



SECTION 6. MITIGATION STRATEGY

This section presents mitigation actions for Suffolk County to reduce potential exposure and losses identified as concerns in the Risk Assessment (Section 5). The Planning 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) Overview of Mitigation Strategy Development
- (3) Review and Update of Mitigation Goals and Objectives
- (4) Capability Assessment
- (5) Review and Update of Mitigation Strategies
- (6) Mitigation Strategy Prioritization, including Review of Cost-Effectiveness

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

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

6.1 BACKGROUND AND PAST MITIGATION ACCOMPLISHMENTS

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

- The County facilitated the development of the original Suffolk County Multi-Jurisdictional All-Hazards Mitigation Plan, completed in 2008, which included eight of the 10 towns and most of their inclusive municipalities. The plan was updated in 2014 and included all 10 towns and their inclusive municipalities. The current planning process represents the regulatory five-year local plan update process, which includes participation of all 10 towns, their inclusive municipalities, two tribal nations, and key county and regional stakeholders.
- All municipalities participating in this Plan participate in the NFIP, which requires the adoption of FEMA floodplain mapping and certain minimum construction standards for building within the floodplain.
- Reports, plans, and studies conducted by federal, state, County and local agencies/entities to examine natural hazards affecting Suffolk County have been reviewed and incorporated into this plan update as appropriate, as discussed in Section 3 (Planning Process) and References.
- To ensure critical assets and essential services maintain power during hazard events, through NYS grant funding, Suffolk County has invested in backup generators. The units are on stand-by at secure locations in Suffolk County and may be requested by any municipality to mitigate a disaster.
- Suffolk County OEM participates on the New York Coastal Storm Planning Team. The New York Coastal Storm Planning Team is a multi-jurisdictional effort to examine neighboring county and transportation emergency plans.





- Suffolk County applied for and received an HMPG grant from FEMA through the NY State Office of Emergency Management to conduct a public education campaign on coastal hazards. Public meetings were hosted by local County Legislators in the most at-risk areas of the County, and a public website (<https://www.suffolkcountyny.gov/mend/index.html>) was established for continued awareness of natural hazards and mitigation related information.
- Suffolk County FRES makes presentations regarding hurricane preparedness to local Chambers of Commerce, communities, schools, and civic associations across Suffolk County. During the late summer and fall periods approximately 10 – 15 presentations are given each month. In addition, Suffolk County FRES attends public meetings with local political figures to emphasize preparedness.
- Many municipalities in Suffolk County have adopted regulatory standards regarding land-use and zoning that exceed minimum requirements and provide the communities with greater capability to manage development without increasing hazard risk and vulnerability. Examples of these standards are presented in the Capability Assessment subsection later in this chapter.
- Municipalities have developed or leveraged programs to fund mitigation activities, including the formation of coastal erosion districts, the establishment and maintenance of “engineered beaches”, and property transfer fees to acquire high-risk property and preserve for open-space use.
- Municipalities have actively participated in available mitigation grant funding opportunities to implement mitigation projects, including the New York Rising Hazard Mitigation Grant Program.
- The County and municipalities have implemented mitigation actions to protect critical facilities and infrastructure throughout the planning area.
- Suffolk County, working along with the inclusive municipalities, conducts and facilitates community and public education and outreach to promote and effect natural hazard risk reduction.
- The Suffolk County FRES has contracted with Emergency Communications Network to license its CodeRED high-speed notification system. The CodeRED emergency notification system is a high-speed mass notification service that allows the Suffolk Emergency Managers and Public Safety Officials to deliver customized messages directly to Suffolk County homes and business. The CodeRED system also sends out high-speed emails and text messages to those residents who have enrolled additional contact information.

6.2 GENERAL MITIGATION PLANNING APPROACH

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

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





- NYS DHSES New York State Hazard Mitigation Planning Standards Guide, 2017.

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

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

6.3 REVIEW AND UPDATE OF MITIGATION GOALS AND OBJECTIVES

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

6.3.1 MISSION STATEMENT

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

During the original 2008 hazard mitigation planning process the Mitigation Planning Committee (MPC) developed a mission statement which was then maintained during the 2014 update. As part of the 2020 update process, the Suffolk County Hazard Mitigation Steering Committee reviewed the mission statement and elected to maintain it without edit or amendment, as:

Identify and reduce the vulnerability to natural hazards in order to protect the health, safety, quality of life, environment and economy of the communities within Suffolk County.

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

FEMA defines **Objectives** as strategies or implementation steps to attain mitigation goals.

Unlike goals, objectives are specific and measurable, where feasible.

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

6.4 GOALS AND OBJECTIVES

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

The original goals and objectives of the HMP were established by the MPC during the 2007-2008 planning process. The MPC identified eight goals through a facilitated exercise, working from a catalog of goal statements created through review of similar plans and FEMA planning guidance. Once the goals were established, objectives that meet multiple goals were selected through a similar facilitated exercise. For the purposes of this plan, goals are defined as 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).

The Suffolk County goals are compatible with the needs and goals expressed in other available community planning documents as well as the NYS HMP. Achievement of these goals helps to define the effectiveness of a mitigation strategy.

Objectives were then updated by the Steering Committee through its knowledge of the local area, review of past efforts, findings of the risk assessment, qualitative evaluations, and identification of mitigation options. The objectives are used to 1) measure the success of the plan once implemented, and 2) to help prioritize identified mitigation actions. For the purposes of this plan, objectives are defined as follows:

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

The Steering Committee selected objectives that would meet multiple goals. The objectives serve as a stand-alone measurement of a mitigation action, rather than as a subset of a goal. Achievement of the objectives will be a measure of the effectiveness of a mitigation strategy. The objectives also are used to help establish priorities.

During the 2020 plan update process, the Steering Committee reviewed the 2014 goals and objectives. Further, all participating jurisdictions were provided a Goals and Objectives worksheet to facilitate their input to the update process. The 2014 goals and objectives were reviewed in consideration of the hazard events and losses since the 2014 plan, the updated hazard profiles and vulnerability assessment, the goals and objectives established in the other related State, county and local risk management plans, as well as direct input on how the County and municipalities recognize they need to move forward to best manage their hazard risk. Amendments include additions/edits to goals and/or objectives to express the planning partnership's interests in 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 2019 update have been amended, as presented in Table 6-1 and Table 6-2. Red text indicates the updates for this plan.

Table 6-1. Suffolk County Hazard Mitigation Plan Goals

Goal Number	Goal Statement
G-1	Save lives and reduce injury.
G-2	Avoid, minimize or reduce damage to property including but not limited to critical facilities, lifelines , infrastructure and those properties known to receive or experience repetitive damages.
G-3	Reduce exposure to risk, while protecting or restoring natural processes to the maximum extent possible.
G-4	Consider the wise uses of land in known or identified hazard areas.
G-5	Encourage the development and implementation of sustainable , long-term, cost-effective and environmentally sound mitigation projects.
G-6	Promote hazard mitigation awareness and education throughout the county.
G-7	Improve community emergency management capability (i.e., prepare, respond, recover, mitigate).
G-8	Maintain economic viability after a hazard event.



**Table 6-2. Suffolk County Hazard Mitigation Plan Objectives**

Objective Number	Objective Statement
O-1	Enhance the public's understanding of natural hazards, the risk they pose and ways to mitigate those impacts.
O-2	Retrofit, acquire, or relocate structures in high hazard areas, including but not limited to those known to be or subject to repetitive damages.
O-3	Continually improve understanding of the location and potential impacts of natural hazards, the vulnerability of building types, and community development patterns and the measures needed to protect life safety at the local government level.
O-4	Strengthen codes so that new construction can withstand the impacts of natural hazards and lessen the impact of that development on the environment's ability to absorb the impact of natural hazards.
O-5	Seek projects that minimize or mitigate their impact on the environment or protect natural/cultural resources that serve a natural hazard mitigation function including but not limited to: beach nourishment, stream channel restoration, and wetlands creation/preservation
O-6	Replace objective with: Encourage new development outside of hazard prone areas.
O-7	Establish a partnership among all levels of government and the business community to improve and implement methods to protect life and property .
O-8	Develop and implement wildfire mitigation and watershed protection strategies that reduce losses to habitat and protect water while also reducing damage to development.
O-9	Increase enrollment and support of the CRS program in order to lower cost of flood insurance premiums.
O-10	Protect against the negative impacts of invasive species .
O-11	Implement water conservation measures, use reclaimed water, and increase more prudent groundwater usage, create surface water storage where appropriate.
O-12	Develop or improve early warning emergency response systems and evacuation procedures.
O-13	Work to lower emergency service response times, including improvement to transportation facilities.
O-14	Seek to integrate/coordinate all phases of Emergency Management within the planning area.
O-15	Seek mitigation projects that provide the highest degree of natural hazards protection at the least cost by considering projects that will mitigate the impacts of multiple hazards and/or leverage multiple funding sources.
O-16	Increase resilience of critical facilities, lifelines , infrastructure, agriculture, and aquaculture .
O-17	Implement stormwater best management practices and seek to implement identified stormwater management activities and projects, including securing needed funding.
O-18	Strengthen understanding of, and adaptation to, a changing climate.
O-19	Support and enroll the Tribal Nations in the National Flood Insurance Program.





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Table 6-3. Suffolk County Hazard Mitigation Plan Objectives

Obj. #	Objective Statement	Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8
O-1	Enhance the public's understanding of hazards, the risk they pose and ways to mitigate those impacts.	X	X				X		
O-2	Retrofit, acquire, or relocate structures in high hazard areas, including but not limited to those known to be or subject to repetitive damages.		X			X			X
O-3	Continually improve understanding of the location and potential impacts of hazards, the vulnerability of building types, and community development patterns and the measures needed to protect life safety at the local government level.	X	X		X				X
O-4	Strengthen codes so that new construction can withstand the impacts of hazards and lessen the impact of that development on the environment's ability to absorb the impact of natural hazards.		X		X	X			
O-5	Seek projects that minimize or mitigate their impact on the environment or protect natural/cultural resources that serve a natural hazard mitigation function including but not limited to: beach nourishment, stream channel restoration, and wetlands creation/preservation			X		X			
O-6	Replace objective with: Encourage new development outside of hazard prone areas.			X	X				
O-7	Establish a partnership among all levels of government and the business community to improve and implement methods to protect life and property.		X				X	X	X
O-8	Develop and implement wildfire mitigation and watershed protection strategies that reduce losses to habitat and protect water while also reducing damage to development.	X	X	X	X	X			
O-9	Increase enrollment and support of the CRS program in order to lower cost of flood insurance premiums.					X	X		X
O-10	Protect against the negative impacts of invasive species.		X	X		X			
O-11	Implement water conservation measures, use reclaimed water, and increase more prudent groundwater usage, create surface water storage where appropriate.			X		X			
O-12	Develop or improve early warning emergency response systems and evacuation procedures.	X						X	X
O-13	Work to lower emergency service response times, including improvement to transportation facilities.	X						X	X
O-14	Seek to integrate/coordinate all phases of Emergency Management within the planning area.							X	X
O-15	Seek mitigation projects that provide the highest degree of hazards protection at the least cost by considering projects that will mitigate the impacts of multiple hazards and/or leverage multiple funding sources.	X	X	X	X	X	X	X	X
O-16	Increase resilience of critical facilities, lifelines, infrastructure, agriculture, and aquaculture.		X						X
O-17	Implement stormwater best management practices and seek to implement identified stormwater management activities and projects, including securing needed funding.		X	X		X			





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Obj. #	Objective Statement	Goal 1	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6	Goal 7	Goal 8
O-18	Strengthen understanding of, and adaptation to, a changing climate. <i>(New objective for the 2020 update)</i>	X	X	X		X	X		
O-19	Support and enroll the Tribal Nations in the National Flood Insurance Program. <i>(New objective for the 2020 update)</i>	X	X	X		X	X		

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6.5 CAPABILITY ASSESSMENT

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

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

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

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

County, municipal and tribal capabilities in the areas of planning and regulatory, administrative and technical, and fiscal may be found in the Capability Assessment section of their jurisdictional annexes in Section 9. Further, participating jurisdictions have identified how they have integrated hazard risk management into their existing planning, regulatory and operational/administrative framework (“integration capabilities”), and how they intend to promote this integration (“integration actions”). A list of planning documents reviewed for integration is included in Appendix G. 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 Suffolk County are presented below.

6.5.1 PLANNING AND REGULATORY CAPABILITIES-STATE AND FEDERAL

National Flood Insurance Program

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

There are three components to the NFIP: flood insurance, floodplain management and flood hazard mapping. Communities participate in the NFIP by adopting and enforcing floodplain management ordinances to reduce future flood damage. In exchange, the NFIP makes federally backed flood insurance available to homeowners,





renters, and business owners in these communities. Community participation in the NFIP is voluntary. Flood insurance is designed to provide an alternative to disaster assistance to reduce the escalating costs of repairing damage to buildings and their contents caused by floods. Flood damage in the U.S. is reduced by nearly \$1 billion each year through communities implementing sound floodplain management requirements and property owners purchasing flood insurance. Additionally, buildings constructed in compliance with NFIP building standards suffer approximately 80% less damage annually than those not built in compliance (FEMA 2008).

Suffolk County and the majority of the County's individual jurisdictions actively participate in the NFIP. The Unkechaug Tribal Nation is actively working to join the NFIP and has identified joining the NFIP as a mitigation action. As of July 2020, there were 31,664 NFIP policyholders in Suffolk County. There have been 31,759 claims made, totaling over \$1 billion for damages to structures and contents. There are 3,681 NFIP Repetitive Loss (RL) properties in the County. Severe Repetitive Loss (SRL) data was unavailable for this plan update. Further details on the County's flood vulnerability may be found in the flood hazard profile in Section 5.

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

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

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

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

Limit of Moderate Wave Action (LiMWA): LiMWA depicts the Limit of the Area of Moderate Wave Action (MOWA), the portion of the 1% annual chance coastal flood hazard area referenced by building codes and standards, where base flood wave heights are between 1.5 and 3 feet, and where wave characteristics are deemed sufficient to damage many NFIP-compliant structures on shallow or solid wall foundations. Coastal communities may adopt what is commonly referred to as the "LiMWA standard" where they enforce "V zone" construction standards within coastal LiMWA "A zones".





NFIP Community Rating System (CRS)

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

Currently no communities in Suffolk County participate in CRS. In the past, the Town of Southampton and the Villages of Babylon, Brightwaters, Northport and Southampton were involved in the program at Class 10 ratings. The status of these communities has since been “rescinded” and they receive no discount.

Towns, Villages, and the County as a whole could expect significant cost savings on premiums if enrolled 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 2020). Details on each NWP can be found here: <https://www.nan.usace.army.mil/Missions/Regulatory/Regional-General-Permits/>

There are three types of USACE permits: standard, nationwide (described above), and regional. Standard permits are individual permits that involve full public interest review of an individual permit application and includes the issuance of a public notice for any project that does not meet the terms and conditions of an NWP or a Letter of Permission (LOP). Regional general permits are for small, specialized projects. Suffolk County is part of the New York District (USACE New York District 2020b). In New York State, there are six regional general permit categories (see <https://www.lrb.usace.army.mil/Missions/Regulatory/New-York-Permit-Information/>).

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 Coastal Management Section works to reduce coastal erosion and storm damage to protect lives, natural resources, and properties through 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.

6.5.2 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 I (Plan Review Matrix).

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

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

Emergency and Evacuation Plans

The Suffolk County FRES is designated to coordinate all emergency management activities in the County, including: mitigation, preparedness, response, and recovery. The department works collaboratively with many other agencies and organizations, which enables the county to better protect life and property during disasters and emergencies. FRES maintains the Suffolk 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 CEMP 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 2020).

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 2020).

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 2020).

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 2020).

Per the NYS DHSES Office of Planning & Development website, as of the date of this plan update, the Town of East Hampton, Village of Greenport, Village of Head of the Harbor/Village of Nissequogue, Village of Lloyd Harbor, Village of Ocean Beach, Village of Sag Harbor, Town of Smithtown, and Town of Southold are the only approved LWRP plans in Suffolk County.

Refer to https://www.dos.ny.gov/opd/programs/WFRevitalization/LWRP_status.html to see a list of all 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.

Suffolk County’s “Comprehensive Master Plan 2035” was adopted in 2015. The plan identifies policies and initiatives that will: provide the foundation for sustainable growth of communities in the County; and encourage economic development that will help to retain and attract businesses and create jobs for all County residents. Key objectives of this regional analysis include the following:

- Provide adequate housing options for all Suffolk County residents.
- Provide infrastructure that supports sustainable growth in Suffolk County.
- Improve mobility, access, and safety.
- Stimulate growth of target sectors in Suffolk County.
- Promote connectivity between areas accommodating residential and economic growth with recreational resources.
- Improve resiliency to effects of climate change.





- Protect the County's open spaces, natural resources and aquifer.
- Maintain and improve the quality of life for Suffolk County residents.
- Provide education and training to Suffolk County's current and future workforce.
- Foster regional coordination and collaboration among all stakeholders.

The plan update includes sustainability and resilience strategies to guide the County into the future. These strategies take the 100-year floodplain, and environmental constraints into account.

Each Town within Suffolk County has a comprehensive master plan with a purpose of guiding policy and effectuating zoning at the local level. There are opportunities for coordination with the County's Hazard Mitigation Plan recommendations and action items.

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

Table 6-4. Comprehensive Plan Status in Suffolk County

Jurisdiction	Year Adopted	Status
Babylon	1998	-
Brookhaven	1996	2010 Update in progress
East Hampton	2005	2020 Update in progress
Huntington	2008	-
Islip	1989	2011 Update in progress
Riverhead	2003	-
Shelter Island	1994	2020 Update in progress
Smithtown	2015	-
Southampton	1999	Section updates adopted 2004-2016
Southold	1985	2020 Update in progress

Source: Suffolk County Department of Economic Development and Planning 2020

No update in process

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 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).

Suffolk County has developed a Stormwater Phase II management plan in accordance with Permit No. GP-0-08-002 that includes county wide and local initiatives to protect water quality and reduce local flooding, including a prioritized plan to meet current and future needs for repair, expansion and management of local stormwater infrastructure. Maintenance programs are developed to continually assess the condition of the





stormwater system, to track sediment by volume and type removed, and to reduce the likelihood of flooding due to clogged collection and conveyance systems. Progress on, and updates to, the County's stormwater management program are documented in annual progress reports.

All 10 towns in the County have their own individual Stormwater Management Plans and conduct annual progress reports. All Towns have stormwater management and control measures that address the minimum control measures required by the NYSDEC.

Many municipalities have found the New York State Stormwater Management Design Manual to be a valuable resource in managing their MS4 program.

6.5.3 ADMINISTRATIVE AND TECHNICAL CAPABILITIES STATE AND FEDERAL

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

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

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

New York State Department of Environmental Conservation (NYSDEC) – Region 1

Within the NYSDEC – Region 1 is located on eastern Long Island and includes Nassau and Suffolk Counties. Each of NYSDEC's nine regions has an office that serves the communities within that region. A total of approximately 3,000 NYSDEC staff work in either the Central Office and the regional offices. NYSDEC's Central Office is in Albany. The Region 1 office is located in Stony Brook, NY. NYSDEC staff have two main areas of responsibility: natural resource management and environmental quality protection. As part of natural resource management staff oversee state fish and wildlife resources, as well as state forests and wildlife (NYSDEC Region 1 2020).

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

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

- Coastal Erosion and Floodplain Management Section: The Coastal Erosion branch of this section works to reduce coastal erosion and storm damage to protect lives, natural resources, and properties through





structural and non-structural means. The Floodplain Management branch is responsible for reducing flood risk to life and property through proper management of activities including development in flood hazard areas, and review and development of revised flood maps.

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

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 Suffolk County are discussed in Section 5 (Risk Assessment). To help New York State communities plan for effects of climate change, new graphics are now available showing the increased likelihood of heavy precipitation events (NRCC 2020). The projections are provided at: <http://www.nrcc.cornell.edu/>

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

Technical Bulletins for the 2010 Codes of New York State

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

Forms and Publications

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

Long Island Regional Planning Council

The Long Island Regional Planning Council (LIRPC) is established to represent the various interests and needs of all Long Islanders in providing education, research, planning, advocacy and leadership on important issues affecting the physical, economic and social health, and overall quality of life, of the region and its residents.

In furtherance of its goals, the LIRPC shall disseminate valuable information, serve as a regional forum for discourse and debate on key issues affecting Long Island, identify and address impediments and obstacles to resolving such issues, utilize the inherent powers entrusted to it to effectuate positive change, and assemble the available resources necessary to develop a comprehensive plan which shall serve as a blueprint for implementation of the Region’s long-range planning goals and strategies. The LIRPC, formed in 2008 from the original Long Island Regional Planning Board, is established pursuant to New York State General Municipal Law by founding Legislation in Nassau and Suffolk Counties for the purpose of promoting the physical,





economic and social health and well-being of the Long Island region and its residents. The main goal of the LIRPC is to educate Long Island's officials, stakeholders and residents on key issues affecting the quality of life on Long Island, and to serve as a catalyst for action by proposing immediate and long-term implemental solutions for these issues of regional concern.

6.5.4 ADMINISTRATIVE AND TECHNICAL CAPABILITIES – COUNTY AND LOCAL

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

Suffolk County Department of Economic Development and Planning

Suffolk County Department of Economic Development and Planning: The Department of Economic Development and Planning assists and promotes the development, growth and retention of a broad mix of industry clusters that facilitate job opportunities and private capital investment. Through implementation of various technical and financing programs the department acts as a one-stop resource for all type of business sectors and their respective needs.

The Department can support long term recovery from hazard events in the County using planners and GIS staff. Using expertise in grant funding, community engagement, and technology, the Department of Economic Development and Planning is also able to identify the best potential impacts of funding and projects. The Department acts as a data hub post-disaster event to collect information for FEMA, the state, etc. during disaster response phases.

The Department includes the following units:

- *Cartography and GIS:* GIS layers can be found at the Suffolk County GIS Portal and the Suffolk County Open Data Portal.
- *Regulatory Review:* Within the Division of Planning and Environment, the Regulatory Review unit is responsible for the following:
 - Review of all Suffolk County actions for compliance with the State Environmental Quality Review Act (SEQRA) and local environmental laws for the Suffolk County Council on Environmental Quality (CEQ);
 - Administer the municipal referral process for the Suffolk County Planning Commission;
 - Act as a liaison between Suffolk County and the American Planning Association, in administering the Suffolk County Planning Federation;
 - Accounting of the County's open space transfer of development rights program;
 - Provide professional services to the municipalities in the County, including advice and technical assistance to municipalities on planning matters such as subdivision design, traffic circulation, parking layouts, land use analysis, innovative planning techniques, zoning and land use control methods, and draft ordinances.
- *Research and Statistics:* Within the Division of Planning and Environment, the Research and Statistics unit performs research and analysis of Suffolk County's demographics, economy, commercial market, housing, development, and land use. The Research and Statistics unit also maintains a reference collection of current and historic demographic and economic data including U. S. Census information for the Nassau-Suffolk region. The unit also maintains a comprehensive development database of proposed and existing multi-family housing complexes, retail centers, hotels, and office buildings in the County.





- *Environmental Planning and Aquaculture:* The Environmental Planning section provides assistance and guidance to Federal, state and local government agencies and the general public regarding coastal-related problems and activities. Land use, zoning and environmental data and information are assembled, portrayed and analyzed in support of the preparation of management plans and recommendations pertaining to Suffolk County's three major estuaries (the Long Island Sound, Peconic Bay System and the South Shore Bays), numerous harbors and watersheds, fragile shorelines and associated natural habitats and resources. Existing land use, land available for development, surface water quality, groundwater resources, public access, flooding and erosion hazard mitigation, fisheries management, dredging and the assessment of environmental impacts of development activities are typical topics that have been investigated. The Section also prepares and assists other County departments in the preparation of grant applications for funding from Federal and state programs that is used for special studies and project implementation.
- *Open Space and Farmland:* The Open Space and Farmland section is concerned with the various aspects of Open Space and Farmland preservation in Suffolk County including Suffolk County's Farmland Purchase of Development Rights Program, New York State Agricultural District Program, and Suffolk County's Open Space programs.
- *Water Quality Improvement:* The purpose of the Water Quality Improvement Division is to protect and improve Suffolk County's ground and surface waters. Protecting and maintaining the quality of our groundwater resources is especially important in Suffolk County because we are located above a federally designated Sole Source Aquifer system. This means that 100% of the County's drinking water comes from these natural underground reservoirs therefore preserving the integrity of the groundwater systems is critical for public health. The Water Quality unit includes numerous programs and projects:
 - *Integrated Pest Management (IPM) Program:* The IMP Program is implemented under contract with Cornell Cooperative Extension of Suffolk County (CCE) to support County facilities' compliance with the pesticide prohibition. CCE performs research and demonstration projects on pest management both indoors and outdoors on County properties. CCE staff conducts site visits and scouting on County properties to enable early diagnosis of pest problems and to provide viable alternatives to pest control in order to prevent the need for pesticide use. CCE staff also performs maintenance activities at County facilities to prevent pest incidences. Training to County employees in alternative pest management techniques and Best Management Practices (BMPs) is provided by CCE including pesticide applicator and specialty training required to obtain New York State certifications. CCE also conducts public outreach and presents at various conferences wherein they represent the goals of the County pesticide prohibition law.
 - *Pesticide Community Advisory Committee:* The Pesticide Community Advisory Committee (Pesticide CAC) established by Suffolk County Local Law No. 34-1999 and pursuant to Chapter 647 of the Suffolk County Code is a central component of the IMP Program for County Properties. The Pesticide CAC is charged with overseeing the implementation of the pesticide prohibition on County properties and managing the use of any necessary pesticides by reviewing requests and approving special use exemptions. The Pesticide CAC is managed by the Department of Economic Development and Planning, Division of Water Quality Improvement and includes other County agencies, CCE, cancer awareness advocates, and environmental organizations. The Pesticide CAC works to capitalize on the experiences of various stakeholders to consider the necessity of exemptions and to promote the ongoing development and use of alternative pest management strategies and BMPs on County properties.
 - *Stormwater Management Program:* The Suffolk County Stormwater Management Program implements various strategies to mitigate the harmful effects from stormwater discharges and





runoff. Components of the program include the identification of stormwater inputs and monitoring, control of stormwater runoff from construction activities, implementation of stormwater improvement projects on roadways, pollution prevention training for County employees, and public education and participation. The Suffolk County Stormwater Management Program is conducted by Cornell Cooperative Extension of Suffolk County in coordination with the Suffolk County Departments of Public Works and Economic Development and Planning. The continuity of the program is mandated by the U.S. Environmental protection Agency (EPA) and New York State Department of Environmental Conservation (NSYDEC).

- *Wetland Stewardship Program:* Suffolk County's coastal marshes are of great importance due to their ecosystem services and natural protective features such as providing critical habitat for species of environmental and commercial importance, nitrogen removal, buffering coastal communities from the impacts of storms, and resilience to sea-level rise. Yet, the sustainability and resilience of Long Island tidal marshes, particularly those on our South Shore, are threatened by tidal restrictions, waterlogging, extensive mudflat and panne formation, and invasive plants. For these reasons a comprehensive wetlands management program was recommended by the Vector Control and Wetlands Management Long-Term Plan, under Resolution 285-2007. The County Executive recognized the importance of this program and adopted the Suffolk County Wetlands Stewardship Strategy (WSS). Several projects are currently underway.

Suffolk County Planning Commission

The Suffolk County Planning Commission is comprised of 15 members who are nominated by the County Executive and are confirmed by the County Legislature. Of the 15 Commissioners, one represents each of the 10 Towns in Suffolk, one represents villages with population under 5000, one represents villages with population over 5000 and there are three at large representatives. County law also requires that the Commission members collectively reflect a variety of backgrounds including in law, business, real estate, labor, environmental action and transportation.

The Commission has the responsibility under State and County law to:

- Review site plans and zoning actions meeting certain jurisdictional requirements such as within 500 feet of county or state roads, municipal boundaries and/or estuaries
- Establish a Comprehensive Plan for Suffolk County
- Conduct studies and render reports as are needed in the performance of its functions;
- Report annually to the legislature on the status of the County;

Suffolk County Department of Fire, Rescue and Emergency Services

The Suffolk County FRES is committed to serving both the 1.5 million residents of Suffolk County and the over 10,000 emergency responders who are dedicated to saving lives and protecting property. FRES leads hazard mitigation planning and comprehensive emergency management planning for the County. FRES is organized into the following functional areas to best provide its services. The Commissioner of FRES oversees all functions including:

- *Fire Marshal's Office:* The Fire Marshal's Office (FMO) provides inspections and enforcement activities for building codes, fire investigations, public education, technical response assistance to the Fire and EMS Agencies within Suffolk County, staffing for various positions within the county's incident command structure and support of emergency management operations.





- *Fire Rescue Communications Section:* The Fire Rescue Communications Section (COMMS) is an enhanced 911 facility which handles Fire and EMS calls, in addition to dispatching services for emergency response. The staff must initially be certified by New York State as Emergency Medical Technicians and maintain national certification as Emergency Medical Dispatchers (EMD) and Emergency Fire Dispatchers (EFD). The staff also operates the county's Mobile Command Vehicles in conjunction with the FMO section.
- *Office of Emergency Management:* The Office of Emergency Management (OEM) coordinates the county's response to natural and man-made disasters. OEM personnel are responsible for development of the Comprehensive All-Hazards Emergency Management Plan, the operation of the county's Emergency Operation Center (EOC) and work with local, state, and federal officials in all aspects of shelter management, planning, resource management, and emergency response and recovery activities.
- *Administration Section:* The Administration Section (ADMIN) provides clerical, human resource, grant management, and financial management coordination functions for the department.
- *Suffolk County Fire Academy:* The Suffolk County Fire Academy (SCFA) which provides classroom instruction and field training for local fire departments throughout the county. Courses range from basic firefighting to incident command, incident management and specialized training as needed.
- *Deployable Assets for Emergency Response:* Suffolk County Fire Rescue and Emergency Services provides resources for emergency responders.

Suffolk County Police Department

The Suffolk County Police Department responds to various hazard related emergencies. The Department is able to coordinate with various County, state, and federal agencies and has a standalone emergency operations center that coordinates with the County emergency operations center. All Police are trained as EMT's. The Department has numerous sections that are capable of providing response leading up to, during, and following hazard events:

- **Aviation Section:** The Aviation Section often completes flyovers of the coastline prior to and after coastal storm events to record event damages using the Section's four helicopters.
- **Marine Bureau:** The Marine Bureau is comprised of a fleet of vessels that patrol County waters 365 days a year. The Fleet includes boats capable of ocean rescue, shallow water rescue, and ice rescue as well as a Dive Team.
- **Sheltering:** The Police Department provides shelter security for American Red Cross established shelters. The Department also uses the Police Academy to house first responders during hazard events (roughly 200-300 people).

Suffolk County Sheriff's Department

The Suffolk County Sheriff's Department is primarily a response agency. The Department does provide security at shelters, aids in evacuations, and provides traffic control. The Department supports agencies such as FRES and DPW in hazard mitigation projects.

Suffolk County Department of Information Technology

The Department of Information Technology supports computer services and applications for Suffolk County's Departments. The Department has supported the recent conversion to socially distanced work environments (VPN, video conferencing, etc.), establishment of a platform for the Department of Health to handle the increased load created by the coronavirus outbreak, and the eventual transfer to the state system. The Department has four staff tasked with cyber security.





Suffolk County Department of Public Works

The Department of Public Works constructs, maintains and operates county properties and designs, constructs and maintains county roads, sewerage systems, buildings and other facilities, such as waterways, bridges, docks and marinas. In addition, the department is responsible for the operation of the Suffolk County Transit System as well as controlling mosquitoes that transmit disease and impact the enjoyment of outdoor activities.

Suffolk County Parks Department

The Parks Department is comprised of 110 full time employees who are responsible for 60,000 acres of parkland, the largest amount of county owned parkland in the country. Staff are responsible for maintenance of spillways, culverts, and weirs in County Parks. The Suffolk County Parks Department Maintenance Division has 20 employees including a tree trimmer. Trees are removed if they are dangers to frequented areas (paths and such). Residents that border parks often call about problem trees. The Environmental Division has 3-4 staff and often responds to erosion control and endangered species related issues. The Environmental Division can be tasked with stream clearing when necessary.

Suffolk County Department of Health Services

The Suffolk County Department of Health Services promotes wellness and protects the public's health and environment. The Department provides support for 27 EMS Departments and 69 Fire-based EMS Departments in Suffolk County.

- **Bureau of Epidemiology & Disease Control:** The Bureau of Epidemiology and Disease Control within the Division of Public Health plays a central role in the Health Department's mission to prevent the occurrence and spread of communicable disease. The New York Sanitary Code designates over 70 communicable diseases as reportable. The Bureau maintains surveillance for each disease through investigation performed by experienced epidemiological staff. Surveillance activities include identifying patterns and clusters to find common source outbreaks and tracing chains of infection to their origin. Outbreak control measures are instituted in some cases to prevent further spread of disease, such as contact tracing, vaccination of susceptibles, providing prophylactic (preventive) medication or treatment, and notifying and educating individuals or groups of their potential exposure. Occasionally, food handlers, vendors, wholesale suppliers or restaurateurs are identified as the point source of infection and immediate actions are taken to ensure the safety of the public. The Bureau's Nurse Epidemiologists maintain close contact with area hospital Infection Control Practitioners in order to ascertain suspect patient presentations, unexpected illness, unusual clusters that may indicate a biological terrorist event or unusual occurrence of a communicable disease in the community. Clinical staff are available 24 hours, seven days a week to respond to urgent public health disease inquiries or issues.
- **Environmental Quality:** The Division of Environmental Quality (DEQ) conducts comprehensive programs that protect Suffolk County residents against adverse environmental factors. DEQ programs also preserve and enhance the generally high quality of the Suffolk County environment. The major programs of the Division of Environmental Quality are groundwater and drinking water protection, wastewater management, toxic and hazardous materials pollution control, monitoring and laboratory analyses, enforcement of regulations, and environmental management studies and programs for groundwater and surface waters, including related ecological issues. These programs are managed through the five offices of the division: Water Resources, Pollution Control, Wastewater Management, Ecology, and the Public and Environmental Health Laboratory.





Suffolk County Soil and Water Conservation District

During the 1930s, the Midwest experienced an environmental disaster known as the Dust Bowl. Due to a long drought and lack of a cover crop, topsoil from farmland was eroded by wind and lifted into huge dust clouds, which traveled thousands of miles. This event prompted Congress to pass legislation declaring soil and water conservation a national priority. In 1937, President Roosevelt requested that all states provide the opportunity for local governments to establish Soil and Water Conservation Districts stating that their responsibilities would be to assist in the prevention of soil erosion and flood control. In 1940, New York State adopted the Soil and Water Conservation Districts Law and consequently, in 1964 Suffolk County Legislators declared the county, a Soil and Water Conservation District.

As such, resolution 245-1964 established the Soil and Water Conservation District in accordance with the provisions of the Soil and Water Conservation District Law of New York, Chapter 727, Laws of 1940. The law directs Districts to conserve soil and water resources, control sediment and erosion, reduce floodwater, preserve natural resources, assist in the drainage and irrigation of agricultural lands, preserve wildlife and protect public lands. In 1975 the State passed an amendment to the Law, which requires the District to develop a conservation plan for all farms over twenty-five acres. Another amendment in 1989 was added directing Districts to improve water quality and to control and abate nonpoint source pollution.

A Board of Directors, whose members are appointed by the County Legislature, governs the District. The type of member and the length of term are dictated in the Soil and Water Conservation District Law.

District Directors decide activities of the District and are responsible for its operational management.

The diverse scope of expertise and knowledge of the District has rendered the department an asset to the County's goal to protect and preserve natural resources. The District's dedication has been established by increased assistance provided to the agricultural community, private landowners and municipalities and by the many partnerships we established with various local, county, state and federal governmental agencies.

Suffolk County SWCD Assistance for Agricultural Producers, Landowners, Municipalities & Professional Consultants:

- *Inventory and Evaluations:* Site Plan and Subdivision Reviews, Shoreline and Bluff Erosion Control
- *Soils:* MAPS: Aerials, Soil, Topographic, and Wetland, Soils Information, Soil Erosion and Drainage
- *Technical Assistance:* Agricultural Irrigation, Agricultural Engineering Practices, Technical Assistance, Agronomic Practices, Nonpoint Source Pollution Control, NYSDEC Erosion & Sediment Control Training, LINPI, Invasive Species, Native Plants
- *Conservation Planning:* Agricultural Value Assessment, Agricultural Environmental Management (AEM) Plans, USDA Conservation Programs, Ponds and Wildlife Watering Facilities (SWCD 2020).

Suffolk County Council on Environmental Quality

The Council on Environmental Quality was established in 1970 by Article I of the Suffolk County Charter otherwise known as the Environmental Bill of Rights. In 1972 the County established the Suffolk County Historic Trust and appointed the CEQ members as trustees. The Council's primary responsibilities include providing advice and assistance to any department, board, commission or agency of Suffolk County government on the implementation of and compliance with the State Environmental Quality Review Act. In addition, the Council may make recommendations to the County Legislature and County Executive as to what county-owned properties should be dedicated to the county nature preserve or historic trust and what properties not owned by the county should be acquired for purposes of dedication. The Council also serves an important role examining





developments in the County that are likely to have an impact on the quality of the environment. Under its mandated Charter responsibilities, the Council is advisory to both the County Executive and Legislature.

Central Pine Barrens Commission

Three of Suffolk County's 10 Towns host the 100,000+ acre, New York State designated region known as the Central Pine Barrens. This region is the largest remnant of a forest thought to have once encompassed over a quarter million acres. The Central Pine Barrens overlies a portion of Long Island's federally designated sole source drinking water aquifer. In 1993, New York State's Long Island Pine Barrens Protection Act defined this region at the junction of the Towns of Brookhaven, Riverhead, and Southampton. The 1993 Act created a five-member Central Pine Barrens Joint Planning and Policy Commission, an Advisory Committee, and mandated the production and implementation of the *Central Pine Barrens Comprehensive Land Use Plan*, adopted in June 1995.

Under NY Environmental Conservation Law Article 57, the Commission produced and implements a Comprehensive Land Use Plan. The Act and the Plan charge the Commission with the combined duties of a state agency, a planning board, and a park commission:

- Land use review, permitting, and enforcement authority in the Central Pine Barrens, along with the local municipalities.
- Establishment and operation of a transferable development rights and conservation easement program.
- Coordination of public lands stewardship and management on a regional basis.

The Commission's stewardship work is advanced by a set of "Councils". They have responsibility for:

- Protected Lands Management
- Law Enforcement
- Fire Management
- Research.

NY State law requires the Central Pine Barrens Plan to address "Provisions for fire management for controlled, prescribed burning, and responses to unanticipated fires." Towards this end, the Wildfire Task Force brings together 41 public and private agencies to:

- Produce and implement a Pine Barrens Fire Management Plan
- Perform fire protection assessments
- Operate a prescribed fire program
- Run a fire weather and daily fire danger posting program, including broadcasts, web postings, roadside signs, and fax notifications.
- Run the NY Wildfire and Incident Management Academy, a National Wildfire Coordinating Group training venue
- Operate an air ground firefighting training program
- Work cooperatively on arson investigation & prevention
- Operate a public outreach program.

Peconic Estuary Partnership

The Peconic Estuary Partnership (PEP) is a National Estuary Program that acts as a backbone organization, bringing together partners from different sectors around common goals. PEP staff and our partners support monitoring, research, collaboration and education to address priority issues within the Peconic Estuary





Watershed. PEP acts as a bridge at the boundary between science and policy, and ensures that an informed citizenry, along with all other stakeholders, have a voice in the decision-making process. The Peconic Estuary Partnership leads various planning efforts, partners on mitigation projects such as wetlands restoration and living shorelines with various jurisdictions, and provides education and outreach. Areas of focus include environmental protection, climate resiliency, and water quality.

6.5.5 FISCAL CAPABILITIES-FEDERAL AND STATE

Mitigation projects and initiatives are largely or entirely dependent on available funding. Suffolk 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.

Army Corps of Engineers – Fire Island to Montauk Point (FIMP) Reformulation Program

The authorized project provides for hurricane protection and beach erosion control along five reaches of the south shore of Long Island between Fire Island Inlet and Montauk Point, a distance of approximately 83 miles. The project also authorizes Federal participation in periodic nourishment. The sponsor is the New York State Department of Environmental Conservation. In 1978, the Department of the Interior (DOI) supported by other agencies referred the Environmental Impact Statement (EIS) for the authorized project to the Council on Environmental Quality (CEQ) as unacceptable. In June 1978, CEQ recommended project reformulation to the Chief of Engineers, who in turn directed the District to reformulate the project. Reformulation was originally initiated in 1980; however, because of difficulties between the Federal, State and County in proceeding with the Westhampton reach, which at the time was the most vulnerable reach of the authorized project, the Reformulation was suspended. Based on letters of intent to support an interim plans, the Reformulation study was resumed in 1994. Work on the Reformulation study is currently ongoing, with several interim projects already constructed for critical vulnerable areas.

The project was authorized by the Rivers and Harbors Act of 14 July 1960 in accordance with House Document 425 and subsequently modified by the River & Harbor Act of 1962, and the Water Resources Development Acts of 1974, 1986 and 1992. In response to the 2012 Sandy event, P.L. 113-2, The Disaster Relief Appropriations Act of 2013, provides the required Federal funds to complete construction of this Project at 100% Federal cost.

Study Purpose

The purpose of the on-going Fire Island to Montauk Point (FIMP) Reformulation Study is to identify, evaluate and recommend long-term solutions for hurricane and storm damage reduction for homes and businesses within the floodplain extending along 83-miles of ocean and bay shorelines from Fire Island Inlet to Montauk Point. This area extends as far landward in some locations as Sunrise Highway and Montauk Highway. The study considers all areas within the maximum estimated limit of flooding, and is located entirely within Suffolk County. This encompasses the Atlantic and bay shores of the Towns of Babylon, Islip, Brookhaven, Southampton, and East Hampton and incorporated Villages. The study area also includes 26 miles of the Fire Island National Seashore, which is under the jurisdiction of the National Park Service.

Congress and New York State have asked the United States Army Corps of Engineers (Corps) to develop a comprehensive long-term plan of protection for areas that are prone to flooding, erosion and other storm damage. This plan would replace the numerous uncoordinated measures that have been used to protect individual properties with a comprehensive management approach that considers the entire coastal system. The objective of the study, therefore, is to evaluate and recommend a long-term, comprehensive plan for storm damage reduction, which maintains, preserves or enhances the natural resources. The New York State Department of Environmental Conservation (DEC) is the Corps' non-Federal partner.





- The Reformulation Study approaches the issue of storm damage along Suffolk County's south shore in a different way than previous studies:
- It looks at the study area as a comprehensive coastal system and evaluates alternatives for their impacts at specific locations and on the entire system.
- The study team includes the participation of all concerned Federal, State and local government agencies, as well as major scientific and environmental organizations.
- It includes state-of-the-art engineering, environmental, economic and planning studies to provide information about historic conditions and to model possible future conditions. To ensure objectivity and high standards, these studies are being independently reviewed.

The Study Process

The 83-mile long Fire Island Inlet to Montauk Point study area contains many different physical environments and distinct geographic areas, each having individual problems and needs. The planning process consists of a series of steps to identify problems, propose and evaluate alternative solutions, and ultimately identify a recommended plan. The development of alternative plans will combine different measures in different locations of the study area. This approach offers both flexibility and opportunities for long-term decisions about what works best for each location, as well as for the entire study area. While the specific solutions will vary, the following basic components are being evaluated at all locations:

- Coastal Management Measures (inlet modifications or breach contingency plans)
- Storm Damage Reduction Options
- Locally Implemented Floodplain Management Plans
- Coastal management measures will address issues such as the condition of inlets including the need for sand bypassing, and emergency response to storm events.

This assessment may result in adopting new procedures for maintaining navigation inlets or responding to breaches in the barrier system. Storm damage reduction options may include structural and non-structural options, and may supplement the effectiveness of coastal management measures. The study approach is to identify cost-effective regional or coastal protection features, such as beach and dune fill and groin modification. Concurrently, the direct protection of flood plain development through measures such as flood proofing or structure acquisition will be evaluated and ultimately integrated into a comprehensive plan.

An additional element of the FIMP project will be a Floodplain Management Plan to ensure the future effectiveness of the Coastal Management Measures or the Storm Damage Reduction features. The elements of the Floodplain Management Plan will be developed in parallel with the development of the Coastal Management Measures and Storm Damage Reduction features.

While Coastal Management and Storm Damage reduction features may be implemented with federal funding support, the Floodplain Management Plan is implemented at the state, county and community level.

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 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. 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 Environmental Protection Fund Local Waterfront Revitalization Program (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.

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>

An example of HMGP funds being used in Suffolk County is the Tidal Wetland Restoration at Smith Point County Park to Improve Protection Against Flooding and Storm Damage project. The Department of Homeland Security-Federal Emergency Management Agency (DHS-FEMA) is provided Federal financial assistance to New York State Division of Homeland Security and Emergency Services (NYSDHSES), as Recipient, and Suffolk County, as Sub-recipient, was awarded funds through the FEMA Hazard Mitigation Grant Program (HMGP) with the main purposes of restoring approximately 77 acres of marshland to improve natural protection against flooding, storm surge, intense wave action, and improve the marsh sustainability and resilience against sea level rise. The project site is the marshland at the Smith Point County Park in the southernmost portion of Shirley, NY. The contract between the County of Suffolk and NYSDHSES started in July 2014. The Phase I, or





planning and permitting phase was conducted between 2016 and 2019. It is anticipated that the implementation phase will take place during the restoration season of 2020-2021.

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 PDM 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 are the following:

Individual Assistance (IA)

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

Public Assistance (PA)

Public Assistance (PA) provides cost reimbursement aid to local governments (state, county, local, municipal authorities and school districts) and certain non-profit agencies that were involved in disaster response and recovery programs or that suffered loss or damage to facilities or property used to deliver government-like services. This program is largely funded by FEMA with both local and state matching contributions required.





For additional information regarding PA, please refer to: <https://www.fema.gov/public-assistance-local-state-tribal-and-non-profit>

Small-Business Administration (SBA) Loans

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

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

Social Services Block Grant

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

Department of Homeland Security

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

Community Development Block Grants (CDBG)

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





additional information regarding CDBG, please refer to: <https://www.hudexchange.info/programs/cdbg-entitlement/>

U.S. Economic Development Administration

The U.S. Economic Development Administration (USED) 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 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 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 website (<https://www.eda.gov/>) for additional information.

Federal Highway Administration - Emergency Relief

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

Federal Transit Administration - Emergency Relief

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

State Hazard Mitigation Funding Opportunities

Empire State Development

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



**New York State Department of Transportation (NYSDOT)****Damaged Roads and Signals**

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

Scour Around Culverts and Bridges

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

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

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

This program encompasses a variety of bridge improvement work, including upgrading concrete bridge abutments and/or piers by adding steel or concrete pile foundations, increasing the size of waterway openings to meet 100-year flood projections and reducing or eliminating the number of bridge piers in the water to prevent debris and ice jams that can flood surrounding areas. Completion of the program will ensure continual access to critical facilities and essential personnel during emergency events. Adverse impacts to travel throughout the State will be greatly reduced during severe weather events as well (NYSDOT 2014).

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

Emergency Watershed Protection Program

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

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





Emergency Watershed Protection Program - Recovery

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

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

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

Emergency Watershed Protection Program - Floodplain Easement (FPE)

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

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

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

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

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

The Climate Smart Communities (CSC) program is jointly sponsored by the following six New York State agencies: Department of Environmental Conservation; Energy Research and Development Authority; Public Service Commission; Department of State; Department of Transportation; and the Department of Health. The program encourages municipalities to minimize the risks of climate change and reduce long-term costs through actions which reduce greenhouse gas (GHG) emissions and adapt to a changing climate. The program offers free technical support on energy and climate and guidance tailored to New York State communities. As of April 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 NYSDEC of the passage of the resolution. The required 10 elements of the Pledge are as follows:

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

Climate Smart Communities Certification (CSC) Program

The Climate Smart Communities Certification (CSC) program enables high-performing registered communities to achieve recognition for their leadership. Designed around the existing pledge elements, the certification program recognizes communities achieving any or 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.

Climate Smart Communities Grant Program

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

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

- Construction of natural resiliency measures
- Relocation or retrofit of climate-vulnerable facilities





- Conservation or restoration of riparian areas and tidal marsh migration area
- Reduction of flood risk
- Clean transportation
- Reduction or recycling of food waste

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

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

In scoring grant applications, increasing points are awarded to communities who have already taken the CSC pledge and to those that have achieved certification status. All grant recipients must take the Climate Smart Communities Pledge within the term of their grant contract. For climate mitigation projects, grant recipients must provide a report of estimates of emissions reduction. Certification actions must adhere to the requirements and standards described in the Climate Smart Communities Certification Manual

<http://www.dec.ny.gov/energy/96511.html>. For implementation projects involving property (construction, improvements, restoration, rehabilitation) – if the property is not owned by the grant recipient, they must obtain a climate change mitigation easement.

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

New York State Department of Environmental Conservation (NYSDEC)

Water Quality Improvement Project (WQIP) Program

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

- Wastewater treatment improvement
- Non-agricultural nonpoint source abatement and control
- Land acquisition for source water protection
- Salt storage
- Aquatic habitat restoration





- Municipal separate storm sewer systems (MS4)

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

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

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

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

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

- Required by an executed Order on Consent; or
- Required by a draft or final State Pollutant Discharge Elimination System (SPDES) permit; or
- Upgrading or replacing an existing wastewater system; or
- Constructing a wastewater treatment and/or collection system for an area with failing onsite septic systems; or
- Identified in a Total Maximum Daily Load (TMDL) Implementation Plan

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

New York State Department of Transportations

BRIDGE NY

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

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

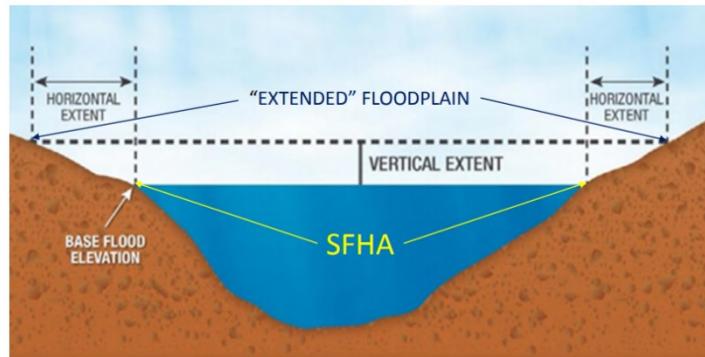
Community Risk and Resiliency Act (CRRA)

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





- Official Sea-level Rise Projections - CRRA requires the Department of Environmental Conservation (DEC) to adopt science-based sea-level rise projections into regulation.
- Consideration of Sea-Level Rise, Storm Surge and Flooding - CRRA requires applicants for permits or funding in a number of specified programs to demonstrate that future physical climate risk due to sea-level rise, storm surge and flooding have been considered, and that DEC consider incorporating these factors into certain facility-siting regulations.
- Smart Growth Public Infrastructure Policy Act Criteria - CRRA adds mitigation of risk due to sea-level rise, storm surge and flooding to the list of smart-growth criteria to be considered by state public-infrastructure agencies.
- Guidance on Natural Resiliency Measures - CRRA requires DEC, in consultation with the Department of State (DOS), to develop guidance on the use of natural resources and natural processes to enhance community resiliency.
- Model Local Laws Concerning Climate Risk - CRRA requires DOS, in cooperation with DEC, to develop model local laws that include consideration of future risk due to sea-level rise, storm surge and/or flooding. These model local laws must be based on available data predicting the likelihood of extreme-weather events, including hazard-risk analysis (NYSDEC 2018).



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

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

6.5.6 FISCAL CAPABILITIES – COUNTY AND LOCAL

Emergency Solutions Grant (ESG)

The Suffolk County Consortium continues to work with non-profit agencies in the provision of homeless housing and supportive services to implement programs that address the need for emergency shelters. The Emergency Solutions Grant allows the County to provide direct funding to non-profit organizations to assist with the operation of emergency shelters.

In addition to shelter funding, and in order to prevent families and individuals from becoming homeless in the first place, the Suffolk County Community Development Office utilizes Emergency Solutions Grant funds to assist with a homeless prevention program.





Suffolk County Farmland Preservation Program

The Nation's first (1974) purchase of development rights (PDR) program to preserve farmland, the Suffolk County Farmland program has seen 10,508 acres come into the program to date. Land stays in private ownership and the County acquires non-agricultural development rights. These rights are valued as the difference between the full market value of property for its "highest and best use" (full value) minus the value of the agricultural rights (residual value). The owner files property covenants similar to a conservation easement limiting the use of the property to agricultural production.

The department has further information on the program including an historical account, sample deed covenants, local law establishing selection procedures, structure approvals required in future, and maps locating PDR's in Suffolk County. The department also maintains maps and records for the Suffolk County Agricultural District program, a tax abatement program to relieve active farm areas of property tax burdens for short 8 year cycles, which also affords farms protection under New York State "right-to-farm" laws.

Beach Erosion Control and Erosion Control Districts

Several municipalities within the county have established Beach Erosion Control Districts (e.g. Bridgehampton Erosion Control District and Sagaponack Erosion Control District) for the specific purpose of funding beach re-nourishment in those locations.

Community Preservation Fund (CPF)

The Community Preservation Fund is an open-space funding mechanism whereby a 2% tax is imposed on real property transactions for the specific purposes of funding the acquisition and protection of open space parcels within a local jurisdiction. This funding could be used to meet the local share requirements for acquisitions under FEMAs mitigation grant programs.

State-enabling legislation requires the Town Board to establish a Community Preservation Fund Advisory Board. This Advisory Board reviews recommendations on proposed acquisitions of interest in real property using monies from the Transfer Tax, commonly known as the Community Preservation Fund. As required, this Board consists of seven town residents who serve without compensation. This Board acts in an advisory capacity to the Town Board.

Water Quality Protection and Restoration Program and Land Stewardship Initiatives

The Charter Law extending and accelerating the Suffolk County ¼% drinking water protection program for environmental protection was approved by the Suffolk County voters during November 2007. This law extended the ¼% sales tax revenue trust fund through November 30, 2030. An additional 0.50% share of the ¼% sales tax trust fund was implemented on December 1, 2007 to fund the Water Quality Protection and Restoration Program and Land Stewardship Initiatives (WQPRP). This raises the portion of the ¼% sales tax revenues apportioned to the WQPRP to 11.75%. WQPRP -Through the WQPRP, Suffolk County has funded over \$52 million in projects to reduce stormwater runoff, mitigate and prevent pollution of groundwater and surface waters, and to restore natural water habitats and wetlands. Management of over 50 Active Projects - The Water Quality Improvement Division supervised 50 on-going water quality projects during 2018. The total funding to date for the projects funded through the Water Quality Protection and Restoration Program and Land Stewardship Initiatives (WQPRP) is approximately \$52 million dollars. Between 2016 and 2018, the WQPRP Review Committee approved \$4.7 million in Enhanced Water Quality funding for an additional 14 projects. During 2018, the WQPRP Review Committee approved nearly \$2.4 million in 477 Water Quality funding for an additional 10 projects.





Peconic Land Trust

The Peconic Land Trust has worked diligently with landowners, communities, municipalities, and partner organizations to protect 13,000 acres of land, conserving more working farms on Long Island than any other private conservation organization, and securing millions of dollars from the public and private sector for land protection (Peconic Land Trust n.d.).

6.5.7 POTENTIAL MITIGATION FUNDING SOURCES

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

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Table 6-5. Mitigation Funding Sources

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





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Program	Description	Lead Agency	Website
HOME Investment Partnerships Program	Grants to local and state government and consortia for permanent and transitional housing, (including financial support for property acquisition and rehabilitation for low income persons)	HUD	https://www.hud.gov/program_offices/comm_planning/affordablehousing/programs/home/
HUD Disaster Recovery Assistance	Grants to fund gaps in available recovery assistance after disasters (including mitigation)	HUD	https://www.hud.gov/info/disasterresources
Section 108 Loan Guarantee	Enables states and local governments participating in the Community Development Block Grant (CDBG) program to obtain federally guaranteed loans for disaster-distressed areas	HUD	https://www.hudexchange.info/programs/section-108/
Smart Growth Implementation Assistance (SGIA) program	The SGIA program focuses on complex or cutting-edge issues, such as stormwater management, code revision, transit-oriented development, affordable housing, infill development, corridor planning, green building, and climate change. Applicants can submit proposals under 4 categories: community resilience to disasters, job creation, the role of manufactured homes in sustainable neighborhood design or medical and social service facilities siting.	EPA	https://www.epa.gov/smartgrowth
Partners for Fish and Wildlife	Financial and technical assistance to private landowners interested in pursuing restoration projects affecting wetlands and riparian habitats	U.S. Fish and Wildlife Service	https://www.fws.gov/partners/
FHWA Emergency Relief Program	Fund for the repair or reconstruction of Federal-aid highways that have suffered serious damage as a result of (1) natural disasters or (2) catastrophic failures from an external cause	U.S. Department of Transportation (DOT)	https://www.fhwa.dot.gov/programadmin/erelief.cfm
Transportation Investment Generating Economic Recovery (TIGER)	Investing in critical road, rail, transit and port projects across the nation	U.S. DOT	https://www.transportation.gov/tags/tiger-grants
Community Facilities Direct Loan & Grant Program	This program provides affordable funding to develop essential community facilities in rural areas. An essential community facility is defined as a facility that provides an essential service to the local community for the orderly development of the community in a primarily rural area, and does not include private, commercial or business undertakings.	USDA	https://www.rd.usda.gov/programs-services/community-facilities-direct-loan-grant-program
Emergency Loan Program	USDA's Farm Service Agency (FSA) provides emergency loans to help producers recover from production and physical losses due to drought, flooding, other natural disasters or quarantine	USDA	https://www.fsa.usda.gov/programs-and-services/farm-loan-programs/emergency-farm-loans/index





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Program	Description	Lead Agency	Website
Emergency Watershed Protection (EWP) program	Provide assistance to relieve imminent hazards to life and property caused by floods, fires, drought, windstorms, and other natural occurrences	NRCS	https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/landscape/ewpp/
Financial Assistance	Financial assistance to help plan and implement conservation practices that address natural resource concerns or opportunities to help save energy, improve soil, water, plant, air, animal and related resources on agricultural lands and non-industrial private forest land	NRCS	https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/
Regional Conservation Partnership Program (RCPP)	The Regional Conservation Partnership Program (RCPP) promotes coordination of NRCS conservation activities with partners that offer value-added contributions to expand our collective ability to address on-farm, watershed, and regional natural resource concerns. Through RCPP, NRCS seeks to co-invest with partners to implement projects that demonstrate innovative solutions to conservation challenges and provide measurable improvements and outcomes tied to the resource concerns they seek to address.	NRCS	https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/rcpp/
Emergency Management Performance Grants (EMPG) Program	Assist local, tribal, territorial, and state governments in enhancing and sustaining all-hazards emergency management capabilities	U.S. DHS	https://www.fema.gov/emergency-management-performance-grant-program
Land & Water Conservation Fund	Matching grants to states and local governments for the acquisition and development of public outdoor recreation areas and facilities (as well as funding for shared federal land acquisition and conservation strategies)	National Park Service	https://www.nps.gov/subjects/lwcf/index.htm
Coastal Watersheds Grant Program	Restore America's Estuaries, in close coordination with and financial support from EPA, administers the NEP Coastal Watersheds Grant Program. This grant program funds projects within the geographic areas shown here and supports the following Congressionally-set priorities: <ul style="list-style-type: none">•Loss of key habitats resulting in significant impacts on fisheries and water quality such as seagrass, mangroves, tidal and freshwater wetlands, forested wetlands, kelp beds, shellfish beds, and coral reefs;•Recurring harmful algae blooms;•Unusual or unexplained marine mammal mortalities;•Proliferation or invasion of species that limit recreational uses, threaten wastewater systems, or cause other ecosystem damage;	National Estuary Program	https://estuaries.org/initiatives/watershedgrants/





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Program	Description	Lead Agency	Website
	<ul style="list-style-type: none">Flooding and coastal erosion that may be related to sea level rise, changing precipitation, or salt marsh, seagrass, or wetland degradation or loss;Impacts of nutrients and warmer water temperatures on aquatic life and coastal ecosystems, including low dissolved oxygen conditions in estuarine waters; andContaminants of emerging concern found in coastal and estuarine waters such as pharmaceuticals, personal care products, and microplastics.		
State			
Local Government Records Management Improvement Fund (LGRMIF) Disaster Recovery Grants	Grants for disaster recovery projects related to damage caused by a sudden, unexpected event involving fire, water, man-made or natural phenomena where a timely response is necessary to prevent the irretrievable loss of vital or archival records, or to ensure reasonable, timely access to vital records	New York State Archives / New York State Education Department	http://www.archives.nysesd.gov/grants/grants_lgrmif.shtml
The New York State Emergency Services Revolving Loan	Repair of firefighting apparatus, ambulances, or rescue vehicles; Renovation, rehabilitation, or repair of facilities that house firefighting equipment, ambulances, rescue vehicles, and related equipment	NYS DHSES	http://www.dhses.ny.gov/ofpc/services/loan/
Environmental Protection Fund (EPF)	Matching grants for the acquisition, planning, development, and improvement of parks, historic properties	New York State Parks, Recreation & Historic Preservation (NYSOPRHP)	https://www.dec.ny.gov/about/92815.html
Recreational Trails (RTP)	Program Matching grants for the acquisition, development, rehabilitation and maintenance of trails and trail-related projects	NYSOPRHP	https://parks.ny.gov/grants/recreational-trails/default.aspx
Environmental Protection & Improvement Grants	Competitive grants for environmental protection and improvement; available for municipalities, community organizations, not-for-profit organizations and others	New York State Department of Environmental Conservation	https://www.dec.ny.gov/about/92815.html
Volunteer Fire Assistance Grants	The grant is a 50/50 matching funds program. Its purpose is to make funds available to rural fire companies for the purchase of wildland firefighting equipment such as portable backpack pumps, Nomex	NYSDEC	https://www.dec.ny.gov/regulations/2364.html





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Program	Description	Lead Agency	Website
	protective clothing, hand tools, hard hats, hose, portable radios and dry hydrants.		
Clean Water Act Section 604(b) Water Quality Planning Grants	Provide funding to implement regional comprehensive water quality management planning activities as described in Section 604(b) of the federal Clean Water Act. 604(b) funds are to be used for water quality management planning activities, including tasks to determine the nature, extent and causes of point and nonpoint source water pollution problems, and to develop plans to resolve these problems.	NYSDEC	https://www.dec.ny.gov/lands/53122.html
Water Quality Improvement Project (WQIP) Program	The Water Quality Improvement Project (WQIP) program is a competitive, reimbursement grant program that funds projects that directly address documented water quality impairments. Applications are typically available each spring through the Consolidated Funding Application.	NYSDEC	https://www.dec.ny.gov/pubs/4774.html
New York State DEC/EFC Wastewater Infrastructure Engineering Planning Grant (EPG)	The New York State Department of Environmental Conservation (DEC), in conjunction with the New York State Environmental Facilities Corporation (EFC), will offer grants to municipalities to help pay for the initial planning of eligible Clean Water State Revolving Fund (CWSRF) water quality projects. The ultimate goal of the EPG program is to advance water quality projects to construction, so successful applicants can use the engineering report funded by the grant to seek financing through the CWSRF program, Water Quality Improvement Project program, or other funding entities to further pursue the identified solution.	NYSDEC	https://www.dec.ny.gov/pubs/81196.html
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	https://www.dec.ny.gov/energy/109181.html
BRIDGE NY	The State is making funding available for local governments to rehabilitate and replace bridges and culverts statewide.	NYS DOT	https://www.dot.ny.gov/BRIDGENY





6.6 MITIGATION STRATEGY DEVELOPMENT AND UPDATE

6.6.1 UPDATE OF MITIGATION STRATEGIES

To evaluate progress on local mitigation actions, each jurisdiction with actions in previous DMA 2000 or related plans, including those who participated in the 2014 Suffolk County HMP, was provided with access to the BAToolSM Mitigation Module, a simple-to-use program to report progress on their mitigation actions. The program walks users through the critical elements that must be updated for each mitigation strategy and rolls up the progress into a table for HMP reporting. The Module was pre-populated with those actions identified for their jurisdiction in the prior plan. For each action, municipalities were asked to indicate the status of each action (“No Progress/Unknown”, “In Progress/Not Yet Complete”, “Ongoing”, “Completed”, “Discontinued”), and provide review comments on each. Jurisdictions were requested to quantify the extent of progress, and provide reasons for the level progress or why actions were discontinued. Each jurisdictional annex provides a table identifying their prior mitigation strategy, the status of those actions and initiatives, and their disposition within their updated strategy.

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

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

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

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

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

- Local Plans and Regulations – These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.





- Structure and Infrastructure Project- These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection – These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- Education and Awareness Programs – These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as the National Flood Insurance Program and Community Rating System, StormReady (NOAA) and Firewise (NFPA) Communities.

A mitigation strategy workshop was conducted by NYSDHSES and FEMA Region II representatives on June 3, 2020, supplemented by one on one phone calls between jurisdictions and the contract consultant, for all participating jurisdictions to support the development of focused problem statements based on the impacts of natural hazards in the county and their communities. These problem statements are intended to provide a detailed description of the problem area, including its impacts to the municipality/jurisdiction; past damages; loss of service; etc. An effort was made to include the street address of the property/project location, adjacent streets, water bodies, and well-known structures as well as a brief description of existing conditions (topography, terrain, hydrology) of the site. These problem statements form a bridge between the hazard risk assessment which quantifies impacts to each community with the development of actionable mitigation strategies.

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

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

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

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

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





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

6.6.2 UPDATE OF COUNTY MITIGATION STRATEGY

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

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

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

- Review of the results and findings of the updated risk assessment;
- Review of available regional and county plans, reports and studies;
- Direct input from county departments and other county and regional agencies, including:
 - Department of Fire Rescue and Emergency Services
 - Department of Economic Development and Planning
 - Department of Public Works
 - Department of Parks
 - Department of Information Technology
 - Health Services
 - Sheriff’s Department
 - Police Department
 - Soil and Water Conservation District
- Input received through the public and stakeholder outreach process.

6.6.3 MITIGATION STRATEGY EVALUATION AND PRIORITIZATION

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

Recent FEMA planning guidance (March 2013) identifies a modified STAPLEE (Social, Technical, Administrative, Political, Legal, Economic, and Environmental) mitigation action evaluation methodology that uses a set of 10 evaluation criteria suited to the purposes of hazard mitigation strategy evaluation. This method provides a systematic approach that considers the opportunities and constraints of implementing a particular





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mitigation action. The June 2020 Mitigation Workshop further amplified these evaluation criteria, and indicated that communities may want to consider other factors.

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

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

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





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

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

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

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

For the 2020 plan update there has been an effort to develop more specific, clearly defined, and action-oriented mitigation strategies. These local strategies include projects and initiatives that have been well-vetted, and are seen by the community as the most effective approaches to advance their local mitigation goals and objectives within their capabilities. As such, many of the initiatives in the updated mitigation strategy were ranked as “High” or “Medium” priority, as reflective of the community’s clear intent to implement, available resources notwithstanding. In general, initiatives that would have had “low” priority rankings were appropriately screened out during the local action evaluation process.

6.6.4 BENEFIT/COST REVIEW

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

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

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

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

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





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

Low = < \$10,000

Medium = \$10,000 to \$100,000

High = > \$100,000

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

Table 6-6. Qualitative Cost and Benefit Ratings

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

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

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

