2013.
- FEMA Local Mitigation Plan Review Guide, October 1, 2011.
- FEMA Integrating Hazard Mitigation into Local Planning, March 1, 2013.
- FEMA Plan Integration: Linking Local Planning Efforts, July 2015.
- FEMA Mitigation Planning How-To Guide #3, Identifying Mitigation Actions and Implementing Strategies (FEMA 386-3), April 2003.
- FEMA Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards, January 2013.
- NYS DHSES New York State Hazard Mitigation Planning Standards, 2017.
- NYS DHSES New York State Hazard Mitigation Planning Standards Guide, 2017.

The mitigation strategy update approach includes the following steps that are further detailed in later sections of this section:

- Section 6.3 - Review and update mitigation goals and objectives
- Section 6.4 - Identify mitigation capabilities and evaluate their capacity and effectiveness to mitigate and manage hazard risk
- Section 6.5 - Prepare an implementation strategy, including:
 - Identification of progress on previous county and local mitigation strategies
 - Development of updated county and local mitigation strategies, and
 - Prioritization projects and initiatives in the updated mitigation strategy



6.3 REVIEW AND UPDATE OF MITIGATION GOALS AND OBJECTIVES

This section documents the efforts to update the guiding principle (mission statement), and hazard mitigation goals and objectives established to reduce or avoid long-term vulnerabilities to the identified hazards.

6.3.1 Mission Statement

Per FEMA guidance (386-1), a mission statement or guiding principle describes the overall duty and purpose of the planning process and serves to identify the principal message of the plan. It focuses or constrains the range of goals and objectives identified. This is not a goal because it does not describe outcomes, rather it is broad in scope, and provides a direction for the HMP update.

During the original 2014 hazard mitigation planning process the Steering Committee developed a mission statement. As part the of the 2021 update process, the Cayuga County Hazard Mitigation Steering Committee reviewed the mission statement and elected to adjust it to include the concepts of resiliency and community lifelines to reflect their commitment to reducing the impacts on natural hazards on their communities:

The mission of the Cayuga County Multi-Jurisdictional All-Hazard Mitigation Plan is to identify and reduce, through cost-effective and sustainable mitigation efforts, our vulnerability to natural and man-made hazards. In doing so, Cayuga County seeks to create an informed, prepared, and resilient community while protecting health, safety, property, lifelines, economy, quality of life, and environment for all.

FEMA defines **Goals** as general guidelines that explain what should be achieved. Goals are usually broad, long-term, policy statements, and represent a global vision.

FEMA defines **Objectives** as strategies or implementation steps to attain mitigation goals. Unlike goals, objectives are specific and measurable, where feasible.

FEMA defines **Mitigation Actions** as specific actions that help to achieve the mitigation goals and objectives.

6.4 GOALS AND OBJECTIVES

According to CFR 201.6(c)(3)(i): “The hazard mitigation strategy shall include a description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.” The Cayuga County Steering Committee developed mitigation goals and objectives based on the risk assessment results, discussions, research, and input from amongst the committee, existing authorities, policies, programs, resources, stakeholders and the public.

The original goals and objectives of the HMP were established during the 2014 planning process through a facilitated exercise, working from a catalog of goal statements created through review of similar plans and FEMA planning guidance and reviewing consistency with other relevant state, county, and local plans. The Cayuga County HMP Steering Committee revisited the goals and objectives to align with the 2019 NYS HMP and perceived changes in risk and vulnerability, and, in addition to increase clarity via plain language. For the purpose of this plan, goals are defined as general guidelines that explain what is to be achieved. The goals help define the benefits that the plan is trying to achieve. The success of the plan, once implemented, should be measured by the degree to which its goals have been met (that is, by the actual benefits in terms of hazard mitigation).

The Steering Committee updated the goals to be compatible with the needs and goals expressed in other available community planning documents as well as the NYS HMP. The achievement of these goals helps to define the effectiveness of a mitigation strategy.

Objectives were then updated by the Steering Committee through its knowledge of the local area, review of past efforts, findings of the risk assessment, qualitative evaluations, and identification of mitigation options. The





objectives are used to 1) measure the success of the plan once implemented, and 2) to help prioritize identified mitigation actions. For the purposes of this plan, objectives are defined as follows:

Objectives are short-term aims which, when combined, form a strategy or course of action to meet a goal. Unlike goals, objectives are a stand-alone measurement of the effectiveness of a mitigation action, rather than as a subset for a goal. The objectives also are used to help establish priorities.

During the 2020 plan update process, the Steering Committee reviewed the 2014 goals and objectives. Further, all participating jurisdictions were provided with a Goals and Objectives worksheet to facilitate their input to the update process. The 2014 goals and objectives were reviewed in consideration of the hazard events and losses since the 2014 plan, the updated hazard profiles and vulnerability assessment, the goals and objectives established in the other related State, county and local risk management plans, as well as direct input on how the county and municipalities recognize they need to move forward to best manage their hazard risk. Amendments include additions/edits to goals and/or objectives to express the planning partnership’s interests in increasing sustainability as well as integrating this plan with other planning mechanisms/programs as identified in the table below.

As a result of this review process, the Goals and Objectives for the 2021 update have been amended, as presented in Table 6-1 and Table 6-2.

Table 6-1. Cayuga County Hazard Mitigation Plan Goals

| Goal Number | Goal Statement |
|-------------|--|
| G-1 | Protect Life, Property, and Economic Stability |
| G-2 | Increase Public Awareness and Preparedness |
| G-3 | Enhance Disaster Preparedness, Response and Recovery and Promote Mitigation Efforts through Existing Programs and Partnerships |
| G-4 | Protect Open Space, Agricultural Land, the Environment, and Natural Resources |
| G-5 | Promote and Support Partnerships |

Table 6-2. Cayuga County Hazard Mitigation Plan Objectives

| Updated 2021 Goals and Objectives |
|---|
| Goal 1: Protect Life, Property, and Economic Stability |
| Objective 1-1: Protect the ongoing operation of critical facilities and infrastructure. |
| Objective 1-2: Retrofit, acquire, or relocate NFIP insured repetitive loss or severe repetitive loss structures. |
| Objective 1-3: Promote the establishment of policies that will ensure the maintenance and improvement of essential and lifeline facilities, services, and infrastructure. |
| Objective 1-4: Implement actions that enhance the county's capability to assess and profile community hazard exposure. |
| Objective 1-5: Enhance understanding of flood and stormwater issues and identify improvement projects by conducting hazard studies and identifying areas that have poor drainage or inadequate stormwater infrastructure. |
| Objective 1-6: Develop, maintain, strengthen and promote enforcement of ordinances, regulations, plans and other mechanisms that facilitate hazard mitigation and lead to overall risk reduction. |
| Objective 1-7: Ensure that development is done using up- to-date and appropriate standards that also consider risk from natural hazards. |
| Objective 1-8: Actively identify and pursue funding opportunities to develop and implement local mitigation activities. |
| Objective 1-9: Address the specific needs of vulnerable populations. |
| Goal 2: Increase Public Awareness and Preparedness |
| Objective 2-1: Use existing and/or develop new programs that accurately evaluate individual and community preparedness. |



| Updated 2021 Goals and Objectives |
|---|
| Objective 2-2: Develop and/or tailor existing educational outreach programs to increase public knowledge and awareness around potential hazards and preparedness measures |
| Objective 2-3: Increase awareness among homeowners, renters, and businesses about the benefits of natural hazard insurance programs (i.e. flooding) |
| Objective 2-4: Develop education and outreach programs to inform vulnerable populations about local and regional hazard mitigation efforts. |
| Objective 2-5: Assist in implementing mitigation and resilience activities by providing information on tools, partnership opportunities, funding resources, and government initiatives. |
| Goal 3: Enhance Disaster Preparedness, Response and Recovery and Promote Mitigation Efforts through Existing Programs and Partnerships |
| Objective 3-1: Encourage the establishment of policies that increase resiliency and propel efforts aimed at improvement of lifelines, essential services, and infrastructure. |
| Objective 3-2: Coordinate and integrate hazard mitigation actions with existing local emergency operations plans when appropriate. |
| Objective 3-3: Enhance hazard response capabilities by identifying and acquiring any special emergency services, training, equipment, facilities, and infrastructure. |
| Objective 3-4: Develop and improve a public emergency traffic route inventory. |
| Objective 3-5: Ensure continuity of local government, emergency services, and lifeline or essential facilities operations during and immediately after hazard events. |
| Objective 3-6: Maintain and expand emergency services and equipment share service programs. |
| Objective 3-7: Strengthen intermunicipal and interorganizational communication to streamline hazard mitigation action or project execution. |
| Goal 4: Protect the Environment and Natural Resources |
| Objective 4-1: Develop mitigation projects that identify, protect, preserve, and restore natural lands, features, and environmentally sensitive areas such as wetlands, floodplains, stream corridors, hillsides and ridge lines. |
| Objective 4-2: Continue to preserve, protect, and acquire open space, and environmentally sensitive and critical areas, particularly in high hazard areas. |
| Objective 4-3: Encourage the incorporation of hazard mitigation measures into land-use planning and natural resource management that will ultimately have the least adverse effect on the natural environment. |
| Objective 4-4: Work with county Soil and Water Conservation District and other organizations towards the restoration of stream corridors and the implementation of erosion and sedimentation control measures. |

6.5 CAPABILITY ASSESSMENT

According to the FEMA Mitigation Planning How-To Guide #3, a capability assessment is an inventory of a community’s missions, programs and policies; and an analysis of its capacity to carry them out. This assessment is an integral part of the planning process. The assessment process enables identification, review and analysis of local and state programs, policies, regulations, funding and practices currently in place that may either facilitate or hinder mitigation.

During the original planning process, the county and all jurisdictions identified and assessed their capabilities in the areas of planning and regulatory, administrative and technical, and fiscal. By completing this assessment, the Planning Committee and each jurisdiction learned how or whether they would be able to implement certain mitigation actions by determining the following:

- Limitations that may exist on undertaking actions;
- The range of local and/or state administrative, programmatic, regulatory, financial and technical resources available to assist in implementing their mitigation actions;
- Actions deemed infeasible as they are currently outside the scope of capabilities;
- Types of mitigation actions that may be technically, legally (regulatory) administratively, politically or fiscally challenging or infeasible;
- Opportunities to enhance local capabilities to support long term mitigation and risk reduction.





During the 2020 plan update process, all participating jurisdictions were tasked with developing or updating their capability assessment, paying particular attention to evaluating the effectiveness of these capabilities in supporting hazard mitigation, and identifying opportunities to enhance local capabilities.

County and municipal capabilities in the areas of planning and regulatory, administrative and technical, and fiscal may be found in the Capability Assessment section of their jurisdictional annexes in Section 9. Further, participating jurisdictions have identified how they have integrated hazard risk management into their existing planning, regulatory and operational/administrative framework (“integration capabilities”), and how they intend to promote this integration (“integration actions”). A list of planning documents reviewed for integration is included in Appendix J. A further summary of these continued efforts to develop and promote a comprehensive and holistic approach to hazard risk management and mitigation is presented in Section 7 (Plan Maintenance).

A summary of the various federal, state, county and local planning and regulatory, administrative and technical, and fiscal programs available to promote and support mitigation and risk reduction in Cayuga County are presented below.

6.5.1 Planning and Regulatory Capabilities – County and Local

Municipal Land Use Planning and Regulatory Authority

The county and municipalities have various land use planning mechanisms that can be leveraged to mitigate flooding and support natural hazard risk reduction. Specific county and local planning and regulatory capabilities are identified in their jurisdictional annexes in Section 9 – Annexes. These include but are not limited to: comprehensive plans, flood damage prevention ordinances, local codes and regulations, stormwater regulations, and municipal level plans. A list of plans reviewed is provided in Section 3 (Planning Process) and summarized in Appendix J (Plan Review Matrix).

The Cayuga County Department of Planning and Economic Development provides a wide range of planning services to support the county and its communities. The Department administers programs, develops policies, and provides information and expertise to promote sound planning and environmental protection in the county.

Section 239 of New York State General Municipal Law (GML) requires the referral of certain local planning actions to the County Planning Board for the examination of possible inter-municipal impacts. The Cayuga County GML 239-l,m, and Review Committee operates under New York State General Municipal Law §239 l, m, and n to advise local boards on the potential intermunicipal or countywide impact of local land use decisions.

Emergency and Evacuation Plans

The Cayuga County Office of Emergency Services is responsible for maintaining and updating the County Comprehensive Emergency Management Plan (CEMP) which is a comprehensive approach to emergency management. The CEMP is an all-hazards plan that outlines how the county will efficiently and effectively manage emergencies and disaster situations. In addition, Cayuga County has adopted the National Incident Management System (NIMS) to respond to and manage emergencies in accordance with Homeland Security Presidential Directive-5, the New York State Governor’s Executive Order No. 26, and Cayuga County Legislature Resolution adopting NIMS. Cayuga County has adopted NIMS as the guiding document to meet federal guidelines for domestic incident management.



All county agencies will participate in risk reduction activities in coordination with the County Hazard Mitigation Coordinator. The Hazard Mitigation Coordinator will participate as a member of the Cayuga County Local Emergency Planning Committee (LEPC).

Comprehensive Master Plans

Comprehensive planning is a term used in the United States by land use planners to describe a process that determines community goals and aspirations in terms of community development. The outcome of comprehensive planning is the “Comprehensive Plan” or Master Plan” which dictates public policy in terms of transportation, utilities, land use, recreation, and housing. Towns are authorized to develop and adopt a comprehensive plan by New York State Town Law Section 272-a.; villages can do the same per Section 7-722 of the Village Law. State statutes require that all land use laws in a municipality be consistent with a comprehensive plan.

Most Communities within Cayuga County have a comprehensive master plan with the purpose of guiding policy and effectuating zoning at the local level. There are opportunities within the Plans for coordination with the county’s Hazard Mitigation Plan recommendations and action items.

The current status of the comprehensive plans in the county is shown in Table 6-4 below.

Table 6-4. Comprehensive Plan Status in Cayuga County

| Jurisdiction | Year Adopted/ Updated | Status |
|---|-----------------------|----------------|
| City of Auburn | 2010 | Needs updating |
| Village of Aurora | 2008 | Needs updating |
| Village of Cayuga | 2013 | Updated |
| Town of Aurelius | 2006 | Needs updating |
| Town of Brutus/ Village of Weedsport | 2010 | Needs updating |
| Town of Cato/ Town of Ira | 2008 | Needs updating |
| Town of Fleming | 2006 | Needs updating |
| Town of Genoa | 2013 | Updated |
| Town of Ledyard | 2012 | Updated |
| Town of Montezuma | 2016 | Updated |
| Town of Mentz/ Village of Port Byron | 2015 | Updated |
| Village of Meridian | 2009 | Needs updating |
| Town of Owasco | 2016 | Updated |
| Town of Niles | 2010 | Needs updating |
| Town of Scipio | 2011 | Updated |
| Town of Springport | 2011 | Updated |
| Town of Sterling/ Village of Fair Haven | 2018 | Updated |
| Town of Victory | 2010 | Needs updating |
| Village of Union Springs | 2007 | Needs updating |



6.5.2 Planning and Regulatory Capabilities-State and Federal

National Flood Insurance Program

The U.S. Congress established the NFIP with the passage of the National Flood Insurance Act of 1968 (FEMA's 2002 National Flood Insurance Program (NFIP): Program Description). The NFIP is a Federal program enabling property owners in participating communities to purchase insurance as a protection against flood losses in exchange for State and community floodplain management regulations that reduce future flood damages.

There are three components to the NFIP: flood insurance, floodplain management and flood hazard mapping. Communities participate in the NFIP by adopting and enforcing floodplain management ordinances to reduce future flood damage. In exchange, the NFIP makes federally backed flood insurance available to homeowners, renters, and business owners in these communities. Community participation in the NFIP is voluntary. Flood insurance is designed to provide an alternative to disaster assistance to reduce the escalating costs of repairing damage to buildings and their contents caused by floods. Flood damage in the U.S. is reduced by nearly \$1 billion each year through communities implementing sound floodplain management requirements and property owners purchasing flood insurance. Additionally, buildings constructed in compliance with NFIP building standards suffer approximately 80% less damage annually than those not built in compliance (FEMA 2008).

Cayuga and the majority of the county's individual jurisdictions actively participate in the NFIP. . As of July 2020, there were 417 NFIP policyholders in Cayuga County. There have been 291 claims made, totaling over \$1.4 million for damages to structures and contents. Severe Repetitive Loss (SRL) data was unavailable for this plan update. Further details on the county's flood vulnerability may be found in the flood hazard profile in Section 5.

Municipal participation in and compliance with the NFIP is supported at the Federal level by FEMA Region II and the Insurance Services Organization (ISO), at the state-level by the New York State Department of Environmental Conservation (NYSDEC) and New York State Office of Emergency Management (NYSOEM). Additional information on the NFIP program and its implementation throughout the county may be found in the flood hazard profile (Section 5) and each jurisdiction's annex (Volume II Section 9).

The State and communities may adopt higher regulatory standards when implementing the provisions of the NFIP. Specifically identified are the following:

Freeboard: By law, NYS requires base flood elevation plus 2 feet (BFE+2) for all new construction. When there is a base flood elevation available, the lowest floor including any basement, must be at or above the base flood elevation (plus two feet beginning in 2007). Elevation may be by means of properly compacted fill, a solid slab foundation, or a "crawl space" foundation which contains permanent openings to let flood waters in and out. Non-residential structures may be flood proofed in lieu of elevation. Where a local floodplain administrator has information to estimate a base flood elevation, such as historic flood records or a hydraulic study, that elevation must be used. If the development consists of more than 5 acres or more than 50 lots, the permit applicant must develop a base flood elevation and build accordingly (NYSDEC 2007). Communities may go beyond this requirement, providing for additional freeboard. In most New York communities, new structures must have the lowest floor three feet or more above the highest adjacent grade.

Cumulative Substantial Improvements/Damages: The NFIP allows improvements valued at up to 50% of the building's pre-improvement value to be permitted without meeting the flood protection requirements. Over the years, a community may issue a succession of permits for different repairs or improvement to the same structures. This can greatly increase the overall flood damage potential for the structure and within a community. The community may wish to demonstrate "substantial improvement" cumulatively so that once a threshold of



improvement within a certain length of time is reached, the structure is considered to be substantially improved and must meet flood protection requirements.

NFIP Community Rating System (CRS)

As an additional component of the NFIP, the Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. As a result, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the community actions meeting the three goals of the CRS: (1) reduce flood losses; (2) facilitate accurate insurance rating; and (3) promote the awareness of flood insurance (FEMA 2017).

According to the April 2020 NFIP Flood Insurance Manual, the Village of Moravia participates in the CRS program and is listed as a class 8 community.

U. S. Army Corps of Engineers

Under Section 404(e) of the Clean Water Act, the U.S. Army Corps of Engineers (USACE) can issue general permits to authorize activities that have only minimal individual and cumulative adverse environmental effects. A nationwide permit (NWP) is a general permit that authorizes activities across the country, unless a district or division commander revokes the nationwide permit in a state or other geographic region. There are 54 nationwide permits, and they authorize a wide variety of activities, including: linear transportation projects, bank stabilization activities, residential development, commercial and industrial developments, aids to navigation and certain maintenance activities (USACE 2020). Details on each NWP can be found here:

<https://www.nan.usace.army.mil/Missions/Regulatory/Regional-General-Permits/>

There are three types of USACE permits: standard, nationwide (described above), and regional. Standard permits are individual permits that involve full public interest review of an individual permit application and includes the issuance of a public notice for any project that does not meet the terms and conditions of an NWP or a Letter of Permission (LOP). Regional general permits are for small, specialized projects. Cayuga County is part of the Buffalo District Office In New York State, there are six regional general permit categories (see <https://www.lrb.usace.army.mil/Missions/Regulatory/New-York-Permit-Information/>). The Auburn Army Corps of Engineers, located in Auburn, NY, is a branch location of the federal Army Corps of Engineers (USACE/COE). The Army Corps of Engineers perform a wide range of civil, military, and environmental engineering services in Cayuga County. The organization protects vital public and military land and infrastructure through its public engineering projects, which reduce the risk from disasters. The Corps also maintain and provide permits for Cayuga County Army Corps of Engineers Campgrounds and RV Parks.

New York State Floodplain Management

There are two departments that have statutory authorities and programs that affect floodplain management at the local jurisdiction level in New York State: the NYSDEC and the Department of State's Division of Code Enforcement and Administration (DCEA).

The NYSDEC is charged with conserving, improving, and protecting the state's natural resources and environment, and preventing, abating, and controlling water, land, and air pollution. Programs that have bearing on floodplain management are managed by the Bureau of Flood Protection and Dam Safety, which cooperates with federal, state, regional, and local partners to protect lives and property from floods, coastal erosion, and dam failures. These objectives are accomplished through floodplain management and both structural and nonstructural means.



The Floodplain Management Section is responsible for reducing flood risk to life and property through management of activities, such as development in flood hazard areas, and for reviewing and developing revised flood maps. The Section serves as the NFIP State Coordinating Agency and in this capacity is the liaison between FEMA and New York communities that elect to participate in the NFIP. The Section provides a wide range of technical assistance.

Stormwater Management Planning

When proper controls are not in place, research studies show a clear link between urbanization and increased flooding and pollutant export. The goal of stormwater management is to ensure that the quantity and quality of stormwater runoff from a site that is undergoing construction or development should not be substantially altered from its pre-development conditions (NYSDEC 2015).

The control of stormwater runoff is a national priority. A federal regulation, commonly known as Stormwater Phase II, requires permits for stormwater discharges from Municipal Separate Storm Sewer Systems (MS4s) in urbanized areas and for construction activities disturbing one or more acres. To implement the law, the NYS Department of Environmental Conservation has issued two general permits: one for MS4s in urbanized areas and one for construction activities. The permits are part of the State Pollutant Discharge Elimination System (SPDES). Municipal officials are working hard at the local level to protect water resources through better stormwater management. Throughout Central New York, municipalities are making provisions to allow the use of permeable paving materials on public projects when conditions are appropriate. Developers are being asked to incorporate more green spaces in new developments and to avoid disturbing existing vegetation that naturally slows and infiltrates stormwater runoff. Municipal turf management programs no longer rely on the routine use of pesticides and chemical fertilizers. Roadway maintenance crews routinely remove trash and debris from storm drains and culverts. This reduces stormwater backups, road hazards, and the threat of flooding. These efforts are designed to improve water resources through the control of stormwater runoff.

6.5.3 Administrative and Technical Capabilities – County and Local

This subsection provides a summary of capabilities to support hazard mitigation for local jurisdictions, some of which who sat on the Steering Committee and others who provide a resource for support and information to communities. Specific local capabilities (e.g. police, fire, EMS, highway and public works departments, etc.) are provided in Section 9 (Jurisdictional Annexes).

Cayuga County Office of Emergency Services

The Cayuga County Office of Emergency Services is the County Government Agency charged with supporting and promoting an organized, systematic approach to Emergency Planning, Preparedness, Mitigation, Response and Recovery in the event of a natural or man-made disaster in Cayuga County. It strives to support the day to day operations of the many Emergency Service, Public Service, Public Safety, and Emergency Management organizations in Cayuga County.

The Mission of the Cayuga County Office of Emergency Services is to provide effective coordination and collaboration to create a culture of preparedness that builds and sustains a disaster resilient community.

The Office led the update of the 2021 HMP and represented the department on the Steering Committee.



Cayuga County Department of Planning and Economic Development

The Cayuga County Department of Planning and Economic Development deploys a multidisciplinary team of professional staff to assist local officials, groups, and individuals involved in activities aimed at retaining and enhancing the quality of life for current and future generations. Such activities include:

- Facilitating the development of employment and business opportunities
- Promoting the development of the optimum, balanced mix of land use types and intensities
- Protecting agriculture and farmland
- Protecting the natural environment
- Revitalizing rural villages and hamlets

The Department also provides planning assistance to the municipalities. This includes:

- Community development – offers assistance to apply for and administer programs that support community development projects.
- Technical assistance – provides planning services to the county’s municipalities.
- General Municipal Law 239-l, m & n Review Committee - Sections 239-l, 239-m, and 239-n of the General Municipal Law (GML) of New York State require that certain land use actions being reviewed under local zoning, site plan, and subdivision regulations be referred to a county planning agency for review and comment on aspects of the proposal that are of countywide or intermunicipal significance. The Department reviews these referrals through the General Municipal Law 239-l, m & n Review Committee.
- Training - the Cayuga County Department of Planning and Economic Development provides several opportunities throughout the year to help those on local planning boards and Zoning Board of Appeals to meet this training requirement. In addition, there are many training opportunities available in neighboring counties and online.

The Department of Planning and Economic Development sat on the Steering Committee for the 2021 update, attended meetings, provide input on the mitigation strategy, and reviewed the draft plan.

Local Emergency Planning Committee (LEPC)

Cayuga County will maintain an active Local Emergency Planning Committee (LEPC). The LEPC will function as a committee charged with an all hazards evaluation and planning group in Cayuga County. The Cayuga County Local Emergency Planning Committee will be comprised of the following:

- The Cayuga County Legislative Chairperson or designee
- The Clerk of the Cayuga County Legislature or designee
- The Cayuga County Emergency Manager or designee
- The Cayuga County Deputy Director of Emergency Services or designee
- The Cayuga County Deputy Director of Fire Services or designee
- The Cayuga County Deputy Director of Emergency Medical Services or designee
- The Cayuga County Hazardous Materials Coordinator
- The Cayuga County Director of Health & Human Services or designee
- The Cayuga County Sheriff or designee
- The Cayuga County Hazard Mitigation Coordinator or designee
- Others as referenced in PL99-499



The Local Emergency Planning Committee, through the Cayuga County Office of Emergency Services, will be tasked with:

- Identifying potential hazards in the county
- Determine the probable impact each of those hazards could have on people and property
- Delineate the geographic areas affected by potential hazards, plot them on maps, and designate them as hazard areas
- Advising and assisting county departments in developing and reviewing comprehensive plans for facilities.
- Conduct risk reduction workshops for municipalities and major institutions to encourage their involvement in the county risk reduction program.
- Conduct annual audits of all SARA tier two reporting.

Identify specific hazard reduction actions that could be taken for those hazards determined by the hazard analysis to be most significant. For each hazard reduction action identified, the following information is to be included:

- A description of the action
- A Statement of technical feasibility of the action
- The estimated costs of the action
- The expected benefits of the action and the estimated monetary value of each benefit
- An estimate of the level of community support for the action
- The hazard reduction actions identified shall be consolidated into a Risk Reduction Report that prioritizes and makes recommendations concerning the identified action, and submitted to the Hazard Mitigation Coordinator and the Director of the Office of Emergency Services to be forwarded as appropriate to institutions, government entities, Agencies, boards or committees.
- Significant potential hazards to be identified and analyzed include natural, technological, and human-caused hazards.

Cayuga County Health Department

The Health Department promotes and protects the health and well-being of the individuals, families, and the community they serve. Their team of caring, committed professionals will improve the residents health, prevent disease, and provide essential health services with the community as their partner. With the current COVID-19 pandemic, the Department has been running COVID testing for residents. They provide daily situational updates regarding the cases reported in Cayuga County.

The Department sat on the Steering Committee for the 2021 update, attended meetings, provide input on the mitigation strategy, and reviewed the draft plan.

Cayuga County Department of Public Works

The Department of Public Works was created in 2018 by the Cayuga County Legislature to consolidate the operations of the Highways, Weights and Measure, Engineering and Surveying, Support Staff, Garages, Signs, Parks and Trails, Museums, and Buildings. The Department provides essential services to the citizens of Cayuga County in a prompt, courteous, safe, efficient, and cost-effective manner and maintain 561 miles of county roads, 125 miles of state-owned roads, 65 miles of trails, 43 bridges, 21 county-owned buildings, and 3 parks within the county's jurisdiction. The department is made up for four divisions: highway, parks and trails, buildings and grounds, and weights and measures.



The Public Works Director serves as the County Superintendent of Highways and also supervises an integrated department including Buildings & Grounds, Parks & Trails, and Weights & Measures. The Director is supported by a Deputy Director of Public Works.

The Department sat on the Steering Committee for the 2021 update, attended meetings, provide input on the mitigation strategy, and reviewed the draft plan.

6.5.4 Administrative and Technical Capabilities State and Federal

New York State Division of Homeland Security and Emergency Services (NYS DHSES)

For more than 50 years, NYS DHSES (formerly New York State Office of Emergency Management) and its predecessor agencies have been responsible for coordinating the activities of all State agencies to protect New York's communities, the State's economic well-being, and the environment from natural and man-made disasters and emergencies. NYS DHSES routinely assists local governments, voluntary organizations, and private industry through a variety of emergency management programs including hazard identification, loss prevention, planning, training, operational response to emergencies, technical support, and disaster recovery assistance.

NYS DHSES administers the FEMA mitigation grant programs in the state and supports local mitigation planning in addition to developing and routinely updating the State Hazard Mitigation Plan. NYS DHSES prepared the current State Hazard Mitigation Plan working with input from other State agencies, authorities and organizations. It was approved by FEMA in 2018 and it keeps New York eligible for recovery assistance in all Public Assistance Categories A through G, and Hazard Mitigation assistance in each of the Unified Hazard Mitigation Assistance Program's five grant programs. The 2019 New York State HMP was used as guidance in completing the Cayuga County HMP Update. The State HMP can be found here: <https://mitigateny.availabs.org/>.

New York State Department of Environmental Conservation (NYSDEC) – Region 7

Within the NYSDEC – Region 7 is located in Central New York. Each of NYSDEC's nine regions has an office that serves the communities within that region. A total of approximately 3,000 NYSDEC staff work in either the Central Office and the regional offices. NYSDEC's Central Office is in Albany. The Region 7 office is located in Syracuse, NY. NYSDEC staff have two main areas of responsibility: natural resource management and environmental quality protection. As part of natural resource management staff oversee state fish and wildlife resources, as well as state forests and wildlife (NYSDEC 2020).

New York State Department of Environmental Conservation (NYSDEC) – Division of Water - Bureau of Flood Protection and Dam Safety

Within the NYSDEC – Division of Water, the Bureau of Flood Protection and Dam Safety (<https://www.dec.ny.gov/chemical/290.html#Bureaus>) cooperates with federal, state, regional, and local partners to protect lives and property from floods, coastal erosion and dam failures through floodplain management and both structural and non-structural means; and, provides support for information technology needs in the Division. The Bureau consists of the following Sections:

- Coastal Erosion and Floodplain Management Section: The Coastal Erosion branch of this section works to reduce coastal erosion and storm damage to protect lives, natural resources, and properties through structural and non-structural means. The Floodplain Management branch is responsible for reducing flood risk to life and property through proper management of activities including development in flood hazard areas, and review and development of revised flood maps.



- Dam Safety Section: Is responsible for reviewing repairs and modifications to dams and assuring that dam owners operate and maintain dams in a safe condition through inspections, technical reviews, enforcement, and emergency planning.
- Flood Control Projects Section: Is responsible for reducing flood risk to life and property through construction, operation and maintenance of flood control facilities (NYSDEC Division of Water 2020).

The NYSDEC's Mission is "To conserve, improve and protect New York's natural resources and environment and to prevent, abate and control water, land and air pollution, in order to enhance the health, safety and welfare of the people of the state and their overall economic and social well-being."

DEC's goal is to achieve this mission through the simultaneous pursuit of environmental quality, public health, economic prosperity and social well-being, including environmental justice and the empowerment of individuals to participate in environmental decisions that affect their lives.

Northeast Regional Climate Center

The Northeast Regional Climate Center (NRCC) partnered with the New York State Energy Research and Development Authority (NYSERDA) to compare various methods of downscaling global climate model (GCM) output and create extreme precipitation projections for New York State. These projections can be incorporated into climate change adaptation planning. Projections for Cayuga County are discussed in Section 5 (Risk Assessment). To help New York State communities plan for effects of climate change, new graphics are now available showing the increased likelihood of heavy precipitation events (NRCC 2020). The projections are provided at: <http://www.nrcc.cornell.edu/>

Department of State's Division of Code Enforcement and Administration (DCEA)

Technical Bulletins for the 2010 Codes of New York State

The DCEA has published 14 technical bulletins including two recent bulletins with guidance related to flood hazard areas: Electrical Systems and Equipment in Flood-damaged Structures and Accessory Structures. One archived bulletin from January 2003, Flood Venting in Foundations and Enclosures Below Design Flood Elevation, refers to the out-of-date edition of FEMA Technical Bulletin 1 and to American Society of Civil Engineers (ASCE) 24-98, which is not the edition referenced by the current codes.

Forms and Publications

The DCEA posts several model reporting forms and related publications on its web page. The Building Permit Application requests the applicant to indicate whether the site is or is not in a floodplain and advises checking with town clerks or NYSDEC. The General Residential Code Plan Review form includes a reminder to "add 2' freeboard." Sample Flood Hazard Area Review Forms, including plan review checklists and inspection checklists for Zone A and Zone V, are based on the forms in Reducing Flood Losses through the International Code Series published by International Code Council and FEMA (2008).

6.5.5 Fiscal Capabilities – County and Local

Cayuga County Soil and Water Conservation District

The role that agriculture plays in the economy of Cayuga County is substantial. As a result, farms and farm businesses need to remain viable and sustainable to provide healthy, local food, maintain a diversity of open space and continue to provide needed jobs. According to the most recent Census of Agriculture (2017), Cayuga County ranked #2 in NYS in the total market value of agricultural products sold with \$287,853,000. When our



favorable agricultural environment is combined with statistics that indicate the county has the most freshwater shoreline in NYS, a healthy balance must be obtained. The Cayuga SWCD has the opportunity to have a significant impact throughout our community as a result of its capability to work directly with private landowners as well as local municipalities.

The programs provided by the Cayuga SWCD to assist agricultural operations in remaining sustainable and viable include the Agricultural Environmental Management Program (AEM), assistance with nutrient management planning, the promotion of soil health practices, oversight of water quality protecting best management practice (BMP) implementation, and conservation mowing and seeding. In 2019, the Cayuga SWCD assisted with the implementation of on farm agricultural BMPs totaling \$989,926.11. The landowners contributed \$319,626.22 towards the costs, while State funding was leveraged to cover the additional \$667,299.89. The Cayuga SWCD was awarded an additional (Round 25 AgNPS and CRF 4) \$3,566,231 in new grant funding for important projects on Cayuga County farms. Participating farms will be contributing \$1,820,302 towards the implementation of the projects. The funding is focused directly on agricultural BMP implementation. This is in addition to the on-going conservation work that farms complete utilizing their own resources. In addition, the Cayuga SWCD works closely with our Federal partners, including the Natural Resources Conservation Service (NRCS), to promote additional conservation programs, many of which are available to assist with BMP implementation projects.

Non-Agricultural Residential and Municipal Assistance:

The Cayuga SWCD also works closely with the non-agricultural landowners and municipalities throughout the county. We further our efforts on protecting water quality through programs that focus on stormwater management, wastewater management, aquatic vegetation control, streambank and shoreline stabilization, proper site drainage, critical area stabilization/seeding, roadside stabilization measures and the proper recycling of yard waste.

Cayuga County is home to a very diverse collection of water bodies. Lake Ontario defines the northern boundary of the county which also includes all or parts of three Finger Lakes - Cayuga, Owasco, and Skaneateles. In addition, there are several smaller water bodies including Cross Lake, Duck Lake, Lake Como, and Otter Lake. The Cayuga SWCD's Aquatic Vegetation Control Program's objectives are to increase the accessibility and usability of the county's water bodies, while seeking to leave the lakes in the most ecologically intact manner possible. Over the past 5 years, we have removed an average of 2,153 cubic yards per year of vegetation from the waterbodies that we harvest.

The stabilization of exposed and eroding critical areas continues to be another important area of focus for the Cayuga SWCD. In 2019, the Cayuga SWCD was awarded \$729,000 in new State grant funding that will be used towards the installation of a new salt storage shed at a local Town Highway Department, stabilize a stream corridor and evaluate road culverts.

Being located in the Finger Lakes Region has many benefits, primarily an abundance of clean, fresh water. Farming operations and many others benefit from the availability of clean water. For instance, the tourism industry including recreational boating, hiking and fishing opportunities thrive throughout the county.

6.5.6 Fiscal Capabilities-Federal and State

Mitigation projects and initiatives are largely or entirely dependent on available funding. Cayuga County is able to fund mitigation projects through existing local budgets, local appropriations (including referendums and bonding), and through a myriad of Federal and State loan and grant programs.



Federal Hazard Mitigation Funding Opportunities

Federal mitigation grant funding is available to all communities with a current hazard mitigation plan (this plan); however most of these grants require a “local share” in the range of 10-25% of the total grant amount. Details about this program and a further description of these opportunities can be found at: <https://www.fema.gov/hazard-mitigation-assistance>. The FEMA mitigation grant programs are described below.

Hazard Mitigation Grant Program (HMGP)

The HMGP is a post-disaster mitigation program. It is made available to states by FEMA after each Federal disaster declaration. The HMGP can provide up to 75% funding for hazard mitigation measures. The HMGP can be used to fund cost-effective projects that will protect public or private property in an area covered by a federal disaster declaration or that will reduce the likely damage from future disasters. Examples of projects include acquisition and demolition of structures in hazard prone areas, flood-proofing or elevation to reduce future damage, minor structural improvements and development of state or local standards. Projects must fit into an overall mitigation strategy for the area identified as part of a local planning effort. All applicants must have a FEMA-approved Hazard Mitigation Plan (this plan).

Applicants who are eligible for the HMGP are state and local governments, certain nonprofit organizations or institutions that perform essential government services, and Indian tribes and authorized tribal organizations. Individuals or homeowners cannot apply directly for the HMGP; a local government must apply on their behalf. Applications are submitted to NYS DHSES and placed in rank order for available funding and submitted to FEMA for final approval. Eligible projects not selected for funding are placed in an inactive status and may be considered as additional HMGP funding becomes available.

For additional information regarding HMGP, please refer to: <https://www.fema.gov/hazard-mitigation-grant-program>

Flood Mitigation Assistance (FMA) Program

The FMA program combines the previous Repetitive Flood Claims and Severe Repetitive Loss Grants into one grant program. The FMA provides funding to assist states and communities in implementing measures to reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insurable under the NFIP. The FMA is funded annually; no federal disaster declaration is required. Only NFIP insured homes and businesses are eligible for mitigation in this program. Funding for FMA is very limited and, as with the HMGP, individuals cannot apply directly for the program. Applications must come from local governments or other eligible organizations. The federal cost share for an FMA project is at least 75%. At most 25% of the total eligible costs must be provided by a non-federal source. Of this 25%, no more than half can be provided as in-kind contributions from third parties. At minimum, a FEMA-approved local flood mitigation plan is required before a project can be approved. The FMA funds are distributed from FEMA to the state. The NYS DHSES serves as the grantee and program administrator for the FMA program.

For additional information regarding the FMA program, please refer to: <https://www.fema.gov/flood-mitigation-assistance-grant-program>

Building Resilient Infrastructure and Communities (BRIC) Program

Building Resilient Infrastructure and Communities (BRIC) will support states, local communities, tribes and territories as they undertake hazard mitigation projects, reducing the risks they face from disasters and natural



hazards. BRIC is a new FEMA pre-disaster hazard mitigation program that replaces the existing Pre-Disaster Mitigation (PDM) program.

The BRIC program guiding principles are supporting communities through capability- and capacity-building; encouraging and enabling innovation; promoting partnerships; enabling large projects; maintaining flexibility; and providing consistency.

For additional information regarding the BRIC program, please refer to: <https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities>

Extraordinary Circumstances

For FMA project subawards, the (FEMA) Region may apply extraordinary circumstances when justification is provided and with concurrence from FEMA Headquarters (Risk Reduction and Risk Analysis Divisions) prior to granting an exception. If this exception is granted, a local mitigation plan must be approved by FEMA within 12 months of the award of the project subaward to that community.

For HMGP and FMA, extraordinary circumstances exist when a determination is made by the Applicant and FEMA that the proposed project is consistent with the priorities and strategies identified in the State (Standard or Enhanced) Mitigation Plan and that the jurisdiction meets at least one of the criteria below. If the jurisdiction does not meet at least one of these criteria, the Region must coordinate with FEMA Headquarters (Risk Reduction and Risk Analysis Divisions) for HMGP; however, for FMA the Region must coordinate and seek concurrence prior to granting an exception:

- The jurisdiction meets the small impoverished community criteria (see Part VIII, B.2).
- The jurisdiction has been determined to have had insufficient capacity due to lack of available funding, staffing, or other necessary expertise to satisfy the mitigation planning requirement prior to the current disaster or application deadline.
- The jurisdiction has been determined to have been at low risk from hazards because of low frequency of occurrence or minimal damage from previous occurrences as a result of sparse development.
- The jurisdiction experienced significant disruption from a declared disaster or another event that impacts its ability to complete the mitigation planning process prior to award or final approval of a project award.
- The jurisdiction does not have a mitigation plan for reasons beyond the control of the State, federally-recognized tribe, or local community, such as Disaster Relief Fund restrictions that delay FEMA from granting a subaward prior to the expiration of the local or Tribal Mitigation Plan.

For HMGP, PDM, and FMA, the Applicant must provide written justification that identifies the specific criteria or circumstance listed above, explains why there is no longer an impediment to satisfying the mitigation planning requirement, and identifies the specific actions or circumstances that eliminated the deficiency.

When an HMGP project funding is awarded under extraordinary circumstances, the Recipient shall acknowledge in writing to the Regional Administrator that a plan will be completed within 12 months of the subaward. The Recipient must provide a work plan for completing the local or Tribal Mitigation Plan, including milestones and a timetable, to ensure that the jurisdiction will complete the plan in the required time. This requirement shall be incorporated into the award (both the planning and project subaward agreements, if a planning subaward is also awarded).

Federal and State Disaster and Recovery Assistance Programs

Following a disaster, various types of assistance may be made available by local, state and federal governments. The types and levels of disaster assistance depend on the severity of the damage and the declarations that result



from the disaster event. Among the general types of assistance that may be provided should the President of the United States declare the event a major disaster are the following:

Individual Assistance (IA)

Individual Assistance (IA) provides help for homeowners, renters, businesses and some non-profit entities after disasters occur. This program is largely funded by the U.S. Small Business Administration. For homeowners and renters, those who suffered uninsured or underinsured losses may be eligible for a Home Disaster Loan to repair or replace damaged real estate or personal property. Renters are eligible for loans to cover personal property losses. Individuals may borrow up to \$200,000 to repair or replace real estate, \$40,000 to cover losses to personal property and an additional 20% for mitigation. For businesses, loans may be made to repair or replace disaster damages to property owned by the business, including real estate, machinery and equipment, inventory and supplies. Businesses of any size are eligible. Non-profit organizations such as charities, churches, private universities, etc. are also eligible. An Economic Injury Disaster Loan provides necessary working capital until normal operations resume after a physical disaster. These loans are restricted, by law, to small businesses only. For additional information regarding IA, please refer to: <https://www.fema.gov/individual-disaster-assistance>

Public Assistance (PA)

Public Assistance (PA) provides cost reimbursement aid to local governments (state, county, local, municipal authorities and school districts) and certain non-profit agencies that were involved in disaster response and recovery programs or that suffered loss or damage to facilities or property used to deliver government-like services. This program is largely funded by FEMA with both local and state matching contributions required. For additional information regarding PA, please refer to: <https://www.fema.gov/public-assistance-local-state-tribal-and-non-profit>

Small-Business Administration (SBA) Loans

Small Business Administration (SBA) provides low-interest disaster loans to homeowners, renters, business of all sizes, and most private nonprofit organizations. SBA disaster loans can be used to repair or replace the following items damaged or destroyed in a declared disaster: real estate, personal property, machinery and equipment, and inventory and business assets.

Homeowners may apply for up to \$200,000 to replace or repair their primary residence. Renters and homeowners may borrow up to \$40,000 to replace or repair personal property-such as clothing, furniture, cars, and appliances – damaged or destroyed in a disaster. Physical disaster loans of up to \$2 million are available to qualified businesses or most private nonprofit organizations. For additional information regarding SBA loans, please refer to: <https://www.sba.gov/managing-business/running-business/emergency-preparedness/disaster-assistance>

Social Services Block Grant

To address the needs of critical health and human service providers and the populations they serve, the State of New York will receive a total of \$235.4 million in federal Superstorm Sandy Social Services Block Grant funding. The State will distribute \$200,034,600 through a public and transparent solicitation for proposals. The State is also allocating \$35.4 million in State Priority Projects, using the SSBG funding. Sandy SSBG resources are dedicated to covering necessary expenses resulting from Superstorm Sandy, including social, health and mental health services for individuals, and for repair, renovation and rebuilding of health care facilities, mental hygiene facilities, child care facilities and other social services facilities. For additional information regarding the SSBG program, please refer to: <https://www.acf.hhs.gov/ocs/programs/ssbg>



Department of Homeland Security

The Homeland Security Grant Program (HSGP) plays an important role in the implementation of the National Preparedness System by supporting the building, sustainment, and delivery of core capabilities essential to achieving the National Preparedness Goal of a secure and resilient nation. The FY 2017 HSGP supports efforts to build and sustain core capabilities across the Prevention, Protection, Mitigation, Response, and Recovery mission areas. This includes two priorities: building and sustaining law enforcement terrorism prevention capabilities and maturation and enhancement of state and major urban area fusion centers (HSGP 2017). HSGP is comprised of three interconnected grant programs including the State Homeland Security Program (SHSP), Urban Areas Security Initiative (UASI), and the Operation Stonegarden (OPSG). Together, these grant programs fund a range of preparedness activities, including planning, organization, equipment purchase, training, exercises, and management and administration. For additional information regarding HSGP, please refer to: <https://www.fema.gov/homeland-security-grant-program>

Community Development Block Grants (CDBG)

CDBG are federal funds intended to provide low and moderate-income households with viable communities, including decent housing, as suitable living environment, and expanded economic opportunities. Eligible activities include community facilities and improvements, roads and infrastructure, housing rehabilitation and preservation, development activities, public services, economic development, planning, and administration. Public improvements may include flood and drainage improvements. In limited instances, and during the times of “urgent need” (e.g., post disaster) as defined by the CDBG National Objectives, CDBG funding may be used to acquire a property located in a floodplain that was severely damaged by a recent flood, demolish a structure severely damaged by an earthquake, or repair a public facility severely damaged by a hazard event. For additional information regarding CDBG, please refer to: <https://www.hudexchange.info/programs/cdbg-entitlement/>

U.S. Economic Development Administration

The U.S. Economic Development Administration (USEDA) is an agency of the U.S. Department of Commerce that supports regional economic development in communities around the country. It provides funding to support comprehensive planning and makes strategic investments that foster employment creation and attract private investment in economically distressed areas of the United States. Through its Public Works Program USEDAs invests in key public infrastructure, such as in traditional public works projects, including water and sewer systems improvements, expansion of port and harbor facilities, brownfields, multitenant manufacturing and other facilities, business and industrial parks, business incubator facilities, redevelopment technology-based facilities, telecommunications and development facilities. Through its Economic Adjustment Program, USEDAs administers its Revolving Loan Fund (RLF) Program, which supplies small businesses and entrepreneurs with the gap financing needed to start or expand their business, in areas that have experienced or are under threat of serious structural damage to the underlying economic base. Please refer to the USEDAs website (<https://www.eda.gov/>) for additional information.

Federal Highway Administration - Emergency Relief

The Federal Highway Administration Emergency Relief is a grant program that may be used for repair or reconstruction of Federal-aid highways and roads on Federal lands which have suffered serious damage as a result of a disaster. NYS is serving as the liaison between local municipalities and FHWA. \$30 Million in funding was released in October-November of 2012 for emergency repair work conducted in first 180 days following Hurricane Sandy. Another \$220 Million in additional funding became available February 2013. For information regarding the FHWA Emergency Relief Program, please refer to:



<https://www.fhwa.dot.gov/programadmin/erelief.cfm>

Federal Transit Administration - Emergency Relief

The Federal Transit Authority Emergency Relief is a grant program that funds capital projects to protect, repair, reconstruct, or replace equipment and facilities of public transportation systems. Administered by the Federal Transit Authority at the U.S. Department of Transportation and directly allocated to MTA and Port Authority. This transportation-specific fund was created as an alternative to FEMA PA. Currently, a total of \$5.2 Billion has been allocated to NYS-related entities. For information regarding the FTA Emergency Relief Program, please refer to: <https://www.transit.dot.gov/funding/grant-programs/emergency-relief-program/emergency-relief-program>

State Hazard Mitigation Funding Opportunities

Empire State Development

Empire State Development offers a wide range of financing, grants and incentives to promote business and employment growth, and real estate development throughout the State. Several programs address infrastructure construction associated with project development, acquisition and demolition associated with project development and brownfield remediation and redevelopment. For additional information regarding Empire State Development, please refer to: <https://esd.ny.gov/>

New York State Department of Transportation (NYSDOT)

Damaged Roads and Signals

High winds, storm tidal surge and flooding caused significant damage to NYSDOT facilities, roads and local transportation infrastructure in the Hudson Valley, Long Island and New York City. Repair and replacement will be necessary for these facilities and infrastructure. In some cases, municipalities will be direct applicants; therefore, not all FEMA-eligible costs are included for damaged infrastructure.

Scour Around Culverts and Bridges

The Scour Critical/Flood Prone Bridge Program is an initiative developed to harden New York State's at-risk bridges to withstand extreme weather events. In the past three years, the State has suffered nine presidentially declared disasters due to extreme weather, many involving severe flooding (NYSDOT 2014).

For this initiative, 105 scour critical/flood prone bridges (https://www.dot.ny.gov/main/business-center/cbow/repository/CBOW_list_2014.pdf) throughout New York State were identified as most at-risk from repeated flooding and are located in the Capital District, Long Island, Mid-Hudson, Mohawk Valley, North Country, Finger Lakes, Central/Western and Southern Tier regions. The locations encompass 78 communities within 30 counties across the State (NYSDOT 2014).

All of the bridges included in this program were built to the codes and standards of their time and remain safe and open for everyday traffic. However, due to a variety of natural severe weather events and the increasing frequency of major storms and floods, they are vulnerable to scour, and flooding caused by the intensity and velocity of water from extreme natural events. Bridge scour erodes and carries away foundation materials such as sand and rocks from around and beneath bridge abutments, piers, foundations and embankments (NYSDOT 2014).

This program encompasses a variety of bridge improvement work, including upgrading concrete bridge abutments and/or piers by adding steel or concrete pile foundations, increasing the size of waterway openings to



meet 100-year flood projections and reducing or eliminating the number of bridge piers in the water to prevent debris and ice jams that can flood surrounding areas. Completion of the program will ensure continual access to critical facilities and essential personnel during emergency events. Adverse impacts to travel throughout the State will be greatly reduced during severe weather events as well (NYSDOT 2014).

Through HMGP, this program aims to increase the State's resiliency and mitigate the risks of loss and damage associated with future disasters. The total cost of the program, including all 105 bridges across the state, is \$518 million. It will be paid for with a mix of funding from FEMA and the U.S. Department of Housing and Urban Development. No state funding will be required (NYSDOT 2014).

Emergency Watershed Protection Program

The purpose of the Emergency Watershed Protection Program (EWP) was established by Congress to respond to emergencies created by natural disasters. The EWP Program is designed to help people and conserve natural resources by relieving imminent hazards to life and property caused by floods, fires, drought, windstorms, and other natural occurrences. The U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) administers the EWP Program; EWP-Recovery, and EWP-Floodplain Easement (FPE). For additional information regarding the EWP, please refer to:

<https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/landscape/ewpp/>

Emergency Watershed Protection Program - Recovery

The EWP Program is a recovery effort program aimed at relieving imminent hazards to life and property caused by floods, fires, windstorms, and other natural occurrences. Public and private landowners are eligible for assistance, but must be represented by a project sponsor that must be a legal subdivision of the State, such as a city, county, township or conservation district, and Native American Tribes or Tribal governments. NRCS may pay up to 75 percent of the construction cost of emergency measures. The remaining 25 percent must come from local sources and can be in the form of cash or in-kind services.

EWP work is not limited to any one set of measures. It is designed for installation of recovery measures to safeguard lives and property as a result of a natural disaster. NRCS completes a Damage Survey Report (DSR) which provides a case-by-case investigation of the work necessary to repair or protect a site.

Watershed impairments that the EWP Program addresses are debris-clogged stream channels, undermined and unstable streambanks, jeopardized water control structures and public infrastructures, wind-borne debris removal, and damaged upland sites stripped of protective vegetation by fire or drought.

Emergency Watershed Protection Program - Floodplain Easement (FPE)

Privately-owned lands or lands owned by local and state governments may be eligible for participation in EWP-FPE. To be eligible, lands must meet one of the following criteria:

- Lands that have been damaged by flooding at least once within the previous calendar year or have been subject to flood damage at least twice within the previous 10 years
- Other lands within the floodplain are eligible, provided the lands would contribute to the restoration of the flood storage and flow, provide for control of erosion, or that would improve the practical management of the floodplain easement
- Lands that would be inundated or adversely impacted as a result of a dam breach



EWP-FPE easements are restored to the extent practicable to the natural environment and may include both structural and nonstructural practices to restore the flood storage and flow, erosion control, and improve the practical management of the easement.

Structures, including buildings, within the floodplain easement must be demolished and removed, or relocated outside the 100-year floodplain or dam breach inundation area.

New York State Department of Environmental Conservation Climate Smart Communities (CSC) Program

The Climate Smart Communities (CSC) program is jointly sponsored by the following six New York State agencies: Department of Environmental Conservation; Energy Research and Development Authority; Public Service Commission; Department of State; Department of Transportation; and the Department of Health. The program encourages municipalities to minimize the risks of climate change and reduce long-term costs through actions which reduce greenhouse gas (GHG) emissions and adapt to a changing climate. The program offers free technical support on energy and climate and guidance tailored to New York State communities. As of April 2020, 314 communities, representing New Yorkers in every region of the state, have committed to acting on climate through New York State's Climate Smart Communities program.

Benefits of participating in the program include saving taxpayer dollars, improving operations and infrastructure, increasing energy independence and security, demonstrating leadership, and positioning for economic growth. Registered Climate Smart Communities receive notification of state and federal assistance that they can leverage to help adopt low-carbon technologies, and of programs and support for efficiency improvements and energy conservation. Further, they receive an advantage in accessing some state assistance programs. They can call on the help of other local governments that already have adopted climate smart practices and policies, and their climate-smart accomplishments receive statewide recognition. Key elements of the Climate Smart Communities program are described below.

For additional information regarding the CSC program, please refer to:

<http://www.dec.ny.gov/energy/50845.html>

Climate Smart Communities Pledge

Any city, town, village or county in New York can join the program by adopting the Climate Smart Communities Pledge. To become a registered Climate Smart Community, the municipality's governing body must adopt a resolution that includes all 10 elements of the Pledge and inform NYSDEC of the passage of the resolution. The required 10 elements of the Pledge are as follows:

- Pledge to be a Climate Smart Community.
- Set goals, inventory emissions, plan for climate action.
- Decrease community energy use.
- Increase community use of renewable energy.
- Realize benefits of recycling and other climate-smart solid waste management practices.
- Reduce greenhouse gas emissions through use of climate-smart land-use tools.
- Enhance community resilience and prepare for the effects of climate change.
- Support development of a green innovation economy.
- Inform and inspire the public.
- Commit to an evolving process of climate action.



Climate Smart Communities Certification (CSC) Program

The Climate Smart Communities Certification (CSC) program enables high-performing registered communities to achieve recognition for their leadership. Designed around the existing pledge elements, the certification program recognizes communities achieving any on over 130 total possible actions through a rating system leading to four levels of award: Certified, Bronze, Silver and Gold. Recertification of completed actions is required every five years. Details of the program and the specific documentation required for each action are described in the CSC Certification Manual at http://www.dec.ny.gov/docs/administration_pdf/certman.pdf. The county has registered in the Program, along with Moravia Village, and the Towns of Niles, Owasco and Montezuma.

Climate Smart Communities Grant Program

In April 2016, DEC announced an expansion of the Environmental Protection Fund to support communities ready to reduce greenhouse gas emissions and prepare for the effects of climate change. Climate Smart Community Implementation grants support mitigation and adaptation projects and range from \$100,000 to \$2 million. Competitive grants ranging from \$25,000 to \$100,000 will also provide support for local governments to become certified Climate Smart Communities. All counties, cities, towns and villages of the State of New York are eligible to receive funding. The CSC grant program will provide 50/50 matching grants for eligible projects in the following categories.

Funding is available for **implementation projects** that advance a variety of climate adaptation and mitigation actions, including the following:

- Construction of natural resiliency measures
- Relocation or retrofit of climate-vulnerable facilities
- Conservation or restoration of riparian areas and tidal marsh migration area
- Reduction of flood risk
- Clean transportation
- Reduction or recycling of food waste

Funding is also available for **certification projects** that advance several specific actions aligned with Climate Smart Communities Certification requirements:

- Right-sizing of government fleets
- Developing natural resource inventories
- Conducting vulnerability assessments
- Developing climate adaptation strategies
- Updating hazard mitigation plans to address changing conditions and reduce climate vulnerability

In scoring grant applications, increasing points are awarded to communities who have already taken the CSC pledge and to those that have achieved certification status. All grant recipients must take the Climate Smart Communities Pledge within the term of their grant contract. For climate mitigation projects, grant recipients must provide a report of estimates of emissions reduction. Certification actions must adhere to the requirements and standards described in the Climate Smart Communities Certification Manual (<http://www.dec.ny.gov/energy/96511.html>). For implementation projects involving property (construction, improvements, restoration, rehabilitation) – if the property is not owned by the grant recipient, they must obtain a climate change mitigation easement.



The Climate Smart Communities Toolkit was developed to educate New York communities on recommended practices that will help to reduce greenhouse gas emissions and adapt to the effects of climate change, specifically in the areas of land-use, transportation policy, green buildings, infrastructure investment, green infrastructure, housing policy, and adaptation and resilience. The Climate Smart Communities Guide to Local Action contains overviews of possible community actions, how-to's and case studies to help communities implement the CSC pledge. The Climate Smart Communities Land Use Toolkit allows New York communities to find recommended practices that will help to reduce greenhouse gas emissions in the areas of land use, transportation policy, green building, infrastructure investment, green infrastructure and housing policy.

New York State Department of Environmental Conservation (NYSDEC)

Water Quality Improvement Project (WQIP) Program

The Water Quality Improvement Project (WQIP) program is a competitive, reimbursement grant program that funds projects that directly address documented water quality impairments. The competitive, statewide grant program is open to local governments and not-for-profit corporations. Grant recipients may receive up to 75 percent of the project costs for high priority wastewater treatment improvement, non-agricultural nonpoint source abatement and control, land acquisition for source water protection, aquatic habitat restoration, and municipal separate storm sewer system projects; up to 50% for salt storage projects; and up to 40% for general wastewater infrastructure improvement projects. Eligible activities include:

- Wastewater treatment improvement
- Non-agricultural nonpoint source abatement and control
- Land acquisition for source water protection
- Salt storage
- Aquatic habitat restoration
- Municipal separate storm sewer systems (MS4)

Details regarding this program are available here - <https://www.dec.ny.gov/pubs/4774.html>

New York State DEC/EFC Wastewater Infrastructure Engineering Planning Grant (EPG)

The New York State Department of Environmental Conservation (DEC), in conjunction with the New York State Environmental Facilities Corporation (EFC), will offer grants to municipalities to help pay for the initial planning of eligible Clean Water State Revolving Fund (CWSRF) water quality projects.

The Wastewater Infrastructure Engineering Planning Grant will assist municipalities with the engineering and planning costs of CWSRF-eligible water quality projects. Municipalities with a Median Household Income (MHI) of \$65,000 or less in REDC regions of Capital District, Southern Tier, North Country, Mohawk Valley, Central NY, Finger Lakes, or Western NY OR with a Median Household Income of \$85,000 or less in REDC regions of Long Island, New York City or Mid-Hudson are eligible to apply. Grants with a 20 percent required local match will be provided to finance activities including engineering and/or consultant fees for engineering and planning services for the production of an engineering report.

The goal of the EPG program is to advance water quality projects to construction, so successful applicants can use the engineering report funded by the grant to seek financing through the CWSRF program, WQIP program, or other funding entities to further pursue the identified solution. Funding priorities go to projects that are:

- Required by an executed Order on Consent; or
- Required by a draft or final State Pollutant Discharge Elimination System (SPDES) permit; or



- Upgrading or replacing an existing wastewater system; or
- Constructing a wastewater treatment and/or collection system for an area with failing onsite septic systems; or
- Identified in a Total Maximum Daily Load (TMDL) Implementation Plan

Details regarding this program can be found here - <https://www.dec.ny.gov/pubs/81196.html>

New York State Department of Transportations

BRIDGE NY

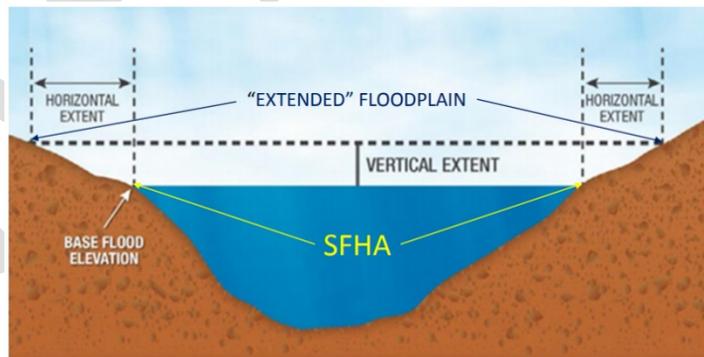
The BRIDGE NY program, administered by the New York State Department of Transportation (NYSDOT), is open to all municipal owners of bridges and culverts. Projects will be awarded through a competitive process and will support all phases of project development. Projects selected for funding under the BRIDGE NY Initiative will be evaluated based on the resiliency of the structure, including such factors as hydraulic vulnerability and structural resiliency; the significance and importance of the bridge including traffic volumes, detour considerations, number and types of businesses served and impacts on commerce; and the current bridge and culvert structural conditions. Information regarding the program can be found here –

<https://www.dot.ny.gov/BRIDGENY>

Community Risk and Resiliency Act (CRRA)

On September 22, 2014, Governor Andrew Cuomo signed bill A06558/S06617-B, the Community Risk and Resiliency Act (CRRA). The purpose of the bill is to ensure that certain state monies, facility-siting regulations and permits include consideration of the effects of climate risk and extreme-weather events. The bill's provisions will apply to all applications and permits no later than January 1, 2017. CRRA includes five major provisions:

- Official Sea-level Rise Projections - CRRA requires the Department of Environmental Conservation (DEC) to adopt science-based sea-level rise projections into regulation.
- Consideration of Sea-Level Rise, Storm Surge and Flooding - CRRA requires applicants for permits or funding in a number of specified programs to demonstrate that future physical climate risk due to sea-level rise, storm surge and flooding have been considered, and that DEC consider incorporating these factors into certain facility-siting regulations.
- Smart Growth Public Infrastructure Policy Act Criteria - CRRA adds mitigation of risk due to sea-level rise, storm surge and flooding to the list of smart-growth criteria to be considered by state public-infrastructure agencies.
- Guidance on Natural Resiliency Measures - CRRA requires DEC, in consultation with the Department of State (DOS), to develop guidance on the use of natural resources and natural processes to enhance community resiliency.
- Model Local Laws Concerning Climate Risk - CRRA requires DOS, in cooperation with DEC, to develop model local laws that include consideration of future risk due to sea-level rise, storm surge





and/or flooding. These model local laws must be based on available data predicting the likelihood of extreme-weather events, including hazard-risk analysis (NYSDEC 2018).

CRRA requires NYSDEC, in consultation with DOS, to prepare guidance on implementation of the statute. To meet its obligation to develop guidance for the implementation of CRRA, DEC is proposing a new document, State Flood Risk Management Guidance (SFRMG). The SFRMG is intended to inform state agencies as they develop program-specific guidance to require that applicants demonstrate consideration of sea-level rise, storm surge and flooding, as permitted by program-authorizing statutes and operating regulations. The SFRMG incorporates possible future conditions, including the greater risks of coastal flooding presented by sea-level rise and enhanced storm surge, and of inland flooding expected to result from increasingly frequent extreme-precipitation events (NYSDEC 2018).

For additional details on the CRRA, please refer to: <https://www.dec.ny.gov/energy/102559.html>

6.5.7 Potential Mitigation Funding Sources

While it is important to recognize the mitigation strategies for each jurisdiction to help achieve the mitigation goals and objectives of the HMP, it is also important to provide sources for funding to implement these strategies. The table below provides a list of programs, descriptions, and links for those seeking funding sources. This table is not intended to be a comprehensive list, but rather a starting point to help identify potential sources of funding for the identified mitigation strategies.



Table 6-5. Mitigation Funding Sources

| Program | Description | Lead Agency | Website |
|--|--|-------------|---|
| Federal | | | |
| Hazard Mitigation Assistance (HMA) | Grants to provide funding for eligible mitigation activities that reduce disaster losses and protect life and property from future disaster damages – includes FMA, HMGP, BRIC | FEMA | https://www.fema.gov/hazard-mitigation-assistance |
| Flood Mitigation Assistance (FMA) | Program Grants to States and communities for pre-disaster mitigation planning and projects to help reduce or eliminate the long-term risk of flood damage to structures insurable under the National Flood Insurance Program | FEMA | https://www.fema.gov/flood-mitigation-assistance-grant-program |
| Hazard Mitigation Grant Program (HMGP) | Grants to States and communities for planning and projects providing long-term hazard mitigation measures following a major disaster declaration | FEMA | https://www.fema.gov/hazard-mitigation-grant-program |
| Building Resilient Infrastructure and Communities (BRIC) | Grants to States local communities, tribes and territories as they undertake hazard mitigation projects, reducing the risks they face from disasters and natural hazards. BRIC is a new FEMA pre-disaster hazard mitigation program that replaces the existing Pre-Disaster Mitigation (PDM) program. | FEMA | https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities |
| Public Assistance: Hazard Mitigation Funding Under Section 406 | Hazard mitigation discretionary funding available under Section 406 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act following a Presidentially declared disaster | FEMA | https://www.fema.gov/news-release/2017/05/03/4309/fema-hazard-mitigation-grants-404-and-406 |
| Assistance to Firefighters Grant Program | The primary goal of the Assistance to Firefighters Grants (AFG) is to enhance the safety of the public and firefighters with respect to fire-related hazards by providing direct financial assistance to eligible fire departments, nonaffiliated Emergency Medical Services organizations, and State Fire Training Academies. This funding is for critically needed resources to equip and train emergency personnel to recognized standards, enhance operations efficiencies, foster interoperability, and support community resilience. | FEMA | https://www.fema.gov/welcome-assistance-firefighters-grant-program |
| High Hazard Potential Dams (HHPD) Rehabilitation Grant | The Rehabilitation of High Hazard Potential Dams Grant Program (HHPD) provides technical, planning, design, and construction assistance in the form of grants to non-Federal governmental organizations or nonprofit | FEMA | https://www.grants.gov/web/grants/view-opportunity.html?oppId=316238 |





| Program | Description | Lead Agency | Website |
|---|--|---|---|
| | organizations for rehabilitation of eligible high hazard potential dams. | | |
| Fire Management Assistance Grant Program | Assistance for the mitigation, management, and control of fires on publicly or privately-owned forests or grasslands that threaten such destruction as would constitute a major disaster. Provides a 75% Federal cost share and the State pay the remaining 25% for actual cost. | FEMA | https://www.fema.gov/fire-management-assistance-grant-program |
| Disaster Housing Program | Emergency assistance for housing, including minor repair of home to establish livable conditions, mortgage and rental assistance | HUD | https://www.hud.gov/program_offices/public_indian_housing/publications/dhap |
| HOME Investment Partnerships Program | Grants to local and state government and consortia for permanent and transitional housing, (including financial support for property acquisition and rehabilitation for low income persons) | HUD | https://www.hud.gov/program_offices/comm_planning/affordablehousing/programs/home/ |
| HUD Disaster Recovery Assistance | Grants to fund gaps in available recovery assistance after disasters (including mitigation) | HUD | https://www.hud.gov/info/disasterresources |
| Section 108 Loan Guarantee | Enables states and local governments participating in the Community Development Block Grant (CDBG) program to obtain federally guaranteed loans for disaster-distressed areas | HUD | https://www.hudexchange.info/programs/section-108/ |
| Smart Growth Implementation Assistance (SGIA) program | The SGIA program focuses on complex or cutting-edge issues, such as stormwater management, code revision, transit-oriented development, affordable housing, infill development, corridor planning, green building, and climate change. Applicants can submit proposals under 4 categories: community resilience to disasters, job creation, the role of manufactured homes in sustainable neighborhood design or medical and social service facilities siting. | EPA | https://www.epa.gov/smartgrowth |
| Partners for Fish and Wildlife | Financial and technical assistance to private landowners interested in pursuing restoration projects affecting wetlands and riparian habitats | U.S. Fish and Wildlife Service | https://www.fws.gov/partners/ |
| FHWA Emergency Relief Program | Fund for the repair or reconstruction of Federal-aid highways that have suffered serious damage as a result of (1) natural disasters or (2) catastrophic failures from an external cause | U.S. Department of Transportation (DOT) | https://www.fhwa.dot.gov/programadmin/erelief.cfm |





| Program | Description | Lead Agency | Website |
|--|---|-------------|---|
| Transportation Investment Generating Economic Recovery (TIGER) | Investing in critical road, rail, transit and port projects across the nation | U.S. DOT | https://www.transportation.gov/tags/tiger-grants |
| Community Facilities Direct Loan & Grant Program | This program provides affordable funding to develop essential community facilities in rural areas. An essential community facility is defined as a facility that provides an essential service to the local community for the orderly development of the community in a primarily rural area, and does not include private, commercial or business undertakings. | USDA | https://www.rd.usda.gov/programs-services/community-facilities-direct-loan-grant-program |
| Emergency Loan Program | USDA's Farm Service Agency (FSA) provides emergency loans to help producers recover from production and physical losses due to drought, flooding, other natural disasters or quarantine | USDA | https://www.fsa.usda.gov/programs-and-services/farm-loan-programs/emergency-farm-loans/index |
| Emergency Watershed Protection (EWP) program | Provide assistance to relieve imminent hazards to life and property caused by floods, fires, drought, windstorms, and other natural occurrences | NRCS | https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/landscape/ewpp/ |
| Financial Assistance | Financial assistance to help plan and implement conservation practices that address natural resource concerns or opportunities to help save energy, improve soil, water, plant, air, animal and related resources on agricultural lands and non-industrial private forest land | NRCS | https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/ |
| Regional Conservation Partnership Program (RCPP) | The Regional Conservation Partnership Program (RCPP) promotes coordination of NRCS conservation activities with partners that offer value-added contributions to expand our collective ability to address on-farm, watershed, and regional natural resource concerns. Through RCPP, NRCS seeks to co-invest with partners to implement projects that demonstrate innovative solutions to conservation challenges and provide measurable improvements and outcomes tied to the resource concerns they seek to address. | NRCS | https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/rcpp/ |
| Emergency Management Performance Grants (EMPG) Program | Assist local, tribal, territorial, and state governments in enhancing and sustaining all-hazards emergency management capabilities | U.S. DHS | https://www.fema.gov/emergency-management-performance-grant-program |
| Reimbursement for Firefighting on Federal Property | Provides reimbursement only for direct costs and losses over and above normal operating costs. | U.S. DHS | https://www.usfa.fema.gov/grants/firefighting_federal_property.html |
| Department of Homeland Security Grant Program (HSGP) | HSGP is composed of three interconnected grant programs including the State Homeland Security Program (SHSP), Urban Areas Security Initiative | U.S. DHS | https://www.dhs.gov/homeland-security-grant-program-hsgp |





| Program | Description | Lead Agency | Website |
|----------------------------------|--|-------------------------------------|---|
| | (UASI), and the Operation Stonegarden (OPSG). Together, these competitive grant programs fund a range of preparedness activities, including planning, organization, equipment purchase, training, exercises, and management and administration. | | |
| Land & Water Conservation Fund | Matching grants to states and local governments for the acquisition and development of public outdoor recreation areas and facilities (as well as funding for shared federal land acquisition and conservation strategies) | National Park Service | https://www.nps.gov/subjects/lwcf/index.htm |
| Coastal Watersheds Grant Program | <p>Restore America’s Estuaries, in close coordination with and financial support from EPA, administers the NEP Coastal Watersheds Grant Program. This grant program funds projects within the geographic areas shown here and supports the following Congressionally-set priorities:</p> <ul style="list-style-type: none"> •Loss of key habitats resulting in significant impacts on fisheries and water quality such as seagrass, mangroves, tidal and freshwater wetlands, forested wetlands, kelp beds, shellfish beds, and coral reefs; •Recurring harmful algae blooms; •Unusual or unexplained marine mammal mortalities; •Proliferation or invasion of species that limit recreational uses, threaten wastewater systems, or cause other ecosystem damage; •Flooding and coastal erosion that may be related to sea level rise, changing precipitation, or salt marsh, seagrass, or wetland degradation or loss; •Impacts of nutrients and warmer water temperatures on aquatic life and coastal ecosystems, including low dissolved oxygen conditions in estuarine waters; and •Contaminants of emerging concern found in coastal and estuarine waters such as pharmaceuticals, personal care products, and microplastics. | National Estuary Program | https://estuaries.org/initiatives/watershedgrants/ |
| USSBA | Small Business Administration (SBA) provides low-interest disaster loans to homeowners, renters, business of all sizes, and most private nonprofit organizations. SBA disaster loans can be used to repair or replace the following items damaged or destroyed in a declared disaster: real estate, personal property, machinery and equipment, and inventory and business assets. | Small Business Administration (SBA) | https://www.sba.gov/funding-programs/disaster-assistance |





| Program | Description | Lead Agency | Website |
|--|---|---|---|
| State | | | |
| Local Government Records Management Improvement Fund (LGRMIF) Disaster Recovery Grants | Grants for disaster recovery projects related to damage caused by a sudden, unexpected event involving fire, water, man-made or natural phenomena where a timely response is necessary to prevent the irretrievable loss of vital or archival records, or to ensure reasonable, timely access to vital records | New York State Archives / New York State Education Department | http://www.archives.nysed.gov/grants/grants_lgrmif.shtml |
| The New York State Emergency Services Revolving Loan | Repair of firefighting apparatus, ambulances, or rescue vehicles; Renovation, rehabilitation, or repair of facilities that house firefighting equipment, ambulances, rescue vehicles, and related equipment | NYS DHSES | http://www.dhSES.ny.gov/ofpc/services/loan/ |
| Environmental Protection Fund (EPF) | Matching grants for the acquisition, planning, development, and improvement of parks, historic properties | New York State Parks, Recreation & Historic Preservation (NYSOPRHP) | https://www.dec.ny.gov/about/92815.html |
| Recreational Trails (RTP) | Program Matching grants for the acquisition, development, rehabilitation and maintenance of trails and trail-related projects | NYSOPRHP | https://parks.ny.gov/grants/recreational-trails/default.aspx |
| Environmental Protection & Improvement Grants | Competitive grants for environmental protection and improvement; available for municipalities, community organizations, not-for-profit organizations and others | New York State Department of Environmental Conservation | https://www.dec.ny.gov/about/92815.html |
| Volunteer Fire Assistance Grants | The grant is a 50/50 matching funds program. Its purpose is to make funds available to rural fire companies for the purchase of wildland firefighting equipment such as portable backpack pumps, Nomex protective clothing, hand tools, hard hats, hose, portable radios and dry hydrants. | NYSDEC | https://www.dec.ny.gov/regulations/2364.html |
| Clean Water Act Section 604(b) Water Quality Planning Grants | Provide funding to implement regional comprehensive water quality management planning activities as described in Section 604(b) of the federal Clean Water Act. 604(b) funds are to be used for water quality management planning activities, including tasks to determine the nature, extent and causes of point and nonpoint source water pollution problems, and to develop plans to resolve these problems. | NYSDEC | https://www.dec.ny.gov/lands/53122.html |
| Water Quality Improvement Project (WQIP) Program | The Water Quality Improvement Project (WQIP) program is a competitive, reimbursement grant program | NYSDEC | https://www.dec.ny.gov/pubs/4774.html |





| Program | Description | Lead Agency | Website |
|---|---|-------------|---|
| | that funds projects that directly address documented water quality impairments. Applications are typically available each spring through the Consolidated Funding Application. | | |
| BRIDGE NY | The State is making funding available for local governments to rehabilitate and replace bridges and culverts statewide. | NYS DOT | https://www.dot.ny.gov/BRIDGENY |
| New York State DEC/EFC Wastewater Infrastructure Engineering Planning Grant (EPG) | The New York State Department of Environmental Conservation (DEC), in conjunction with the New York State Environmental Facilities Corporation (EFC), will offer grants to municipalities to help pay for the initial planning of eligible Clean Water State Revolving Fund (CWSRF) water quality projects. The ultimate goal of the EPG program is to advance water quality projects to construction, so successful applicants can use the engineering report funded by the grant to seek financing through the CWSRF program, Water Quality Improvement Project program, or other funding entities to further pursue the identified solution. | NYSDEC | https://www.dec.ny.gov/pubs/81196.html |

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6.6 MITIGATION STRATEGY DEVELOPMENT AND UPDATE

6.6.1 Update of Mitigation Strategies

For each action, municipalities were asked to indicate the status of each action (“No Progress/Unknown”, “In Progress/Not Yet Complete”, “Ongoing”, “Completed”, “Discontinued”), and provide review comments on each. Jurisdictions were requested to quantify the extent of progress and provide reasons for the level progress or why actions were discontinued. Each jurisdictional annex provides a table identifying their prior mitigation strategy, the status of those actions and initiatives, and their disposition within their updated strategy.

Local mitigation actions identified as “Complete” and actions identified as “Discontinued” have been removed from the updated strategies. Those local actions that municipalities identified as “No Progress/Unknown” or “In Progress/Not Yet Complete,” as well as certain actions/initiatives identified as “Continuous,” have been carried forward in their local updated mitigation strategies. Actions considered ongoing capabilities were marked as “Discontinued” and included in the plan in the Capabilities section of the annexes. Jurisdictions were asked to provide further details on these projects to help better define the projects, identify benefits and costs, and improve implementation.

At the June 2020 Kick-Off and during subsequent local-level planning meetings, all participating jurisdictions were further surveyed to identify mitigation activities completed, ongoing and potential/proposed. As new additional potential mitigation actions, projects or initiatives became evident during the plan update process, including as part of the risk assessment update and as identified through the public and stakeholder outreach process (see Section 3 – Planning Process), communities were made aware of these either through direct communication (local meetings, email, phone) or via their draft municipal annexes.

To help support the selection of an appropriate, risk-based mitigation strategy, each annex provided a summary of hazard vulnerabilities identified during the plan update process, either directly by municipal representatives, through review of available county and local plans and reports, and through the hazard profiling and vulnerability assessment process.

Beginning in June 2020, members of the Planning Committee and contract consultant worked directly with each jurisdiction (phone, email, local support meetings) to assist with the development and update of their annex and include mitigation strategies, focusing on identifying well-defined, implementable projects with a careful consideration of benefits (risk reduction, losses avoided), costs, and possible funding sources (including mitigation grant programs).

Concerted efforts were made to assure that jurisdictions develop updated mitigation strategies that included activities and initiatives covering the range of mitigation action types described in recent FEMA planning guidance (FEMA “Local Mitigation Planning Handbook” March 2013), specifically:

- Local Plans and Regulations – These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project – These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection – These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.



- Education and Awareness Programs – These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as the National Flood Insurance Program and Community Rating System, StormReady (NOAA) and Firewise (NFPA) Communities.

A mitigation strategy workshop was conducted by NYSDHSES and FEMA Region II representatives on October 27, 2020, supplemented by four additional mitigation action development virtual workshops and one on one phone calls between jurisdictions and the contract consultant, for all participating jurisdictions to support the development of focused problem statements based on the impacts of natural hazards in the county and their communities. These problem statements are intended to provide a detailed description of the problem area, including its impacts to the municipality/jurisdiction; past damages; loss of service; etc. An effort was made to include the street address of the property/project location, adjacent streets, water bodies, and well-known structures as well as a brief description of existing conditions (topography, terrain, hydrology) of the site. These problem statements form a bridge between the hazard risk assessment which quantifies impacts to each community with the development of actionable mitigation strategies.

A strong effort has been made to better focus local mitigation strategies to clearly defined, readily implementable projects and initiatives that meet the definition or characteristics of mitigation. Broadly defined mitigation objectives have been eliminated from the updated strategy unless accompanied by discrete actions, projects or initiatives.

Certain continuous or ongoing strategies that represent programs that are, or since prior and existing plans have become, fully integrated into the normal operational and administrative framework of the community have been identified within the ‘Capabilities’ section of each annex and removed from the updated mitigation strategy.

At least two mitigation projects per jurisdiction have been documented with an Action Worksheet, as per the New York State Hazard Mitigation Planning Standards Guide.

As discussed within the hazard profiles in Section 5.4 (Risk Assessment), the long-term effects of climate change are anticipated to exacerbate the impacts of weather-related hazards including flood, severe storm, severe winter storm and wildfire. By way of addressing these climate change-sensitive hazards within their local mitigation strategies and integration actions, communities are working to evaluate and recognize these long-term implications and potential impacts, and to incorporate in planning and capital improvement updates.

Jurisdictions worked to develop implementable mitigation actions to address repetitive losses and severe repetitive losses due to flooding. Limited availability of data resulted in receipt of aggregate data only, with specific locations and damages of relevant structure not provided at the time of the plan update. This restricted the ability of jurisdictions to develop location-specific actions. However, jurisdictions determined the types of strategies to be utilized to reduce repetitive losses and included these strategies as mitigation actions.

Jurisdictions included mitigation actions to address vulnerable critical facilities and lifelines. These actions have been proposed in consideration of protection against 0.2% annual chance (500-year) events, or worst-case scenarios. It is recognized, however, that in the case of projects being funded through federal mitigation programs, the level of protection may be influenced by cost-effectiveness as determined through a formal benefit-cost analysis. In the case of “self-funded” projects, municipal discretion must be recognized. Further, it must be recognized that the county and municipalities have limited authority over privately-owned critical facility owners with regard to mitigation at any level of protection.



6.6.2 Update of County Mitigation Strategy

The update of the county-level mitigation strategies included a review of progress on the actions/initiatives identified in the 2014 HMP, using a process similar to that used to review municipal mitigation strategy progress. The county, through their various department representatives, reviewed mitigation actions through the BAToolSM Mitigation Module, identifying all of the county-level actions/initiatives from the 2014 plan. For each action, relevant county representatives were asked to indicate the status of each action (“No Progress/Unknown”, “In Progress/Not Yet Complete”, “Continuous”, “Completed”, “Discontinued”), and provide review comments on each.

Projects/initiatives identified as “Complete”, as well as though actions identified as “Discontinued”, have been removed from this plan update. Those actions the county has identified as “No Progress/Unknown”, “In Progress/Not Yet Complete” or “Continuous” have been carried forward in the county’s updated mitigation strategy. Actions considered ongoing capabilities were marked as “Discontinued” and included in the plan as ongoing capabilities.

Throughout the course of the plan update process, additional regional and county-level mitigation actions have been identified. These were identified through:

- Review of the results and findings of the updated risk assessment;
- Review of available regional and county plans, reports and studies;
- Direct input from county departments and other county and regional agencies
- Input received through the public and stakeholder outreach process.

6.6.3 Mitigation Strategy Evaluation and Prioritization

Section 201.c.3.iii of 44 CFR requires an action plan describing how the actions identified will be prioritized.

Recent FEMA planning guidance (March 2013) identifies a modified STAPLEE (Social, Technical, Administrative, Political, Legal, Economic, and Environmental) mitigation action evaluation methodology that uses a set of 10 evaluation criteria suited to the purposes of hazard mitigation strategy evaluation. This method provides a systematic approach that considers the opportunities and constraints of implementing a particular mitigation action. The June 2020 Mitigation Workshop further amplified these evaluation criteria, and indicated that communities may want to consider other factors.

Based on this guidance, the Steering and Planning Committees have developed and applied an action evaluation and prioritization methodology which includes an expanded set of fourteen (14) criteria to include the consideration of cost-effectiveness, availability of funding, anticipated timeline, and if the action addresses multiple hazards.

The fourteen (14) evaluation/prioritization criteria used in the 2020 update process are:

1. Life Safety – How effective will the action be at protecting lives and preventing injuries?
2. Property Protection – How significant will the action be at eliminating or reducing damage to structures and infrastructure?
3. Cost-Effectiveness – Are the costs to implement the project or initiative commensurate with the benefits achieved?



4. Technical – Is the mitigation action technically feasible? Is it a long-term solution? Eliminate actions that, from a technical standpoint, will not meet the goals.
5. Political – Is there overall public support for the mitigation action? Is there the political will to support it?
6. Legal – Does the municipality have the authority to implement the action?
7. Fiscal - Can the project be funded under existing program budgets (i.e., is this initiative currently budgeted for)? Or would it require a new budget authorization or funding from another source such as grants?
8. Environmental – What are the potential environmental impacts of the action? Will it comply with environmental regulations?
9. Social – Will the proposed action adversely affect one segment of the population? Will the action disrupt established neighborhoods, break up voting districts, or cause the relocation of lower income people?
10. Administrative – Does the jurisdiction have the personnel and administrative capabilities to implement the action and maintain it or will outside help be necessary?
11. Multi-hazard – Does the action reduce the risk to multiple hazards?
12. Timeline - Can the action be completed in less than 5 years (within our planning horizon)?
13. Local Champion – Is there a strong advocate for the action or project among the jurisdiction’s staff, governing body, or committees that will support the action’s implementation?
14. Other Local Objectives – Does the action advance other local objectives, such as capital improvements, economic development, environmental quality, or open space preservation? Does it support the policies of other plans and programs?

Participating jurisdictions were asked to use these criteria to assist them in evaluating and prioritizing mitigation actions identified in the 2020 update. Specifically, for each mitigation action, the jurisdictions were asked to assign a numeric rank (-1, 0, or 1) for each of the 14 evaluation criteria, defined as follows:

- 1 = Highly effective or feasible
- 0 = Neutral
- -1 = Ineffective or not feasible

Further, jurisdictions were asked to provide a brief summary of the rationale behind the numeric rankings assigned, as applicable. The numerical results of this exercise were then used by each jurisdiction to help prioritize the action or strategy as “Low”, “Medium,” or “High.” While this provided a consistent, systematic methodology to support the evaluation and prioritization of mitigation actions, jurisdictions may have additional considerations that could influence their overall prioritization of mitigation actions.

It is noted that jurisdictions may be carrying forward mitigation actions and initiatives from prior mitigation strategies that were prioritized using a different, but not necessarily contrary, approach. It is important to note that certain initiatives from the 2014 Cayuga County HMP and other local HMPs are being carried forward in their updated strategies, with or without modification.



For the 2021 plan update there has been an effort to develop more specific, clearly defined, and action-oriented mitigation strategies. These local strategies include projects and initiatives that have been well-vetted, and are seen by the community as the most effective approaches to advance their local mitigation goals and objectives within their capabilities. As such, many of the initiatives in the updated mitigation strategy were ranked as “High” or “Medium” priority, as reflective of the community’s clear intent to implement, available resources notwithstanding. In general, initiatives that would have had “low” priority rankings were appropriately screened out during the local action evaluation process.

6.6.4 Benefit/Cost Review

Section 201.6.c.3iii of 44CFR requires the prioritization of the action plan to emphasize the extent to which benefits are maximized according to a cost/benefit review of the proposed projects and their associated costs. Stated otherwise, cost-effectiveness is one of the criteria that must be applied during the evaluation and prioritization of all actions comprising the overall mitigation strategy.

The benefit/cost review applied in for the evaluation and prioritization of projects and initiatives in this plan update process was qualitative; that is, it does not include the level of detail required by FEMA for project grant eligibility under the HMGP and BRIC grant program. For all actions identified in the local strategies, jurisdictions have identified both the costs and benefits associated with project, action or initiative.

Costs are the total cost for the action or project, and may include administrative costs, construction costs (including engineering, design and permitting), and maintenance costs.

Benefits are the savings from losses avoided attributed to the implementation of the project, and may include life-safety, structure and infrastructure damages, loss of service or function, and economic and environmental damage and losses.

When available, jurisdictions were asked to identify the actual or estimated dollar value for project costs and associated benefits. Having defined costs and benefits allows a direct comparison of benefits versus costs, and a quantitative evaluation of project cost-effectiveness. Often, however, numerical costs and/or benefits have not been identified, or may be impossible to quantitatively assess.

For the purposes of this planning process, jurisdictions were tasked with evaluating project cost-effectiveness with both costs and benefits assigned to “High”, “Medium” and “Low” ratings. Where quantitative estimates of costs and benefits were available, ratings/ranges were defined as:

Low = < \$10,000 *Medium* = \$10,000 to \$100,000 *High* = > \$100,000

Where quantitative estimates of costs and/or benefits were not available, qualitative ratings using the following definitions were used:



Table 6-6. Qualitative Cost and Benefit Ratings

| Costs | |
|----------|--|
| High | Existing funding levels are not adequate to cover the costs of the proposed project, and implementation would require an increase in revenue through an alternative source (e.g., bonds, grants, and fee increases). |
| Medium | The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years. |
| Low | The project could be funded under the existing budget. The project is part of or can be part of an existing, ongoing program. |
| Benefits | |
| High | Project will have an immediate impact on the reduction of risk exposure to life and property. |
| Medium | Project will have a long-term impact on the reduction of risk exposure to life and property or will provide an immediate reduction in the risk exposure to property. |
| Low | Long-term benefits of the project are difficult to quantify in the short term. |

Using this approach, projects with positive benefit versus cost ratios (such as high over high, high over medium, medium over low, etc.) are considered cost-effective.

For some of the Cayuga County initiatives identified, the Planning Committee may seek financial assistance under FEMA’s HMGP or Hazard Mitigation Assistance (HMA) programs. These programs require detailed benefit/cost analysis as part of the application process. These analyses will be performed when funding applications are prepared, using the FEMA BCA model process. The Planning Committee is committed to implementing mitigation strategies with benefits that exceed costs. For projects not seeking financial assistance from grant programs that require this sort of analysis, the Planning Committee reserves the right to define “benefits” according to parameters that meet its needs and the goals and objectives of this plan.