



## SECTION 6. MITIGATION STRATEGIES

This section presents mitigation strategies for Cattaraugus County to reduce potential exposure and losses identified as concerns in the Risk Assessment portion of this plan. 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 Planning Approach
3. Review and Update of Mitigation Goals and Objectives
4. Capability Assessment
5. Mitigation Strategy Development

**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 requirements of the Disaster Mitigation Act of 2000 (refer to Section 1 [Introduction] for more detail on DMA 2000), 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 plan update. The county, through previous and ongoing hazard mitigation activities, has demonstrated that it is proactive in protecting its physical assets and citizens against losses from natural hazards. Examples of previous and ongoing actions and projects include the following:

- The county facilitated the development of the original Cattaraugus County Multi-Jurisdictional Hazard Mitigation Plan. The current planning process represents the regulatory five-year plan update process, which includes participation of 44 jurisdictions in the county, along with key county and regional stakeholders.
- All municipalities participating in this Hazard Mitigation Plan (HMP) update participate in the National Flood Insurance Program (NFIP), which requires the adoption of Federal Emergency Management Agency (FEMA) floodplain mapping and certain minimum standards for building within the floodplain.
- Reports, plans, and studies relating to or including information on natural hazards or natural hazard policies affecting Cattaraugus County have been reviewed and incorporated into this plan update as appropriate, as discussed in Section 3 (Planning Process) and References.

### 6.2 GENERAL MITIGATION PLANNING APPROACH

The overall approach used to update the county and local hazard mitigation strategies is based on FEMA and New York State (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 subsections 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

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.

This section documents the efforts to develop hazard mitigation goals and objectives established to reduce or avoid long-term vulnerabilities to the identified hazards.

#### 6.3.1 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 mitigation goals were developed based on the risk assessment results, discussions, research, and input from the committee, existing authorities, policies, programs, resources, stakeholders, and the public. The Steering Committee reviewed the 2014 goals and objectives and made revisions for the 2020 update based on the risk assessment results, discussions, research, and input from among the committee, existing authorities, policies, programs, resources, stakeholders, and the public. For the purposes of this plan, goals and objectives are defined as follows:

**Goals** are general guidelines that explain what is to be achieved. They are usually broad, long-term, policy-type statements and represent global visions. 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).

**Objectives** are short-term aims that form a strategy or course of action to meet a goal. Unlike goals, objectives are stand-alone measurements of the effectiveness of a mitigation action. The objectives also are used to help establish priorities.

During the 2020 plan update process, the Steering Committee reviewed the goals and objectives established in the 2014 HMP. These 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 New York State 2019 HMP, Cattaraugus County, and local risk management plans as well as direct input on how the county and municipalities 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 integrating this plan with other planning mechanisms/programs and to support mitigation through the protection and preservation of



natural systems, including particular reference to certain goals and objectives in the NYS 2019 HMP update, as identified in the table below.

As a result of this review process, the goals and objectives for the 2020 update were updated to those presented in Table 6-1.

Table 6-1. Cattaraugus County Hazard Mitigation Plan Goals and Objectives

Goals	Objectives
<b>Goal 1: Protect life, property, and critical infrastructure from hazard impacts.</b>	Objective 1.1: Retrofit critical infrastructure to protect against hazard impacts.
	Objective 1.2: Enhance stormwater management infrastructure.
	Objective 1.3: Ensure that critical facilities can continue to function during and after hazard impacts.
	Objective 1.4: Acquire, retrofit, or relocate structures from flood-prone areas.
	Objective 1.5: Acquire or relocate structures from areas prone to landslides.
	Objective 1.6: Encourage residents and business owners to insure their property against hazard impacts, including through flood insurance through the National Flood Insurance Program (NFIP).
<b>Goal 2: Reduce the risk of hazards on life, property, and the environment.</b>	Objective 2.1: Develop and/or update local regulations based on current information and best practices.
	Objective 2.2: Maintain natural waterways and drainage systems to reduce the impacts of hazards.
<b>Goal 3: Educate the public, officials, and other stakeholders about the hazards they face and what can be done to mitigate hazard impacts.</b>	Objective 3.1: Provide training opportunities to local officials regarding regulatory issues and best practices.
	Objective 3.2: Continue to educate individuals throughout the county on the hazards they face and what property protection measures they can take.

## 6.4 CAPABILITY ASSESSMENT

According to FEMA’s *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 current local and state programs, policies, regulations, funding, and practices that could either facilitate or hinder mitigation.

During the original planning process, the county and participating jurisdictions identified and assessed their capabilities in the areas of existing programs, policies, and technical documents. By completing this assessment, 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 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 Planning and Regulatory, Administrative and Technical, and Fiscal arenas may be found in the Capability Assessment section of each jurisdictional annex in Section 9 - Annexes. Within each annex, participating jurisdictions 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 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 Cattaraugus County are presented below.

### 6.4.1 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 review is provided in Section 3 (Planning Process) and summarized in Appendix H (Plan Review Matrix).

The Cattaraugus County Department of Economic Development, Planning, and Tourism provides a wide range of planning services to support the county and its communities. The Planning Division provides support to many of the county's municipalities in the areas of land use and comprehensive planning, zoning, geographic information systems, infrastructure development, and design guidelines for new construction and redevelopment.

- Provision of Municipal Support Services for all municipalities, including assistance with Comprehensive Planning, Community Revitalization Fund, Grant Assistance, Smart Growth, Age Friendly Communities, Land Bank, Census Data and Demographics, Complete Streets, planning assistance, and zoning assistance.
- Development of a model conservation subdivision ordinance for municipalities to use.
- Development of the “Smart Development for Quality Communities,” a series of guidebooks outlining the vision of the county and its communities for development while preserving the rural character of the county.
- Development of the Coordinated Public Transit-Human Services Transportation Plan.
- Provision of training and planning information for Municipal Planners and Zoning Officials.
- Agricultural Development services, including farmland protection planning, including administering the Agricultural Districts and the annual 30-Day Inclusion programs, sitting on the County Legislature’s Agriculture & Farmland Protection Board, and overseeing the Agricultural and Farmland Protection Plan for Cattaraugus County.



- Participating on study and advisory committees as a member agency of the Community Transportation Coalition (CTC), which is responsible for multi-agency transportation planning and funding coordination for Cattaraugus County.
- Creation and maintenance of the Cattaraugus County Countywide Trail System Plan.
- Environmental services, including floodplain mapping using the Cattaraugus County Parcel Viewer, Green Infrastructure, and Watershed Protection.
- Creation and maintenance of the Multi-Jurisdictional Hazard Mitigation Plan for Cattaraugus County.
- Technical assistance to county and city departments and to the towns and villages.
- GIS mapping services to county departments and municipalities (Cattaraugus County Department of Economic Development, Planning, and Tourism 2019).

Cattaraugus County Department of Public Works staff provided leadership for the Cattaraugus County HMP Update planning effort. In addition, the county staff on the Steering Committee provided continuous support for the implementation of mitigation projects and mitigation educational outreach and serves as a resource to the county and municipalities.

Section 239 of New York State General Municipal Law (GML) requires the referral of certain local planning actions to the Cattaraugus County Planning Board for the examination of possible intermunicipal impacts. The Cattaraugus County Planning Board operates under New York State General Municipal Law §239 l and m to advise local boards on the potential intermunicipal or countywide impact of local land use decisions. The Planning Board uses the Cattaraugus County Comprehensive Plan to direct recommendations on municipal land use referrals and to review proposed county capital improvement projects.

### **National Flood Insurance Program (NFIP) and Flood Damage Prevention**

As it is a federal program, the NFIP is described in Section 6.4.2, below.

All municipalities in Cattaraugus County actively participate in the NFIP. As of 2020, there were 479 NFIP policies in Cattaraugus County. There have been 382 claims made, totaling over \$2.87 million for damages to structures and contents. There are 60 NFIP Repetitive Loss (RL) properties in the county. The 2015 HMP stated that there were only 15 RL properties in the county, with 11 being residential and the other four being commercial properties. Given these numbers, there has been a notable increase in the number of RL properties throughout the county. However, information on specific locations of Repetitive Loss (RL) and Severe Repetitive Loss (SRL) properties was not made available from FEMA for this plan update, so the county is unable to provide a breakdown of the RL properties by occupancy. Further details on the county's flood vulnerability may be found in the flood hazard profile in Section 5.4.1 - Flood.

Municipal compliance with the NFIP is described in each of the jurisdictional annex in Section 9. The county's municipalities have been compliant with the NFIP, but municipal flood damage prevention capabilities are generally low. To enhance their flood damage prevention programs and enhance compliance with the NFIP in the future, each municipality has actions in their mitigation strategies to update their flood damage prevention ordinances to incorporate two feet of freeboard, and to ensure that their floodplain administrators complete training on floodplain management and the NFIP. In addition, Cattaraugus County's mitigation strategy (see Section 9.1) includes actions to facilitate a countywide FIRM update, and to coordinate with each municipality to examine and enhance their flood damage prevention programs and compliance with the NFIP in the future.

### **Emergency and Evacuation Plans**

The Cattaraugus County Office of Emergency Services is designated to coordinate all emergency management activities in the county, including planning, response, and management. The department works collaboratively



with many other agencies and organizations, which enables the county to better protect life and property during disasters and emergencies. The Office of Emergency Services maintains the Cattaraugus 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. The Cattaraugus County Sheltering Plan provides protocol for sheltering and evacuation of residents in the event of an emergency.

### Local Waterfront Revitalization Program

The Waterfront Revitalization of Coastal Areas and Inland Waterways Act offers local governments the opportunity to participate in the State's Coastal Management Program (CMP) on a voluntary basis by preparing and adopting a Local Waterfront Revitalization Program (LWRP), providing more detailed implementation of the State's CMP through use of such existing broad powers as zoning and site plan review (New York State Division of Planning 2018).

When an LWRP is approved by the New York State Secretary of State, State agency actions are required to be consistent with the approved LWRP to the maximum extent practicable. When the federal government concurs with the incorporation of an LWRP into the CMP, federal agency actions must be consistent with the approved addition to the CMP. Title 19 of NYCRR Part 600, 601, 602, and 603 provide the rules and regulations that implement each of the provisions of the Waterfront Revitalization of Coastal Areas and Inland Waterways Act, including but not limited to the required content of an LWRP, the processes of review and approval of an LWRP, and LWRP amendments (New York State Division of Planning 2018).

A LWRP consists of a planning document prepared by a community and the program established to implement the plan. An LWRP may be comprehensive and address all issues that affect a community's entire waterfront, or it may address the most critical issues facing a significant portion of its waterfront. An approved LWRP reflects community consensus and provides a clear direction for appropriate future development. It establishes a long-term partnership among local government, community-based organizations, and the State. Also, funding to advance preparation, refinement, or implementation of Local Waterfront Revitalization Programs is available under Title 11 of the New York State Environmental Protection Fund Local Waterfront Revitalization Program (EPF LWRP), among other sources (New York State Division of Planning 2018).

Any village, town, or city located along the State's coast or designated inland waterway can prepare a new or amend an existing Local Waterfront Revitalization Program. Municipalities are encouraged to address local revitalization issues in a broader context, aligned with regional economic development strategies and regional resource protection and management programs (New York State Division of Planning 2018).

Refer to [https://www.dos.ny.gov/opd/programs/WFRevitalization/LWRP\\_status.html](https://www.dos.ny.gov/opd/programs/WFRevitalization/LWRP_status.html) to see a list of all approved LWRPs. Cattaraugus County currently does not have any approved LWRPs.

### 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.



## 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).

According to the federal law commonly known as Stormwater Phase II, permits are required for stormwater discharges from Municipal Separate Storm Sewer Systems (MS4s) in urbanized areas and those additionally designated by the New York State Department of Environmental Conservation (NYSDEC). Owners or operators of such MS4s must be authorized in accordance with the State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems. The permit requires development of a Stormwater Management Program (SWMP).

### 6.4.2 Planning and Regulatory Capabilities – State and Federal

#### National Flood Insurance Program (NFIP)

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. Please refer to the Flood Hazard Profile in Section 5.4.1 - Flood for information on recent legislation related to reforms to the NFIP.

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).

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 NYSDEC and New York State Division of Homeland Security and Emergency Services (NYS DHSES). Additional information on the NFIP program and its implementation throughout the county may be found in the flood hazard profile (Section 5.4.1 - Flood).

The state and municipalities within it 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 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 (NYDEC 2018). Communities may go beyond this



requirement, providing for additional freeboard. In most New York communities, new structures must have the lowest floor 3 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 structures within a community. The community may wish to deem "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 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, 2012).

As of October 2020, no communities within Cattaraugus County participate in the CRS program.

### 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 2017). Details on each NWP can be found here: <https://usace.contentdm.oclc.org/utills/getfile/collection/p16021coll7/id/6711>.

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. In New York State, there are six regional general permit categories (see <https://www.lrb.usace.army.mil/Missions/Regulatory/New-York-Permit-Information/>) (USACE Buffalo District 2019).

### 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 Dam Safety Section is responsible for “reviewing repairs and modifications to dams and assuring [sic] that dam owners operate and maintain dams in a safe condition through inspections, technical reviews, enforcement, and emergency planning.” The Flood Control Projects Section is responsible for reducing flood risk to life and property through construction, operation, and maintenance of flood control facilities.

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.

### **6.4.3 Administrative and Technical Capabilities - County and Local**

This subsection provides a summary of capabilities to support hazard mitigation for local jurisdictions, some of whom 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).

#### **Cattaraugus County Planning Division**

The Cattaraugus County Planning Division provides a variety of services to the residents and businesses of the county. The county strives to provide these services in a way that improves the county’s quality of life while ensuring its economic well-being. The Planning Division supports the communities within the county in comprehensive and land use planning, zoning, infrastructure development, geographic information systems, and design guidelines for redevelopment and new construction. Additionally, the Planning Division serves as a policy and technical advisor to the Cattaraugus County Agricultural and Farmland Protection Board in the administration of the Agricultural District Program (<https://www.cattco.org/planning/services>).

The Cattaraugus County Planning Division consists of the following divisions:

- County Planning Services
- Agricultural Development Services
- Geographic Information Systems and Information Services
- Community Support Services
- Local Planning Assistance
- Environmental Protection Services
- Trails Services

#### **Cattaraugus County Office of Emergency Services**

The Cattaraugus County Office of Emergency Services is responsible for all emergency planning, response, and management within the county. The office creates and maintains county emergency plans, including the CEMP, and reviews and files municipal emergency plans; additionally, the office leads the county emergency operations and assists all towns, cities, and villages with emergency planning and coordination. The county offers Fire Service Training, Emergency Medical Service Training, and American Heart Association CPR/ AED/ First Aid Training.

Staff within the Cattaraugus County Office of Emergency Services are trained in the principles of National Incident Management Systems (NIMS) and Incident Command System (ICS), allowing them to serve as the primary support for the Cattaraugus County Emergency Operations Center (EOC). Staff also works with NYS DHSES, FEMA, and county agencies such as fire departments and Emergency Medical Services providers.



### Cattaraugus County Soil and Water Conservation District

The Cattaraugus County Soil and Water Conservation District (CCSWCD) is a subdivision of the local government established under New York State law. The CCSWCD's purpose is to carry out a program for the conservation, use, and development of soil, water, and related resources. The CCSWCD coordinates and implements resource management programs at a local level and facilitates cooperation between local, state, and federal agencies. The CCSWCD works with landowners, land managers, local government agencies, and other local interests to address issues related to soil and water, including:

- Erosion control
- Flood prevention
- Water conservation and use
- Wetlands
- Groundwater
- Water quality and quantity
- Nonpoint source pollution
- Forestland protection
- Wildlife
- Recreation
- Wastewater management
- Community development

The mission of CCSWCD is to *promote the health, safety, and general welfare of the present and future generations of Cattaraugus County residents through the conservation and enhancement of soil, water, air, flora, and fauna through the delivery of science-based technical and educational assistance.* (Cattaraugus County Soil and Water Conservation District, No Date).

Specific services provided by CCSWCD include:

- Agricultural assessments – CCSWCD completes soil group worksheets for landowners applying for an agricultural assessment. These worksheets provide the soil types found on the landowner's property and identifies how many acres of each soil group they have. This information is used to help determine a tax exemption if the landowner's land is identified as agricultural land.
- Stream Disturbance Permit Applications
- Preliminary Site Evaluation of Ponds
- Conservation Planning on Agricultural Land
- Interpretation of Resource Information
- Erosion and Sediment Control – Drainage Planning

### Cattaraugus County Health Department – Division of Environmental Health

The Cattaraugus County Health Department works to protect and improve the health of county residents. Services provided by the department include:

- Children and Families Health Services – including Birth Certificates, Childhood Developmental Services, Children's Healthcare, Children with Special Health Care Needs, Family Planning, Immunization Services, and Women, Infants, and Children (WIC)



- Healthy Living Services – including a Cancer Screening Program, HIV/AIDS Counseling and Testing, Home Care, Reproductive Health Services, Smoking “Quit Line,” Tuberculosis Clinic, and Preventative Services
- Laboratory Services – including coliform testing of drinking water, blood chemistries, bacteriology, blood lead, hematology, mycobacteriology, mycology, and virology
- Emergency Preparedness – The Office of Public Health Emergency Preparedness (PHEP) works with the Cattaraugus County Health Department to coordinate the Department’s preparation and response to large-scale public health emergencies, ensuring the safety and well-being of the residents of Cattaraugus County. This is accomplished through:
  - The development of joint partnerships with members of federal, state, and local government, hospitals, community-based organizations, and volunteers
  - The development of plans and the provision of training
  - Conducting exercises and drills for plans created by the department
  - Frequently updating plans with the involvement of all partners

### Cattaraugus County Legislature

The Legislature serves as the governing body of the county. The purpose of the Legislature is to exercise the powers and discharge any duties of local government and the administration of public affairs that can be imposed or conferred upon it by law. It is composed of eight legislative districts and operates under a committee system. The committees include:

- Finance
- Public Works
- Strategic Planning
- County Operations
- Public Safety
- Human Services
- Development and Agriculture
- Labor Relations

The primary purpose of the County Legislature is to “conduct the peoples’ business as a vital unit of local government, assuming responsibility for planning, financing, and operating municipal services countywide.” (<https://www.cattco.org/government>)

### Cattaraugus County Department of Public Works

The Cattaraugus County Department of Public Works (DPW) consolidates the operations of the Highway, Refuse, Buildings and Grounds divisions, and the Onoville Marina. The Onoville Marina, located in the Town of South Valley, is a self-sufficient enterprise fund. Marina operating expenses are covered by revenues generated from dock and campground fees and fuel sales. Two full-time employees and nine seasonal employees staff the marina.

The DPW is also responsible for the maintenance of county-owned buildings. There are five major public buildings within the county: county centers in Little Valley and Olean, the Pines Healthcare and Rehabilitation centers in Machias and Olean, and the Department of Public Works facility in Little Valley. The DPW employs 58 full and part-time employees that clean and maintain the above-mentioned facilities.

Most of the financial and human resources of the DPW is used in the maintenance of 395 miles of road, 265 bridges, 258 culverts, and 1,530 drainage structures that fall under county jurisdiction. The DPW is broken down



further to the Highway Division, which employs 125 full-time employees and includes the Engineering Division, the Commissioner's staff, and the Little Valley Garage. There are six highway facilities and the Little Valley maintenance facility. In 2019, the Department of Public Works used its \$12.3 million budget for road maintenance, including snowplowing, paving, surface treatment, ditching, pothole patching, equipment replacement, and maintenance throughout the county. The county also has a 2019 Capital Projects Program with a budget of \$21.8 million, to be used for major road improvements, culvert and bridge replacements/rehabilitations, and buildings.

The Refuse Division is the second largest operation overseen by the DPW. The Refuse Division employs 12 full-time and 19 part-time individuals and operates seven transfer stations throughout the county.

Funding for the DPW is derived from a variety of resources. The largest percent of the Department's funding comes from local property taxes, though other sources include 1% of sales tax revenue, mortgage recording tax, vehicle registration fees, and state and federal funding through a variety of programs.

### Highway Division

These employees provide for the maintenance of 392 miles of county roads, 264 bridges, 256 culverts, 1,500 drainage pipes, 6,800 access culverts, 40 miles of guide rail, 5,000 sign installations, and 10,000 signs. The DPW is also responsible for snow and ice control of county roads. The Highway Division uses sanding and snow removal operations during snow and ice events.

### Cattaraugus County Soil and Water Conservation District

The Cattaraugus County Soil and Water Conservation District's mission is to promote the health, safety, and general welfare of the present and future generations of Cattaraugus County residents through the conservation and enhancement of soil, water, air, flora, and fauna through the delivery of science-based technical and educational assistance (Cattaraugus County Soil and Water, 2020).

## 6.4.4 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 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 Cattaraugus County HMP Update. The State HMP can be found here: <https://mitigateny.availabs.org/>.



## **New York State Department of Environmental Conservation (NYSDEC) – Region 9 – Central New York**

NYSDEC – Region 9 is located in central New York and includes Allegany, Cattaraugus, Chautauqua, Erie, Niagara, and Wyoming counties. The main Department of Environmental Conservation (DEC) office is located in Buffalo with a sub-office in Allegany. DEC 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 (NYSDEC Region 9 2019).

## **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 (<http://www.dec.ny.gov/about/61432.html>) 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 nonstructural means; and, provides support for information technology needs in the division. The bureau consists of the following sections:

- Coastal Management: Works to reduce coastal erosion and storm damage to protect lives, natural resources, and properties through structural and nonstructural means.
- Dam Safety: 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: Is responsible for reducing flood risk to life and property through construction, operation, and maintenance of flood control facilities.
- Floodplain Management: 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 (NYSDEC Bureau of Flood Protection and Dam Safety 2019).

## **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 Cattaraugus 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 2019). 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).

### 6.4.5 Fiscal Capabilities – County and Local

#### Municipal Fiscal Capabilities

Cattaraugus County and individual municipalities are (legally, not necessarily practically) able to fund mitigation projects through existing local budgets, local appropriations (including referendums and bonding), and a variety of federal and state loan and grant programs. Many municipalities noted throughout the planning process that they are faced with increasing fiscal constraints, including decreasing revenues, budget constraints, and tax caps. In an effort to overcome these fiscal challenges, municipalities have continued to leverage the sharing of resources and combining available funding with grants and other sources and note that plans and intermunicipal cooperation are beneficial in obtaining grants.

### 6.4.6 Fiscal Capabilities – State and Federal

Mitigation projects and initiatives are largely or entirely dependent on available funding. Cattaraugus 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 BRIC and 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, PDM, 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 PDM and 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 includes the following:

#### Individual Assistance (IA)

IA provides help for homeowners, renters, businesses, and some nonprofit 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. Nonprofit 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)

PA provides cost reimbursement aid to local governments (state, county, local, municipal authorities and school districts) and certain nonprofit 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

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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 Program (SSBG)

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To address the needs of critical health and human service providers and the populations they serve, the State of New York received 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

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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 composed 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)

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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, USED A 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, USED A 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 USED A website (<https://www.eda.gov/>) for additional information.

### Federal Highway Administration - Emergency Relief (FHWA-ER)

The FHWA- ER 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 the first 180 days following Hurricane Sandy. Another \$220 million in additional funding became available February 2013. For information regarding the FHWA-ER Program, please refer to: <https://www.fhwa.dot.gov/programadmin/erelief.cfm>

### Federal Transit Administration - Emergency Relief (FTA-ER)

The FTA-ER 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 metropolitan transit authorities (MTA) and port authorities, 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-ER 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/>

### Local Waterfront Revitalization Program

The Waterfront Revitalization of Coastal Areas and Inland Waterways Act offers local governments the opportunity to participate in the State's Coastal Management Program (CMP) (pdf) on a voluntary basis by preparing and adopting a LWRP, providing more detailed implementation of the State's CMP through use of such existing broad powers as zoning and site plan review. When an LWRP is approved by the New York State Secretary of State, State agency actions are required to be consistent with the approved LWRP to the maximum



extent practicable. When the federal government concurs with the incorporation of an LWRP into the CMP, federal agency actions must be consistent with the approved addition to the CMP.

An approved LWRP reflects community consensus and provides a clear direction for appropriate future development. It establishes a long-term partnership among local government, community-based organizations, and the State. Also, funding to advance preparation, refinement, or implementation of Local Waterfront Revitalization Programs is available under Title 11 of the New York State EPF LWRP, among other sources.

In addition, State permitting, funding, and direct actions must be consistent, to the maximum extent practicable, with an approved LWRP. Within the federally defined coastal area, federal agency activities are also required to be consistent with an approved LWRP. This “consistency” provision is a strong tool that helps ensure all government levels work in unison to build a stronger economy and a healthier environment.

### New York State Department of Transportation (NYSDOT)

#### Scour Critical/Flood Prone Bridge Program

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](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/>

### EWP - 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.

### EWP - 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 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 2016, more than 170 communities, representing 6.6 million 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 DEC 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 ten 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](http://www.dec.ny.gov/docs/administration_pdf/certman.pdf).

### 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 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/Environmental Facilities Corporation (EFC) Wastewater Infrastructure Engineering Planning Grant (EPG)

The New York State DEC, in conjunction with the New York State 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 Regional Economic Development Council (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 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

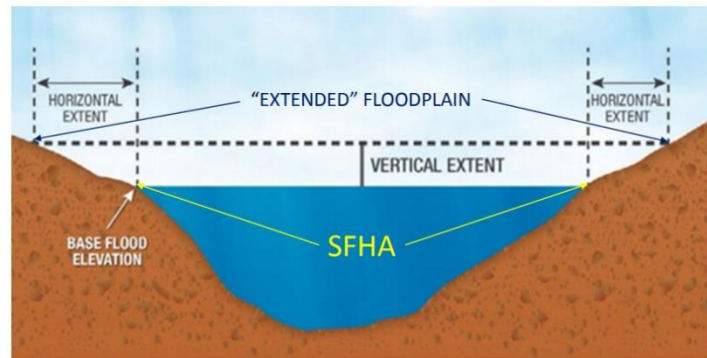
#### BRIDGE NY

The BRIDGE NY program, administered by the 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 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 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 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>

### 6.4.7 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 6-2. Mitigation Funding Sources

Program	Description	Lead Agency	Website
<b>Federal</b>			
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, PDM.	FEMA	<a href="https://www.fema.gov/hazard-mitigation-assistance">https://www.fema.gov/hazard-mitigation-assistance</a>
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	<a href="https://www.fema.gov/flood-mitigation-assistance-grant-program">https://www.fema.gov/flood-mitigation-assistance-grant-program</a>
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	<a href="https://www.fema.gov/hazard-mitigation-grant-program">https://www.fema.gov/hazard-mitigation-grant-program</a>
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	<a href="https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities">https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities</a>
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	<a href="https://www.fema.gov/news-release/2017/05/03/4309/fema-hazard-mitigation-grants-404-and-406">https://www.fema.gov/news-release/2017/05/03/4309/fema-hazard-mitigation-grants-404-and-406</a>
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	<a href="https://www.fema.gov/welcome-assistance-firefighters-grant-program">https://www.fema.gov/welcome-assistance-firefighters-grant-program</a>
Disaster Housing Program	Emergency assistance for housing, including minor repair of home to establish livable conditions, mortgage and rental assistance.	HUD	<a href="https://www.hud.gov/program_offices/public_indian_housing/publications/dhap">https://www.hud.gov/program_offices/public_indian_housing/publications/dhap</a>
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	<a href="https://www.hud.gov/program_offices/comm_planning/affordablehousing/programs/home/">https://www.hud.gov/program_offices/comm_planning/affordablehousing/programs/home/</a>
HUD Disaster Recovery Assistance	Grants to fund gaps in available recovery assistance after disasters (including mitigation).	HUD	<a href="https://www.hud.gov/info/disasterresources">https://www.hud.gov/info/disasterresources</a>
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	<a href="https://www.hudexchange.info/programs/section-108/">https://www.hudexchange.info/programs/section-108/</a>



Program	Description	Lead Agency	Website
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	<a href="https://www.epa.gov/smartgrowth">https://www.epa.gov/smartgrowth</a>
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	<a href="https://www.fws.gov/partners/">https://www.fws.gov/partners/</a>
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)	<a href="https://www.fhwa.dot.gov/programadmin/erelief.cfm">https://www.fhwa.dot.gov/programadmin/erelief.cfm</a>
Transportation Investment Generating Economic Recovery (TIGER)	Investing in critical road, rail, transit, and port projects across the nation.	U.S. DOT	<a href="https://www.transportation.gov/tags/tiger-grants">https://www.transportation.gov/tags/tiger-grants</a>
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	<a href="https://www.rd.usda.gov/programs-services/community-facilities-direct-loan-grant-program">https://www.rd.usda.gov/programs-services/community-facilities-direct-loan-grant-program</a>
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	<a href="https://www.fsa.usda.gov/programs-and-services/farm-loan-programs/emergency-farm-loans/index">https://www.fsa.usda.gov/programs-and-services/farm-loan-programs/emergency-farm-loans/index</a>
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	<a href="https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/landscape/ewpp/">https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/landscape/ewpp/</a>
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	<a href="https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/">https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/</a>
Regional Conservation Partnership Program (RCPP)	The 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	<a href="https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/rcpp/">https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/rcpp/</a>
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	<a href="https://www.fema.gov/emergency-management-performance-grant-program">https://www.fema.gov/emergency-management-performance-grant-program</a>



Program	Description	Lead Agency	Website
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	<a href="https://www.nps.gov/subjects/lwcf/index.htm">https://www.nps.gov/subjects/lwcf/index.htm</a>
Coastal Watersheds Grant Program	<p>Restore America’s Estuaries, in close coordination with and financial support from EPA, administers the National Estuary Program (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"> <li>•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; <ul style="list-style-type: none"> <li>•Recurring harmful algae blooms;</li> <li>•Unusual or unexplained marine mammal mortalities;</li> </ul> </li> <li>•Proliferation or invasion of species that limit recreational uses, threaten wastewater systems, or cause other ecosystem damage; <ul style="list-style-type: none"> <li>•Flooding and coastal erosion that may be related to sea-level rise, changing precipitation, or salt marsh, seagrass, or wetland degradation or loss;</li> </ul> </li> <li>•Impacts of nutrients and warmer water temperatures on aquatic life and coastal ecosystems, including low dissolved oxygen conditions in estuarine waters; and</li> <li>•Contaminants of emerging concern found in coastal and estuarine waters such as pharmaceuticals, personal care products, and microplastics.</li> </ul>	National Estuary Program	<a href="https://estuaries.org/initiatives/watershedgrants/">https://estuaries.org/initiatives/watershedgrants/</a>
<b>State</b>			
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	<a href="http://www.archives.nysed.gov/grants/grants_lgrmif.shtml">http://www.archives.nysed.gov/grants/grants_lgrmif.shtml</a>
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	<a href="http://www.dhSES.ny.gov/ofpc/services/loan/">http://www.dhSES.ny.gov/ofpc/services/loan/</a>
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)	<a href="https://www.dec.ny.gov/about/92815.html">https://www.dec.ny.gov/about/92815.html</a>
Recreational Trails (RTP)	Program Matching grants for the acquisition, development, rehabilitation and maintenance of trails and trail-related projects.	NYSOPRHP	<a href="https://parks.ny.gov/grants/recreational-trails/default.aspx">https://parks.ny.gov/grants/recreational-trails/default.aspx</a>



Program	Description	Lead Agency	Website
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	<a href="https://www.dec.ny.gov/about/92815.html">https://www.dec.ny.gov/about/92815.html</a>
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	<a href="https://www.dec.ny.gov/regulations/2364.html">https://www.dec.ny.gov/regulations/2364.html</a>
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	<a href="https://www.dec.ny.gov/lands/53122.html">https://www.dec.ny.gov/lands/53122.html</a>
Water Quality Improvement Project (WQIP) Program	The WQIP program is a competitive, reimbursement grant program that funds projects that directly address documented water quality impairments. Applications are typically available each spring through the Consolidated Funding Application.	NYSDEC	<a href="https://www.dec.ny.gov/pubs/4774.html">https://www.dec.ny.gov/pubs/4774.html</a>
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	<a href="https://www.dec.ny.gov/pubs/81196.html">https://www.dec.ny.gov/pubs/81196.html</a>
Climate Smart Communities Grant Program	The CSC Grant program was established in 2016 to provide 50/50 matching grants to cities, towns, villages, and counties (or boroughs of New York City) of the State of New York for eligible climate adaptation and mitigation projects.	NYSDEC	<a href="https://www.dec.ny.gov/energy/109181.html">https://www.dec.ny.gov/energy/109181.html</a>
BRIDGE NY	The state is making funding available for local governments to rehabilitate and replace bridges and culverts statewide.	NYS DOT	<a href="https://www.dot.ny.gov/BRIDGENY">https://www.dot.ny.gov/BRIDGENY</a>



## 6.5 MITIGATION STRATEGY DEVELOPMENT AND UPDATE

### 6.5.1 Update of Municipal Mitigation Strategies

To evaluate progress on local mitigation actions, each jurisdiction was provided with a Mitigation Action Plan Review Worksheet, pre-populated with those actions identified for their jurisdiction in the prior (2014) plan. For each action, municipalities 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. Municipalities were requested to quantify the extent of progress and provide reasons for the level of 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 as ongoing capabilities. Municipalities were asked to provide further details on these projects to help better define the projects, identify benefits and costs, and improve implementation.

At the Kick-Off and during subsequent local level planning meetings, all participating municipalities 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 or through review of available county and local plans and reports, and through the hazard profiling and vulnerability assessment process.

Beginning in July 2019, members of the Steering Committee and contract consultants 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 ensure that municipalities 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 man-made 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 series of mitigation strategy workshops were conducted the week of September 21, 2020, 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. In total, six workshops were held for Cattaraugus County’s municipalities.

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.

Municipalities included mitigation actions to address vulnerable critical facilities. These actions have been proposed in consideration of protection against 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.



## 6.5.2 Mitigation Best Practices

Catalogs of hazard mitigation best practices were developed that present a broad range of alternatives to be considered for use in Cattaraugus County, in compliance with 44 CFR Section 201.6(c)(3)(ii). One catalog was developed for each hazard of concern evaluated in this plan. The catalogs present alternatives that are categorized in two ways:

- By who would have responsibility for implementation:
  - Individuals – personal scale
  - Businesses – corporate scale
  - Government – government scale
- By what the alternatives would do:
  - Manipulate the hazard
  - Reduce exposure to the hazard
  - Reduce vulnerability to the hazard
  - Build local capacity to respond to or be prepared for the hazard

The alternatives presented include actions that will mitigate current risk from hazards and actions that will help reduce risk from changes in the impacts of these hazards resulting from climate change. Hazard mitigation actions recommended in this plan were selected from among the alternatives presented in the catalogs. The catalogs provide a baseline of mitigation alternatives that are backed by a planning process, are consistent with the established goals and objectives, and are within the capabilities of the planning partners to implement. Some of these actions may not be feasible based on the selection criteria identified for this plan. The purpose of the catalogs was to provide a list of what could be considered to reduce risk from natural hazards within the planning area. Actions in the catalog that are not included for the partnership’s action plan were not selected for one or more of the following reasons:

- The action is not feasible
- The action is already being implemented
- There is an apparently more cost-effective alternative
- The action does not have public or political support.

## 6.5.3 Update of Mitigation Strategies

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 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”, “Ongoing”, “Completed”, “Discontinued”), and provide review comments on each.

Projects/initiatives identified as “Complete”, and 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 “Ongoing” have been carried forward in the county’s updated mitigation strategy. Actions considered ongoing capabilities were marked as “Ongoing” 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; and
- Input received through the public and stakeholder outreach process.

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, landslide, severe storm, severe winter storm, and utility interruption. The county has included mitigation actions and initiatives, including continuing and long-term planning and emergency management support, to address these long-term implications and potential impacts.

Various county departments and agencies have included mitigation actions to address vulnerable critical facilities. These actions have been proposed in consideration of protection against 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, local government authority may affect the ability to implement. Further, it must be recognized that the county has limited authority over privately-owned critical facility owners with regard to mitigation at any level of protection.

#### 6.5.4 Mitigation Strategy Evaluation and Prioritization

Section 201.c.3.iii of 44 CFR requires how the identified mitigation strategies will be prioritized, implemented, and administered by the local jurisdictions. For this plan update, each mitigation strategy was prioritized using a modified STAPLEE (Social, Technical, Administrative, Political, Legal, Economic, and Environmental) mitigation action evaluation methodology based on a set of 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 Steering Committee applied an action evaluation and prioritization methodology, which includes an expanded set of 14 criteria to include the consideration of cost-effectiveness, availability of funding, anticipated timeline, and if the action addresses multiple hazards. The 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 were totaled and then used by each jurisdiction to help prioritize the action or strategy as *low*, *medium*, or *high*. Actions that had a numerical value between 1 and 5 were categorized as *low*; actions with numerical values between 6 and 9 were categorized as *medium*; and actions with numerical values between 10 and 14 were categorized as *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 inherently contrary, approach. Mitigation actions in the prior (2014) Cattaraugus County HMP were “qualitatively evaluated against the mitigation goals and objectives and other evaluation criteria. They were then prioritized into three categories: high, medium, and low.” At their discretion, jurisdictions carrying forward prior initiatives were encouraged to re-evaluate their priority, particularly if conditions that would affect the prioritization criteria had changed.

For the plan update there has been an effort to develop more clearly defined and action-oriented mitigation strategies. These local strategies include projects and initiatives that are seen by the community as the most effective approaches to advance their local mitigation goals and objectives within their capabilities. In addition, each municipality was asked to develop problem statements. With active support from NYS DHSES planning staff, municipalities were able to develop action-oriented and achievable mitigation strategies.

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 them, available resources notwithstanding. In general, initiatives that would have had *low* priority rankings were appropriately screened out during the local action evaluation process.

### 6.5.5 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 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 Hazard Mitigation Assistance (HMA) grant programs. For all actions identified in the local strategies, jurisdictions have identified both the costs and benefits associated with project, action, or initiative.

**Costs** presented include the total project estimation. This can include administrative, construction (engineering, design, and permitting), and maintenance costs.

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

When possible, jurisdictions were asked to identify the actual or estimated dollar costs and associated benefits. Often numerical costs and/or benefits were not identified and may be impossible to quantify. In this case, jurisdictions were asked to evaluate project cost-effectiveness using *high*, *medium*, and *low* ratings. Where estimates of costs and benefits were available, the ratings were defined as the following:

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 6-3 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 Cattaraugus County initiatives identified, the Planning Partnership may seek financial assistance under FEMA’s 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 Partnership 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 Partnership reserves the right to define benefits according to parameters that meet its needs and the goals and objectives of this plan.