



EXECUTIVE SUMMARY

The 2020 update to the Suffolk County Hazard Mitigation Plan (HMP) was prepared in accordance with the Disaster Mitigation Act of 2000 (DMA 2000). The DMA 2000 requires states and local governments to prepare HMPs to remain eligible to receive pre-disaster mitigation grant funds available in the wake of federally declared disasters. To restate, jurisdictions that do not participate in this process and do not adopt the resulting HMP will not be eligible to receive future pre-disaster mitigation grant funding (Section 404 grant funds). Importantly, pre-disaster mitigation grant funds are separate and distinct from federal and state funds available for direct post-disaster relief (i.e., Public Assistance [PA] and Individual Assistance [IA]). Availability of those funds remains unchanged: if a federally declared disaster occurs in Suffolk County, affected jurisdictions will still receive immediate recovery assistance regardless of their participation in this HMP. However, the DMA 2000 improves the disaster planning process by: (1) increasing requirements for hazard mitigation planning and (2) necessitating that participating municipalities document their hazard mitigation planning process and identify hazards, potential losses, and mitigation needs, goals, and strategies.

Hazard Mitigation is any sustained action taken to reduce or eliminate the long-term risk and effects that can result from specific hazards.

FEMA defines a **Hazard Mitigation Plan** as the documentation of a state or local government evaluation of natural hazards and the strategies to mitigate such hazards.

Suffolk County Multi-Jurisdictional Planning Process

Suffolk County developed and adopted the original Suffolk County HMP in 2008 with an update taking place in 2014. The DMA 2000 regulations require that local plans be formally updated and adopted every five (5) years, reassessing risk and updating local strategies to manage and mitigate those risks. To comply, Suffolk County and most of its inclusive jurisdictions actively participated in the 2020 update of the HMP. Extensive outreach efforts by the Suffolk County Fire, Rescue and Emergency Services (FRES) resulted in participation from the Suffolk County Water Authority (SCWA), the Shinnecock Tribal Nation, the Unkechaug Tribal Nation, and 41 of the 42 municipal governments. Upon completion and approval of the HMP, participating jurisdictions will continue to address and implement the findings and recommendations of this HMP.

Table ES-1 lists local governments that actively participated in the HMP update process to achieve or maintain their compliance with the DMA 2000 requirements.

Table ES-1. Participating Jurisdictions in the 2020 Suffolk County HMP Update

Jurisdictions		
Suffolk County	Village of Asharoken	Village of North Haven
Suffolk County Water Authority	Village of Babylon	Village of Northport
Shinnecock Tribal Nation	Village of Belle Terre	Village of Ocean Beach
Unkechaug Tribal Nation	Village of Bellport	Village of Old Field
Town of Babylon	Village of Brightwaters	Village of Patchogue
Town of Brookhaven	Village of Dering Harbor	Village of Poquott
Town of East Hampton	Village of East Hampton	Village of Port Jefferson
Town of Huntington	Village of Greenport	Village of Quogue
Town of Islip	Village of Head of Harbor	Village of Sag Harbor
Town of Riverhead	Village of Huntington Bay	Village of Saltaire



Jurisdictions		
Town of Shelter Island	Village of Islandia	Village of Shoreham
Town of Smithtown	Village of Lake Grove	Village of Southampton
Town of Southampton	Village of Lindenhurst	Village of The Branch
Town of Southold	Village of Lloyd Harbor	Village of Westhampton Beach
Village of Amityville	Village of Nissequogue	Village of West Hampton Dunes

Note: The Village of Sagaponack is not participating in the 2020 HMP.

During the Suffolk County HMP planning process, the nation, the State of New York and Suffolk County were facing the COVID-19 pandemic. The COVID-19 pandemic was declared a major disaster on March 20, 2020 (DR-4480). The Governor issued a stay-at-home Executive Order beginning March 22, 2020, which remained in effect the duration of the planning process. Suffolk County has been greatly impacted by the COVID-19 pandemic with 43,844 positive cases and nearly 2,000 confirmed deaths as of August 10, 2020.

The Suffolk County FRES, Steering Committee members and the planning partners (County departments, SCWA, municipalities and the Tribal Nations) were facing the COVID-19 pandemic concurrent with completing the update to the HMP. Suffolk County and all planning partners made their best effort to work through this unprecedented time to complete the HMP update and meet FEMA and State requirements. Unfortunately, in-person public meetings planned were canceled for the safety of residents and all planning partners. However, Steering Committee, Planning Committee and jurisdiction-specific meetings continued virtually. More targeted stakeholder and public involvement was initiated to ensure a broad audience was reached and is described further below.

During this HMP update process, Suffolk County and the participating jurisdictions accomplished the following:

- Developed a Steering Committee and planning partnership.
- Reviewed and updated the hazards of concern.
- Profiled and prioritized these hazards.
- Estimated inventory at risk and potential losses associated with these hazards.
- Reviewed and updated hazard mitigation goals and objectives.
- Reviewed and updated County and local mitigation strategies to address identified risks and vulnerabilities.
- Updated and developed maintenance procedures to be executed upon approval of the HMP.

As required by the DMA 2000, the participating jurisdictions and Suffolk County have informed the public about HMP update efforts and have provided opportunities for public comment and input regarding the planning process. In addition, numerous agencies and stakeholders have participated as core or support members to provide input and expertise to the planning process. This HMP documents the process and outcomes of the jurisdictions’ mitigation planning efforts.

Suffolk County and the participating jurisdictions incorporate mitigation planning as an integral component of daily government operations through existing processes and programs. A multi-lingual public outreach campaign was initiated to commence the HMP update. A Suffolk County HMP brochure and social media posts were distributed in English, Spanish and Mandarin encouraging participation in the planning process. In addition, a citizen survey to gauge natural hazard preparedness was developed. The survey asked quantifiable questions about citizen perception of risk, knowledge of mitigation, and support of community programs. and stakeholder surveys across multiple sectors was distributed to obtain input. The brochure, citizen survey and stakeholder surveys are posted on the County’s mitigation website (<https://fres.suffolkcountyny.gov/RESPOND/HazardMitigation.aspx>). Updates to the HMP will be similarly





announced after annual plan reviews and 5-year updates. The website also offered the general public and stakeholder groups an opportunity to provide their input through a community survey. The HMP update was presented at the already-scheduled public Suffolk County Planning Commission meeting and individual stakeholder meetings were scheduled and held virtually to ensure a robust outreach campaign. Further, a public ArcGIS Online Story Map and Hazard Mapping Tool was developed to further engage residents during the planning process. The County HMP Coordinator and local planning partnership representatives will be responsible for receiving, tracking, and filing public comments regarding this HMP when posted for draft public review and throughout the plan’s period of performance.

Suffolk County Hazard Mitigation Plan Adoption

Following formal Federal Emergency Management Agency (FEMA) approval of this HMP update, Suffolk County and all participating jurisdictions will be required to formally adopt the updated HMP. A sample copy of an adoption resolution is in Appendix A (Plan Adoption). Of the 45 participating planning partners listed in Table ES-1, all fully met the participation requirements specified by the Steering Committee. Those that did not participate would not be able to seek FEMA or NYS DHSES approval at the time of plan submittal nor be eligible to obtain FEMA grant funding. Any non-participating local government within the Suffolk County planning area can “link” to this plan in the future following the protocol outlined in Appendix J (Linkage Procedures).

Suffolk County Profile

According to the 2018 American Community Survey (ACS) Census data, Suffolk County had a population of 1,487,901. The population density of Suffolk County was 1,624 persons per square mile in 2018. It is well recognized that the County’s population swells significantly during the summer season, particularly within coastal communities that have great exposure to coastal storms and related hazards. Suffolk County is bordered by Nassau County to the west and major water bodies to the north (Long Island Sound), south and east (Atlantic Ocean).

Suffolk County includes rural landscape, residential areas, business districts, commercial/industrial areas, various transportation systems (e.g., local and state roadways, railway, airport), various terrains and natural features, approximately 1,000 miles of shoreline, 150,500 acres of recreation and open space, and educational facilities. In 2017, Suffolk County had 30,032 acres of farmland. This combination of natural and developed features lays the foundation for Suffolk County’s vulnerability to natural hazards, both in terms of exposure to hazard events and the potential impact of hazard events.

Development increases population and structures and therefore can increase the impact of hazards on a community. For example, heavy development planned for a flood-prone area would likely increase the impact of the flood events as time progresses.

The Suffolk County HMP provides a general overview of current and anticipated population and land use within the study area. This information provides a basis for making decisions regarding the type of mitigation approaches to consider and the locations in which these approaches should be applied. This information can also be used to support decisions regarding future development in vulnerable areas. For potential increases in vulnerability, the County and jurisdictions can then plan ahead to mitigate those vulnerabilities early in the development process or can direct development to areas of lower risk. The Planning Committee will revisit the mitigation plan regularly to ensure that mitigation actions support sustainability in order to minimize increased risk and to support the implementation and targeting of specific mitigation actions to address the potential impacts of development over time.



Risk Assessment

A key component of an HMP is accurate identification of risks posed by hazards and corresponding impacts on the community. The process of identifying hazards of concern, profiling hazard events, and conducting a vulnerability assessment is known as a risk assessment. The risk assessment portion of the mitigation planning process included the steps shown and summarized below.



Step 1: Identify hazards of concern. Suffolk County considered the full range of natural and non-natural hazards that could impact the county and then identified and ranked hazards of greatest concern. The following list of 16 hazards of concern was selected for further evaluation in the HMP:

- Coastal Erosion
- Cyber Security
- Disease Outbreak
- Drought
- Earthquake
- Expansive Soils
- Extreme Temperature (heat and cold)
- Flood (coastal, riverine, dam failure, flash, ice jam and urban)
- Groundwater Contamination
- Hurricane
- Infestation and Invasive Species
- Nor' Easter
- Severe Storm (thunderstorm, hail, wind, tornado)
- Severe Winter Storm
- Shallow Groundwater Flooding
- Wildfire

Step 2: Prepare a profile of each hazard of concern. These profiles assist jurisdictions in evaluating and comparing hazards that can impact their areas. Each type of hazard has unique characteristics that vary from event to event. That is, impacts associated with a specific hazard can vary depending on the magnitude and location of each event (a hazard event is a specific, uninterrupted occurrence of a particular type of hazard). Further, probability of occurrence of a hazard at a given location affects the priority assigned to that hazard. Finally, each hazard impacts different communities in different ways, depending on geography, local development, population distribution, age of buildings, and mitigation measures already implemented.

Steps 3 and 4: Evaluate assets of jurisdictions and identify assets exposed or vulnerable to the identified hazards of concern. Hazard profile information, combined with data regarding population, demographics, general building stock, and critical facilities at risk, prepares the community to develop risk scenarios and estimate potential damages and losses from each hazard.

Overall vulnerability of Suffolk County to the hazards of concern cannot be underestimated. Frequent severe storms result in wind damage and flooding that impact residents, businesses, and government services. National



Flood Insurance Program (NFIP) statistics for Suffolk County, as of July 13, 2020, identify 31,664 NFIP policyholders in Suffolk County with 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.

Suffolk County Mitigation Strategy

Outcomes of the risk assessment, supplemented by community input, provided a basis for reviewing past mitigation actions, future goals, and appropriate local mitigation actions.

Goals and Objectives

The 2014 HMP specified eight overarching mitigation goals with corresponding objectives that summarized hazard reduction outcomes the County and participating jurisdictions want to achieve. During the 2020 plan update process, the Steering Committee reviewed the goals and objectives established in the 2014 HMP. These goals and objectives were reviewed in consideration of the hazard events and losses since the 2014 plan; the updated hazard profiles and vulnerability assessment; the goals and objectives established in the 2019 NYS HMP, County, and local risk management plans; and direct input from the County and jurisdictions for how to meet their needs to advance and best manage their hazard risk. Amendments include additions/edits to goals and 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 (refer to Section 6 – Mitigation Strategies). The following summarizes the eight (8) updated goals for the 2020 HMP.

The mitigation strategy portion of the HMP includes:

- A summary of past and current mitigation efforts
- Local hazard mitigation goals and objectives
- Identification and analysis of mitigation measures and projects under consideration
- Multi-jurisdictional mitigation strategy (goals and objectives)
- Mitigation action plan (summary of specific actions)

1. Save lives and reduce injury.
2. Avoid, minimize, or reduce damage to property, including critical facilities, lifelines, infrastructure, and those properties known to receive or experience repetitive damages.
3. Reduce exposure to risk, while protecting or restoring natural processes to the maximum extent possible.
4. Consider the wise uses of land in known or identified hazard areas.
5. Encourage the development and implementation of sustainable, long-term, cost-effective, and environmentally sound mitigation projects.
6. Promote hazard mitigation awareness and education throughout the County.
7. Improve community emergency management capability (i.e., prepare, respond, recover, mitigate).
8. Maintain economic viability after a hazard event.

Capability Assessment

Capability assessments were prepared by Suffolk County and each participating jurisdiction. A capability assessment is an inventory of a community’s missions, programs, and policies and an analysis of its capacity to implement them. This assessment is an integral part of the planning process. The capability assessment process includes identification, review, and analysis of current local and state programs, policies, regulations, funding, and practices that may either facilitate or hinder mitigation.

By completing these assessments, Suffolk County and participating jurisdictions learned how or whether they would be able to implement certain mitigation actions by determining the following:



- Types of mitigation actions that may be prohibited by law.
- Limitations that may hinder mitigation actions.
- The range of local and state administrative, programmatic, regulatory, financial, and technical resources available to assist in implementing their mitigation actions.

Identification, Prioritization, Analysis, and Implementation of Mitigation Actions

Suffolk County has seen much success in the implementation of the 2014 HMP, particularly through actions that integrate hazard mitigation into jurisdictions' daily operations.

As part of the planning process for this HMP update, all participating jurisdictions evaluated their risks and known or anticipated losses to the hazards of concern, assessed their capabilities to manage hazard risk, reviewed progress on past mitigation efforts, and identified a comprehensive range of mitigation alternatives and actions they endeavor to implement as resources are identified and available. The HMP identifies all proposed mitigation actions relevant to achievement of the goals and objectives presented above. The County and participating jurisdictions have identified appropriate local mitigation actions, along with hazards mitigated, goals and objectives met, lead agencies, estimated costs, potential funding sources, and proposed timeline. These actions are identified in Volume II, Section 9 for the County and each participating jurisdiction.

Plan Maintenance Procedures

Hazard mitigation planning is an ongoing process. Section 7 (Plan Maintenance) of this plan presents procedures for HMP monitoring, integration, evaluation, and updating. The Planning Partnership will continue ongoing mitigation efforts to implement the HMP and revise and update the HMP, as necessary.

To monitor implementation of the HMP, Planning Partnership members will meet annually to discuss the status of HMP implementation and will prepare a report summarizing the status of the HMP and any needed updates. The mitigation evaluation will address changes as new hazard events occur, as the area develops, and as more is learned about hazards and their impacts. The evaluation will include an assessment of whether the planning process and actions have been effective, whether development or other issues warrant changes to the HMP or its priorities, progress toward achievement of the communities' goals, and whether changes are warranted. The HMP will be updated at a minimum within the 5-year cycle specified by the DMA 2000.

Point of Contact

To request information or provide comments regarding this HMP, please contact the Suffolk County FRES:

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