

# SARATOGA COUNTY HAZARD MITIGATION ACTION PLAN UPDATE

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## 2025 DRAFT

Mitigating Risk for a Safe, Secure, Sustainable Future



**SARATOGA**  
**COUNTY** NEW  
YORK



For more information, visit our website at:

<https://www.saratogacountyny.gov/>

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**SECTION 1**  
**INTRODUCTION**

# SECTION 1: INTRODUCTION

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## BACKGROUND

Saratoga County is in eastern New York State in the Capital District Region. The county seat is the Village of Ballston Spa. Saratoga County has eight bordering counties. Fulton County is adjacent to the west, Schenectady and Montgomery County are to the southwest, Albany County borders the southern portion of the county, Rensselaer County is to the southeast, Washington County is to the east, Hamilton County is to the northwest, and Warren County is to the north.

Originally Saratoga County was part of Albany County but was split off in the 18<sup>th</sup> century. Today, the county has a total area of 844 square miles, of which roughly 810 square miles are land, and 34 square miles are water.<sup>1</sup>

Saratoga County is prone to large amounts of snow that can result in flood events. While flooding is a well-known risk, Saratoga County is susceptible to a wide range of natural hazards, including but not limited to drought, landslide, severe storms, and severe winter storms. These life-threatening hazards can destroy property, disrupt the economy, and lower the overall quality of life for individuals.

While it is impossible to prevent an event from occurring, the impacts from many hazards on people and property can be lessened through mitigation. The Federal Emergency Management Agency (FEMA) defines mitigation as *sustained actions taken to reduce or eliminate long-term risk to people and property from hazards and their effects.*<sup>2</sup> Communities participate in hazard mitigation by developing hazard mitigation plans. The New York State Division of Homeland Security and Emergency Services (NYS DHSES) and FEMA have the authority to review and approve hazard mitigation plans through the Disaster Mitigation Act of 2000.

The Disaster Mitigation Act requires that hazard mitigation plans be reviewed and revised every five years to maintain eligibility for Hazard Mitigation Assistance (HMA) grant funding. In 2019, Saratoga County developed their previous Hazard Mitigation Action Plan (HMAP.)

FEMA approved the previous Saratoga County HMAP in 2019, which then was set to expire in 2024. Therefore, the County began the process of developing a Hazard Mitigation Plan Update in order to maintain eligibility for grant funding. The HMAP Update planning process provided an opportunity for Saratoga County to evaluate successful mitigation actions and explore opportunities to avoid future disaster loss.

Saratoga County selected H<sub>2</sub>O Partners, Inc. to write and develop the 2025 HMAP Update, hereinafter titled: “Saratoga County Hazard Mitigation Action Plan Update 2025: Maintaining a

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<sup>1</sup> Source: <http://www.usa.com/saratoga-county-ny.htm>

<sup>2</sup> Source: <http://www.fema.gov/hazard-mitigation-planning-resources>

## SECTION 1: INTRODUCTION

Safe, Secure, and Sustainable Community” (Plan or Plan Update). Saratoga County’s Plan is a multi-jurisdictional plan. Table 1-1 shows the participating jurisdictions in this Plan Update.

**Table 1-1. Participating Jurisdictions**

PARTICIPATING JURISDICTIONS	
Saratoga County	
Town of Ballston	Village of Ballston Spa
Town of Charlton	Town of Clifton Park
Town of Corinth	Village of Corinth
Town of Day	Town of Edinburg
Town of Galway	Village of Galway
Town of Greenfield	Town of Hadley
Town of Halfmoon	Town of Malta
City of Mechanicville	Town of Milton
Town of Moreau	Town of Northumberland
Town of Providence	Village of Round Lake
Town of Saratoga	City of Saratoga Springs
Village of Schuylerville	Village of South Glens Falls
Town of Stillwater	Village of Stillwater
Village of Victory	Town of Waterford
Village of Waterford	Town of Wilton

Hazard mitigation activities are an investment in a community’s safety and sustainability. It is widely accepted that the most effective hazard mitigation measures are implemented at the local government level, where decisions on the regulation and control of development are ultimately made. A comprehensive review of a hazard mitigation plan addresses vulnerabilities to hazards that exist today and in the foreseeable future. Therefore, it is essential that a plan identify projected patterns of how future development will increase or decrease a community’s overall hazard vulnerability.

### SCOPE

The focus of the Plan Update is to identify activities to mitigate hazards classified as “high” or “moderate” risk, as determined through a detailed hazard risk assessment conducted for Saratoga County and the participating jurisdictions. The hazard classification enables the participating jurisdictions to prioritize mitigation actions based on hazards which can present the greatest risk to lives and property in the geographic scope.

### PURPOSE

The Plan Update was prepared by Saratoga County, participating jurisdictions, and H<sub>2</sub>O Partners, Inc. The purpose of the Plan Update is to protect people and structures and to minimize the costs

## SECTION 1: INTRODUCTION

of disaster response and recovery. The goal of the Plan Update is to minimize or eliminate long-term risks to human life, property, operations, and the environment from known hazards by identifying risks and implementing cost-effective hazard mitigation actions. The planning process is an opportunity for participating jurisdictions within Saratoga County, stakeholders, and the general public to evaluate and develop successful hazard mitigation actions to reduce future risk of loss of life and damage to property resulting from a disaster in Saratoga County.

The Mission Statement of the Plan Update is, “*Maintaining a secure and sustainable future through the revision and development of targeted hazard mitigation actions to protect life and property.*”

Participating jurisdictions within Saratoga County, and planning participants identified fifteen natural hazards and one human-caused hazard to be addressed by the Plan Update. The specific goals of the Plan Update are to:

- Provide a comprehensive update to the 2019 HMAP;
- Minimize disruption to participating jurisdictions within Saratoga County following a disaster;
- Streamline disaster recovery by articulating actions to be taken before a disaster strikes to reduce or eliminate future damage;
- Demonstrate a firm local commitment to hazard mitigation principles;
- Serve as a basis for future funding that may become available through grants and technical assistance programs offered by the State or Federal government. The Plan will enable participating jurisdictions within Saratoga County to take advantage of rapidly developing mitigation grant opportunities as they arise; and
- Ensure that participating jurisdictions within Saratoga County maintain eligibility for the full range of future Federal disaster relief.

### AUTHORITY



The Plan is tailored specifically for participating jurisdictions within Saratoga County and plan participants including Planning Team members, stakeholders, and the general public who participated in the Plan Update development process. The Plan complies with all requirements promulgated by the New York State Division of Homeland Security and Emergency Services (NYS DHSES) and all applicable provisions of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, Section 104 of the Disaster Mitigation Act of 2000 (DMA 2000) (P.L. 106-390), and the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004 (P.L. 108-264), which amended the National Flood Insurance Act (NFIA) of 1968 (42 U.S.C. 4001, et al). Additionally, the Plan complies with the Interim Final Rules for the Hazard Mitigation Planning and Hazard Mitigation Grant Program (44 CFR, Part 201), which specify the criteria for approval of mitigation plans required in Section 322 of the DMA 2000 and standards found in FEMA’s “Local Mitigation Planning Policy Guide” (April 2023), and the “Local Mitigation Planning Handbook” (May 2023).

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## SUMMARY OF SECTIONS

Sections 1 and 2 of the Plan Update outline the Plan’s purpose and development, including how Planning Team members, stakeholders, and members of the general public were involved in the planning process. Section 3 profiles Saratoga County’s population and economy.

Sections 4 through 20 present a hazard overview and information on individual natural and human-caused hazards in the planning area. For each hazard, the Plan Update presents a description of the hazard, a list of historical hazard events, and the results of the vulnerability and risk assessment process.

Section 21 presents hazard mitigation goals and objectives. Section 22 gives an analysis for the previous actions and Section 23 presents hazard mitigation actions for Saratoga County and the participating jurisdictions. Section 24 identifies Plan maintenance mechanisms. Annexes A through EE provide a unique, stand-alone guide to mitigation planning for each participating jurisdiction.

The list of planning team members and stakeholders is located in Appendix A. Public survey results are analyzed and presented in Appendix B. Appendix C contains a detailed list of critical facilities for the area. Appendix D contains information regarding Dam locations within Saratoga County. Appendix E contains information regarding workshops and meeting documentation. Capability Assessment results for participating jurisdictions within Saratoga County are in Appendix F. Appendix G includes State and Federal Funding Opportunities. Appendix H contains Flood Insurance Rate Maps and Appendix I contains the County Emergency Preparedness Assessment.<sup>3</sup>

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<sup>3</sup> Information contained in some of these appendices are exempt from public release under the Freedom of Information Act (FOIA).





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SECTION 2

**PLANNING PROCESS**

## SECTION 2: PLANNING PROCESS

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### PLAN PREPARATION AND DEVELOPMENT

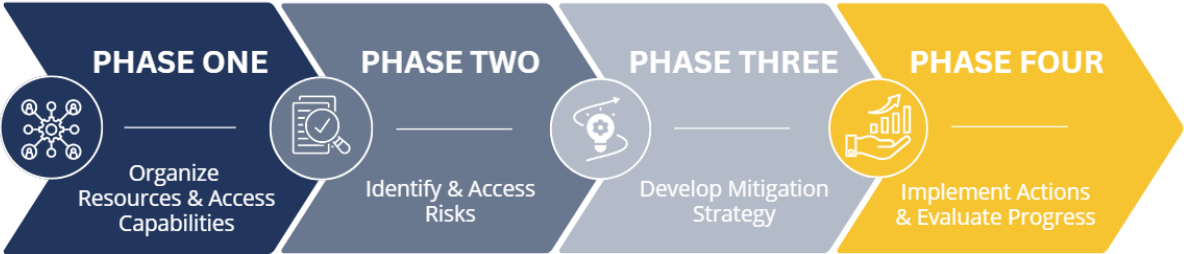
Hazard mitigation planning involves coordination with various constituents and stakeholders to develop a more disaster-resistant community. Section 2 provides an overview of the planning process including the identification of key steps and a detailed description of how stakeholders and the public were involved.

#### OVERVIEW OF THE PLAN

Saratoga County hired H<sub>2</sub>O Partners, Inc. (Consultant Team), to provide technical support and oversee the development of the Saratoga County Hazard Mitigation Action Plan Update 2025. The Consultant Team used the FEMA “Local Mitigation Planning Handbook” (May 2023), the FEMA “Local Mitigation Planning Policy Guide” (April 2023), and the “New York State Hazard Mitigation Planning Standards Guide” (2022) to develop the Plan. The overall planning process is shown in Figure 2-1 below.

# SECTION 2: PLANNING PROCESS

**Figure 2-1. Mitigation Planning Process**



Saratoga County, the participating jurisdictions, and the Consultant Team met in November 2023 to begin organizing resources, identify Planning Team members, and conduct a Capability Assessment.

## PLANNING TEAM

Key members of H<sub>2</sub>O Partners, Inc. developed the Plan Update in conjunction with the Planning Team. The Planning Team was established using a direct representation model. Some of the responsibilities of the Planning Team included: completing Capability Assessment surveys, providing input regarding the identification of hazards, identifying mitigation goals, and developing mitigation strategies. An Executive Planning Team consisting of key personnel involved in hazard mitigation activities from each of the participating jurisdictions within Saratoga County, shown in Table 2-1, was formed to coordinate planning efforts and request input and participation in the planning process.

Table 2-2 reflects the Advisory Planning Team, consisting of additional representatives from area organizations and departments from the participating jurisdictions within Saratoga County that participated throughout the planning process. All Executive and Advisory Planning Team members are involved in hazard mitigation activities; those with the authority to regulate development are identified with an asterisk next to their title.

**Table 2-1. Executive Planning Team**

ORGANIZATION / DEPARTMENT	TITLE
Saratoga County – Emergency Management	Deputy Director / Fire Coordinator
Saratoga County – Emergency Management	Director*
Town of Ballston – Town Board	Town Supervisor*
Village of Ballston Spa – Village Board	Mayor*
Town of Charlton – Town Board	Town Supervisor*
Town of Clifton Park – Planning and Zoning	Director*
Town of Clifton Park – Safety and Security	Director*
Town of Corinth – Town Board	Town Supervisor*
Village of Corinth – Village Board	Mayor*
Town of Day – Highway	Deputy Superintendent
Town of Edinburg – Highway	Superintendent

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ORGANIZATION / DEPARTMENT	TITLE
Town of Galway – Town Board	Town Supervisor*
Village of Gallway – Village Board	Mayor*
Town of Greenfield – Town Board	Town Supervisor*
Town of Hadley – Town Board	Town Supervisor*
Town of Halfmoon – Building and Code Enforcement	Code Enforcement Officer*
Town of Malta – Town Board	Town Supervisor*
City of Mechanicville – Mayor’s Office	Mayor*
Town of Milton – Highway	Deputy Superintendent
Town of Milton – Stormwater Management	Stormwater Management Officer (SMO)
Town of Moreau – Town Board	Town Supervisor*
Town of Northumberland – Building	Building Code Administrator*
Town of Providence – Highway	Superintendent
Village of Round Lake – Village Board	Mayor*
Town of Saratoga – Town Board	Town Supervisor*
City of Saratoga Springs – Fire	Assistant Fire Chief
City of Saratoga Springs – Police	Assistant Chief
City of Saratoga Springs – Risk and Safety	Director*
Village of Schuylerville – Administration	Village Clerk
Village of South Glens Falls – Village Board	Mayor*
Town of Stillwater – Town Board	Town Supervisor*
Village of Stillwater – Administration	Village Engineer
Village of Victory – Administration	Village Secretary
Town of Waterford – Administration	Code Enforcement Officer*
Village of Waterford – Village Government	Mayor*
Town of Wilton – Building	Supervising Building Inspector / Code Enforcement Officer Zoning Officer / Fire Marshall*

**Table 2-2. Advisory Planning Team**

ORGANIZATION / DEPARTMENT	TITLE
Saratoga County – Emergency Services	Deputy Director / EMS Coordinator
Saratoga County – Emergency Services	Specialist
Saratoga County – Government	County Supervisor – Saratoga Springs

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ORGANIZATION / DEPARTMENT	TITLE
Saratoga County – Planning	Director*
Saratoga County – Planning	GIS
Saratoga County – Public Works	Commissioner*
Saratoga County – Public Works	Director*
Saratoga County – Sewage District	Executive Director*
Saratoga County – Sheriff’s Office	Undersheriff
Saratoga County – Water Authority	Executive Director*
Town of Ballston – Local Emergency Management Committee (LEPC)	Chair
Town of Ballston – Local Emergency Management Committee (LEPC)	Committee Member
Town of Ballston – Town Board	Deputy Town Supervisor / Highway Superintendent
Village of Ballston Spa – Administration	Village Administrator
Town of Charlton – Highway	Superintendent
Town of Charlton – Police and Constables	Senior Constable
Town of Charlton – Zoning and Building	Building Inspector / Code Enforcement*
Town of Clifton Park – Building and Development	Director*
Town of Clifton Park – Highway	Superintendent
Town of Clifton Park – Town Board	Town Supervisor*
Town of Corinth – Assessor’s Office	Secretary
Town of Corinth – Building	Code Enforcement*
Town of Corinth – Highway	Superintendent
Village of Corinth – Administration	Village Clerk / Treasurer
Village of Corinth – Building	Inspector
Village of Corinth – Village Board	Trustee*
Town of Day – Highway	Superintendent
Town of Day – Town Board	Councilman / EMS Representative*
Town of Day – Town Board	Town Supervisor*
Town of Edinburg – Town Board	Town Supervisor*
Town of Galway – Highway	Superintendent
Town of Greenfield – Supervisor’s Office	Confidential Secretary to the Supervisor
Town of Greenfield – Code Enforcement	Building Inspector / Zoning Administrator*
Town of Greenfield – Code Enforcement	Officer*

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ORGANIZATION / DEPARTMENT	TITLE
Town of Greenfield – Highway	Superintendent
Town of Hadley – Highway	Superintendent / Water District Commissioner
Town of Halfmoon – Building and Code Enforcement	Code Enforcement Officer*
Town of Halfmoon – Highway	Superintendent
Town of Halfmoon – Town Board	Town Supervisor*
Town of Malta – Fire	Fire Chief*
Town of Malta – Highway	Superintendent
City of Mechanicville – Building and Code Enforcement	Code Enforcement Officer*
Town of Milton – Comptroller's Office	Comptroller
Town of Milton – Highway	Superintendent
Town of Milton – Town Board	Town Supervisor*
Town of Moreau – Building	Building, Planning and Development Coordinator*
Town of Moreau – Highway	Superintendent
Town of Moreau – Supervisor's Office	Confidential Secretary to the Supervisor
Town of Northumberland – Administration	Town Supervisor*
Town of Northumberland – Highway	Highway Superintendent
Town of Providence – Town Board	Town Supervisor*
Village of Round Lake – Administration	Village Clerk
Village of Round Lake – Building and Code Enforcement	Building Inspector / Code Enforcement Officer*
Town of Saratoga – Administration	Town Clerk
Town of Saratoga – Highway	Superintendent
City of Saratoga Springs – Accounts	Commissioner
City of Saratoga Springs – Mayor's Office	Deputy Mayor
City of Saratoga Springs – Mayor's Office	Executive Assistant
City of Saratoga Springs – Mayor's Office	Mayor*
City of Saratoga Springs – Planning and Economic Development	Administrator
City of Saratoga Springs – Public Works	Deputy Commissioner
Village of Schuylerville – Village Board	Mayor*
Village of South Glens Falls – Administration	Village Clerk / Treasurer
Village of South Glens Falls – Administration	Village Deputy Treasurer

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ORGANIZATION / DEPARTMENT	TITLE
Village of South Glens Falls – Public Works	Superintendent
Town of Stillwater – Building, Planning and Development	Senior Planner / Stormwater Management Officer*
Town of Stillwater – Highway	Superintendent
Town of Stillwater – Police	Chief of Police
Village of Stillwater – Village Board	Mayor*
Village of Victory – Village Board	Deputy Mayor / Trustee
Village of Victory – Village Board	Mayor*
Village of Victory – Public Works	Provisional Working Supervisor
Town of Waterford – Supervisor’s Office	Junior Accountant
Town of Waterford – Highway	Superintendent
Town of Waterford – Police	Public Safety Commissioner*
Town of Waterford – Town Board	Town Supervisor*
Town of Wilton – Comptroller’s Officer	Comptroller
Town of Wilton – Engineering	Director of Planning & Engineering*
Town of Wilton – Highway	Superintendent
Town of Wilton – Town Board	Town Supervisor*

Additionally, a Stakeholder Group was invited via email to participate in the planning process by attending meetings, commenting on draft versions of the plan, and/or by providing data to inform the planning process. The Consultant Team, Planning Teams, and Stakeholder Group coordinated to identify mitigation goals, and develop mitigation strategies and actions for the Plan. Appendix A provides a complete listing of all participating Planning Team members and stakeholders from participating jurisdictions within Saratoga County by organization, title, and stakeholder type. Stakeholder involvement is discussed further below.

Based on results of completed Capability Assessment, participating jurisdictions within Saratoga County described methods for achieving future hazard mitigation measures by expanding existing capabilities. For example, each jurisdiction has an opportunity to identify opportunities for cross-training or increasing the technical expertise of staff by attending free training available through FEMA. In addition, each jurisdiction can identify Planning Team members with the authority to monitor the Plan and identify grant funding opportunities for expanding staff. Other options for improving capabilities for each jurisdiction include the following:

## SECTION 2: PLANNING PROCESS

**Table 2-3. Opportunities for Improving and Expanding Existing Capabilities by Jurisdiction**

JURISDICTION	OPPORTUNITIES
Saratoga County	<ul style="list-style-type: none"> <li>• Develop a <b>Capital Improvement Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Develop a <b>Comprehensive Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Develop <b>land use and building ordinances</b> that will require all new developments to conform to the highest mitigation standards.</li> </ul>
Town of Ballston	<ul style="list-style-type: none"> <li>• Integrate risk information from HMAP into future updates to <b>Capital Improvement Plan</b>.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to confirm to the highest mitigation standards.</li> </ul>
Village of Ballston Spa	<ul style="list-style-type: none"> <li>• Develop a <b>Capital Improvement Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to confirm to the highest mitigation standards.</li> </ul>
Town of Charlton	<ul style="list-style-type: none"> <li>• Develop a <b>Capital Improvement Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to confirm to the highest mitigation standards.</li> </ul>



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JURISDICTION	OPPORTUNITIES
Town of Clifton Park	<ul style="list-style-type: none"> <li>• Develop a <b>Capital Improvement Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to confirm to the highest mitigation standards.</li> </ul>
Town of Corinth	<ul style="list-style-type: none"> <li>• Integrate risk information from HMAP into future updates to <b>Capital Improvement Plan</b>.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to confirm to the highest mitigation standards.</li> </ul>
Village of Corinth	<ul style="list-style-type: none"> <li>• Integrate risk information from HMAP into future updates to <b>Capital Improvement Plan</b>.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to confirm to the highest mitigation standards.</li> </ul>
Town of Day	<ul style="list-style-type: none"> <li>• Develop a <b>Capital Improvement Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to confirm to the highest mitigation standards.</li> </ul>

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JURISDICTION	OPPORTUNITIES
Town of Edinburg	<ul style="list-style-type: none"> <li>• Develop a <b>Capital Improvement Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Develop a <b>Comprehensive Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Develop <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to confirm to the highest mitigation standards.</li> </ul>
Town of Galway	<ul style="list-style-type: none"> <li>• Develop a <b>Capital Improvement Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to confirm to the highest mitigation standards.</li> </ul>
Village of Galway	<ul style="list-style-type: none"> <li>• Develop a <b>Capital Improvement Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Develop <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to confirm to the highest mitigation standards.</li> </ul>
Town of Greenfield	<ul style="list-style-type: none"> <li>• Integrate risk information from HMAP into future updates to <b>Capital Improvement Plan</b>.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to confirm to the highest mitigation standards.</li> </ul>

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JURISDICTION	OPPORTUNITIES
Town of Hadley	<ul style="list-style-type: none"> <li>• Develop a <b>Capital Improvement Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>building ordinances</b> that will require all new developments to conform to the highest mitigation standards.</li> <li>• Develop <b>land use ordinances</b> that will require all new developments to conform to the highest mitigation standards.</li> </ul>
Town of Halfmoon	<ul style="list-style-type: none"> <li>• Develop a <b>Capital Improvement Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to conform to the highest mitigation standards.</li> </ul>
Town of Malta	<ul style="list-style-type: none"> <li>• Integrate risk information from HMAP into future updates to <b>Capital Improvement Plan</b>.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to conform to the highest mitigation standards.</li> </ul>
City of Mechanicville	<ul style="list-style-type: none"> <li>• Integrate risk information from HMAP into future updates to <b>Capital Improvement Plan</b>.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to conform to the highest mitigation standards.</li> </ul>

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JURISDICTION	OPPORTUNITIES
Town of Milton	<ul style="list-style-type: none"> <li>• Develop a <b>Capital Improvement Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to confirm to the highest mitigation standards.</li> </ul>
Town of Moreau	<ul style="list-style-type: none"> <li>• Develop a <b>Capital Improvement Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to confirm to the highest mitigation standards.</li> </ul>
Town of Northumberland	<ul style="list-style-type: none"> <li>• Develop a <b>Capital Improvement Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to confirm to the highest mitigation standards.</li> </ul>
Town of Providence	<ul style="list-style-type: none"> <li>• Integrate risk information from HMAP into future updates to <b>Capital Improvement Plan</b>.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to confirm to the highest mitigation standards.</li> </ul>

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JURISDICTION	OPPORTUNITIES
Village of Round Lake	<ul style="list-style-type: none"> <li>• Develop a <b>Capital Improvement Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to confirm to the highest mitigation standards.</li> </ul>
Town of Saratoga	<ul style="list-style-type: none"> <li>• Integrate risk information from HMAP into future updates to <b>Capital Improvement Plan</b>.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to confirm to the highest mitigation standards.</li> </ul>
City of Saratoga Springs	<ul style="list-style-type: none"> <li>• Integrate risk information from HMAP into future updates to <b>Capital Improvement Plan</b>.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to confirm to the highest mitigation standards.</li> </ul>
Village of Schuylerville	<ul style="list-style-type: none"> <li>• Integrate risk information from HMAP into future updates to <b>Capital Improvement Plan</b>.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to confirm to the highest mitigation standards.</li> </ul>

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JURISDICTION	OPPORTUNITIES
Village of South Glens Falls	<ul style="list-style-type: none"> <li>• Integrate risk information from HMAP into future updates to <b>Capital Improvement Plan</b>.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to confirm to the highest mitigation standards.</li> </ul>
Town of Stillwater	<ul style="list-style-type: none"> <li>• Integrate risk information from HMAP into future updates to <b>Capital Improvement Plan</b>.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to confirm to the highest mitigation standards.</li> </ul>
Village of Stillwater	<ul style="list-style-type: none"> <li>• Integrate risk information from HMAP into future updates to <b>Capital Improvement Plan</b>.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to confirm to the highest mitigation standards.</li> </ul>
Village of Victory	<ul style="list-style-type: none"> <li>• Develop a <b>Capital Improvement Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to confirm to the highest mitigation standards.</li> </ul>

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JURISDICTION	OPPORTUNITIES
Town of Waterford	<ul style="list-style-type: none"> <li>• Develop a <b>Capital Improvement Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to confirm to the highest mitigation standards.</li> </ul>
Village of Waterford	<ul style="list-style-type: none"> <li>• Develop a <b>Capital Improvement Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to confirm to the highest mitigation standards.</li> </ul>
Town of Wilton	<ul style="list-style-type: none"> <li>• Develop a <b>Capital Improvement Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Integrate risk information from HMAP into future updates to <b>Comprehensive Plan</b>.</li> <li>• Develop a <b>Community Wildfire Protection Plan</b> based on information in the risk assessment and identified mitigation projects within the HMAP.</li> <li>• Review current <b>floodplain ordinances</b> for opportunities to increase resiliency such as modifying permitting or building codes.</li> <li>• Review current <b>land use and building ordinances</b> that will require all new developments to confirm to the highest mitigation standards.</li> </ul>

Sample hazard mitigation actions developed with similar hazard risk were shared at the meetings. These important discussions resulted in the development of multiple mitigation actions that are included in the Plan Update to further mitigate risk from natural hazards in the future.

The Planning Team developed hazard mitigation actions for mitigating risk from all of the hazards including potential flood, landslide, and ice storm events. These actions include but are not limited to the county and participating jurisdictions implementing mitigation measures to reduce flood risk at pump stations, relocating structures located in known hazard-prone areas, and identifying evacuation routes for residents during extreme hazard events.

### PLANNING PROCESS

The process used to prepare the Plan Update followed the four major steps included at Figure 2-1. After the Planning Team was organized, a capability assessment was developed and distributed at the Kick-Off Workshop. Hazards were identified and assessed, and results associated with each of the hazards were provided at the Risk Assessment Workshop. Based on Saratoga County’s identified vulnerabilities, specific mitigation strategies were discussed and developed at the Mitigation Strategy Workshop. Finally, Plan maintenance and implementation

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procedures were developed and are included in Section 24. Participation of Planning Team members, stakeholders, and the public at each of the workshops is documented in Appendix E. The Town of Galway and the Village of South Glens Falls were unable to attend workshops throughout the planning process. The Consultant Team followed up directly with the Town of Galway, the Village of South Glens Falls, and the County to review information discussed and gather documents that were collected during the workshops.

At the Plan development workshops held throughout the planning process described herein, the following factors were taken into consideration:

- The nature and magnitude of risks currently affecting the community;
- Hazard mitigation goals to address current and expected conditions;
- Whether current resources will be sufficient for implementing the Plan Update;
- Implementation problems, such as technical, political, legal, and coordination issues that may hinder development;
- Anticipated outcomes; and
- How participating jurisdictions within Saratoga County, agencies, and partners will participate in implementing the Plan Update.

### KICKOFF WORKSHOP

The Kickoff Workshop was held on January 22, 2024, at the Saratoga County Public Health Services in the Village of Ballston Spa. The initial workshop informed participating officials and key department personnel about how the planning process pertained to their distinct roles and responsibilities and engaged stakeholder groups that focus on vulnerable populations and underserved communities including, but not limited to public libraries, economic development agencies, local colleges, and surrounding communities. In addition to the kickoff presentation, participants received the following information:

- Project overview regarding the planning process;
- Public survey access information;
- Hazard Ranking form; and
- Capability Assessment survey for completion.

A risk ranking exercise was conducted at the Kickoff Workshop to get input from the Planning Team and stakeholders pertaining to various risks from a list of natural hazards affecting the planning area. Each participant at the Kickoff Workshop was provided a risk ranking sheet that asked participants to rank hazards in terms of the probability or frequency of occurrence, extent of spatial impact, and the magnitude of impact. The results of the ranking sheets identified unique perspectives on varied risks throughout the planning area. The assessments were also used to set priorities for hazard mitigation actions based on potential loss of lives and dollar losses.

### HAZARD IDENTIFICATION

At the Kickoff Workshop, and through e-mail and phone correspondence, the Planning Team conducted preliminary hazard identification. The Planning Team in coordination with the Consultant Team reviewed and considered a full range of natural hazards. Once identified, the teams narrowed the list to significant hazards by reviewing hazards affecting the area, the 2023 New York State Hazard Mitigation Plan, and initial study results from reputable sources such as federal and state agencies. Based on this initial analysis, the teams identified a total of fifteen



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natural hazards and one human-caused hazard which pose a significant threat to the planning area.

### *RISK ASSESSMENT*

An initial risk assessment for participating jurisdictions within Saratoga County was completed in March 2024 and results were presented to Planning Team members at the Risk Assessment Workshop held on April 4, 2024, at the Saratoga County Public Health Services in the Village of Ballston Spa. At the workshop, the characteristics and consequences of each hazard were evaluated to determine the extent to which the planning area would be affected in terms of potential danger to property and citizens.

Property and crop damages were estimated by gathering data from the National Centers for Environmental Information (NCEI) and National Oceanic and Atmospheric Administration (NOAA). The assessment also examined the impact of various hazards on the built environment, including general building stock, critical facilities, lifelines, and infrastructure. The resulting risk assessment profiled hazard events provided information on previous occurrences, estimated probability of future events, and detailed the spatial extent and magnitude of impact on people and property. Following the risk assessment workshop past event data from NCEI is provided to the planning team for their review and assistance in identifying significant events. A hazard profile and vulnerability analysis for each of the hazards can be found in Sections 4 through 20.

### *MITIGATION REVIEW AND DEVELOPMENT*

Developing the Mitigation Strategy for the Plan involved identifying mitigation goals and new mitigation actions. A Mitigation Workshop was held on July 16, 2024, at the Saratoga County Public Health Services in the Village of Ballston Spa. In addition to the Planning Team, stakeholder groups were invited to attend the workshop. Regarding hazard mitigation actions, workshop participants emphasized the desire for flood and landslide projects. Additionally, the participating jurisdictions were proactive in identifying mitigation actions to lessen the risk of all the identified hazards included in the Plan Update.

An inclusive and structured process was used to develop and prioritize new hazard mitigation actions for the Plan Update. The prioritization method was based on FEMA's STAPLE+E criteria and included social, technical, administrative, political, legal, economic, and environmental considerations. As a result, each Planning Team Member assigned an overall priority to each hazard mitigation action. The overall priority of each action is reflected in the hazard mitigation actions found in Section 23.

Planning Team Members then developed action plans identifying proposed actions, costs and benefits, the responsible organization(s), effects on new and existing buildings, implementation schedules, priorities, and potential funding sources.

Specifically, the process involved:

- Listing optional hazard mitigation actions based on information collected from previous plan reviews, studies, and interviews with federal, state, and local officials. Workshop participants reviewed the optional mitigation actions and selected actions that were most applicable to their area of responsibility, cost-effective in reducing risk, easily implemented, and likely to receive institutional and community support.
- Workshop participants inventoried federal and state funding sources that could assist in implementing the proposed hazard mitigation actions. Information was collected, including

## SECTION 2: PLANNING PROCESS

the program name, authority, purpose of the program, types of assistance and eligible projects, conditions on funding, types of hazards covered, matching requirements, application deadlines, and a point of contact.

- Planning Team Members considered the benefits that would result from implementing the hazard mitigation actions compared to the cost of those projects. Although detailed cost-benefit analyses were beyond the scope of the Plan Update, Planning Team Members utilized economic evaluation as a determining factor between hazard mitigation actions.
- Planning Team Members then selected and prioritized mitigation actions.

Hazard mitigation actions identified in the process were made available to the Planning Team for review. The draft Plan Update was maintained on file by Saratoga County and participating jurisdictions and was made available to the general public for review.

## REVIEW AND INCORPORATION OF EXISTING PLANS

### REVIEW

Background information utilized during the planning process included various studies, plans, reports, and technical information from sources such as FEMA, the United States Army Corps of Engineers (USACE), the U.S. Fire Administration, National Oceanic and Atmospheric Administration (NOAA), the New York State Department of Environmental Conservation (DEC), the New York State Office of Parks, Recreation and Historic Preservation, the New York State Division of Homeland Security and Emergency Services (DHSES), and local hazard assessments and plans. Section 4 and the hazard-specific sections of the Plan (Sections 5 - 20) summarize the relevant background information.

Specific background documents, including those from FEMA, provided information on hazard risk, hazard mitigation actions currently being implemented, and potential mitigation actions. Previous hazard events, occurrences, and descriptions were identified through NOAA's National Centers for Environmental Information (NCEI). Results of past hazard events were found through searching the NCEI. The USACE studies were reviewed for their assessment of risk and potential projects in the region. Cornell University's Program on Applied Demographics documents were used to obtain population projections. The Program on Applied Demographics webpages were reviewed for population and other projections and included in Section 3 of the Plan. Materials from FEMA and DHSES were reviewed for guidance on Plan Update development requirements.

### INCORPORATION OF EXISTING PLANS INTO THE HMAP PROCESS

A Capability Assessment was completed by key departments from the participating jurisdictions within Saratoga County which provided information pertaining to existing plans, policies, ordinances, and regulations to be integrated into the goals and objectives of the Plan Update. The relevant information was included in a master Capability Assessment, Appendix F.

Existing projects and studies were utilized as a starting point for discussing hazard mitigation actions among Planning and Consultant Team members. For example, Saratoga County opened a new Emergency Operations Center in 2021, and continuously works with local municipalities and land trusts on farmland conservation strategies. To date, this program has permanently protected over 5,800 acres of farmland. Additionally, the Town of Ballston has raised the Outlet Road due to continuous flooding and the Town of Stillwater has implemented a community emergency alert system.

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For a comprehensive list of actions from the previous 2019 Saratoga County HMAP, please refer to Section 22.

Additionally, policies and ordinances were reviewed by several of the participating jurisdictions. These jurisdictions have included actions to develop and adopt higher building code standards. Other plans were reviewed, such as Capital Improvement Plans and Emergency Operations Plans, to identify any additional mitigation actions. Finally, the 2023 New York State Hazard Mitigation Plan, was discussed in the initial planning meeting in order to develop a specific group of hazards to address in the planning effort. The 2023 State Plan was also used as a guidance document, along with FEMA materials, in the development of the Saratoga County Hazard Mitigation Action Plan Update 2025.

### INCORPORATION OF THE HMAP INTO OTHER PLANNING MECHANISMS

Planning Team members will integrate implementation of the Plan Update with other planning mechanisms for Saratoga County, such as the Emergency Operations Plan. Existing plans for participating jurisdictions will be reviewed and incorporated into the Plan Update, as appropriate. This section discusses how the Plan will be implemented by the participating jurisdictions within Saratoga County. It also addresses how the Plan will be evaluated and improved over time, and how the public will continue to be involved in the hazard mitigation planning process.

Participating jurisdictions within Saratoga County will be responsible for implementing hazard mitigation actions contained in Section 23. Each hazard mitigation action has been assigned to a specific County, City, Town, or Village department that is responsible for tracking and implementing the action.

A funding source has been listed for each identified hazard mitigation action and may be utilized to implement the action. An implementation time period has also been assigned to each hazard mitigation action as an incentive and to determine whether actions are implemented on a timely basis.

Participating jurisdictions within Saratoga County will integrate hazard mitigation actions contained in the Plan Update with existing planning mechanisms such as ordinances, Emergency Operations or Management Plans, and other local and area planning efforts. Saratoga County will work closely with area organizations to coordinate implementation of hazard mitigation actions that benefit the planning area in terms of financial and economic impact.

Upon formal adoption of the Plan Update, Planning Team members from the participating jurisdictions will review existing plans along with building codes to guide development and ensure that hazard mitigation actions are implemented. Each of the jurisdictions will be responsible for coordinating periodic review of the Plan Update with members of the Advisory Planning Team to ensure integration of hazard mitigation strategies into these planning mechanisms and codes. The Planning Team will also conduct periodic reviews of various existing planning mechanisms and analyze the need for any revisions or updates in light of the approved Plan Update. Participating jurisdictions within Saratoga County will ensure that future long-term planning objectives will contribute to the goals of the Plan to reduce the long-term risk to life and property from moderate and high-risk hazards. Within one year of formal adoption of the Plan, existing planning mechanisms will be reviewed and analyzed as they pertain to the Plan Update.

## SECTION 2: PLANNING PROCESS

Planning Team members will review and revise, as necessary, the long-range goals and objectives in its strategic plan and budgets to ensure that they are consistent with the Plan Update.

Furthermore, Saratoga County will work with neighboring jurisdictions to advance the goals of the Plan Update as it applies to ongoing, long-range planning goals and actions for mitigating risk to natural hazards throughout the planning area.

Table 2-4 identifies types of planning mechanisms and examples of methods for incorporating the Plan into other planning efforts.

**Table 2-4. Examples of Methods of Incorporation**

Planning Mechanism	Incorporation of Plan
Annual Budget Review	Various departments and key personnel that participated in the planning process for participating jurisdictions within Saratoga County will review the Plan and mitigation actions therein when conducting their annual budget review. Allowances will be made in accordance with grant applications sought, and mitigation actions that will be undertaken, according to the implementation schedule of the specific action.
Capital Improvement Plans	Several participating jurisdictions within Saratoga County have a Capital Improvement Plan (CIP) in place or under development. Prior to any revisions to the CIP, City, Town, and Village departments will review the risk assessment and mitigation strategy sections of the HMAP, as limiting public spending in hazardous zones is one of the most effective long-term mitigation actions available to local governments.
Community Wildfire Protection Plan	Community Wildfire Protection Plans (CWPPs) include preventative and corrective actions to address a community's risk of damage from wildfire. Information found in Section 18 of this Plan Update discussing the people and property at risk to wildfire will be reviewed and revised when participating jurisdictions develop a CWPP.
Comprehensive Plans	Several participating jurisdictions within Saratoga County have a Comprehensive Land Use Plan in place. Since comprehensive plans involve developing a unified vision for a community, the mitigation vision and goals of the Plan will be reviewed in the development or revision of a Comprehensive Plan.

## SECTION 2: PLANNING PROCESS

Planning Mechanism	Incorporation of Plan
Floodplain Management Plans	Floodplain management plans include preventative and corrective actions to address the flood hazard. Therefore, the actions for flooding and information found in Section 10 of this Plan Update discussing the people and property at risk to flood will be reviewed and revised when the County, Cities, Towns, and Villages within Saratoga County update their management plans or develops new plans.
Grant Applications	The HMAP will be evaluated by participating jurisdictions within Saratoga County when grant funding is sought for mitigation projects. If a project is not in the Plan Update, a Plan Revision may be necessary to include the action in the Plan.
Regulatory Plans	Currently, several participating jurisdictions within Saratoga County have regulatory plans in place, such as Emergency Operations Plans, Land Use Plans, and Evacuation Plans. The Plan Update will be consulted when County, City, Town, and Village departments review or revise their current regulatory planning mechanisms, or in the development of regulatory plans that are not currently in place.

Appendix F Capability Assessment provides an overview of Planning Team members’ existing planning and regulatory capabilities. These existing capabilities provide the mechanisms to implement the mitigation strategy objectives. For example, the adoption of building codes and implementation of land use regulations have been demonstrated to help communities avoid losses from natural hazard events. Currently, the majority of participating jurisdictions have building codes, zoning ordinances, and land use restrictions in place. Please refer to Appendix F for a complete inventory of each participating jurisdiction’s capabilities.

It should be noted for the purposes of the Plan Update that the HMAP has been used as a reference when reviewing and updating all plans and ordinances for the entire planning area, including all participating jurisdictions. The Emergency Management Action Plans developed for several of the participating jurisdictions are updated every 5 years and incorporate goals, objectives and actions identified in the mitigation plan.

### PLAN REVIEW AND PLAN UPDATE

As with the development of Plan Update, participating jurisdictions within Saratoga County will oversee the review and update process for relevance and if necessary, make adjustments. At the beginning of each fiscal year, Planning Team Members will meet to evaluate the Plan and review other planning mechanisms to ensure consistency with long-range planning efforts. In addition, planning participants will also meet once a year, by conference call or presentation, to re-evaluate prioritization of the hazard mitigation actions.

# SECTION 2: PLANNING PROCESS

## TIMELINE FOR IMPLEMENTING MITIGATION ACTIONS

Both the Executive Planning Team (Table 2-1) and the Advisory Planning Team (Table 2-2) will engage in discussions regarding a timeframe for how and when to implement each hazard mitigation action. Considerations include when the action will be started, how existing planning mechanisms' timelines affect implementation, and when the action should be fully implemented. Timeframes may be general, and there will be short, medium, and long-term goals for implementation based on prioritization of each action, as identified on Hazard Mitigation Action tables included in the Plan Update for participating jurisdictions within Saratoga County.

Both the Executive and Advisory Planning Team will evaluate and prioritize the most suitable hazard mitigation actions for the community to implement. The timeline for implementation of actions will partially be directed by participating jurisdictions' comprehensive planning process, budgetary constraints, and community needs. Participating jurisdictions within Saratoga County are committed to addressing and implementing hazard mitigation actions that may be aligned with and integrated into the Plan Update.

Overall, the Planning Team is in agreement that goals and actions of the Plan Update shall be aligned with the timeframe for implementation of hazard mitigation actions with respect to annual review and updates of existing plans and policies.

## PUBLIC AND STAKEHOLDER INVOLVEMENT

An important component of hazard mitigation planning is public participation and stakeholder involvement. Input from individual citizens and the community as a whole provides the Planning Team with a greater understanding of local concerns and increases the likelihood of successfully implementing hazard mitigation actions. If citizens and stakeholders, such as local businesses, non-profits, hospitals, and schools are involved, they are more likely to gain a greater appreciation of the risks that hazards may present in their community and take steps to reduce or mitigate their impact.

The public was involved in the development of the Saratoga County Hazard Mitigation Action Plan Update 2025 at different stages prior to official Plan approval and adoption. Public input was sought using three methods: (1) open public meetings; (2) survey instruments; and (3) making the draft Plan Update available for public review on participating jurisdictions' websites.

The draft Plan Update was made available to the general public for review and comment on Saratoga County's website for 30 days. The public was notified at the public meetings that the draft Plan Update would be available for review. To ensure opportunities are given to all citizens, including those without internet access, a paper copy of the draft plan annexes was also available at municipal offices and public library locations around the County for 30 days with a comment form that included an email and phone number for the public to provide feedback. Some libraries had more than one annex available for review. A paper copy of the entire draft plan was also available at the Saratoga County Sheriff's Office of Emergency Management. No feedback was received on the draft Plan Update, although it was given on the public survey, and all relevant information was incorporated into the Plan Update. Public input was utilized to assist in identifying hazards that were of most concern to the citizens of the County and what actions they felt should be included and prioritized.

## SECTION 2: PLANNING PROCESS

The Plan Update will be advertised and posted on Saratoga County and participating jurisdictions' websites upon approval from FEMA, and a copy will be kept at the Saratoga County Sheriff's Office of Emergency Management.

### UNDERSERVED COMMUNITIES / VULNERABLE POPULATIONS

A goal of the Planning Team was building equity into the planning process. Including organizations that aid underserved communities and socially vulnerable populations to participate in the plan helps ensure equitable access to the planning process and the meaningful participation of all residents. In addition, these groups can make sure that the interests of vulnerable populations are accurately represented and act as a valuable resource to share information with those vulnerable populations.

The Planning Team worked to identify local agencies, organizations and community leaders that focus on reaching vulnerable populations and underserved communities. These organizations were included in the planning process as stakeholders and were invited to participate in the planning process via email. These agencies were encouraged to post public planning meetings as well as solicit feedback via the public survey.

All stakeholders and planning team members were invited to participate in the development of the Plan during this process, including all public meetings, and surveys. All stakeholders are listed in Table 2-5 below. Some stakeholders have been detailed below along with the agency's mission, including:

- Captain Community Human Services – Volunteer-driven organization that assists community members of all ages in finding solutions to a variety of social issues such as: protecting and nurturing children and youth, strengthening families, connecting seniors, resolving crises, feeding the hungry, sheltering the homeless, supporting the emotionally challenged, and empowering all of our community members to build a brighter future for themselves and their neighbors.
- Life Works – Nonprofit established in 1965 that works to alleviate poverty at the local level in Saratoga County and the Northern Capital Region. Their mission is to provide access to programs that fulfill immediate needs, while delivering the skills, tools and opportunities required to establish economic security for themselves, their families, and communities.
- RISE Housing and Support Services – Human service agency that has been serving people in Saratoga and the surrounding counties since 1978. RISE programs provide safe, healthy housing and support services to people with mental health concerns, substance use, and other life challenges.

In addition, public notices were posted on public bulletin boards throughout the planning area as well as posted on the participating jurisdictions' websites and social media platforms. For a sample of these postings, please see Appendix E. In addition to public meetings, the Planning and Consultant Teams developed a public survey designed to solicit public input during the planning process from citizens and stakeholders and to obtain input and feedback on the mitigation plan. For each form of engagement, all efforts were made to reach Saratoga County's underserved communities and vulnerable populations throughout the planning process. Additional survey information is provided at the end of this section.

## SECTION 2: PLANNING PROCESS

### STAKEHOLDER INVOLVEMENT

Stakeholder involvement is essential to hazard mitigation planning since a wide range of stakeholders can provide input on specific topics and from various points of view. Throughout the planning process, members of community groups, local businesses, and neighboring jurisdictions were invited to participate in development of the Plan Update. The Stakeholder Group (Table 2-5) included a broad range of representatives from both the public and private sector and served as a key component in Saratoga County’s outreach efforts for development of the Plan Update. Documentation of stakeholder meetings is found in Appendix E. A list of organizations invited to attend via email is found in Table 2-5. Those that participated in the public meetings are identified with a plus symbol (+) next to their stakeholder type.

**Table 2-5. Stakeholder Working Group**

AGENCY	TITLE	STAKEHOLDER TYPE
Albany County	Emergency Management Coordinator	Neighboring Community
Albany Medical – Saratoga	General Representative	Healthcare Agency
American Red Cross	Disaster Program Manager	Nonprofit / Community-Based Organization
American Red Cross	Regional Director	Nonprofit / Community-Based Organization
Arvin Hart Fire	Fire Chief	Community-Based Organization
Ballston Community Public Library	Director	Community-Based Organization
Ballston Lake Fire Department	Fire Chief	Community-Based Organization
Ballston Spa Central School District	Superintendent	Academia
Ballston Spa Fire Department	Fire Chief	Community-Based Organization
Ballston Spa Public Library	Director	Community-Based Organization
Burnt Hills – Ballston Lake Central School District	Superintendent	Academia
Burnt Hills Fire Department	Fire Chief	Community-Based Organization
Captain Community Human Services	Executive Director	Community-Based Organization
Capital Region Transportation Council	Director of Regional Planning	Regional Agency
Catholic Charities	Chief Executive Officer	Nonprofit / Community-Based Organization
Charlton Fire Department	Fire Chief	Community-Based Organization
Clifton Park – Halfmoon Fire Department	Fire Chief	Community-Based Organization
Corinth Central School District	Superintendent	Academia



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AGENCY	TITLE	STAKEHOLDER TYPE
Corinth Fire Department	Fire Chief	Community-Based Organization
Corinth Free Library	Director	Community-Based Organization
Corinth, Town of	HOA President	Community-Based Organization +
Corinth, Town of	HOA Treasurer	Community-Based Organization +
Cornell Cooperative Extension	Executive Director	Community-Based Organization
Daily Gazette	Director of Content	Community-Based Organization
Edinburg Common School	Superintendent	Academia
Edinburg Fire Department	Fire Chief	Community-Based Organization
Ellis Medicine	General Representative	Healthcare Agency
Federal Emergency Management Association (FEMA)	Mitigation Planner	Federal Agency +
Four Winds Psychiatric Hospital	Administrative Assistance	Healthcare Agency
Fulton County	Director of Emergency Management	Neighboring Community
Galway Central School District	Superintendent	Academia
Galway Fire Department	Fire Chief	Community-Based Organization +
Galway Public Library	Director	Community-Based Organization
Gansevoort Fire District	Fire Chief	Community-Based Organization
Greenfield Fire District	Fire Chief	Community-Based Organization
Habitat for Humanity	President	Nonprofit / Community-Based Organization
Hadley Luzerne Central School District	Superintendent	Academia
Halfmoon-Waterford Fire Department	Fire Chief	Community-Based Organization
Harmony Corners Fire Department	Fire Chief	Community-Based Organization
Hillcrest Fire	Fire Chief	Community-Based Organization
H.O.P.E Home of Orphaned Pets	President	Community-Based Organization
Jonesville Fire Department	Fire Chief	Community-Based Organization
Life Works	Executive Director	Community-Based Organization

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AGENCY	TITLE	STAKEHOLDER TYPE
Malta Ridge Fire	Fire Chief	Community-Based Organization +
Malta, Town of	CERT Lead	Community-Based Organization +
Mechanicville Area Community Services Center	President	Community-Based Organization
Mechanicville Central School District	Superintendent	Academia
Mechanicville District Public Library	Director	Community-Based Organization
Mechanicville Fire	Fire Chief	Community-Based Organization
Milton (Rock City Falls) Fire	Fire Chief	Community-Based Organization
Montgomery County	Director of Emergency Management	Neighboring Community
National Grid	Customer and Community Account Manager	Utility Provider
New York State (NYS) Department of Environmental Conservation	Director of Division of Forest Protection	State Agency
New York State (NYS) Department of Environmental Conservation	Director of the Division of Lands & Forests	State Agency
New York State (NYS) Department of Environmental Conservation	Director of the Division of Operations	State Agency
New York State (NYS) Department of Environmental Conservation	Director of the Office of Climate Change	State Agency
New York State (NYS) Department of Environmental Conservation	Director of Office of Indian Nation Affairs	State Agency
New York State (NYS) Department of Environmental Conservation, Region 5	Environmental Conversation Officer	State Agency
New York State (NYS) Department of Health	Capital District Representative	State Agency
New York State (NYS) Department of Homeland Security and Emergency Services (DHSES), Region III	Disaster Preparedness	State Agency
New York State (NYS) Department of Homeland Security and Emergency Services (DHSES)	Hazard Mitigation Planner (contractor)	State Agency +
New York State (NYS) Department of Homeland Security and Emergency Services (DHSES)	Mitigation Planning Supervisor	State Agency
New York State (NYS) Department of Homeland Security and Emergency Services (DHSES)	Planning Manager	State Agency +

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AGENCY	TITLE	STAKEHOLDER TYPE
New York State (NYS) Department of Homeland Security and Emergency Services (DHSES)	Planning Manager, Disaster Recovery	State Agency
New York State (NYS) Department of Homeland Security and Emergency Services (DHSES)	Planning Manager, Hazard Mitigation	State Agency
New York State (NYS) Department of Homeland Security and Emergency Services (DHSES), Region III	Regional Director	State Agency
New York State (NYS) Department of Housing and Community Renewal	Press Office Representative	State Agency
New York State (NYS) Department of Transportation, Region 1	Regional Director	State Agency
New York State (NYS) Department of Transportation, Region 1	Resident Engineer Saratoga County	State Agency
New York State (NYS) Electric and Gas (NYSEG)	Government & Community Relations Program Manager	Utility Provider
New York State (NYS) Environmental Facilities Corporation	Press Office Representative	State Agency
New York State Legislature	Executive Chamber, Governor	State Agency
New York State Legislature	Senator of the 44th District	State Agency
New York State (NYS) Office of Parks, Recreation and Historic Preservation	Grant Administrator – Capital District	State Agency
New York State (NYS) Office of Resilient Homes and Communities – Governor’s Office of Storm Recovery	ADA Coordinator	State Agency
New York State (NYS) Office of Resilient Homes and Communities – Governor’s Office of Storm Recovery	Press Office Representative	State Agency
New York State (NYS) Office for Small Cities – Empire State Development	Regional Director – Capital District	State Agency
New York State (NYS) Rural Housing Coalition	General Representative	State Agency
NOAA	Weather Coordination Meteorologist - Albany	Federal Agency
North Rivers Family Service	Chief Executive Officer	Community-Based Organization
Northside (Peck Hose) Fire	Fire Chief	Community-Based Organization
NWS	Senior Service Hydrologist	Federal Agency

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AGENCY	TITLE	STAKEHOLDER TYPE
Providence Fire	Fire Chief	Community-Based Organization
Quaker Springs Fire	Fire Chief	Community-Based Organization
Rebuilding Together Saratoga	Executive Director	Community-Based Organization
Regional Foodbank of Northeast NY	Chief Operations Officer	Community-Based Organization
Rexford Fire	Fire Chief	Community-Based Organization
RISE Housing and Support Services	Executive Director	Community-Based Organization
Round Lake Fire	Fire Chief	Community-Based Organization
Round Lake Library	Librarian	Community-Based Organization
Salvation Army of Saratoga Springs	Lieutenant	Nonprofit / Community-Based Organization
Salvation Army of Saratoga Springs	Office Representative	Nonprofit / Community-Based Organization
Saratoga Chambers of Commerce	Vice President of Communications	Community-Based Organization
Saratoga Chambers of Commerce	Vice President of Office Operations	Community-Based Organization
Saratoga County Water Authority	General Representative	Utility Provider
Saratoga Housing Authority	Executive Director	Community-Based Organization
Saratoga PLAN (Preserving Land and Nature)	Executive Director	Community-Based Organization
Saratoga Springs City School District	Superintendent	Academia
Saratoga Springs Fire	Fire Chief	Community-Based Organization
Saratoga Springs Preservation Foundation	Executive Director	Community-Based Organization
Schenectady County	Director of Emergency Management	Neighboring Community
Schuylerville Central School District	Superintendent	Academia
Schuylerville Fire	Fire Chief	Community-Based Organization
Schuylerville Public Library	Librarian	Community-Based Organization
Shenendehowa Central School District	Superintendent	Academia
Skidmore College	Safety and Security Officer	Academia

## SECTION 2: PLANNING PROCESS

AGENCY	TITLE	STAKEHOLDER TYPE
South Glens Falls Fire	Fire Chief	Community-Based Organization
Stillwater Central School District	Superintendent	Academia
Stillwater Fire	Fire Chief	Community-Based Organization
Stillwater Public Library	Director	Community-Based Organization
S.U.N.Y Empire State University	Media Representative	Academia
U.S. Army Corps of Engineers	North Atlantic Regional Representative	Federal Agency
U.S. Fish & Wildlife, Region 5	Regional Director	Federal Agency
Victory Mills Fire	Fire Chief	Community-Based Organization
Vischer's Ferry Fire Department	Fire Chief	Community-Based Organization
Warren County	Director of Emergency Management	Neighboring Community
Washington County	Director of Public Safety	Neighboring Community
Waterford Fire	Fire Chief	Community-Based Organization
Waterford – Halfmoon Union Free School District	Superintendent	Academia
Waterford Public Library	Librarian	Community-Based Organization
West Charlton Fire	Fire Chief	Community-Based Organization
West Crescent Fire Department	Fire Chief	Community-Based Organization
Wilton Fire	Fire Chief	Community-Based Organization

Stakeholders and participants from neighboring communities that attended the Planning Team and public meetings played a key role in the planning process. For example, stakeholders were concerned with the impacts of flooding, therefore Saratoga County included an action to implement a stream and drainage maintenance system to reduce flooding in hazard areas.

### PUBLIC MEETINGS

A series of public meetings were held throughout the planning area to collect public and stakeholder input. Topics of discussion included the purpose of hazard mitigation, discussion of the planning process, and types of natural hazards. Each participating jurisdiction within Saratoga County released information regarding the public meetings in their area to increase public participation in the Plan Update development process, through posting on their website, on social media sources including Facebook and Instagram, and/or posting the information on bulletin boards in public facilities. A sampling of these notices can be found in Appendix E, along with the documentation on the public meetings. Representatives from area neighborhood associations and area residents were invited to participate. Public meetings were held at Saratoga County

## SECTION 2: PLANNING PROCESS

Public Health Services in the Village of Ballston Spa on the following dates, with an additional virtual public meeting being held on July 16, 2024:

- January 22, 2024
- April 4, 2024
- July 16, 2024

### *PUBLIC PARTICIPATION SURVEY*

In addition to public meetings, the Planning and Consultant Teams developed a public survey designed to solicit public input during the planning process from citizens and stakeholders to obtain data regarding the identification of any potential hazard mitigation actions or problem areas. The survey was promoted by local officials and a link to the survey was posted on participating jurisdictions' websites. A total of 69 surveys were completed online. The survey results are analyzed in Appendix B. Participating jurisdictions within Saratoga County reviewed the input from the surveys and decided which information to incorporate into the Plan as hazard mitigation actions. For example, results indicate that severe storms and extreme temperatures are the hazards of highest concern for the public. Improving the reliability of utilities and constructing infrastructure to reduce hazard impact were the two main actions indicated that the local government should take to mitigate risk to these hazards. As a result, the Planning Team has included mitigation actions to include installing generators at identified critical facilities to ensure continuity of critical services and utilities, and retrofitting structures located in hazard-prone areas.



**SARATOGA**  
**COUNTY** NEW YORK



SECTION 3  
**COUNTY PROFILE**

## SECTION 3: COUNTY PROFILE

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### OVERVIEW

Saratoga County was formed on February 7, 1791, from a portion of Albany County. Saratoga County is the fastest-growing county in upstate New York, seeing a population increase throughout the past decade. The county seat, the Village of Ballston Spa, was established in 1816.

Within the county’s borders are the Adirondack Mountains, the Kayaderosseras Creek, Sacandaga River, along with numerous lakes and streams, and rolling farmland. The Hudson River forms the eastern and northern boundary of the county, and the Mohawk River, the southernmost boundary. Originally, Saratoga County had four towns: Ballston, Stillwater, Halfmoon and Saratoga. Today there are nineteen towns and two cities.

The Woodland Period is the period before the Europeans came to North America. During this period, the area was inhabited for 10,000 years before the first colonial settlers came to the area. The initial inhabitants of the area were the Mohican people, followed by the Mohawk, Abenaki, and Iroquois people. They used the area for creating villages, growing crops, and for hunting and fishing. They also enjoyed the naturally carbonated mineral water from the many springs in the area. The County received its name from the Iroquois word “sarach-togue” which means “hillside of a great river” in reference to the Hudson and Mohawk Rivers<sup>1</sup>.

During the 1600’s the area was populated by trappers and fur-traders using the Hudson and Mohave Rivers to traverse the area. The Dutch people settled in upstate New York in 1624, however the area became a British Colony in 1664 through 1781. During this period, 1775-1783, the American Revolution occurred which led to the creation of the United States. In 1777, during the American Revolution, General Gates defeated British forces, under General Burgoyne, at the Battles of Saratoga. Saratoga County was also a gateway for the westward migration of many settlers, as the Mohawk River provided a natural passageway through the Appalachian Mountains. Both the historic Champlain Canal, located on the Hudson River, and the Erie Canal, located on the Mohawk River, operated in this county.

The area has always been rich with natural resources, making it highly desirable for traders and industries. Logging and fur trading were the original industries but as the industrial revolution spread through the growing nation, it also impacted Saratoga County. With the location 30 miles

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<sup>1</sup> Source: <https://www.saratogacountyny.gov/departments/county-clerk/historian/county-history>



## SECTION 3: COUNTY PROFILE

of Albany and being on the Delaware and Hudson Railway, the area was ideal with transportation and resource access. The waterways in the area drew in paper mills, tanneries, foundries, and textile mills to the area. Harvesting ice was also a popular industry prior to freezers. The ice was reported as being ten inches thick on the rivers during the winter. It would be harvested during the winter then stored year-round in warehouses packed and insulated with sawdust. The carbonated mineral springs water also became an export as it was bottled and sold. In addition to being exported to the surrounding areas, the water drew many tourists to the County.<sup>2</sup>

The introduction of the railway to the area in the 1830s brought in tourists and expanded trade into Canada. The Mohawk and Hudson Railroad was completed in 1831. It was built for trading; however, it was the first railroad in New York and the second one built in the United States. By 1878 there were four railroads operating in the county. The Saratoga and Schenectady Railroad was completed in 1832. The railroad offered access to tourists to the mineral springs. By the late 1800s there were five railroads in the area. Trolleys, electric railroads, were established to connect the suburbs between 1889-1892.

Throughout the history of the County there has been a growth in the population. The first census was conducted in 1790 with 17,000 people reported, by 1800 it had grown to 24,483 people. Saratoga County is currently the fastest growing county in upstate New York.<sup>3</sup>

Figure 3-1 shows the general location of Saratoga County along with the cities, towns, and villages that are located within the county.

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<sup>2</sup> Source: [https://ssmp.skidmore.edu/exhibits/show/saratoga\\_county/industry](https://ssmp.skidmore.edu/exhibits/show/saratoga_county/industry)

<sup>3</sup> Source: <https://www.saratogacountyny.gov/community/>

## SECTION 3: COUNTY PROFILE

**Figure 3-1. Location of Saratoga County**

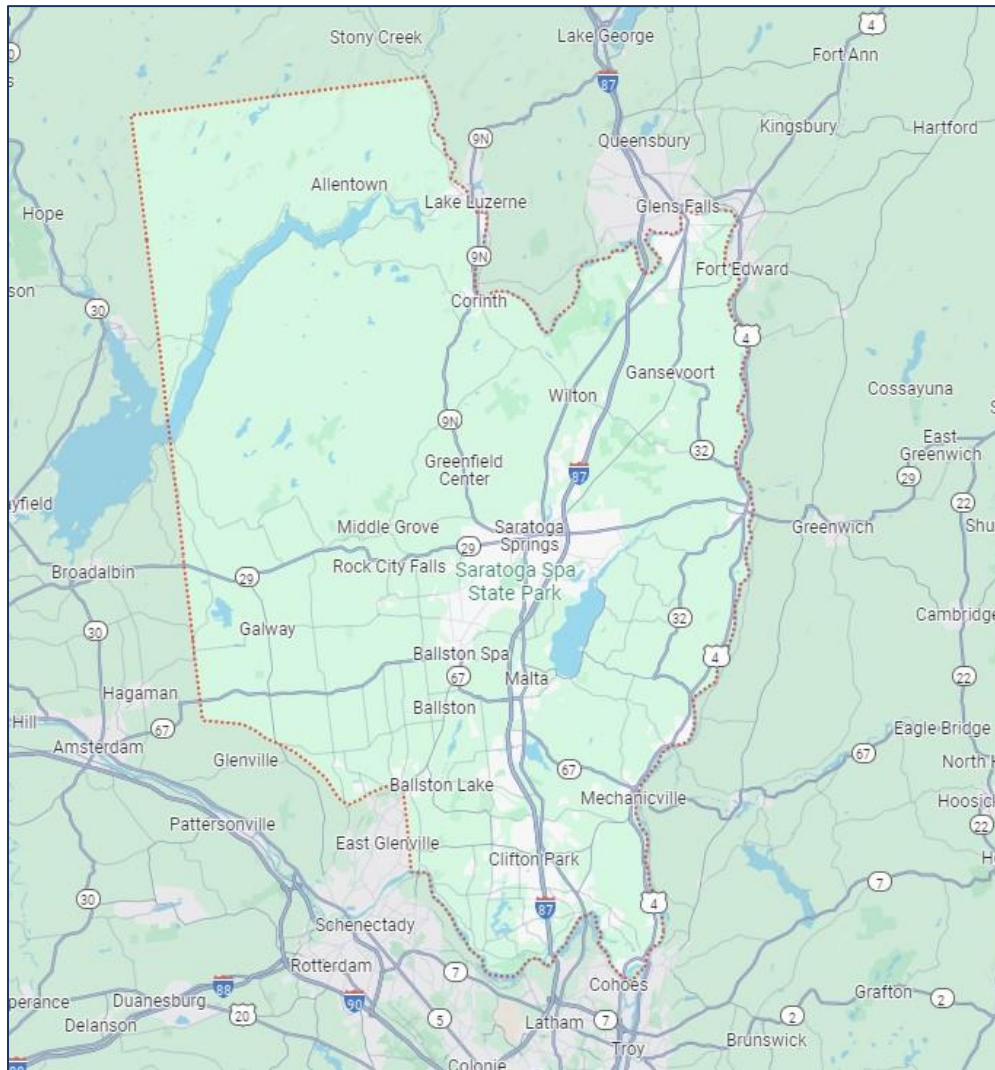
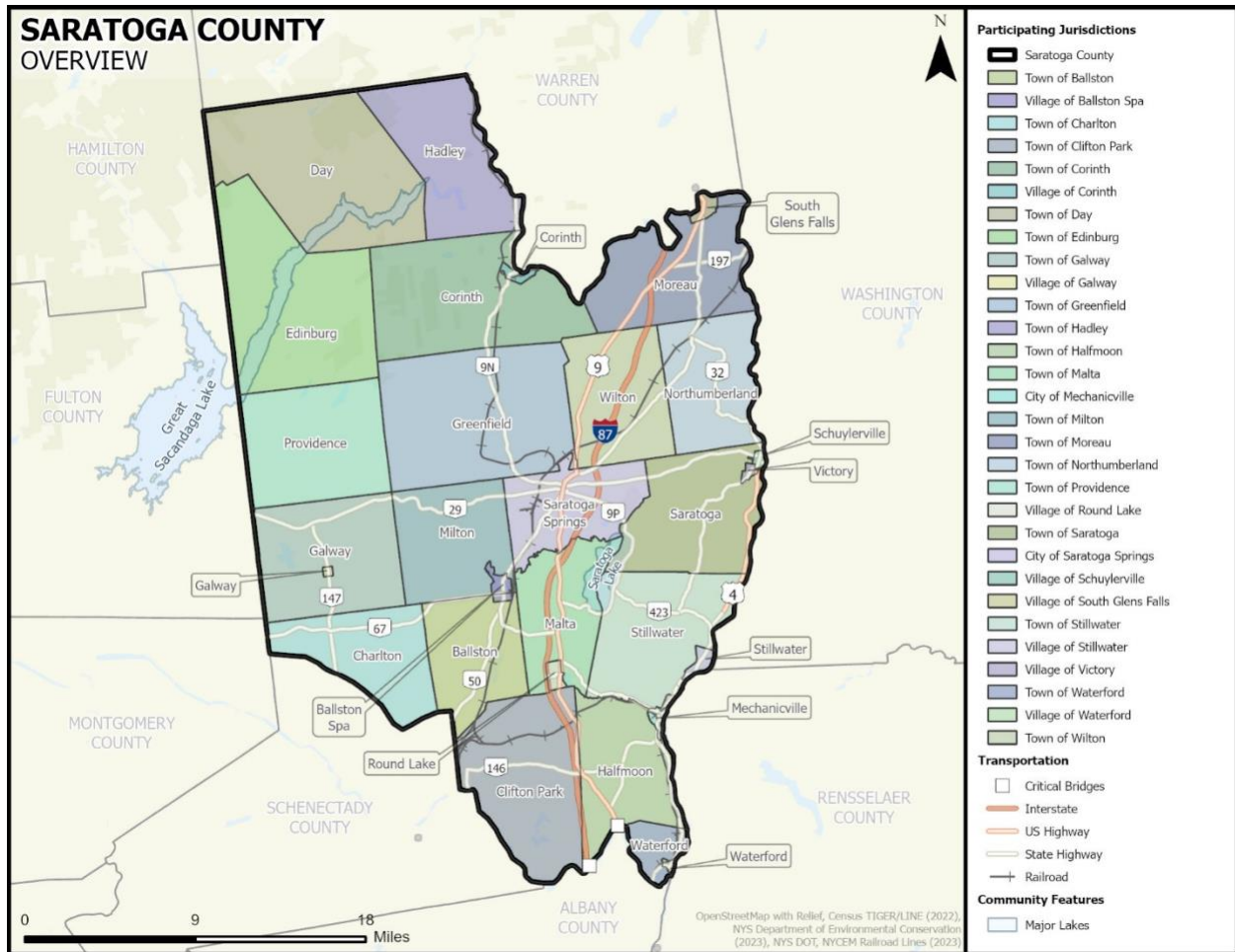


Figure 3-2 shows the participating jurisdictions within Saratoga County that are covered in this Plan Update.

# SECTION 3: COUNTY PROFILE

**Figure 3-2. Saratoga County Planning Area<sup>4</sup>**



Provided in Table 3-1 below is a listing of the jurisdictions in Saratoga County that participated in the Saratoga County Hazard Mitigation Action Plan Update 2024.

**Table 3-1. Participating Jurisdictions**

PARTICIPATING JURISDICTIONS	
Saratoga County	
Town of Ballston	Village of Ballston Spa
Town of Charlton	Town of Clifton Park
Town of Corinth	Village of Corinth
Town of Day	Town of Edinburg
Town of Galway	Village of Galway
Town of Greenfield	Town of Hadley

<sup>4</sup> Map sources: ESRI OpenStreetMap (Custom: no labels), Census TIGER/LINE (2022), Saratoga County Information Technology Department (2023)

## SECTION 3: COUNTY PROFILE

PARTICIPATING JURISDICTIONS	
Town of Halfmoon	Town of Malta
City of Mechanicville	Town of Milton
Town of Moreau	Town of Northumberland
Town of Providence	Village of Round Lake
Town of Saratoga	City of Saratoga Springs
Village of Schuylerville	Village of South Glens Falls
Town of Stillwater	Village of Stillwater
Village of Victory	Town of Waterford
Village of Waterford	Town of Wilton

### POPULATION AND DEMOGRAPHICS

According to the 2020 Census population count, Saratoga County has an official population of 235,509 residents, a 7 percent increase since the 2010 census. Table 3-2 summarizes select characteristics of vulnerable or sensitive populations in the Saratoga County and the participating jurisdictions using data from the U.S. Census Bureau 2022 American Community Survey (ACS) five-year estimates. Note that in some cases the 2022 ACS estimates may differ from the 2020 Census counts; the ACS estimates are used throughout this section for consistency.<sup>5</sup>

Between official U.S. Census population counts, the estimate uses a formula based on new residential building permits and household size. It is simply an estimate and there are many variables involved in achieving an accurate estimation of people living in a given area at a given time.

**Table 3-2. Population Distribution by Jurisdiction**

JURISDICTION	TOTAL 2010 POPULATION	TOTAL 2020 POPULATION (Census)	TOTAL 2022 POPULATION (ACS Estimates)	PERCENT CHANGE 2010-2022
Saratoga County <sup>6</sup>	219,607	235,509	236,328	7%
Town of Ballston	9,776	11,831	11,961	21%
Village of Ballston Spa	5,409	5,111	5,288	-2%
Town of Charlton	4,133	4,328	4,341	5%
Town of Clifton Park	36,705	38,029	38,076	4%
Town of Corinth	6,531	6,500	6,545	0.2%
Village of Corinth	2,559	2,562	2,569	0.3%
Town of Day	856	819	802	-6%

<sup>5</sup> Source: <https://www.census.gov/en.html> and <https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/2021/>

<sup>6</sup> County totals include the entire population within the county lines.

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JURISDICTION	TOTAL 2010 POPULATION	TOTAL 2020 POPULATION (Census)	TOTAL 2022 POPULATION (ACS Estimates)	PERCENT CHANGE 2010-2022
Town of Edinburg	1,214	1,333	1,273	10%
Town of Galway	3,545	3,525	3,539	-1%
Village of Galway	200	165	174	-18%
Town of Greenfield	7,775	8,004	8,031	3%
Town of Hadley	2,048	1,976	2,095	-4%
Town of Halfmoon	21,535	25,662	25,755	19%
Town of Malta	14,765	17,130	17,158	16%
City of Mechanicville	5,196	5,163	5,177	-0.3%
Town of Milton	18,575	18,800	18,819	1%
Town of Moreau	14,728	16,202	16,370	10%
Town of Northumberland	5,087	5,242	5,245	3%
Town of Providence	1,995	2,075	2,059	4%
Village of Round Lake	623	828	822	33%
Town of Saratoga	5,674	5,808	5,839	3%
City of Saratoga Springs	26,586	28,491	28,505	7%
Village of Schuylerville	1,386	1,370	1,640	18%
Village of South Glens Falls	3,518	3,744	3,739	6%
Town of Stillwater	8,287	9,022	9,113	10%
Village of Stillwater	1,738	1,754	1,756	1%
Village of Victory	605	666	694	15%
Town of Waterford	8,423	8,208	8,234	-3%
Village of Waterford	1,990	2,038	2,113	6%
Town of Wilton	16,173	17,361	17,391	7%

Table 3-3 summarizes select characteristics of vulnerable or sensitive populations in Saratoga County and the participating jurisdictions using data from the U.S. Census Bureau 2022 American Community Survey (ACS) five-year estimates.

Between official U.S. Census population counts, the estimate uses a formula based on new residential building permits and household size. It is simply an estimate, and many variables are involved in achieving an accurate estimation of the number of people living in a given area at a given time.

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**Table 3-3. Populations at Greater Risk by Jurisdiction**

JURISDICTION	POPULATION				
	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Saratoga County <sup>7</sup>	44,772	11,049	26,426	15,598	4,430
Town of Ballston	1,957	521	964	538	84
Village of Ballston Spa	670	158	357	338	262
Town of Charlton	1,137	245	470	191	26
Town of Clifton Park	6,988	2,095	3,220	762	953
Town of Corinth	1,369	443	910	641	107
Village of Corinth	476	181	424	373	58
Town of Day	281	0	179	123	2
Town of Edinburg	406	47	220	200	0
Town of Galway	859	234	497	319	0
Village of Galway	44	21	26	29	0
Town of Greenfield	1,704	429	1,202	867	15
Town of Hadley	492	114	303	197	7
Town of Halfmoon	4,509	1251	2,833	979	987
Town of Malta	3,666	579	2,035	1,287	305
City of Mechanicville	964	317	906	1,072	37
Town of Milton	3,010	460	2,142	941	298
Town of Moreau	3,017	902	2,392	1,752	312
Town of Northumberland	822	259	541	330	126
Town of Providence	262	77	223	259	5
Village of Round Lake	152	53	68	25	12
Town of Saratoga	928	277	651	321	36
City of Saratoga Springs	5,997	1,018	3,323	2,879	880
Village of Schuylerville	209	106	199	151	12
Village of South Glens Falls	687	204	506	387	23
Town of Stillwater	1,645	621	654	893	48

<sup>7</sup> County totals include the entire population within the county lines.

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JURISDICTION	POPULATION				
	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Village of Stillwater	211	56	164	225	0
Village of Victory	115	57	112	108	7
Town of Waterford	1,685	254	992	478	68
Village of Waterford	570	107	310	199	0
Town of Wilton	3,074	906	1,769	539	134

## HOMELESS POPULATION

Homelessness is often viewed as an urban problem, but rural communities also experience challenges that cause people to become homeless. The ever-widening gap between increasing housing costs and stagnant wages, the low availability of affordable housing, disabilities, poor mental or physical health, substance use disorder, trauma, attempts to escape from domestic violence, financial or life crises, and systemic inequalities that perpetuate discrimination and poverty all play a role in creating homelessness.<sup>8</sup>

Homelessness has increased over the past decade in many counties in the Saratoga, North Country (SNC), according to a report released by CARES of NY, INC., an organization dedicated to ending homelessness. The FY2022 annual report shows the average length of time homeless (days) for all households was 82 days<sup>9</sup>. Increases are attributed to a number of issues including high housing costs, mental health issues, substance abuse, and long-standing inequalities that lead to poverty. In Saratoga County nearly 33 percent of families are experiencing hardships, and at risk for homelessness.<sup>10</sup>

New York State has adopted a “Code Blue” policy to provide shelter for homeless populations during periods of cold temperatures. Saratoga County also adheres to this policy. A Code Blue Weather Emergency notice is issued when the temperature drops to 32 degrees Fahrenheit or less between 4 p.m. and 8 a.m., including National Weather Service calculations for wind chill values. On these nights, typical policies are relaxed to ensure everyone is warm and safe. No one who is homeless and seeking shelter during a Code Blue will be denied. The most recent data was from CARES of NY for dates 10/1/2023 through 8/31/2024 on the number of homeless populations served. The information stated that an estimated 300 people were served under the Code Blue policy during this timeframe. The county accepts all homeless populations seeking shelter during a code blue alert until the temperature is sustained above freezing.

## POPULATION GROWTH

The official 2020 Saratoga County population is 235,509. Overall, Saratoga County experienced an increase in population between 1990 and 2020 of 30 percent, or an increase by 54,233

<sup>8</sup> National Alliance to End Homelessness, *What Causes Homelessness?*, 2022

<sup>9</sup> Source: <https://caresny.org/cchmis/reports/ny-523/>

<sup>10</sup> Source: <https://sheltersofsaratoga.org/about-homelessness-2/>

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residents. Between 2010 and 2020, the Village of Round Lake experienced the greatest rate of growth (33%) among all jurisdictions, and the Village of Waterford saw the largest percentage of population decline (-76%). Generally, Saratoga County experienced a total growth rate of 7 percent between 2010 and 2020. Table 3-4 provides historic growth rates in Saratoga County.

**Table 3-4. Population Growth by Jurisdictions 1990-2020<sup>11</sup>**

JURISDICTIONS	1990	2000	2010	2020	POP CHANGE 1990-2020	PERCENT OF CHANGE	POP CHANGE 2010-2020	PERCENT OF CHANGE
Saratoga County <sup>12</sup>	181,276	200,635	219,607	235,509	54,233	30%	15,902	7%
Town of Ballston	8,078	8,729	9,776	11,831	3,753	46%	2,055	21%
Village of Ballston Spa	4,937	5,556	5,409	5,111	174	4%	-298	-6%
Town of Charlton	3,984	3,954	4,133	4,328	344	9%	195	5%
Town of Clifton Park	30,117	32,995	36,705	38,029	7,912	26%	1,324	4%
Town of Corinth	5,935	5,985	6,531	6,500	565	10%	-31	0%
Village of Corinth	2,760	2,474	2,559	2,562	-198	-7%	3	0%
Town of Day	746	920	856	819	73	10%	-37	-4%
Town of Edinburg	1,041	1,384	1,214	1,333	292	28%	119	10%
Town of Galway	3,266	3,589	3,545	3,525	259	8%	-20	-1%
Village of Galway	151	214	200	165	14	9%	-35	-18%
Town of Greenfield	6,338	7,362	7,775	8,004	1,666	26%	229	3%
Town of Hadley	1,628	1,971	2,048	1,976	348	21%	-72	-4%
Town of Halfmoon	13,879	18,474	21,535	25,662	11,783	85%	4,127	19%
Town of Malta	11,709	13,005	14,765	17,130	5,421	46%	2,365	16%
City of Mechanicville	5,249	5,019	5,196	5,163	-86	-2%	-33	-1%
Town of Milton	14,658	17,103	18,575	18,800	4,142	28%	225	1%
Town of Moreau	13,002	13,826	14,728	16,202	3,180	24%	1,474	10%
Town of Northumberland	3,645	4,603	5,087	5,242	1,597	44%	155	3%
Town of Providence	1,360	1,841	1,995	2,075	715	53%	80	4%
Village of Round Lake	765	604	623	828	63	8%	205	33%
Town of Saratoga	5,069	5,141	5,674	5,808	739	15%	134	2%
City of Saratoga Springs	25,001	26,186	26,586	28,491	3,490	14%	1,905	7%
Village of Schuylerville	1,364	1,197	1,386	1,370	6	0%	-16	-1%
Village of South Glens Falls	3,506	3,368	3,518	3,744	238	7%	226	6%

<sup>11</sup> U.S. Census Bureau

<sup>12</sup> County totals include the entire population within the county lines.



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JURISDICTIONS	1990	2000	2010	2020	POP CHANGE 1990-2020	PERCENT OF CHANGE	POP CHANGE 2010-2020	PERCENT OF CHANGE
Town of Stillwater	7,233	7,522	8,287	9,022	1,789	25%	735	9%
Village of Stillwater	1,531	1,644	1,738	1,754	223	15%	16	1%
Village of Victory	581	544	605	666	85	15%	61	10%
Town of Waterford	8,695	8,515	8,423	8,208	-487	-6%	-215	-3%
Village of Waterford	2,370	2,204	1,990	2,038	-332	-14%	48	1%
Town of Wilton	10,623	12,511	16,173	17,361	6,738	63%	1,188	7%

## ECONOMIC IMPACT

Building and maintaining infrastructure depends on the economy, and therefore, protecting infrastructure from risk due to natural hazards in the planning area is important to the participating jurisdictions within Saratoga County. Whether it's expanding culverts under a road that washes out during flash flooding, shuttering a fire station, or flood-proofing a wastewater facility, infrastructure must be mitigated from natural hazards in order to continue providing essential utility and emergency response services in a fast-growing planning area.

Based on the American Community Survey 2022 five-year estimates, 62.5 percent of the population 16 years and over is employed in the labor force. The per capita income is \$51,931 and the median household income countywide is \$121,420. It is estimated that 14 percent of households have incomes below \$50,000. Families with incomes below the poverty level in 2022 made up 7.2 percent of all families. Of families that have children under 18 years old, 9 percent are below the poverty level.

Table 3-5 and Table 3-6 show the various occupations and industries within Saratoga County, according to the 2022 estimates by the American Community Survey.

**Table 3-5. Occupations of Employed Population in Saratoga County<sup>13</sup>**

OCCUPATION	ESTIMATE	PERCENT
Civilian employed population 16 years and over	124,500	
Management, business, science, and arts occupations	65,321	52.5%
Sales and office occupations	23,575	18.9%
Service occupations	16,459	13.2%
Production, transportation, and material moving occupations	10,651	8.6%
Natural resources, construction, and maintenance occupations	8,494	6.8%

<sup>13</sup> 2022 American Community Survey 5-Year Estimates Data Profiles.

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**Table 3-6. Industries of Employed Population in Saratoga County<sup>14</sup>**

INDUSTRY	ESTIMATE	PERCENT
Civilian employed population 16 years and over	124,500	
Educational services, and health care and social assistance	30,624	24.6%
Professional, scientific, and management, and administrative and waste management services	15,657	12.6%
Manufacturing	13,750	11.0%
Finance and insurance, and real estate and rental and leasing	12,109	9.7%
Retail trade	11,814	9.5%
Arts, entertainment, and recreation, and accommodation and food services	8,972	7.2%
Public administration	7,720	6.2%
Construction	7,479	6.0%
Other services, except public administration	5,035	4.0%
Transportation and warehousing, and utilities	4,544	3.6%
Information	3,508	2.8%
Wholesale trade	2,902	2.3%
Agriculture, forestry, fishing and hunting, and mining	386	0.3%

### NATURAL, CULTURAL, AND HISTORIC RESOURCES

Saratoga County has a total area of 844 square miles, of which 810 square miles are land and 34 square miles are covered by water. The Hudson River forms the eastern border of the County, and the Mohawk River forms the southern border. The area ranges in elevation with the highest elevation being at the peak of Tenant Mountain at 2,759 feet and the lowest at the waterfront in the Village of Waterford where the Hudson and Mohawk Rivers merge.

The Adirondack Park, in which a portion of northwestern Saratoga County lies, protects the Adirondack Mountains. This park was established in 1892 for watershed protection and for recreational use. The 200,000-acre park has 2,800 lakes and ponds and 30,000 miles of rivers and streams. The park has villages and towns in it year-round and hosts 12.4 million visitors. The Adirondack High Peaks are the forty-six mountain peaks that make up the Adirondack Mountains. They are popular for hiking and span across multiple counties.

Saratoga County is known for its mineral springs. The Saratoga Springs Visitor Center has a brochure for self-guided tours so visitors and locals can visit the twenty sites. Each spring has water that flows from the earth charged with carbon dioxide gas, giving each site a unique taste and diverse characteristics.

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<sup>14</sup> 2022 American Community Survey 5-Year Estimates Data Profiles.

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Horse racing was established on a dirt track in the City of Saratoga Springs in 1847. The Saratoga Race Course is the oldest racetrack in America and is open from mid-July to Labor Day.

The County played a pivotal role in the history of America. The Saratoga National Historical Park has preserved the site of the Saratoga Battlefield which offers reenactments, tours, and recreational opportunities. There are more than 3,000 acres of forestland that are open to the public for recreational use. Saratoga County has multiple trails and maps available for hiking, biking, walking and using snowmobiles.

Saratoga County has a rich history that is preserved through its designated historic buildings and sites. Throughout the county, there are 82 buildings, districts, and sites listed on the National Register of Historic Places. The City of Saratoga Springs has the largest share of historic places in the County, with 19 sites listed on the National Register of Historic Places. Historic buildings are vulnerable to natural hazards as their construction pre-dates modern building codes. There are also historic preservation considerations and requirements for historic structures when they are included in mitigation or recovery projects.

To further understand natural resources that may be vulnerable to a hazard event, as well as those that need consideration when implementing mitigation activities, it is important to identify at-risk species (i.e., endangered species) in the planning area. A federally endangered species is any species of fish, plant life, or wildlife that is in danger of extinction throughout all or most of its range. A threatened species is a species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Both endangered and threatened species are protected by federal law and any future hazard mitigation projects are subject to these laws. Candidate species are plants and animals that have been proposed as endangered or threatened but are not currently listed.

According to the U.S. Fish and Wildlife Service, as of October 2024, there are five federally endangered, threatened, or candidate species in Saratoga County. Additionally, there is one species listed as under review (Little Brown Bat). These species are listed in Table 3-7.

**Table 3-7. Endangered Species in Saratoga County<sup>15</sup>**

TYPE of SPECIES	COMMON NAME	SCIENTIFIC NAME	SPECIES STATUS
Insect	Monarch Butterfly	Danaus plexippus	Candidate
Insect	Karner Blue Butterfly	Lycaeides melissa samuelis	Endangered
Mammal	Northern Long-Eared Bat	Myotis septentrionalis	Endangered
Mammal	Indiana Bat	Myotis sodalist	Endangered
Mammal	Tricolored Bat	Perimyotis subflavus	Proposed Endangered

## EXISTING LAND USE AND DEVELOPMENT TRENDS

Zoning ordinance sets forth regulations and standards related to the extent of uses of land and structures that are allowed in certain areas. A zoning map shows the areas within a community

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<sup>15</sup> U.S. Fish and Wildlife Service, Environmental Conservation Online System <https://ecos.fws.gov/ecp/report/species-listings-by-current-range-county?fips=36091>

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where the various zoning districts and standards are located and gives an overall picture of what types of development are located in a community and how a community intends to continue to grow. The following jurisdictions have a zoning ordinance: Town of Ballston, Village of Ballston Spa, Town of Charlton, Town of Clifton Park, Town of Corinth, Village of Corinth, Town of Day, Town of Edinburg, Town of Galway, Town of Greenfield, Town of Halfmoon, Town of Malta, City of Mechanicville, Town of Milton, Town of Moreau, Town of Northumberland, Town of Providence, Village of Round Lake, Town of Saratoga, City of Saratoga Springs, Village of Schuylerville, Village of South Glens Falls, Town of Stillwater, Village of Stillwater, Village of Victory, Town of Waterford, Village of Waterford, and Town of Wilton.

A review of building permits can also give a picture of the built environment and the number of buildings that are being constructed in the county and each jurisdiction. Table 3-8 lists the number of residential buildings and total units authorized through a permit from each jurisdiction, where data was available, between 2019 and 2023. The data includes total buildings and total units permitted. Permits are reported annually in September and the data includes that from 2019 through 2023 to demonstrate growth. Of the residential building permits issued in this period, over 30 percent were for single-family buildings and 70 percent for multi-family buildings. Housing type can also be an indication of an individual's ability to recover from a disaster.

**Table 3-8. Building Permits, By Jurisdiction, 2019-2023<sup>16</sup>**

JURISDICTION	2019		2020		2021		2022		2023	
	Total Buildings	Total Units	Total Buildings	Total Units	Total Buildings	Total Units	Total Buildings	Total Units	Total Buildings	Total Units
Town of Ballston	89	152	100	144	104	218	79	108	102	200
Village of Ballston Spa	1	1	2	2	0	0	3	3	1	1
Town of Charlton	12	12	5	5	13	13	7	7	14	14
Town of Clifton Park	59	59	51	51	62	62	46	46	69	69
Town of Corinth	18	18	15	16	20	20	8	8	6	6
Village of Corinth	0	0	0	0	0	0	2	61	1	1
Town of Day	4	4	4	4	4	4	5	5	3	3
Town of Edinburg	9	9	10	10	12	12	17	17	5	5
Town of Galway	3	3	8	8	13	13	8	8	4	4
Village of Galway	0	0	0	0	0	0	0	0	0	0
Town of Greenfield	17	17	27	27	25	25	19	19	18	18
Town of Hadley	4	4	3	3	2	2	1	1	0	0
Town of Halfmoon	154	154	178	178	246	246	133	133	84	88
Town of Malta	57	57	50	107	54	54	47	124	18	18
City of Mechanicville	4	5	0	0	1	3	1	4	0	0

<sup>16</sup> U.S. Census Bureau, Building Permit Survey, 1990-2022, <https://www.census.gov/construction/bps/>

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JURISDICTION	2019		2020		2021		2022		2023	
	Total Buildings	Total Units	Total Buildings	Total Units	Total Buildings	Total Units	Total Buildings	Total Units	Total Buildings	Total Units
Town of Milton	14	14	15	15	20	20	195	353	32	50
Town of Moreau	64	119	58	180	65	65	53	53	43	43
Town of Northumberland	8	8	6	6	7	7	0	0	6	6
Town of Providence	7	7	6	6	3	3	11	11	11	11
Village of Round Lake	15	15	11	15	7	7	7	7	2	2
Town of Saratoga	27	27	16	16	17	17	14	14	12	12
City of Saratoga Springs	66	138	58	105	68	71	69	131	66	101
Village of Schuylerville	2	2	1	1	1	1	1	1	3	3
Village of South Glens Falls	6	6	11	12	2	2	8	26	4	4
Town of Stillwater	27	75	31	31	39	165	41	74	44	155
Village of Stillwater	5	5	2	2	2	2	7	7	4	4
Village of Victory	0	0	1	1	1	1	1	1	1	1
Town of Waterford	2	4	2	3	1	3	2	2	0	0
Village of Waterford	5	10	3	8	0	0	2	4	1	1
Town of Wilton	39	68	44	44	50	50	48	48	64	64
Saratoga County <sup>17</sup>	0	0	0	0	0	0	0	0	0	0
<b>TOTALS</b>	<b>718</b>	<b>993</b>	<b>719</b>	<b>1,000</b>	<b>839</b>	<b>1,086</b>	<b>835</b>	<b>1,276</b>	<b>618</b>	<b>884</b>

Certain types of housing found in the Saratoga County planning area are more vulnerable than typical site-built, newly constructed residential structures. This includes mobile or manufactured homes, of which 7,153 (6 percent of total housing stock) are in the planning area. Additionally, single-family residences (SFR) built before 1980 are typically built to lower or less stringent construction standards than newer construction, making these homes more susceptible to damage during hazard events. These older homes comprise 46 percent (approximately 51,143 structures) of housing stock in the planning area. Table 3-9 includes housing inventory data for the participating jurisdictions per the 2022 American Community Survey five-year estimate.

**Table 3-9. Housing Inventory and Vulnerable Structures, By Jurisdiction**

JURISDICTION	TOTAL HOUSING UNITS	BUILT PRIOR TO 1980	MOBILE HOME
Saratoga County <sup>18</sup>	110,095	51,143	7,153
Town of Ballston	5,141	2,298	52

<sup>17</sup> County totals include all total building permits within the county lines.

<sup>18</sup> County totals include all housing units within the county lines.

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JURISDICTION	TOTAL HOUSING UNITS	BUILT PRIOR TO 1980	MOBILE HOME
Village of Ballston Spa	2,477	1,938	0
Town of Charlton	1,765	1,357	0
Town of Clifton Park	15,798	7,504	76
Town of Corinth	3,152	1,967	426
Village of Corinth	1,230	938	10
Town of Day	1,421	949	198
Town of Edinburg	1,855	1,086	407
Town of Galway	1,828	1,037	42
Village of Galway	79	68	10
Town of Greenfield	3,700	1,158	497
Town of Hadley	1,059	590	101
Town of Halfmoon	11,634	2,958	903
Town of Malta	9,002	2,968	930
City of Mechanicville	2,901	2,492	0
Town of Milton	7,976	3,690	1,052
Town of Moreau	6,972	3,527	499
Town of Northumberland	1,970	528	499
Town of Providence	994	338	132
Village of Round Lake	392	256	8
Town of Saratoga	2,700	1,479	191
City of Saratoga Springs	14,596	8,709	133
Village of Schuylerville	708	521	23
Village of South Glens Falls	1,765	1,297	0
Town of Stillwater	4,213	1,940	260
Village of Stillwater	903	506	49
Village of Victory	268	172	49
Town of Waterford	4,128	2,950	48
Village of Waterford	1,151	1,103	26
Town of Wilton	7,290	1,618	1,065

## CHANGES IN VULNERABILITY

The Saratoga County planning area experienced an overall population increase of 7 percent between 2010 and 2020. The American Community Survey estimates the 2022 total housing units

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for the planning area to be 110,095. The total building permits issued between 2019 and 2023 represent approximately 3 percent of the total housing units available in the planning area. The overall population increase, combined with the increase in housing units, indicates a slight increase in vulnerability to all hazards in terms of populations and the built environment. Changes in vulnerability vary by jurisdiction based on each jurisdiction's trends in population and development (Table 3-10).

**Table 3-10. Changes in Vulnerability, by Jurisdiction**

JURISDICTION	POPULATION TREND	HOUSING TREND	OVERALL VULNERABILITY CHANGES
Saratoga County	Increasing	Increasing	Slight Increase
Town of Ballston	Increasing	Increasing	Slight Increase
Village of Ballston Spa	Slight Decrease	Stagnant	No Change
Town of Charlton	Increasing	Increasing	Slight Increase
Town of Clifton Park	Increasing	Increasing	Slight Increase
Town of Corinth	No Change	Increasing	No Change
Village of Corinth	No Change	Stagnant	No Change
Town of Day	Slight Decrease	Stagnant	No Change
Town of Edinburg	Increasing	Increasing	Slight Increase
Town of Galway	Slight Decrease	Stagnant	No Change
Village of Galway	Decreasing	Stagnant	No Change
Town of Greenfield	Increasing	Stagnant	No Change
Town of Hadley	Decreasing	Stagnant	No Change
Town of Halfmoon	Increasing	Increasing	Slight Increase
Town of Malta	Increasing	Increasing	Slight Increase
City of Mechanicville	Slight Decrease	Stagnant	No Change
Town of Milton	Stagnant	Increasing	Slight Increase
Town of Moreau	Increasing	Increasing	Slight Increase
Town of Northumberland	Increasing	Stagnant	Slight Increase
Town of Providence	Increasing	Increasing	Slight Increase
Village of Round Lake	Increasing	Stagnant	Slight Increase
Town of Saratoga	Increasing	Increasing	Slight Increase
City of Saratoga Springs	Increasing	Increasing	Slight Increase
Village of Schuylerville	Slight Decrease	Stagnant	No Change
Village of South Glens Falls	Increasing	Stagnant	Slight Increase
Town of Stillwater	Increasing	Increasing	Slight Increase

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JURISDICTION	POPULATION TREND	HOUSING TREND	OVERALL VULNERABILITY CHANGES
Village of Stillwater	Increasing	Stagnant	Slight Increase
Village of Victory	Increasing	Increase	Slight Increase
Town of Waterford	Decreasing	Stagnant	No Change
Village of Waterford	Increasing	Stagnant	Slight increase
Town of Wilton	Increasing	Increasing	Slight Increase

Changes in vulnerability are applicable to all natural hazards except when discussing dam failure as vulnerability for this hazard is discussed in relation to changes in the estimated inundation areas for profiled dams. For the twelve dams profiled in Section 5, there is no known increase in vulnerability in the estimated inundation areas. While flood and wildfire hazards feature geographical boundaries, increases in population and building inventory can increase overall vulnerability for these hazards even when the trends occur outside of the known hazard boundary. Development decreases permeable surface areas and increases runoff, increasing flood risk. As population density increases, the Wildland Urban Interface (WUI) typically increases. WUI growth often results in more wildfire ignitions, which puts more houses and lives at risk.

## FUTURE GROWTH AND DEVELOPMENT

To better understand how future growth and development in the county might affect hazard vulnerability, it is useful to consider population growth, occupied and vacant land, the potential for future development in hazard areas, and current planning and growth management efforts. This section includes an analysis of the projected population change and economic impacts.

Population projections from 2010 to 2040 are listed in Table 3-11, as provided by Cornell University’s Program on Applied Demographics. This information is only available at the county level; however, the population projection shows a slight increase in population density for Saratoga County, which would mean overall growth for the county.

**Table 3-11. Saratoga County Population Projections<sup>19</sup>**

LAND AREA (SQ MI)	2010		2020		2030		2040	
	Population							
	Total Number	Density (Land Area, SQ MI)	Total Number	Density (Land Area, SQ MI)	Total Number	Density (Land Area, SQ MI)	Total Number	Density (Land Area, SQ MI)
810	219,607	271.12	234,009	288.90	246,743	304.62	252,521	311.75

Comprehensive Plans are guiding documents in a community that sets forth a vision, goals, policies, and guidelines to direct future physical, social, and economic development that will occur within a jurisdiction. Comprehensive Plans are part of a continuous process to provide an

<sup>19</sup> Source: <https://pad.human.cornell.edu/profiles/Saratoga.pdf>



## SECTION 3: COUNTY PROFILE

environment for the citizens and to consider the general desire of the community to conserve, preserve, and protect the natural environment of their jurisdiction. These plans are used to guide municipality staff, decision-makers, and citizens in making decisions which affect the community with the understanding of the long-term effects. The following jurisdictions have a comprehensive plan in place: Town of Ballston, Village of Ballston Spa, Town of Charlton, Town of Clifton Park, Town of Corinth, Village of Corinth, Town of Day, Town of Galway, Village of Galway, Town of Greenfield, Town of Hadley, Town of Halfmoon, Town of Malta, City of Mechanicville, Town of Milton, Town of Moreau, Town of Northumberland, Town of Providence, Village of Round Lake, Town of Saratoga, City of Saratoga Springs, Village of Schuylerville, Village of South Glens Falls, Town of Stillwater, Village of Stillwater, Village of Victory, Town of Waterford, Village of Waterford, and Town of Wilton. Refer to Appendix F Capability Assessment for a complete list of plans in place by participating jurisdictions.



**SARATOGA**  
**COUNTY** NEW YORK

SECTION 4

**RISK OVERVIEW**

## SECTION 4: RISK OVERVIEW

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### HAZARD DESCRIPTION

Section 4 is the first phase of the Risk Assessment and provides background information for the hazard identification process and descriptions for the hazards identified. The Risk Assessment continues with Sections 5 through 20, which include hazard descriptions and vulnerability assessments.

Upon a review of the full range of natural hazards suggested under FEMA planning guidance, Saratoga County and the participating jurisdictions assessed the hazards identified in the 2019 Saratoga County Multi-Jurisdictional All-Hazard Mitigation Plan and the 2023 New York State Hazard Mitigation Plan to determine a list of hazards that have a reasonable risk of occurring in the planning area. The assessment was developed from historical data events, further examining the probability of occurrence, impact (population, property, and economy), adaptive capacity, and changing future conditions (climate change). Saratoga County and the participating jurisdictions identified fifteen natural hazards and one human-caused hazard that are addressed in this Plan Update and were identified as significant, as shown in Table 4-1.

In general, there are five main categories of hazards: atmospheric, geologic, hydrologic, technological, and human-caused. Atmospheric hazards are events or incidents associated with weather generated phenomenon. Atmospheric hazards that have been identified as significant for Saratoga County include extreme cold, extreme heat, hail, hurricane/tropical storm, ice storm, lightning, snow storm, tornado, and wind (Table 4-1).

Geologic hazards are events or incidents associated with the earth’s crust. The geologic hazards identified as significant consist of earthquake and landslide. Both geologic hazards have been identified as significant for the county.

Hydrologic hazards are events or incidents associated with water related damage and account for over 75 percent of Federal disaster declarations in the United States. The hydrologic hazards identified as significant for the county are drought and flood.

Technological hazards refer to the origins of incidents that can arise from human activities, such as the construction and maintenance of dams. They are distinct from natural hazards primarily because they originate from human activity. The risks presented by natural hazards may be increased or decreased as a result of human activity, however they are not inherently human-induced. Therefore, dam failure is classified as a quasi-technological hazard and referred to as “technological” in Table 4-1 for purposes of description.

For the Risk Assessment, the wildfire hazard is considered “other,” since this hazard is not considered atmospheric, geologic, hydrologic, nor technological.

## SECTION 4: RISK OVERVIEW

Human-caused hazards are events or incidents caused by human intent, human error, or as a result of failed systems. These hazards can be caused or exacerbated by either accidental or intentional human actions that result in the loss of life or property. The human-caused hazard identified as significant for the county is invasive species.

**Table 4-1. Hazard Descriptions**

HAZARD	DESCRIPTION
<b>ATMOSPHERIC</b>	
<b>Extreme Cold</b>	Extreme cold refers to temperatures that are significantly lower than what is normal for a particular region or season. Extreme cold may also result in a freeze, which occurs when the temperature drops below 32°F for a significant period of time.
<b>Extreme Heat</b>	Extreme heat is the condition whereby temperatures hover ten degrees or more above the average high temperature in a region for an extended period of time.
<b>Hail</b>	Hailstorms are a potentially damaging outgrowth of severe thunderstorms. Early in the developmental stages of a hailstorm, ice crystals form within a low-pressure front due to the rapid rising of warm air into the upper atmosphere and subsequent cooling of the air mass.
<b>Hurricane/Tropical Storm</b>	A hurricane is an intense tropical weather system of strong thunderstorms with a well-defined surface circulation and maximum sustained winds of 74 mph or higher.
<b>Ice Storm</b>	An ice storm is a storm with falling rain that freezes on contact. Significant accumulations of ice pull down trees and utility lines resulting in loss of power and communication. These accumulations of ice make walking and driving dangerous. Significant ice accumulations are ¼” or greater.
<b>Lightning</b>	Lightning is a sudden electrostatic discharge that occurs during an electrical storm. This discharge occurs between electrically charged regions of a cloud, between two clouds, or between a cloud and the ground.
<b>Snow storm</b>	Severe winter storms may include snow, sleet, freezing rain, or a mix of these wintry forms of precipitation. Blizzards, the most dangerous of all winter storms, combine low temperatures, heavy snowfall, and winds of at least 35 mph, reducing visibility to only a few yards. Ice storms occur when moisture falls and freezes immediately upon impact on trees, power lines, communication towers, structures, roads, and other hard surfaces. Winter storms and ice storms can down trees, cause widespread power outages, damage property, and cause fatalities and injuries to human life.
<b>Tornado</b>	A tornado is a violently rotating column of air that has contact with the ground and is often visible as a funnel cloud. Its vortex rotates cyclonically with wind speeds ranging from as low as 40 mph to as high as 300 mph. The destruction caused by tornadoes ranges from light to catastrophic, depending on the location, intensity, size, and duration of the storm.
<b>Wind</b>	Wind is defined as the motion of air relative to the earth’s surface, and the hazard of high wind is commonly associated with severe thunderstorm winds, tornadoes, hurricanes, and tropical storms. High

## SECTION 4: RISK OVERVIEW

HAZARD	DESCRIPTION
	winds can also occur in the absence of other definable hazard conditions, occurring in forms such as straight-line winds or microbursts.
<b>GEOLOGIC</b>	
<b>Earthquake</b>	An earthquake is the sudden, rapid, shaking of the earth, caused by the breaking and shifting of subterranean rock as it releases strain that has accumulated over a long time. Initial mild shaking may strengthen and become violent within seconds.
<b>Ground Failure (landslide)</b>	A landslide is a geological phenomenon where there is down slope movement of mass rock, debris, or earth. They usually occur in conjunction with other natural hazards, such as earthquakes, volcanoes, wildfires, and floods. Landslides occur nationwide, causing \$1-2 billion in damages with more than 25 fatalities on average each year.
<b>HYDROLOGIC</b>	
<b>Drought</b>	A prolonged period of less than normal precipitation such that the lack of water causes a serious hydrologic imbalance. Common effects of drought include crop failure, water supply shortages, and fish and wildlife mortality.
<b>Flood</b>	The accumulation of water within a body of water, which results in the overflow of excess water onto adjacent lands, usually floodplains. The floodplain is the land adjoining the channel of a river, stream, ocean, lake, or other watercourse or water body that is susceptible to flooding. Most floods fall into the following three categories: riverine flooding, coastal flooding, and shallow flooding.
<b>OTHER</b>	
<b>Wildfire</b>	A wildfire is an uncontrolled fire burning in an area of vegetative fuels such as grasslands, brush, or woodlands. Heavier fuels with high continuity, steep slopes, high temperatures, low humidity, low rainfall, and high winds all work to increase the risk for people and property located within wildfire hazard areas or along the urban/wildland interface. Wildfires are part of the natural management of forest ecosystems, but most are caused by human factors.
<b>TECHNOLOGICAL</b>	
<b>Dam Failure</b>	Dam failure is the collapse, breach, or other failure of a dam structure resulting in downstream flooding. In the event of a dam failure, the energy of the water stored behind even a small dam is capable of causing loss of life and severe property damage if development exists downstream of the dam.
<b>HUMAN-CAUSED</b>	
<b>Invasive Species</b>	Infestation occurs when an area sees the emergence of an excessive population of pest organisms which have the potential to carry diseases, destroy crops, or harm the environment. These pest organisms may be insects, mammals, birds, parasites/pathogens, plants, or fungi that compete for natural resources and can transmit diseases to humans, crops, and livestock, thereby threatening the existing environment.

## SECTION 4: RISK OVERVIEW

New York State identifies 18 hazards that pose a risk to the State, in which Saratoga County determined that 4 of these hazards pose limited to no risk for Saratoga County and the participating jurisdictions based on historical records. Hazards that were not considered significant and were not included in the Plan Update are located in Table 4-2, along with the evaluation process used for determining the significance of each of these hazards. Hazards not identified for inclusion at this time may be addressed during future evaluations and updates.

**Table 4-2. Other Hazards Deferred**

HAZARD	REASON FOR DETERMINATION
<b>Avalanche</b>	According to the 2023 New York State Plan, Saratoga County is not considered a High Risk County for the avalanche hazard and there are no historical occurrences of avalanche for the planning area. There is no history of impact to critical structures, systems, populations or other community assets or vital services as a result of avalanche and none is expected in the future.
<b>Coastal Hazards</b>	According to the 2023 New York State Plan, Saratoga County is not considered a High Risk County for coastal hazards and there are no historical occurrences of coastal hazards for the planning area. There is no history of impact to critical structures, systems, populations or other community assets or vital services as a result of coastal hazards and none is expected in the future.
<b>Tsunami / Seiche</b>	According to the 2023 New York State Plan, there are no recorded events in recent history that have impacted New York State, and Saratoga County is not considered a High Risk County for tsunami / seiche hazard. There is no history of impact to critical structures, systems, populations or other community assets or vital services as a result of tsunami / seiche and none is expected in the future.
<b>Volcano</b>	According to the 2023 New York State Plan, New York State has no record of volcanic activity and presently volcanos do not pose a threat.

## DISASTER DECLARATION HISTORY

One method of understanding hazards that pose a risk to Saratoga County is to identify past hazards events that triggered federal or state disaster declarations. Federal and state declarations may be granted when the severity and magnitude of an event surpasses the ability of the local government to respond and recover. Disaster assistance is supplemental and sequential. Table 4-3 lists state and federal disaster declarations received by Saratoga County. Many of the disaster events were regional or statewide.

Between 1953 and October 2024, Saratoga County received 20 disaster declarations. Out of 20 declared disasters, the largest number (5) were related to severe storms, followed by snow storm (5), hurricane (4), biological (3), flood (1), and fire (1). One declared disaster was classified as “other.” Disaster declarations for Saratoga County are listed in Table 4-3 below.

**Table 4-3. Disaster Declaration History in Saratoga County, 1953-2024<sup>1</sup>**

YEAR	DECLARATION TITLE	HAZARD	DECLARATION TYPE	DISASTER No.
1987	Severe Winter Storm	Snowstorm	DR	DR-801

<sup>1</sup> Source: <https://www.fema.gov/data-visualization/disaster-declarations-states-and-counties>

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YEAR	DECLARATION TITLE	HAZARD	DECLARATION TYPE	DISASTER No.
1993	Severe Blizzard	Snowstorm	EM	EM-3107
1996	Severe Storms and Flooding	Flood	DR	DR-1095
1998	Severe Storms and Flooding	Snowstorm	DR	DR-1196
1998	Severe Storms and Tornadoes	Severe Storm	DR	DR-1222
2000	West Nile Virus	Biological	EM	EM-3155
2001	Fires and Explosions	Fire	DR	DR-1391
2003	Snowstorms	Snowstorm	EM	EM-3173
2003	Power Outage	Other	EM	EM-3186
2004	Severe Storms and Flooding	Severe Storm	DR	DR-1534
2005	Hurricane Katrina Evacuation	Hurricane	EM	EM-3262
2008	Severe Winter Storm	Severe Storm	EM	EM-3299
2009	Severe Winter Storm	Severe Storm	DR	DR-1827
2011	Hurricane Irene	Hurricane	DR	DR-4020
2012	Hurricane Sandy	Hurricane	EM	EM-3351
2017	Severe Winter Storm and Snowstorm	Snowstorm	DR	DR-4322
2019	Severe Storms, Straight-Line Winds, and Flooding	Severe Storm	DR	DR-4472
2020	Covid-19	Biological	EM	EM-3434
2020	Covid-19 Pandemic	Biological	DR	DR-4480
2021	Hurricane Henri	Hurricane	EM	EM-3565

### NATURAL HAZARDS AND CLIMATE CHANGE

Climate change is defined as a long-term hazard which can increase or decrease the risk of other weather hazards. It directly endangers property due to sea level rise and biological organisms due to habitat destruction.

Global climate change is expected to exacerbate the risks of certain types of natural hazards impacted through rising sea levels, warmer ocean temperatures, higher humidity, the possibility of stronger storms, and an increase in wind and flood damages due to storm surges. While sea level rise is a natural phenomenon and has been occurring for several thousand years, the general scientific consensus is that the rate has increased in the past 200 years, from 0.5 millimeters per year to 2 millimeters per year.

New York's ClimAID is the organization charged with providing decision makers with information on the state's vulnerabilities and to facilitate the development of adaptation strategies. According to New York's ClimAID analysis, heat waves are predicted to increase, and New York has already

## SECTION 4: RISK OVERVIEW

experienced a significant warming trend across the state. Winter snow cover is decreasing, and spring is a week or so earlier on average than a few decades ago. In many areas of New York, blooming dates have advanced by as much as eight days. Intense precipitation events (heavy downpours) are occurring more often, leading to more frequent and intense flooding that threatens public safety and damages developed areas, roadways, and other infrastructure, as well as natural systems and protective barriers. As climate continues to change, we may experience more frequent and more severe droughts between these extreme precipitation events. Ranges of plants and animals will shift, changing New York's suite of native species as well as agricultural products.

Saratoga County is within Region 5 for the ClimAID analysis, which includes Utica, Yorktown Heights, Saratoga Springs, and the Hudson Correctional Facility. Climate models project Saratoga County to see relatively low rainfall, increasing summer drought risk and negatively impacting agricultural revenue in Region 5. Average temperature increases of 3.0 to 5.5 degrees by the 2050s and 4.0 to 8.0 degrees by the 2080s are expected. Average precipitation increases of 0 to 5 percent by the 2050s and 5 to 10 percent by the 2080s should be expected. Additional projections for New York State and Region 5 can be found in the ClimAID's most recent publication, *Responding to Climate Change in New York State*.<sup>2</sup>

When considering level of risk, frequency of occurrence, and cost to recover; flooding was identified as each jurisdiction's largest exposure. Each jurisdiction created a hazard mitigation action to address this concern. In addition, Saratoga County has developed a Comprehensive Emergency Management Plan that outlines evacuation and sheltering measures during hazard events.

**Table 4-4. Future Trends in Extreme Weather in New York State<sup>3</sup>**

HAZARDS	EXPECTED TRENDS
Extreme Temperatures	<ul style="list-style-type: none"> <li>• Average annual temperatures are projected to increase by 2.0-3.4°F by the 2020s, 4.1-6.8°F by the 2050s, and 5.3-10.1°F by the 2080s.</li> <li>• Warmer temperatures could extend the state's growing season by about one month.</li> <li>• Summers will become more intense, and winters will become milder.</li> <li>• Higher frequency of 90°F days.</li> <li>• Higher frequency of heat waves, defined as three or more consecutive days over 90°F.</li> <li>• Extreme cold events are expected to decrease as average temperatures rise.</li> <li>• The coolest days of the summer are expected to continue becoming warmer.</li> </ul>

<sup>2</sup> Source: <https://www.nyserda.ny.gov/About/Publications/Energy-Analysis-Reports-and-Studies/Environmental-Research-and-Development-Technical-Reports/Response-to-Climate-Change-in-New-York>

<sup>3</sup> Source: <https://www.nyserda.ny.gov/About/Publications/Energy-Analysis-Reports-and-Studies/Environmental-Research-and-Development-Technical-Reports/Response-to-Climate-Change-in-New-York>



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HAZARDS	EXPECTED TRENDS
Precipitation	<ul style="list-style-type: none"> <li>Regional precipitation across New York State is projected to increase by approximately 1.8% by the 2020s, 3-12% by the 2050s, and 4-15% by the 2080s.</li> <li>Much of the additional precipitation is projected to occur during the winter months.</li> <li>Late summer and early fall precipitation is projected to slightly decrease.</li> <li>Northern parts of the state are likely to see the greatest increases in precipitation.</li> <li>While increase in total annual precipitation is projected to be relatively small, larger increases are projected for the frequency, intensity, and duration of extreme precipitation events.</li> </ul>
Drought	<ul style="list-style-type: none"> <li>By the end of the century, it is likely that late-summer, short-duration droughts will increase across New York State.</li> <li>It is currently unknown how multi-year drought risk may change in the future.</li> </ul>
Flood	<ul style="list-style-type: none"> <li>As sea levels rise, coastal flooding associated with storms is very likely to increase in intensity, frequency, and duration.</li> <li>More frequent and intense coastal storms will also contribute to larger coastal flooding events.</li> <li>By the end of the century, coastal flood levels that currently occur once per decade may occur every one to three years.</li> <li>Flooding at the current 100-year flood level may occur 19 times more often by the end of the century.</li> </ul>
Winter Weather	<ul style="list-style-type: none"> <li>As the climate warms, the likelihood of winter weather decreases.</li> <li>Both extreme cold and snowfall either become less frequent or are expected to do so.</li> </ul>
Thunderstorms (Wind, Hail, Lightning)	<ul style="list-style-type: none"> <li>Historical trend data is unreliable.</li> <li>Indirect evidence supports an increase in the number of days capable of producing severe thunderstorms and an increase in the frequency of very large hail in early springtime, but these possible trends are too uncertain to quantify.</li> </ul>

## OVERVIEW OF HAZARD ANALYSIS

The methodologies utilized to develop the Risk Assessment are a historical analysis and a statistical approach. Both methodologies provide an estimate of potential impact by using a common, systematic framework for evaluation.

Records retrieved from National Centers for Environmental Information (NCEI) and National Oceanic and Atmospheric Administration (NOAA) were reported for participating jurisdictions within Saratoga County. Remaining records identifying the occurrence of hazard events in the planning area and the maximum recorded magnitude of each event were also evaluated.

The use of geographic information system (GIS) technology to identify and assess risks for Saratoga County and evaluate community assets and their vulnerability to the hazards.

# SECTION 4: RISK OVERVIEW

The four general parameters that are described for each hazard in the Risk Assessment include frequency of return, approximate annualized losses, a description of general vulnerability, and a statement of the hazard’s impact.

Frequency of return was calculated by dividing the number of events in the recorded time period for each hazard by the overall time period that the resource database was recording events. Frequency of return statements are defined in Table 4-5, and impact statements are defined in Table 4-6 below.

**Table 4-5. Frequency of Return Statements**

PROBABILITY	DESCRIPTION
Highly Likely	Event is probable in the next year.
Likely	Event is probable in the next three years.
Occasional	Event is probable in the next five years.
Unlikely	Event is probable in the next ten years.

**Table 4-6. Impact Statements**

POTENTIAL SEVERITY	DESCRIPTION
Substantial	Multiple deaths. Complete shutdown of facilities for 30 days or more. More than 50 percent of property destroyed or with major damage.
Major	Injuries and illnesses resulting in permanent disability. Complete shutdown of critical facilities between one and four weeks. More than 25 percent of property destroyed or with major damage.
Minor	Injuries and illnesses do not result in permanent disability. Complete shutdown of critical facilities for up to one week. More than 10 percent of property destroyed or with major damage.
Limited	Injuries and illnesses are treatable with first aid. Shutdown of critical facilities and services for 24 hours or less. Less than 10 percent of property destroyed or with major damage.

Each of the hazard profiles includes a description of a general Vulnerability Assessment. Vulnerability is the total of assets that are subject to damages from a hazard, based on historic recorded damages. Assets in the region were inventoried and defined in hazard zones where appropriate. The total amount of damages, including property and crop damages, for each hazard is divided by the total number of assets (building value totals) in that community to determine the percentage of damage that each hazard can cause to the community. Risk and consequences will be addressed and covered within each hazard profile under the Vulnerability and Impact section as well as under the Assessment of Impact sections, where applicable.

To better understand how future growth and development in the Saratoga County region might affect hazard vulnerability, it is useful to consider population growth, occupied and vacant land, the potential for future development in hazard areas, and current planning and growth management efforts. Hazard vulnerability for all participating jurisdictions within Saratoga County was reviewed based on recent development changes that occurred throughout the planning area. The population of Saratoga County has grown by 7 percent between 2010 and 2020, according

## SECTION 4: RISK OVERVIEW

to the U.S. Census Bureau, therefore the vulnerability to the population, infrastructure, and buildings has increased for hazards that do not have a geographical boundary.

Once loss estimates and vulnerability were known, an impact statement was applied to relate the potential impact of the hazard on the assets within the area of impact.

### HAZARD RANKING

During the 2025 planning process, the Planning Team conducted a risk ranking exercise to get input from the Planning Team and stakeholders. Table 4-7 portrays the results of the risk assessment analysis for the frequency of occurrence and potential severity and the Planning Team’s self-assessment for hazard ranking, based on local knowledge of past hazard events and impacts for each of the identified hazards, as well as the consequence scores from Saratoga County’s County Emergency Preparedness Assessment (CEPA). The consequence scores are representative of the conversation the County had at the most recent CEPA session in 2022. The full CEPA report can be found in Appendix I. The definitions for frequency of occurrence and potential severity can be found in Table 4-5 and Table 4-6.

**Table 4-7. Hazard Risk Ranking**

HAZARD	FREQUENCY OF OCCURENCE	POTENTIAL SEVERITY	RANKING	CONSEQUENCE <sup>4</sup>
<b>NATURAL HAZARDS</b>				
Flood	Highly Likely	Substantial	High	High
Hail	Highly Likely	Limited	High	N/A
Hurricane/Tropical Storm	Occasional	Limited	High	High
Ice Storm	Occasional	Limited	High	High
Lightning	Highly Likely	Substantial	High	N/A
Snow storm	Highly Likely	Major	High	Medium
Tornado	Likely	Major	High	High
Wind	Highly Likely	Substantial	High	High
Extreme Cold	Highly Likely	Limited	Moderate	Medium
Extreme Heat	Highly Likely	Limited	Moderate	Medium
Wildfire	Highly Likely	Limited	Moderate	Medium
Dam Failure	Unlikely	Limited	Low	Very High
Drought	Highly Likely	Limited	Low	Low
Earthquake	Unlikely	Limited	Low	High
Landslide	Occasional	Limited	Low	Low
<b>HUMAN-CAUSED HAZARDS</b>				
Invasive Species	Highly Likely	Limited	Low	N/A

<sup>4</sup> The terms used for this category are reflective of the CEPA and not the Hazard Mitigation Plan.

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### RISK ASSESSMENT RESOURCES AND DATA LIMITATIONS

The risk and vulnerability assessment relies heavily on the content of the National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information (NCEI) Storm Events Database. This database covers weather-related hazards that affect the planning area and that are profiled in this plan including drought, earthquake, extreme cold, extreme heat, flood, hail, hurricane/tropical storm, lightning, snow storm, tornado, and wind. Other hazards were analyzed using databases containing more comprehensive historical data specific to New York such as the New York Department of Environmental Conservation (NYSDEC) Division of Forest Protection for wildfires or the United States Geological Survey (USGS) for earthquakes and landslide hazards. Historical dam incidents, including failures, were researched through the Association of State Dam Safety Officials database which provides historical dam incidents.

The NCEI Storm Events Database is a rich centralized repository of nationwide weather-related hazard events. Among other things, it is the source used by NOAA to populate its monthly storm data publication. The database contains recorded weather events of significance based on a range of potential criteria including intensity, duration, damages, injuries, or other otherwise notable events. The history of data available in the NCEI database allows the study of impacts of individual hazards over an extended period of time. This data contributes to the framework for understanding relative risks over time.

While the NCEI is considered as one of the most comprehensive national historical event databases, it is not without limitations. Records of historical occurrences in the state show significant variations in the number of events recorded from one county to the next. Further research shows that the variations are more attributable to under-reporting of events than variations in weather occurrences. Only the events that have been reported or recorded in the database are factored into the risk assessment when no other reliable resources are available. It is accurate to assume that additional natural hazard occurrences have gone unreported or have been underreported. The risk assessment in this plan is considered the baseline for estimating potential future losses and frequency of events, which are assumed to be the minimum the planning area can anticipate. Additionally, significant events may be reported by both the county and local jurisdictions. This is due to reports from various locations impacted by a given event.

Finally, damages are not reported for the majority of events recorded in the NCEI as property damage estimates are not always available. Natural hazard event damages are often covered by private insurance and statistical insurance data is not readily available in the public domain. The National Weather Service (NWS) regional forecast coordinators utilize the resources available to them to describe damages or impacts of events. However, local input is key to assigning damages to historical events.

### ASSUMPTIONS

Event data is often reported at the county level only. This is primarily due to the nature of most natural hazards impacting areas larger than a single municipality. Winter storms or extreme heat, for example, impact large regions and are not confined to a single location. NWS regional coordinators typically gather event data from countywide or regional reporting and record it accordingly. Some exceptional events are captured by NWS regional coordinators when the impact of the event is severe or catastrophic. However, most events recorded at the municipality level are conveyed by local officials. Event data at the municipality level is often limited as a result. Due to the more robust reporting at the county level and limited reporting at the local level,

## SECTION 4: RISK OVERVIEW

summary vulnerability statements are formulated using both local and countywide event data. These vulnerability assessments assume that events impacting the county similarly impact the jurisdictions within that county. Therefore, the countywide assessment is considered similar for all participating jurisdictions unless stated otherwise. Future risk and vulnerability assessments at the local, county and state level will benefit significantly from increased, detailed event reporting.



**SARATOGA**  
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SECTION 5  
**DAM FAILURE**

## SECTION 5: DAM FAILURE

Portions of the Saratoga County Hazard Mitigation Plan are considered confidential and not for release to the public. The information in this section is covered under Privacy Act of 1974 (5 U.S.C. Section 552a).



**SARATOGA**  
**COUNTY** NEW YORK

SECTION 6  
**DROUGHT**



## SECTION 6: DROUGHT

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### HAZARD DESCRIPTION

Drought is a period of time without substantial rainfall that persists from one year to the next. Drought is a normal part of virtually all climatic regions, including areas with high and low average rainfall. Drought is the consequence of anticipated natural precipitation reduction over an extended period of time, usually a season or more in length. Droughts can be classified as meteorological, hydrologic, agricultural, and socioeconomic. Table 6-1 presents definitions for these different types of droughts.

Droughts are one of the most complex of all natural hazards as it is difficult to determine their precise beginning or end. In addition, droughts can lead to other hazards such as extreme heat and wildfires. Their impact on wildlife and area farming is enormous, often killing crops, grazing land, edible plants, and even in severe cases, trees. A secondary hazard to drought is wildfire because dying vegetation serves as a prime ignition source. Therefore, a heat wave combined with a drought is a very dangerous situation.

**Table 6-1. Drought Classification Definitions<sup>1</sup>**

<b>METEOROLOGICAL DROUGHT</b>	The degree of dryness or departure of actual precipitation from an expected average or normal amount based on monthly, seasonal, or annual time scales.
<b>HYDROLOGIC DROUGHT</b>	The effects of precipitation shortfalls on stream flows and reservoir, lake, and groundwater levels.
<b>AGRICULTURAL DROUGHT</b>	Soil moisture deficiencies relative to water demands of plant life, usually crops.
<b>SOCIOECONOMIC DROUGHT</b>	The effect of demands for water exceeding the supply as a result of a weather-related supply shortfall.

### LOCATION

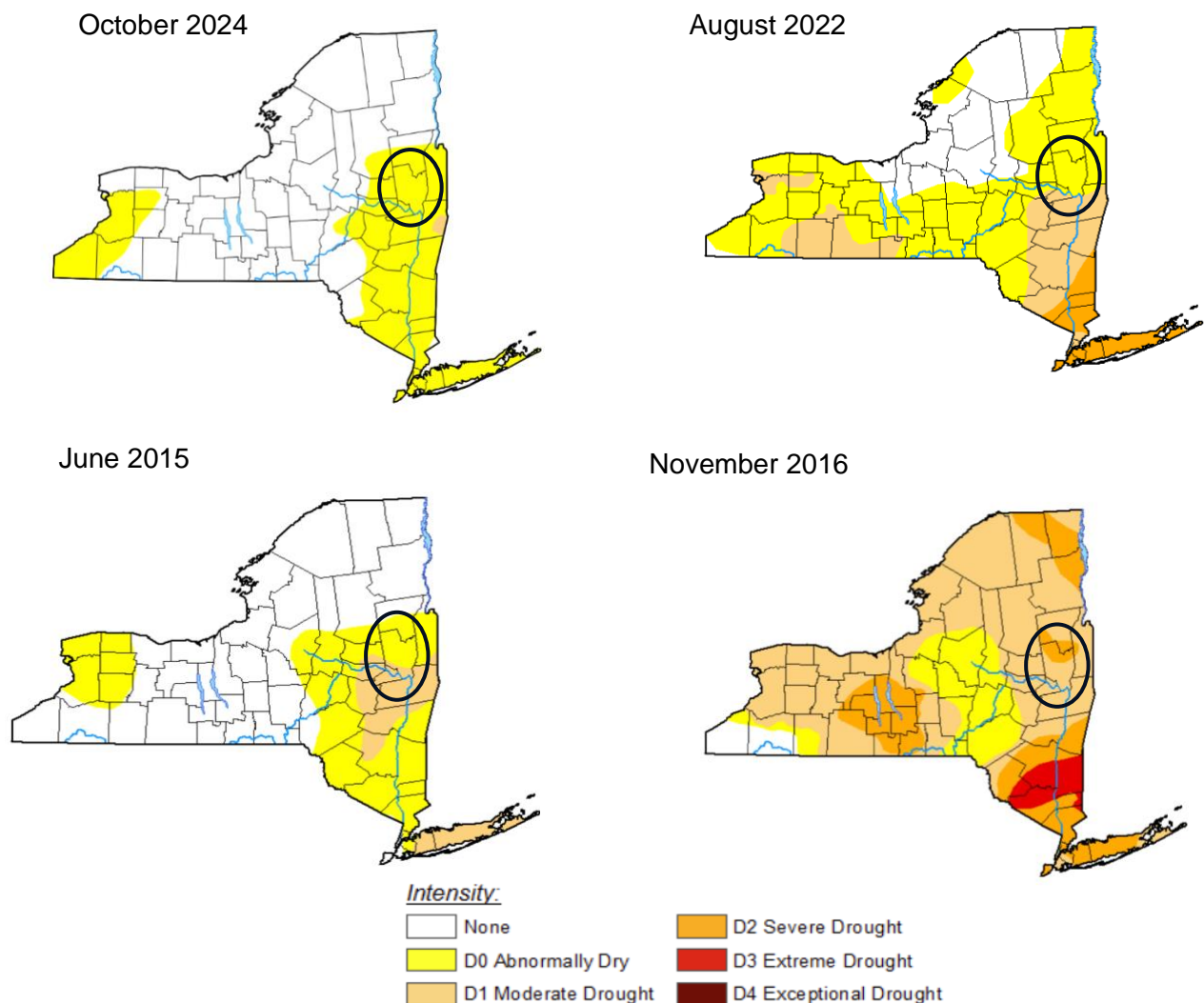
Droughts occur, on average, every one to two years throughout the Saratoga County planning area, including all participating jurisdictions, and are considered a normal condition. These droughts often occur seasonally, peaking in summer and improving over winter. Winter snowfall amounts vary greatly over the state, ranging from around 30 inches in New York City and Long

<sup>1</sup> Source: Multi-Hazard Identification and Risk Assessment: A Cornerstone of the National Mitigation Strategy, FEMA

## SECTION 6: DROUGHT

Island to 140 inches in Oswego, east of Lake Ontario.<sup>2</sup> The snowfall and snow cover provide helpful water content as spring melt releases this water into the soils and streams. Droughts can vary greatly in their intensity and duration. While drought in New York tends to be short-term, it can still have widespread impacts. The U.S. Drought Monitor, produced through a partnership between the National Drought Mitigation Center at the University of Nebraska-Lincoln, U.S. Department of Agriculture and the National Oceanic and Atmospheric Administration, shows the planning area is currently experiencing abnormally dry drought conditions but has experienced a range of conditions from normal to severe drought conditions over the last two decades. There is no distinct geographic boundary to drought; therefore, it can occur throughout the Saratoga County planning area equally.

**Figure 6-1. Range of Drought Conditions Experienced in Saratoga County**



<sup>2</sup> U.S. Drought Monitor. Drought in New York. <https://www.drought.gov/states/new-york#:~:text=Drought%20in%20New%20York%20New%20York%20State%20experiences%20drought%2C%20on,to%20140%20inches%20in%20Oswego%2C>.

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## EXTENT

The Palmer Drought Index is used to measure the extent of drought by measuring the duration and intensity of long-term drought-inducing circulation patterns. Long-term drought is cumulative, with the intensity of drought during the current month dependent upon the current weather patterns plus the cumulative patterns of previous months. The hydrological impacts of drought (e.g., reservoir levels, groundwater levels, etc.) take longer to develop. Table 6-2 depicts magnitude of drought, while Table 6-3 describes the classification descriptions.

In addition to the Palmer Drought Index, New York State’s Department of Environmental Conservation details drought status determinations which are based on the State Drought Index. This index uses state-specific attributes and may differ slightly from national drought assessments. The State Drought Index compares four parameters to historic or “normal” values to evaluate conditions: stream flows, precipitation, lake and reservoir storage levels, and groundwater levels. The state’s Drought Management Task Force uses these factors as well as water use, duration of the dry period, and season to assess drought in different parts of the state at varying times throughout a year. Table 6-4 outlines the New York State Drought Plan and describes the actions to be taken during each stage.

**Table 6-2. Palmer Drought Index**

DROUGHT INDEX	DROUGHT CONDITION CLASSIFICATIONS						
	Extreme	Severe	Moderate	Normal	Moderately Moist	Very Moist	Extremely Moist
Z Index	-2.75 and below	-2.00 to -2.74	-1.25 to -1.99	-1.24 to +.99	+1.00 to +2.49	+2.50 to +3.49	n/a
Meteorological	-4.00 and below	-3.00 to -3.99	-2.00 to -2.99	-1.99 to +1.99	+2.00 to +2.99	+3.00 to +3.99	+4.00 and above
Hydrological	-4.00 and below	-3.00 to -3.99	-2.00 to -2.99	-1.99 to +1.99	+2.00 to +2.99	+3.00 to +3.99	+4.00 and above

**Table 6-3. Palmer Drought Category Descriptions<sup>3</sup>**

CATEGORY	DESCRIPTION	POSSIBLE IMPACTS	PALMER DROUGHT INDEX
D0	Abnormally Dry	Going into drought: short-term dryness slowing planting, growth of crops or pastures; fire risk above average. Coming out of drought: some lingering water deficits; pastures or crops not fully recovered.	-1.0 to -1.9
D1	Moderate Drought	Some damage to crops, pastures; fire risk high; streams, reservoirs, or wells low, some water shortages developing or imminent, voluntary water use restrictions requested.	-2.0 to -2.9
D2	Severe Drought	Crop or pasture losses likely; fire risk very high; water shortages common; water restrictions imposed.	-3.0 to -3.9

<sup>3</sup> Source: National Drought Mitigation Center

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CATEGORY	DESCRIPTION	POSSIBLE IMPACTS	PALMER DROUGHT INDEX
D3	Extreme Drought	Major crop/pasture losses; extreme fire danger; widespread water shortages or restrictions.	-4.0 to -4.9
D4	Exceptional Drought	Exceptional and widespread crop/pasture losses; exceptional fire risk; shortages of water in reservoirs, streams, and wells, creating water emergencies.	-5.0 or less

**Table 6-4. New York State Drought Stage Descriptions<sup>4</sup>**

CATEGORY	DESCRIPTION
Watch	The least severe of the stages, a drought watch is declared when a drought is developing. Public water suppliers begin to conserve water and urge customers to reduce water use.
Warning	Voluntary water conservation is intensified. Public water suppliers and industries update and implement local drought contingency plans. Local agencies make plans in case of emergency declaration.
Emergency	The Governor may declare an emergency. The Disaster Preparedness Commission coordinates the response. Mandatory local / county water restrictions may be imposed. Communities may need to tap alternative water sources to avoid depleting water supplies, protect public health and provide for essential uses.
Disaster	Disaster plans are implemented. Water use is further restricted. The Governor may declare disaster and request federal disaster assistance. Emergency legislation may be enacted. The state provides equipment and technical assistance to communities.

Drought is monitored nationwide by the National Drought Mitigation Center (NDMC). Indicators are used to describe broad scale drought conditions across the U.S. and correspond to the intensity of drought.

Based on the historical occurrences for drought and the location of the Saratoga County planning area, including participating jurisdictions, the area can anticipate a range of drought from abnormally dry to severe drought, or D0 to D2, based on the Palmer Drought Category. The entire planning area has experienced severe drought conditions. This is the most extreme drought condition the planning area can anticipate in the future based on historical events.

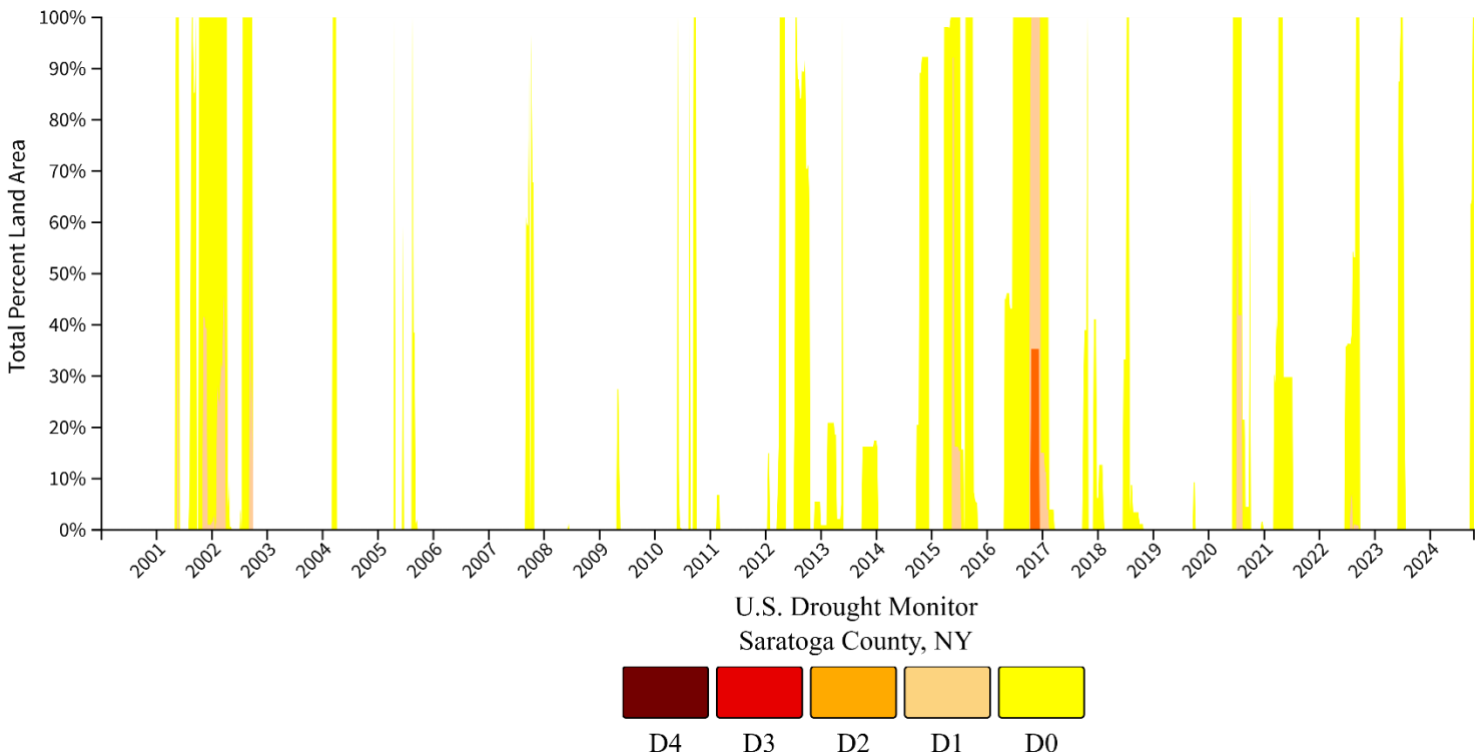
### HISTORICAL OCCURRENCES

The Saratoga County planning area may experience drought conditions in any given year. According to the U.S. Drought Monitor, between January of 2000 and June of 2024, the Saratoga County planning area spent 320 weeks (26%) in some level of drought as defined as Abnormally Dry (D0) or worse conditions. The longest consecutive drought period lasted for 49 weeks during this reporting period. Saratoga County has received 11 USDA disaster declarations for drought from 2012 through 2024.

<sup>4</sup> Drought - NYS Dept. of Environmental Conservation. (n.d.). Retrieved November 11, 2023 from <https://www.dec.ny.gov/lands/5011.html>

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**Figure 7-2. Saratoga County Drought Intensity, 2000 - 2024<sup>5</sup>**



Historical drought information shows the percentage of Saratoga County experiencing drought conditions on a weekly basis. Historical drought data for New York are provided on a county-wide basis per the U.S. Drought Monitor.

Table 6-5 lists historical drought periods that have occurred in Saratoga County. For the purposes of this analysis, only persistent drought conditions of 4 weeks or longer were considered as a drought period. A total of 20 historical drought periods were recorded in the U.S. Drought Monitor, impacting Saratoga County between January 2000 and June 2024. Property and crop drought damages in the planning area were unavailable.

**Table 6-5. Historical Drought Periods, January 2000 - June 2024<sup>6</sup>**

JURISDICTION	DROUGHT PERIOD	WEEKS
Saratoga County	8/7/2001-9/24/2001	7
Saratoga County	10/9//2001-5/13/2002	31
Saratoga County	7/23/2002-9/30/2002	10
Saratoga County	8/16/2005-9/19/2005	5
Saratoga County	9/4/2007-10/23/2007	8
Saratoga County	1/17/2012-5/14/2012	17

<sup>5</sup> U.S. Drought Monitor

<sup>6</sup> Historical data is reported from January 2000 through June 2024.

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JURISDICTION	DROUGHT PERIOD	WEEKS
Saratoga County	7/10/2012-10/22/2012	15
Saratoga County	11/20/2012-5/27/2013	27
Saratoga County	10/1/2013-1/13/2014	15
Saratoga County	9/23/2014-12/15/2014	12
Saratoga County	3/24/2015-8/3/2015	19
Saratoga County	8/11/2015-11/2/2015	12
Saratoga County	4/26/2016-4/3/2017	49
Saratoga County	10/2/2017-10/30/2017	5
Saratoga County	12/5/2017-2/12/2018	10
Saratoga County	6/19/2018-10/29/2018	19
Saratoga County	6/9/2020-10/5/2020	17
Saratoga County	3/9/2021-7/19/2021	19
Saratoga County	6/21/2022-10/3/2022	15
Saratoga County	6/5/2023-7/24/2023	8

Based on the historical drought events for the Saratoga County planning area, including participating jurisdictions, there have been four drought periods reported during since the 2019 Plan.

## SIGNIFICANT EVENTS

### April 2016 to April 2017 – Saratoga County

A drought between 2016 and 2017 brought attention to the State of New York from state and government officials, as conditions quickly deteriorated and extreme drought occurred for the first time since 2002. There were major impacts to farming, with crop yields down for many producers, as well as record-low stream flows and impacts to smaller reservoir systems.<sup>7</sup> In the Saratoga planning area, the highest level of drought reported was D2 (severe) between October and December of 2016. This was the longest drought period recorded for the planning area which lasted for 49 consecutive weeks.

## PROBABILITY OF FUTURE EVENTS

Based on available records of historic events, there have been 20 extended time periods of drought conditions (ranging in length from approximately 30 days to over 340 days) within a 24.5-year reporting period, which provides a probability of one event in every one to two years. This frequency supports a “Highly Likely” probability of future events for the Saratoga County planning

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<sup>7</sup> National Integrated Drought Information System. Historical Drought Conditions in New York. <https://www.drought.gov/states/new-york>.

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area. The impact of climate change could produce longer, more severe droughts, exacerbating the current drought conditions and impacts.

## VULNERABILITY AND IMPACT

All existing and future buildings, facilities, and populations are exposed to this hazard and could potentially be impacted. However, drought impacts are mostly experienced in water shortages, breaks in water lines, or crop and livestock losses on agricultural lands and typically have minimal impact on buildings.

The Saratoga County Planning Team identified the following critical facilities as assets that are considered the most important to the planning area and are susceptible to a range of impacts caused by drought events. For a comprehensive list of critical facilities by participating entity please see Appendix C.

**Table 6-6. Critical Facilities Vulnerable to Drought Events**

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Services (EOC, Fire, Police, EMS, Hospitals)	<ul style="list-style-type: none"> <li>Increased law enforcement activities may be required to enforce water restrictions.</li> <li>Firefighters may have limited water resources to aid in firefighting and suppression activities, increasing risk to lives and property.</li> <li>Potential for increased number of emergency calls as drought events can lead to cascading hazard events such as wildfires and flash flooding.</li> </ul>
Airport, Academic Institutions, Community Residential Facilities, Day Care Facilities, Evacuation Centers & Shelters, Governmental Facilities	<ul style="list-style-type: none"> <li>Strain on staff as drought may cause health problems related to low water flows and poor water quality.</li> <li>Water main breaks due to soil shrinking and swelling cycles could lead to facility closures.</li> <li>Building foundations may crack due to soil shrinking and swelling cycles.</li> <li>Operations dependent on water supply may be adversely impacted.</li> <li>Economic disruptions due to cracked foundations and infrastructure damages as a result of soil shrinking and swelling cycles.</li> </ul>
Commercial Suppliers (food, gas, etc.)	<ul style="list-style-type: none"> <li>Operations dependent on water supply may be adversely impacted.</li> <li>Economic disruptions due to cracked foundations and infrastructure damages as a result of soil shrinking and swelling cycles.</li> </ul>
Utility Services and Infrastructure (electric, water, wastewater, communications)	<ul style="list-style-type: none"> <li>Potential for increased number of emergency calls as drought events can lead to cascading hazard events such as wildfires and flash flooding.</li> <li>Water main breaks due to soil shrinking and swelling cycles could lead to facility closures.</li> <li>Operations dependent on water supply may be adversely impacted.</li> </ul>

Even with the planning area relying on multiple water utility providers as well as local and private service, high demand can still deplete these resources during extreme drought conditions. As resources are depleted, potable water is in short supply and overall water quality can suffer, elevating health concerns for all residents but especially vulnerable populations – typically children, the elderly, and the ill. In addition, potable water is used for drinking, sanitation, patient

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care, sterilization, equipment, heating and cooling systems, and many other essential functions in medical facilities.

The average person will survive only a few days without potable water, and this timeframe can be drastically shortened for those people with more fragile health – typically children, the elderly, and people with disabilities. During summer drought, or hot and dry conditions, elderly persons, small children, infants, those with disabilities, or those who do not have adequate cooling units in their homes may become more vulnerable to injury and/or death. In addition, people who speak a language other than English may face increased vulnerability due to language barriers that limit their access to important information such as weather-related warnings and instructions regarding safety measures.

The population over 65 in the Saratoga County planning area is estimated at 19 percent of the total population and children under the age of 5 are estimated at 5 percent. The population with a disability is estimated at 11 percent of the total population. In addition, an estimated 7 percent of the planning area population live below the poverty level and 2 percent of the population speaks English ‘less than very well’ (Table 6-7).

**Table 6-7. Populations at Greater Risk by Participating Entity<sup>8</sup>**

JURISDICTION	POPULATION				
	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Saratoga County	44,772	11,049	26,426	15,598	4,430
Town of Ballston	1,957	521	964	538	84
Village of Ballston Spa	670	158	357	338	262
Town of Charlton	1,137	245	470	191	26
Town of Clifton Park	6,988	2,095	3,220	762	953
Town of Corinth	1,369	443	910	641	107
Village of Corinth	476	181	424	373	58
Town of Day	281	0	179	123	2
Town of Edinburg	406	47	220	200	0
Town of Galway	859	234	497	319	0
Village of Galway	44	21	26	29	0
Town of Greenfield	1,704	429	1,202	867	15
Town of Hadley	492	114	303	197	7
Town of Halfmoon	4,509	1251	2,833	979	987
Town of Malta	3,666	579	2,035	1,287	305
City of Mechanicville	964	317	906	1,072	37

<sup>8</sup> US Census Bureau, American Community Survey, 2022



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JURISDICTION	POPULATION				
	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Town of Milton	3,010	460	2,142	941	298
Town of Moreau	3,017	902	2,392	1,752	312
Town of Northumberland	822	259	541	330	126
Town of Providence	262	77	223	259	5
Village of Round Lake	152	53	68	25	12
Town of Saratoga	928	277	651	321	36
City of Saratoga Springs	5,997	1,018	3,323	2,879	880
Village of Schuylerville	209	106	199	151	12
Village of South Glens Falls	687	204	506	387	23
Town of Stillwater	1,645	621	654	893	48
Village of Stillwater	211	56	164	225	0
Village of Victory	115	57	112	108	7
Town of Waterford	1,685	254	992	478	68
Village of Waterford	570	107	310	199	0
Town of Wilton	3,074	906	1769	539	134

The population is also vulnerable to food shortages when drought conditions exist, and potable water is in short supply. Water is a key input for food production. It is used on farms to grow crops, raise livestock, clean processing equipment, generate electricity, and rinse produce. In livestock farming, large volumes of water are used for livestock watering along with maintenance of general hygiene of the animals and equipment. Water is an important element in all food processes: it is an ingredient for the preparation of beverages and food products, the most important media for cleaning and sterilization of equipment and processing plants, and an unavoidable source in the utilities when heating, cooling and power generation are required.

All residents in the Saratoga County planning area could be adversely affected by drought conditions, which could limit water supplies and present health threats. The economic impact of droughts can be significant as they produce a complex web of impacts that spans many sectors of the economy and reach well beyond the area experiencing physical drought. This complexity exists because water is integral to our ability to produce goods and provide services. If droughts extend over a number of years, the direct and indirect economic impact can be significant.

Crop production can also suffer greatly during extreme drought conditions, limiting fresh local food supplies, driving up costs, and negatively impacting the local economy. Drought conditions could adversely affect the agricultural industry throughout the Saratoga County planning area, including participating jurisdictions.

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Saratoga County has a prominent agricultural sector and features more than 600 farms including dairy, beef, sheep, poultry, swine, vegetables, fruits, and greenhouse farms. These farms are a vital part of the food and agricultural industry in the planning area. Saratoga County’s annual market value of agricultural products sold is over \$115,000,000. An estimated 33 percent of sales are from crops and an estimated 67 percent of sales are from livestock and poultry products.<sup>9</sup> Drought can negatively affect nutrition sources and future yields. Crops may become scarcer, raising prices, but the higher costs of production and potential soil degradation could hurt long-term yield. For livestock, feed shortages, decreases in feed, and stressed animals would reduce productivity and increase cost. Dry pastures lead to lower quality hay and increased fire danger. Prolonged drought periods could have devastating impacts on the agricultural industry across the planning area.

Habitat damage is a vulnerability of the environment during periods of drought for both aquatic and terrestrial species. The county has multiple state wildlife management areas including Saratoga Sand Plains (1,000 acres) in Wilton and Northumberland, and Victory Mills (47 acres) in Victory and Saratoga areas. In addition, Saratoga County has 13 nature preserves, many public parks, including the Saratoga Spa State Park, and several lakes including the Great Sacandaga Lake. Drought impacts can include visibly dry vegetation and lower water levels in lakes, and long-term impacts such as damage to ecosystems render these habitats vulnerable during periods of extreme or prolonged drought.

Impacts of past droughts experienced in the Saratoga County planning area, including participating jurisdictions, have not resulted injuries or fatalities supporting a “Limited” severity of impact meaning injuries and/or illnesses are treatable with first aid, shutdown of facilities and services for less than 24 hours, and less than 10 percent of property is destroyed or with major damage. Monetary damages associated with drought are unavailable and at this time the annualized estimated losses due to drought over the 24.5-year reporting period in the Saratoga County planning area are considered negligible.

### ASSESSMENT OF IMPACTS

The Drought Impact Reporter was developed in 2005 by the University of Nebraska-Lincoln to provide a national database of drought impacts. Droughts can have an impact on agriculture, business and industry; energy; fire; plants and wildlife; relief, response, and restrictions; society and public health; tourism and recreation; and water supply and quality. The reports are submitted from individuals to federal, state, and local agencies, as well as the general public. Table 6-8 lists the drought impacts to Saratoga County from 2005 to 2024 based on reports received by the Drought Impact Reporter.

**Table 6-8. Drought Impacts, 2005-2024**

DROUGHT IMPACTS 2005-2021	
Agriculture	6
Business & Industry	0
Energy	0
Fire	0

<sup>9</sup> Census of Agriculture. Saratoga County, New York County Profile. 2022

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DROUGHT IMPACTS 2005-2021	
Plants & Wildlife	6
Relief, Response & Restrictions	4
Society & Public Health	3
Tourism & Recreation	0
Water Supply & Quality	6

Drought has the potential to impact people in the Saratoga County planning area, including participating jurisdictions. While it is rare that drought, in and of itself, leads to a direct risk to the health and safety of people in the U.S., severe water shortages could result in inadequate supply for human needs. Population trends for the planning area indicate continued future growth which can cause concern for the current water infrastructure and demand for the planning area. Severe drought conditions can be frequently associated with a variety of impacts, including:

- Dry clay soil can lead to water main lines shifting and break. Often repair to water lines includes shutting off water to multiple homes at one time.
- The number of health-related low-flow issues (e.g., diminished sewage flows, increased pollution concentrations, reduced firefighting capacity, and cross-connection contamination) will increase as the drought intensifies.
- Public safety from forest / range / wildfires will increase as water availability and/or pressure decreases.
- During drought there is an increased risk for wildfires and dust storms.
- Respiratory ailments may increase as the air quality decreases.
- Prolonged drought can lead to increases in illness and disease related to drought.
- There may be an increase in disease due to wildlife concentrations (e.g., rabies, Rocky Mountain spotted fever, Lyme disease).
- Residents may disagree with the County and participating Cities, Towns, and Villages over water use / water rights, creating conflict.
- Political conflicts may increase between municipalities, counties, states, and regions.
- Water management conflicts may arise between competing interests.
- Increased law enforcement activities may be required to enforce water restrictions.
- The community may need increased operational costs to enforce water restriction or rationing.
- Severe water shortages could result in inadequate supply for human needs as well as lower quality of water for consumption.
- Firefighters may have limited water resources to aid in firefighting and suppression activities, increasing risk to lives and property.
- Utility providers can see decreases in revenue as water supplies diminish.
- Utilities providers may cut back energy generation and service to their customers to prioritize critical service needs.
- Hydroelectric power generation facilities and infrastructure would have significantly diminished generation capability. Dams simply cannot produce as much electricity from low water levels as they can from high water levels.
- Fish and wildlife food and habitat will be reduced or degraded over time during a drought and disease will increase, especially for aquatic life.

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- Wildlife will move to more sustainable locations creating higher concentrations of wildlife in smaller areas, increasing vulnerability, and further depleting limited natural resources.
- There are five federally endangered, threatened or candidate species in Saratoga County. Severe and prolonged drought can result in the reduction of a species or cause the extinction of a species altogether.
- Plant life will suffer from long-term drought. Wind and erosion will also pose a threat to plant life as soil quality will decline.
- Dry and dead vegetation will increase the risk of wildfire.
- Drought poses a significant risk to annual and perennial crop production and overall crop quality leading to higher food costs.
- Drought-related declines in production may lead to an increase in unemployment.
- Drought may limit livestock grazing resulting in decreased livestock weight, potential increased livestock mortality, and increased cost for feed.
- Negatively impacted water suppliers may face increased costs resulting from the transport water or develop supplemental water resources.
- Long term drought may negatively impact future economic development.

The overall extent of damage caused by periods of drought is dependent on its extent and duration. The level of preparedness and pre-event planning done by community, local businesses, and citizens will contribute to the overall economic and financial conditions in the aftermath of a drought event. The water service providers of Saratoga County planning area, including all participating jurisdictions, will implement a drought contingency plan / protocol based on their area during time of drought.

## CLIMATE CHANGE CONSIDERATIONS

New York State experiences periods of drought, on average, every two to three years. These droughts often occur seasonally, peaking in summer and improving over winter. Winter snowfall amounts vary greatly over the state, ranging from around 30 inches in New York City and Long Island to 140 inches in Oswego, east of Lake Ontario. The snowfall and snow cover provide helpful water content as spring melt releases this water into the soils and streams. Due to climate change, this melting is occurring earlier in the year, and possibly leading to lower-than-expected stream flows or soil moisture going into the warm season. As winters warm, more precipitation is falling as rain instead of snow, also contributing to less spring snowmelt.<sup>10</sup>

Rising temperatures and shifting rainfall patterns are likely to increase the intensity of both floods and droughts. Average annual precipitation in the Northeast has increased 10 percent since 1895, and precipitation from extremely heavy storms has increased 70 percent since 1958. During the next century, annual precipitation and the frequency of heavy downpours are likely to keep rising. Precipitation is likely to increase during winter and spring, but not change significantly during summer and fall. Rising temperatures will melt snow earlier in spring and increase evaporation, and thereby dry the soil during summer and fall. As a result, changing the climate is likely to intensify flooding during winter and spring, and drought during summer and fall.<sup>11</sup>

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<sup>10</sup> NOAA, NIDIS: <https://www.drought.gov/states/new-york#:~:text=Drought%20in%20New%20York,New%20York%20State&text=The%20snowfall%20and%20snow%20cover,going%20into%20the%20warm%20season>.

<sup>11</sup> Environmental Protection Agency, EPA 430-F-16-034, August 2016: What Climate Change Means for New York



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SECTION 7  
**EARTHQUAKE**

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## HAZARD DESCRIPTION

An earthquake is the sudden movement of the Earth’s surface caused by the release of stress accumulated within or along the edge of the Earth’s tectonic plates, volcanic eruption, or by a manmade explosion. The majority of earthquakes occur along faults; however, earthquakes can occur within plate interiors. Over geologic time, plates move and plate boundaries change, pushing weakened boundary regions to the interior part of the plates. These areas of weakness within the continents can cause earthquakes in response to stresses that originate at the edges of the plate or in the deeper crust.

Earthquake locations are described by the focal depth and geographic position of the epicenter. The focal depth of an earthquake is the depth from the Earth’s surface to the region where an earthquake’s energy originates (the focus or hypocenter). The epicenter is the point on the Earth’s surface directly above the hypocenter. Earthquakes usually occur without warning, with their effects impacting great distances away from the epicenter.

According to the U.S. Geological Society (USGS) Earthquake Hazards Program, an earthquake hazard is anything associated with an earthquake that may influence an individual’s normal activities. Table 7-1 describes definition of examples.

**Table 7-1. Definitions of Earthquake Hazards<sup>1</sup>**

HAZARD	DESCRIPTION
Surface Faulting	Displacement that reaches the earth’s surface during slip along a fault. Commonly occurs with shallow earthquakes, those with an epicenter less than 20 kilometers.
Ground Motion (shaking)	The movement of the earth’s surface from earthquakes or explosions. Ground motion or shaking is produced by waves that are generated by sudden slip on a fault or sudden pressure at the explosive source and travel through the earth and along its surface.
Landslide	A movement of surface material down a slope.
Liquefaction	A process by which water-saturated sediment temporarily loses strength and acts as a fluid, like when you wiggle your toes in the wet sand near the water at the beach. This effect can be caused by earthquake shaking.

<sup>1</sup> Source: USGS, 2012

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HAZARD	DESCRIPTION
Tectonic Deformation	A change in the original shape of a material due to stress and strain.
Tsunami	A sea wave of local or distant origin that results from large-scale seafloor displacements associated with large earthquakes, major submarine slides, or exploding volcanic islands.
Seiche	The sloshing of a closed body of water from earthquake shaking.

### LOCATION

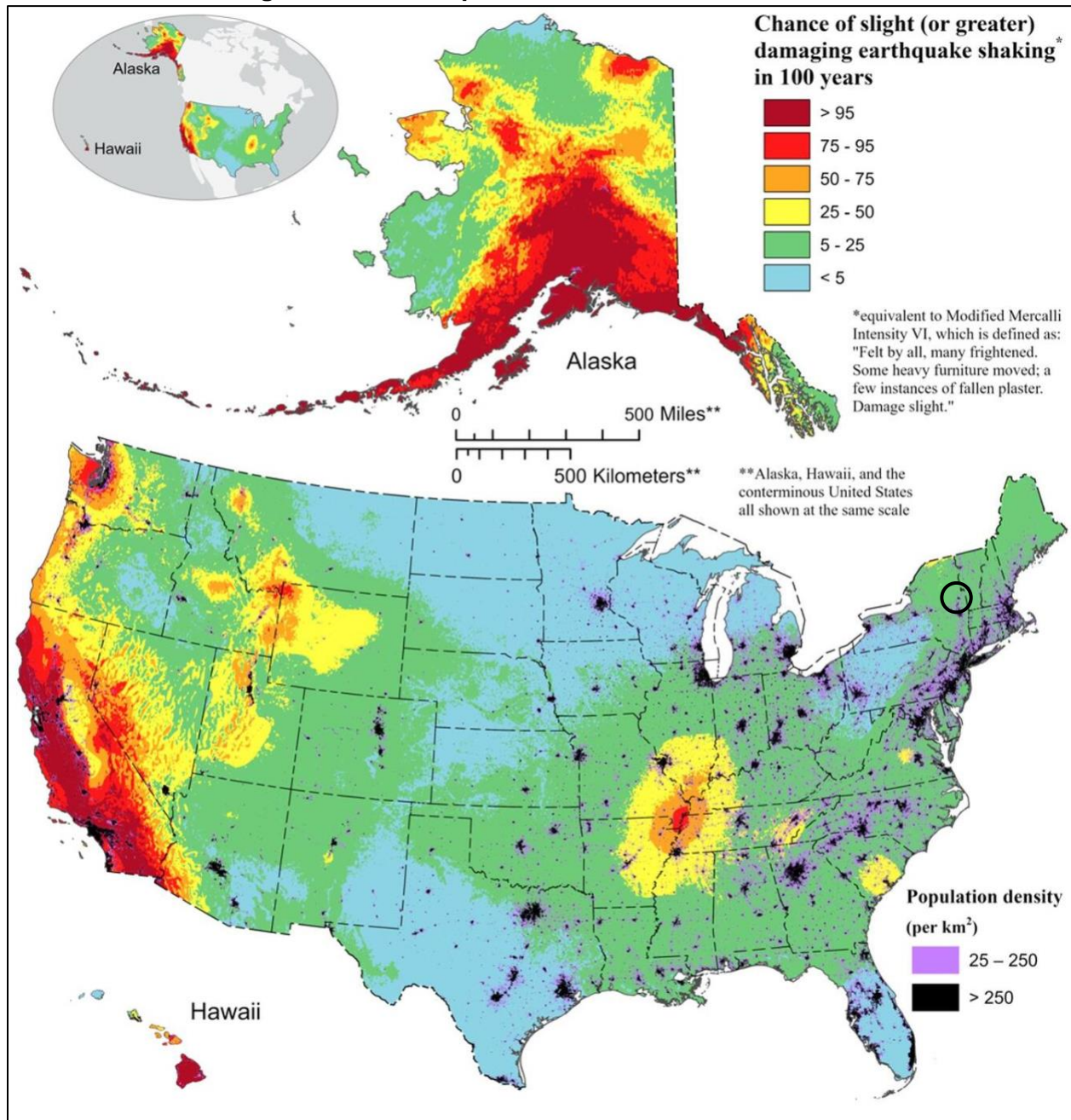
Earthquake hazard areas are mapped by the USGS's National Seismic Hazard Model (NSHM). Figure 7-1 shows the most recent 2023 iteration of this USGS model. The NSHM defines the potential for earthquake ground shaking for various probability levels across the United States. The 2023 NSHM is an update to the previous 2018 version, and compiles data and findings from a number of sources including earthquake catalogs, geodetic- and geologic-based fault and deformation models, and ground motion models (GMMs), among others.<sup>2</sup> The map shows the percent chance that a given area will experience a category VI (or stronger) earthquake in 100 years, as defined by the Modified Mercalli Intensity (MMI) Scale (Table 7-3). The likelihood of a significant earthquake event is signified by the color-coding on the map. Densely populated areas are also highlighted on the map (purple and black dotting) to indicate areas of elevated vulnerability in relation to higher seismic risk. The Saratoga County planning area, as identified in Figure 7-1, is located in a relatively low hazard area, with between a 5 percent and 25 percent chance of experiencing a strong earthquake every 100 years.

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<sup>2</sup> A comprehensive overview of the modelling process can be found at the USGS website, <https://www.usgs.gov/programs/earthquake-hazards/science/2023-50-state-long-term-national-seismic-hazard-model-0#overview>

## SECTION 7: EARTHQUAKE

Figure 7-1. U.S. Map of Peak Ground Acceleration<sup>3</sup>



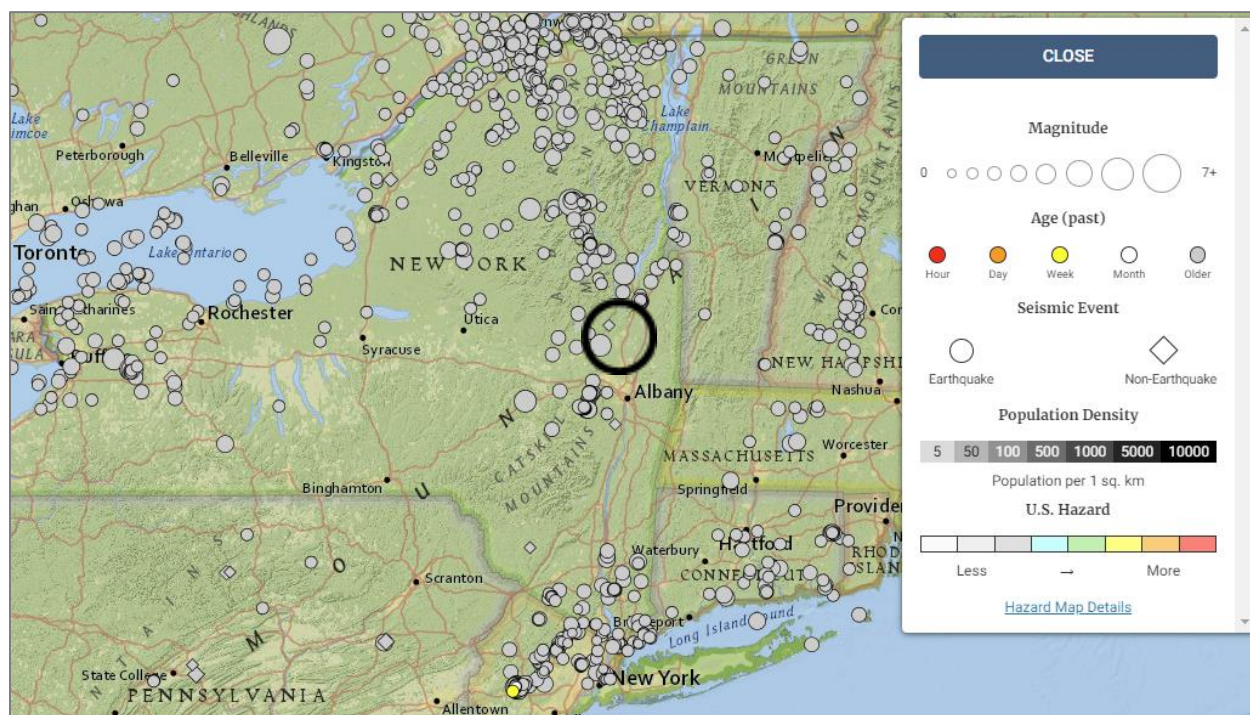
Historically, most earthquakes in New York State occur in three zones: around New York City, in the Adirondack Mountains, and west of the City of Rochester. Figure 7-2 maps historic earthquake epicenters across New York between 1914 and June 2023.

<sup>3</sup> The Saratoga County planning area is indicated by the black circle.



## SECTION 7: EARTHQUAKE

Figure 7-2. Historic Earthquake Epicenters in New York, 1914 – June 2023<sup>4</sup>



### EXTENT

Earthquakes are measured in terms of magnitude and intensity. The prevalent magnitude measurement in use today is based on the Moment Magnitude Scale (MMS). MMS measures the movement of rock along the fault. It accurately measures larger earthquakes, which can last for minutes, affect a much larger area, and cause more damage. Magnitudes are based on a logarithmic scale (base 10), meaning that for each whole number you go up on the magnitude scale, the amplitude of the ground motion recorded by a seismograph goes up ten times. Using this scale, a magnitude 5 earthquake would result in ten times the level of ground shaking as a magnitude 4 earthquake (and about 32 times as much energy would be released).<sup>5</sup> The USGS reports earthquake magnitudes above 4.0 as “moment magnitude,” often described in the press as “Richter” magnitude. Table 7-2 shows the magnitude levels for the current Richter/Moment Magnitude scale.

<sup>4</sup> Saratoga County’s approximate location is indicated by the black circle.

<sup>5</sup> (n.d.). How Do We Measure Earthquake Magnitude? Michigan Tech.

<https://www.mtu.edu/geo/community/seismology/learn/earthquake-measure/#:~:text=The%20moment%20magnitude%20scale%20is,the%20earthquake%20at%20multiple%20stations.>

# SECTION 7: EARTHQUAKE

**Table 7-2. Richter / Moment Magnitude Scale<sup>6</sup>**

MAGNITUDE	CATEGORY	DESCRIPTION OF EFFECTS	EVENTS PER YEAR
< 3.0	Micro	Usually not felt, but can be recorded by seismograph	+100,000
3.0 – 3.9	Minor	Often felt, but causes no damage	12,000 - 100,000
4.0 – 4.9	Light	Felt by all, minor breakage of objects	2,000 - 12,000
5.0 – 5.9	Moderate	Some damage to weak structures	200 – 2,000
6.0 – 6.9	Strong	Moderate damage in populated areas	20 – 200
7.0 – 7.9	Major	Serious damage over large areas with loss of life expected	3 – 20
> 7.9	Great	Severe destruction and loss of life over large areas	Less than 3

Earthquake Intensity measurement is an on-the-ground description. The measurement qualitatively explains the severity of earthquake shaking and its effects on people and their environment. Intensity measurements will differ depending on each location’s proximity to the epicenter or point on the surface of the earth directly above the focus where the earthquake started. The intensity scale consists of a series of certain key responses such as people awakening, movement of furniture, damage to chimneys, and total destruction. There can be multiple intensity measurements associated with an earthquake as opposed to one magnitude measurement.<sup>7</sup> The Modified Mercalli Intensity value assigned to a specific site after an earthquake has a more meaningful measure of severity to the nonscientist than the magnitude because intensity refers to the effects actually experienced at a specific location. The scale provides the intensity of the earthquake in values ranging from I to X. Table 7-3 describes the typical effects and intensities associated with earthquakes of various magnitudes. The intensity and effects depend on multiple factors (earthquake depth, epicenter location, site geology, population density, to name a few) and can vary widely.

<sup>6</sup> (n.d.). Earthquakes. Britannica. <https://www.britannica.com/science/earthquake-geology>

<sup>7</sup> Wood, H. O., and Neumann, Frank (1931). Modified Mercalli Intensity Scale of 1931: Seismological Society of America Bulletin, v. 21, no. 4, p. 277-283.

# SECTION 7: EARTHQUAKE

**Table 7-3. Magnitude and Modified Mercalli Intensity (MMI) Scale<sup>8</sup>**

INTENSITY	CATEGORY	DESCRIPTION OF EFFECTS	CORRESPONDING RICHTER MAGNITUDE
I	Not Felt	Not felt except by a very few under especially favorable conditions	< 2.0
I	Not Felt	Felt only by a few persons at rest, especially on upper floors of buildings.	2.0 – 2.9
II – III	Weak	Felt quite noticeably by persons indoors, with shaking of indoor objects. Rarely causes damages.	3.0 – 3.9
IV – V	Light to Moderate	Noticeable shaking of indoor objects and rattling noises. Felt by most people in the affected area. Generally, no to minimal damage	4.0 – 4.9
VI – VII	Strong to Very Strong	Significant damages to poorly constructed buildings. Limited to moderate damages to well-built structures.	5.0 – 5.9
VIII – IX	Severe to Violent	Damage slight in specially designed structures; considerable damage in ordinary buildings with partial collapse. Damage great in poorly built structures.	6.0 – 6.9
VIII +	Severe to Extreme	Damage considerable in specially designed structures. Damage substantial to most buildings, with partial or complete collapse. Felt across great distances with major damage mostly limited to 250 km from Epicenter.	7.0 – 7.9
VIII – IX	Severe to Violent	Major damage to buildings, structures likely to be destroyed; will cause moderate to heavy damage to sturdy or earthquake-resistant buildings; damaging in large areas; felt in extremely large regions.	8.0 – 8.9
VIII +	Severe to Extreme	At or near total destruction. Severe damage or collapse to all buildings; heavy damage and shaking extends to distant locations and permanent changes in ground topography.	9.0+

Taking into consideration the possible extent of an earthquake for the area, by reviewing Tables 7-2 and 7-3 in conjunction with only two previous occurrences, as depicted in Figure 7-3 below, the Saratoga County planning area has experienced earthquakes of 3.1 to 4.1 magnitude or Levels II-V (weak to moderate impact) on the Modified Mercalli intensity scale. This is the greatest extent the entire planning area can anticipate in the future, based on historic records.

<sup>8</sup> Source: USGS

## SECTION 7: EARTHQUAKE

### HISTORICAL OCCURRENCES

According to USGS, and the National Geophysical Data Center (NGDC), the most significant earthquakes on record have occurred north of the Saratoga County planning area in the Adirondack Mountains. In that region, a 5.3 magnitude earthquake occurred in the Hamlet of Au Sable Forks in 1983, and a 5.1 magnitude earthquake occurred near the Town of Newcomb. Both of these are considered “strong to very strong” earthquakes on the Modified Mercalli Intensity scale.

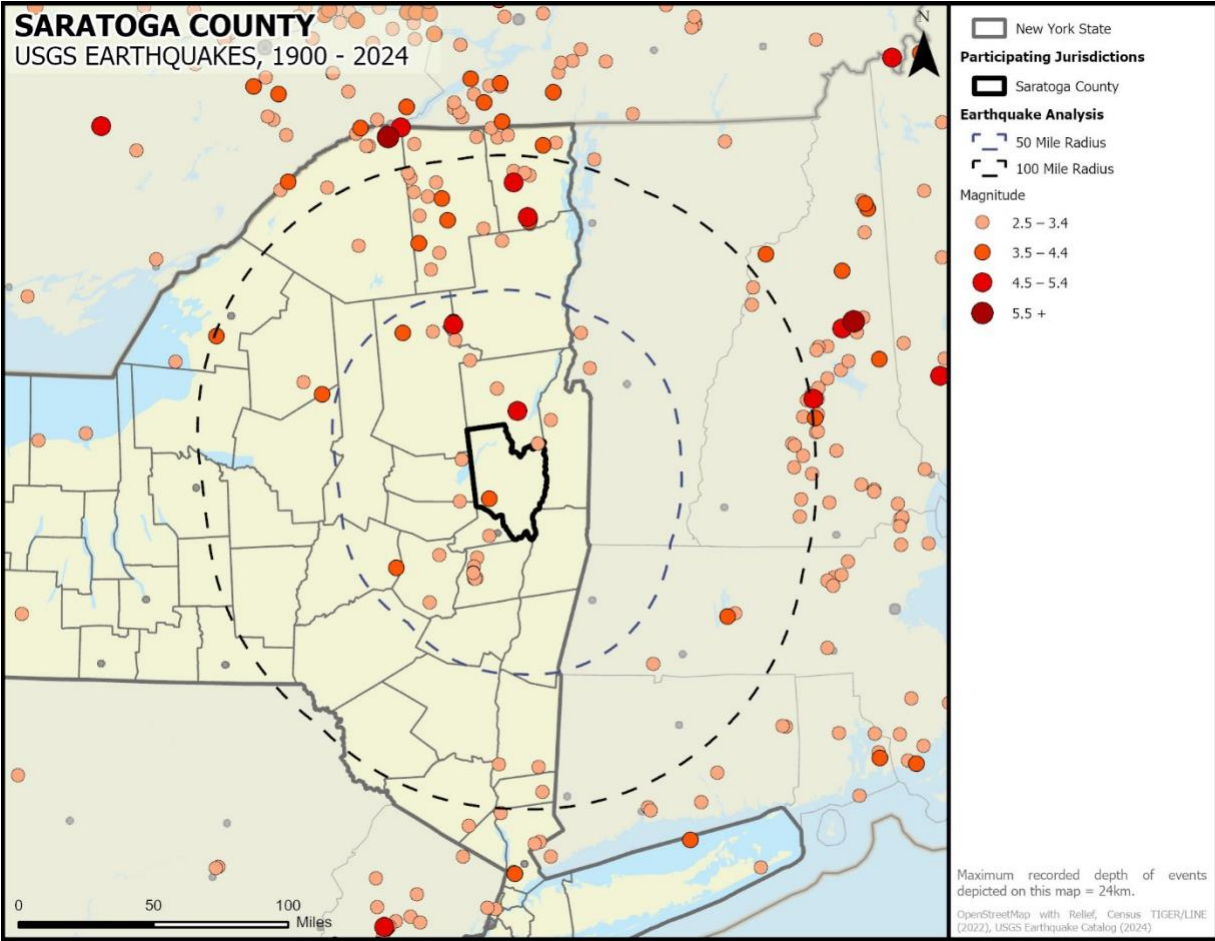
Within the Saratoga County planning area, the strongest earthquake on record occurred over 100 years ago on February 3, 1916, when a 4.1 magnitude (light to moderate intensity) earthquake occurred roughly 2 miles southeast of the Town of Galway. The only other previous earthquake to occur within the planning area was a 3.1 magnitude (weak intensity) earthquake in the Village of South Glens Falls that occurred on March 11, 2020. No known impacts or damages are associated with either of these events within the planning area, though residents did report feeling shaking and hearing a loud boom in the Village of South Glens Falls during the 2020 event.<sup>9</sup> Table 7-4 includes a summary of historical earthquake events that have occurred in Saratoga County as well as those within a 50-mile and 100-mile radius of the county.

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<sup>9</sup> <https://www.news10.com/top-stories/south-glens-falls-reacts-to-being-epicenter-of-wednesday-earthquake/>

# SECTION 7: EARTHQUAKE

**Figure 7-3. Historic Earthquake Events in Saratoga County, 1900-2024**



**Table 7-4. Historical Earthquake Event Summary, 1900-2024**

JURISDICTION	NUMBER OF EVENTS	MAXIMUM EXTENT	INJURIES & FATALITIES	PROPERTY & CROP DAMAGE
Saratoga County	2	4.1	0	\$0
50-Mile Radius	33	5.1	0	\$0
100-Mile Radius	77	5.3	0	\$0

A significant earthquake, as defined by NGDC, is one that has caused at least moderate damage (approximately \$1 million or more), has resulted in 10 or more deaths, has registered as a magnitude 7.5 or greater, has registered as Modified Mercalli Intensity (MMI) Scale X or greater, or generated a tsunami. None of these criteria have been met by any seismic activity known to have impacted the planning area.

## PROBABILITY OF FUTURE EVENTS

Earthquake Hazard Maps show the distribution of earthquake shaking levels that have a certain probability of occurring over a given period. According to the USGS, the entire Saratoga County planning area has between a 5 percent and 25 percent chance of a slightly damaging (or greater)

## SECTION 7: EARTHQUAKE

earthquake within 100 years. Based on historical records, the probability of an earthquake affecting the Saratoga County planning area, including participating jurisdictions, is “Unlikely”, meaning that an event is probable in the next 10 years.

### VULNERABILITY AND IMPACT

Little warning is usually associated with earthquakes and can impact areas a great distance away from the epicenter. The amount of damage depends on the density of population and buildings, and infrastructure construction in the affected area. Some places may be more vulnerable than others based on soil type, building age, and building codes in the Saratoga County planning area.

The Saratoga County Planning Team identified the following critical facilities as assets that are considered the most important to the planning area and are susceptible to a range of impacts caused by earthquake events. For a comprehensive list by participating jurisdiction, please see Appendix C.

**Table 7-5. Critical Facilities Vulnerable to an Earthquake**

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Services (EOC, Fire, Police, EMS), Hospitals and Medical Centers	<ul style="list-style-type: none"> <li>Emergency operations and services may be significantly impacted due to power outages, damaged facilities, fires and/or loss of communications. Impact can impede emergency response vehicle access to areas.</li> <li>Power outages could disrupt communications, delaying emergency response times.</li> <li>Extended power outages may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.</li> </ul>
Airport, Academic Institutions, Animal Shelter, Evacuation Centers & Shelters, Governmental Facilities, Residential/ Assisted Living Facilities	<ul style="list-style-type: none"> <li>Power outages could disrupt critical care.</li> <li>Backup power sources could be damaged.</li> <li>Evacuations may be necessary due to extended power outages or other associated damages to facilities.</li> <li>Economic disruption due to power outages negatively impact airport services as well as area businesses reliant on airport operations.</li> </ul>
Commercial Supplier (food, fuel, etc.)	<ul style="list-style-type: none"> <li>Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable.</li> <li>Essential supplies like medicines, water, food, and equipment deliveries may be delayed.</li> </ul>
Utility Services and Infrastructure (electric, water, wastewater, communications)	<ul style="list-style-type: none"> <li>Emergency operations and critical services may be significantly impacted due to power outages, damaged facilities, and/or loss of communications. Impact can impede emergency service vehicle access to areas.</li> <li>Power outages could disrupt communications, delaying emergency response times further straining the capacity and resources of emergency service personnel.</li> </ul>

With no significant historical events that resulted in reported damages, neither annualized loss-estimates or a breakdown of potential dollar losses of critical facilities and infrastructure from earthquakes are available. The potential severity of impact from an earthquake for the entire Saratoga County planning area, including participating jurisdictions, is considered “Limited”,

## SECTION 7: EARTHQUAKE

meaning injuries are treatable with first aid, less than 10 percent of infrastructure and property destroyed or with major damage, and critical facilities being shut down for less than 24 hours.

### CLIMATE CHANGE CONSIDERATIONS

While small, often unfelt earthquakes are relatively common, damaging earthquakes are rare within New York State, including the Saratoga County planning area. Changing conditions of weather patterns and climate change has not been established as having a direct impact on earthquake intensity or frequency.

According to the USGS, statistically there is an approximately equal distribution of earthquakes in all cold weather, hot weather, rainy weather, etc. Very large low-pressure changes associated with major storm systems, like typhoons and hurricanes, are known to trigger episodes of fault slip or slow earthquakes in the Earth's crust and may also play a role in triggering some damaging earthquakes. However, the numbers are small and are not statistically significant.<sup>10</sup>

The Saratoga County planning area is located outside of the three major zones within New York State that experience the most seismic activity. However, being located at the southern edge of the Adirondack Mountains, the planning area is in relatively close proximity to the more frequent earthquakes which occur farther north along that mountain range. Climate change is assumed to have no impact on the probability or intensity of potential earthquakes in the planning area.

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<sup>10</sup> (n.d.). *Natural Hazards*. United States Geological Survey. <https://www.usgs.gov/faqs/there-earthquake-weather>



**SARATOGA**  
**COUNTY** NEW YORK

SECTION 8  
**EXTREME COLD**



## SECTION 8: EXTREME COLD

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### HAZARD DESCRIPTION



Extreme cold refers to temperatures that are significantly lower than what is normal for a particular region or season. Extreme cold temperatures occur every winter in at least part of the country and affects millions of people across the United States. The arctic air can be dangerous and when combined with brisk winds, the planning area may experience dangerously cold wind chill values. Extreme cold may also result in a freeze, which according to the National Weather Service, occurs when the temperature

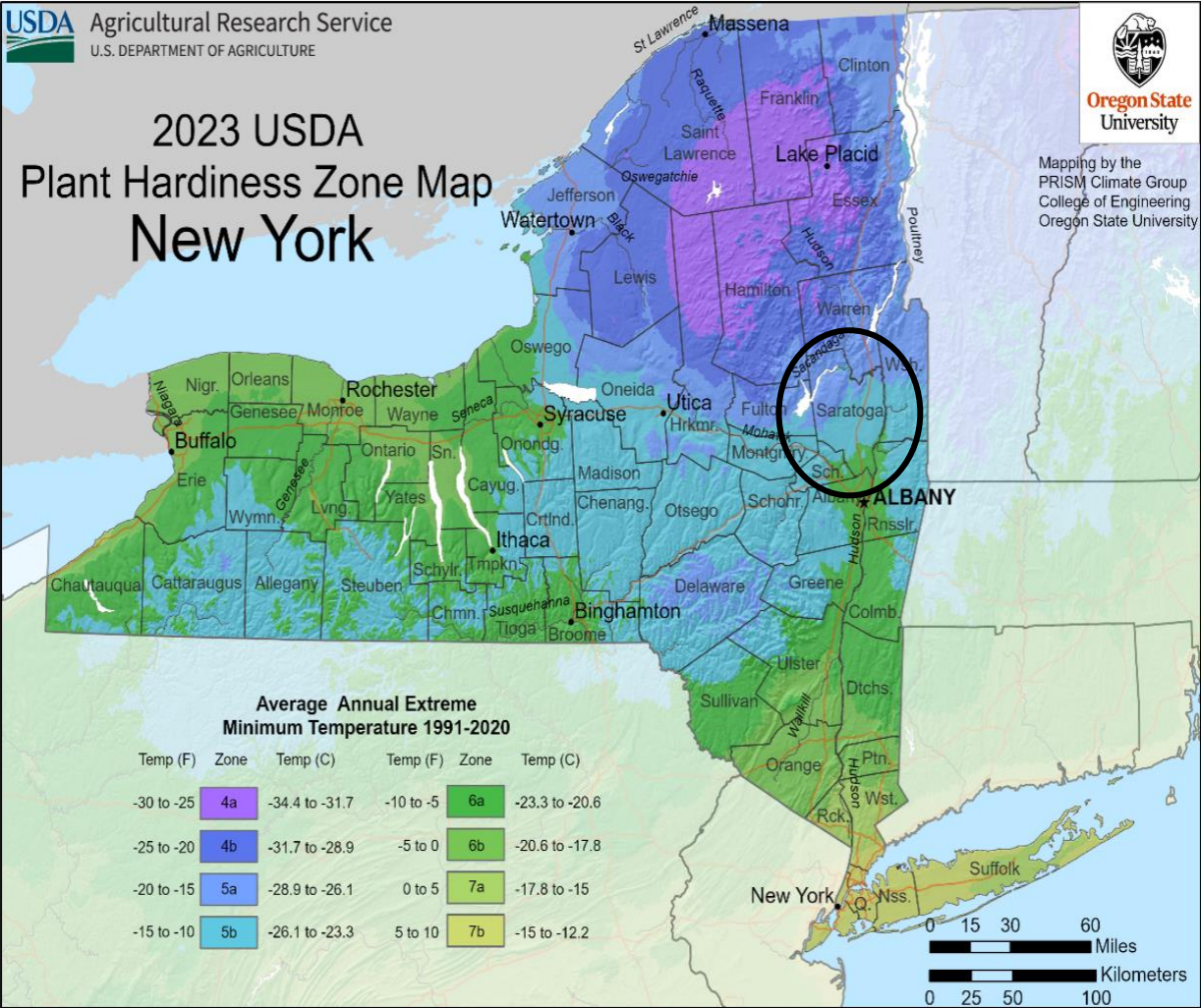
drops below 32°F for a significant period of time.

People exposed to extreme cold are susceptible to frostbite and can succumb to hypothermia in a matter of minutes. Extreme cold temperatures can also affect crops. In late spring or early fall, cold air outbreaks can damage or kill produce for farmers, as well as residential plants and flowers. Freezes and their effects are significant during the growing season. Extreme cold may also impact or damage roads, bridges, buildings, and critical infrastructure.

As indicated in Figure 8-1, the Saratoga County planning area, including participating jurisdictions, is in USDA Hardiness Zones 5a, 5b, and 6a, with annual minimum temperatures between -5°F and -20°F.

SECTION 8: EXTREME COLD

Figure 8-1. Annual Minimum Temperature<sup>1</sup>



LOCATION

Extreme cold events are not confined to specific geographic boundaries. Therefore, the entire Saratoga County planning area, including all participating jurisdictions, are exposed to extreme cold temperatures, and may be impacted.

EXTENT

The extent of extreme cold is measured by wind chill, which is the temperature of the atmosphere in relation to wind speed. Wind Chill describes what the air temperature *feels* like to the human skin. In simple terms, the colder the air temperature and the higher the wind speeds the colder it will feel on your skin if you're outside. So even if it remains the same temperature, but the wind speed increases, it will actually feel colder to your skin. This is because as wind blows across our bodies it takes our heat and blows it away. The faster the wind speeds, the faster our body heat

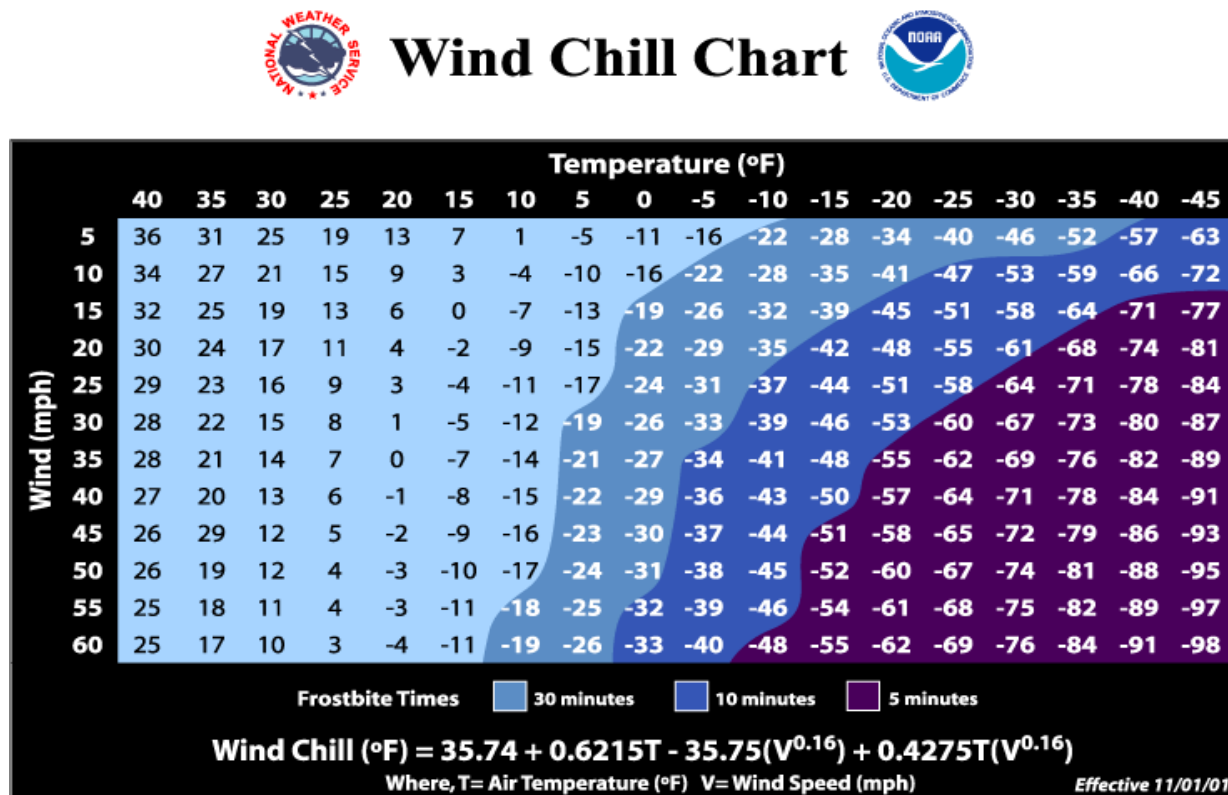
<sup>1</sup> Source: USDA

## SECTION 8: EXTREME COLD

is taken away and the colder it feels. It is important to understand the full extent of extreme cold temperatures because it can cause significant effects on the human body.

Figure 8-2 presents the National Weather Service Wind Chill Temperature Index. This chart represents wind chill based on the temperature and wind speed. The colors represent a frostbite indicator, showing the points where temperature, wind speed and exposure time will cause frostbite on an individual exposed to the elements. For example, a temperature of 20°F and a wind speed of 10mph will produce a wind chill temperature of 9°F. Under these conditions, exposed skin can freeze in 30 minutes.

Figure 8-2. Wind Chill Temperature Index



As described in Figure 8-1, the Saratoga County planning area has an average annual minimum cold temperature of -5°F to -20°F. The NCEI Storm Events Database provides historical records of extreme cold, frost, and freeze events in Saratoga County since 1996. The coldest reported temperatures in the Saratoga County planning area range from -25°F and -30°F when accounting for wind chill. It is expected that the planning area will experience a similar extent in the future.

## HISTORICAL OCCURRENCES

According to historical records there are 112 extreme cold events reported in the Saratoga County planning area between January 1996 and June 2024. It is important to note that the NCEI Storm Events Database only has records dating back to 1996 for Saratoga County and while it aims to capture the best available data, it may not account for every event. Table 8-1 shows historical incident information for the planning area. Extreme cold event data for the planning area is

# SECTION 8: EXTREME COLD

provided on a County-wide basis only in the NCEI database. Only those events with reported damages, injuries or fatalities have been included in the table.

**Table 8-1. Historical Extreme Cold Events, January 1996 – June 2024<sup>2</sup>**

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Saratoga County	5/1/2008	0	0	\$0	\$835,500
Saratoga County	5/1/2008	0	0	\$0	\$1,699,200
<b>TOTALS</b>		<b>0</b>	<b>0</b>	<b>\$2,534,700</b>	

**Table 8-2. Historical Extreme Cold Events Summary, January 1996 – June 2023**

JURISDICTION	NUMBER OF EVENTS	DEATHS	INJURIES	PROPERTY DAMAGES	CROP DAMAGES
Saratoga County	122	0	0	\$0	\$2,534,700

Based on the list of historical extreme cold events for the Saratoga County planning area, 17 of the events have occurred since the 2019 Plan.

## SIGNIFICANT EVENTS

### May 1, 2008 – Saratoga County

An unusually cold air mass, clear skies and light winds led to a widespread frost, along with subfreezing temperatures during the early morning hours of May 1, 2008. These cold temperatures, combined with the anomalously early blossoming of vegetation due to an early season warm spell, had significant agricultural impact for portions of northern Saratoga County where a total of \$2,534,700 (2024 dollars) in crop damages were reported. The freeze and frost were particularly damaging to fruit trees. Preliminary damage estimates were near \$20 million dollars in production losses, mainly for apple and peach orchards across the entire mid-Hudson Valley region.

## PROBABILITY OF FUTURE EVENTS

According to historical records, the Saratoga County planning area is expected to experience approximately three to four extreme cold events each year. The probability of a future extreme cold event affecting the Saratoga County planning area, including participating jurisdictions, is considered “Highly Likely”, with an extreme cold event likely to occur within the next year. The end of this section addresses climate change and its impacts on future extreme cold events in the planning area.

## VULNERABILITY AND IMPACT

Extreme cold can be very dangerous and may cause fatalities, especially for those who live below the poverty level and are unable to pay for heating systems or utility bills. Power outages are common during extreme cold events which can also lead to the inability to heat homes safely.

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<sup>2</sup> Values are in 2024 dollars. Database was searched for events between January 1996 and June 2024. This data includes cold/wind chill, extreme cold/wind chill, and frost/freeze events from the NCEI Storm Events Database. Only those events with reported damages, injuries or fatalities have been included in the table.

## SECTION 8: EXTREME COLD

This can lead to people using unsafe practices such as running a generator or gas stove inside their home.

During periods of extreme cold, aging critical infrastructure and utility systems, such as electrical and water systems, may fail. Freezing temperatures can cause water pipes to freeze and crack. In addition, ice may gather along electrical lines which can impact the electrical infrastructure and cause widespread outages for potentially long periods of time.

Saratoga County has a prominent agricultural sector and features more than 600 farms including dairy, beef, sheep, poultry, swine, vegetables, fruits, and greenhouse farms. These farms are a vital part of the food and agricultural industry in the planning area. Saratoga County’s annual market value of agricultural products sold is over \$115,000,000.<sup>3</sup> Extreme cold events may severely damage crops and may even cause low crop yields by restricting stem growth. The most dangerous time for an extreme cold event to occur is during the spring months, when crops are the most vulnerable to damage. An extreme cold event in the planning area may impact the County’s agricultural assets causing severe economic loss.

The Saratoga County Planning Team identified the following critical facilities (Table 8-3) as assets that are considered the most important to the planning area and are susceptible to a range of impacts caused by extreme cold events. For a comprehensive list by participating jurisdiction see Appendix C.

**Table 8-3. Critical Facilities Vulnerable to Extreme Cold Events**

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Departments (EOC, Fire, Police, EMS), Hospitals and Medical Centers	<ul style="list-style-type: none"> <li>• Emergency operations, services and response times may be significantly impacted due to power outages, and/or loss of communications.</li> <li>• Exposure to extreme cold can cause illnesses in first responders if exposed for a period of time.</li> <li>• Roads may become impassable due to snow and/or ice impacting response times by emergency services.</li> <li>• Extended power outages due to increased usage may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.</li> </ul>
Airport, Academic Institutions, Animal Shelter, Evacuation Centers & Shelters, Governmental Facilities, Residential/ Assisted Living Facilities	<ul style="list-style-type: none"> <li>• Power outages due to increased usage could disrupt critical care.</li> <li>• Backup power sources could be damaged.</li> <li>• Increased number of patients due to exposure to cold temperatures could lead to a strain on staff.</li> <li>• Water pipes can freeze and burst leading to flooding within facilities.</li> <li>• Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable.</li> <li>• Essential supplies like medicines, water, food, and equipment deliveries may be delayed.</li> <li>• Economic disruption due to power outages negatively impact airport services as well as area businesses reliant on airport operations.</li> <li>• Exposure risks to outdoor workers.</li> </ul>

<sup>3</sup> Census of Agriculture. Saratoga County, New York County Profile. 2022

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CRITICAL FACILITIES	POTENTIAL IMPACTS
Commercial Supplier (food, gas/fuel, etc.)	<ul style="list-style-type: none"> <li>Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable.</li> <li>Essential supplies like medicines, water, food, and equipment deliveries may be delayed.</li> </ul>
Utility Services and Infrastructure (electric, water, wastewater, communications)	<ul style="list-style-type: none"> <li>Emergency operations, services and response times may be significantly impacted due to power outages, and/or loss of communications.</li> <li>Roads may become impassable due to snow and/or ice impacting response times by emergency services.</li> <li>Power outages due to increased usage could disrupt critical care.</li> <li>Backup power sources could be damaged.</li> <li>Water pipes can freeze and burst leading to flooding within facilities.</li> </ul>

People and animals are subject to health risks from extended exposure to cold air. Children and elderly people are at greater risk of death from hypothermia during these events, especially in the neighborhoods with older housing stock. According to the U.S. Center for Disease Control, every year hypothermia kills about 600 Americans, half of whom are 65 years of age or older. In addition, populations living below the poverty level may not be able to afford to run heat on a regular basis or an extended period of time. They may lack access to adequate heating and emergency supplies.

Due to factors like limited mobility, communication difficulties, medical needs, sensitivity to cold temperatures, reliance on support services, transportation challenges, housing accessibility issues, and possible shortages in emergency shelter accommodations, people with disabilities are particularly vulnerable to extreme cold events. In addition, people who speak a language other than English may face increased vulnerability due to language barriers that limit their access to important information such as weather-related warnings and instructions regarding safety measures. Inclusive measures are crucial to address these vulnerabilities and ensure their safety during severe weather events.

The population over 65 in the Saratoga County planning area is estimated at 19 percent of the total population and children under the age of 5 are estimated at 5 percent. The population with a disability is estimated at 11 percent of the total population. In addition, an estimated 7 percent of the planning area population live below the poverty level and 2 percent of the population of the speaks English 'less than very well'.

**Table 8-4. Populations at Greater Risk of Extreme Cold Events<sup>4</sup>**

JURISDICTION	POPULATION				
	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Saratoga County	44,772	11,049	26,426	15,598	4,430
Town of Ballston	1,957	521	964	538	84
Village of Ballston Spa	670	158	357	338	262
Town of Charlton	1,137	245	470	191	26

<sup>4</sup> U.S. Census Bureau, American Community Survey, 2022

## SECTION 8: EXTREME COLD

JURISDICTION	POPULATION				
	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Town of Clifton Park	6,988	2,095	3,220	762	953
Town of Corinth	1,369	443	910	641	107
Village of Corinth	476	181	424	373	58
Town of Day	281	0	179	123	2
Town of Edinburg	406	47	220	200	0
Town of Galway	859	234	497	319	0
Village of Galway	44	21	26	29	0
Town of Greenfield	1,704	429	1,202	867	15
Town of Hadley	492	114	303	197	7
Town of Halfmoon	4,509	1251	2,833	979	987
Town of Malta	3,666	579	2,035	1,287	305
City of Mechanicville	964	317	906	1,072	37
Town of Milton	3,010	460	2,142	941	298
Town of Moreau	3,017	902	2,392	1,752	312
Town of Northumberland	822	259	541	330	126
Town of Providence	262	77	223	259	5
Village of Round Lake	152	53	68	25	12
Town of Saratoga	928	277	651	321	36
City of Saratoga Springs	5,997	1,018	3,323	2,879	880
Village of Schuylerville	209	106	199	151	12
Village of South Glens Falls	687	204	506	387	23
Town of Stillwater	1,645	621	654	893	48
Village of Stillwater	211	56	164	225	0
Village of Victory	115	57	112	108	7
Town of Waterford	1,685	254	992	478	68
Village of Waterford	570	107	310	199	0
Town of Wilton	3,074	906	1769	539	134

Older homes tend to be more vulnerable to the impacts of ice storm events. Their heating and electrical systems may be outdated and prone to outages. Pipes may no longer be well insulated as materials can degrade over long periods of time leading to frozen and busted pipes in homes

## SECTION 8: EXTREME COLD

and businesses. Approximately 47 percent (51,143 structures) of the housing structures in the Saratoga County planning area were built before 1980 (Table 8-5).

**Table 8-5. Structures at Greater Risk of Extreme Cold Events<sup>5</sup>**

JURISDICTION	SFR STRUCTURES BUILT BEFORE 1980	PERCENT OF TOTAL HOUSING UNITS (%)
Saratoga County	51,143	46.5
Town of Ballston	2,298	44.7
Village of Ballston Spa	1,938	78.2
Town of Charlton	1,357	76.9
Town of Clifton Park	7,504	47.5
Town of Corinth	1,967	62.4
Village of Corinth	938	76.3
Town of Day	949	66.8
Town of Edinburg	1,086	58.5
Town of Galway	1,037	56.7
Village of Galway	68	86.1
Town of Greenfield	1,158	31.3
Town of Hadley	590	55.7
Town of Halfmoon	2,958	25.4
Town of Malta	2,968	33.0
City of Mechanicville	2,492	85.9
Town of Milton	3,690	46.3
Town of Moreau	3,527	50.6
Town of Northumberland	528	26.8
Town of Providence	338	34.0
Village of Round Lake	256	65.3
Town of Saratoga	1,479	54.8
City of Saratoga Springs	8,709	59.7
Village of Schuylerville	521	73.6
Village of South Glens Falls	1,297	73.5
Town of Stillwater	1,940	46.0
Village of Stillwater	506	56.0

<sup>5</sup> U.S. Census Bureau, American Community Survey, 2022



# SECTION 8: EXTREME COLD

JURISDICTION	SFR STRUCTURES BUILT BEFORE 1980	PERCENT OF TOTAL HOUSING UNITS (%)
Village of Victory	172	64.2
Town of Waterford	2,950	71.5
Village of Waterford	1,103	95.8
Town of Wilton	1,618	22.2

Extreme cold events have been known to cause injury and fatality to humans. Overall, the total loss estimate of property and crops in the planning area is \$2,534,700 with an estimated average annualized loss of \$89,900. Based on historic loss and damages, the impact of extreme cold damages on the Saratoga County planning area, including participating jurisdictions, can be considered “Limited” severity of impact, meaning injuries and illnesses are treatable with first aid, critical facilities and services shut down for 24 hours or less, and less than 10 percent of property destroyed or with major damage.

**Table 8-6. Extreme Cold Event Damage Totals, January 1996 - June 2024**

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATES
Saratoga County	\$2,534,700	\$88,900

## ASSESSMENT OF IMPACTS

The greatest risk from an extreme cold event is to public health and safety. The impact of climate change could produce more frequent and intense extreme cold events, exacerbating the current winter storm impacts. Extreme cold conditions are associated with a variety of impacts, including:

- Vulnerable populations, particularly the elderly (19 percent of total population) and children under 5 (5 percent of total population), can face serious or life-threatening health problems from exposure to extreme cold including hypothermia and frostbite.
- Loss of electric power or other heat source can result in increased potential for fire injuries or hazardous gas inhalation because residents burn candles for light or use fires or generators to stay warm.
- Response personnel, including utility workers, public works personnel, debris removal staff, tow truck operators, and other first responders, are subject to injury or illness resulting from exposure to extreme cold temperatures.
- Response personnel would be required to travel in potentially hazardous conditions, elevating the life safety risk due to accidents and potential contact with downed power lines.
- Operations or service delivery may experience impacts from electricity blackouts due to ice and extreme cold related damages.
- Power outages are possible throughout the planning area due to downed trees and power lines and/or rolling blackouts. Outages are also possible due to an increase in electricity usage and demand when using electric heating systems.
- Critical facilities without emergency backup power may not be operational during power outages.
- Severe cold could significantly damage vegetation and crops.

## SECTION 8: EXTREME COLD

- Exposed water pipes may freeze and break when exposed to extreme cold temperatures, both residential and commercial structures are vulnerable, causing significant damages.

The economic and financial impacts of extreme cold events on the community will depend on the scale of the event, what is damaged, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by community, local businesses, and citizens will also contribute to the overall economic and financial conditions in the aftermath of an extreme cold event.

## CLIMATE CHANGE CONSIDERATIONS

Climate change may slightly decrease the risk of extreme cold events in the planning area. According to the Fourth National Climate Assessment, seasonal differences in Northeast U.S. temperatures have decreased in recent years as winters have warmed three times faster than summers. By the middle of this century, winters are projected to be milder, with fewer cold extremes, particularly across inland and northern portions of the Northeast. This will likely result in a shorter and less pronounced cold season with fewer frost days and a longer transition out of winter. Under the higher scenario, the trend of decreasing seasonality continues for the northern half of the region through the end of the century, but by then summer temperatures across the Mid-Atlantic are projected to rise faster than those in winter.<sup>6</sup>

In addition, according to the Climate Risk and Resilience Portal (ClimRR), the historical annual minimum temperature is about 35°F. Under the RCP 4.5 climate model, the annual minimum temperature at mid-century is projected to be about 40°F which represents a 5°F change from the current annual minimum temperature. This projection is consistent with the Fourth National Climate Assessment showing a potential increase in average minimum temperature for the Saratoga County planning area.

It can be inferred with milder winters and fewer cold extremes in the Northeastern U.S. that Saratoga County may see a decrease in extreme cold events, but data and research is still limited. However, it is important to note that data on future impacts is limited and these projections are subject to change as the research evolves.

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<sup>6</sup> U.S. Global Change Research Program, Fourth National Climate Assessment, Chapter 18: Northeast



**SARATOGA**  
**COUNTY** NEW YORK

SECTION 9

**EXTREME HEAT**

## SECTION 9: EXTREME HEAT

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### HAZARD DESCRIPTION

Extreme heat is a prolonged period of excessively high temperatures and exceptionally humid conditions. Extreme heat impacts occur throughout parts of New York State, including the Saratoga County planning area. The entire planning area, and all its participating jurisdictions, has the potential to be affected by extreme heat. Extreme heat is a leading cause of death among hazardous weather events in the United States according to the National Weather Service. These events are a growing concern for New York State and are projected to increase in frequency, duration, and severity.



Although heat can damage buildings and facilities, it presents a more significant threat to the safety and welfare of citizens. The major human risks associated with severe heat include short- and long-term social, economic, public health, livestock health / welfare, crop production, and infrastructure impacts. The most vulnerable population to heat casualties are children and the elderly or infirmed who frequently live on low fixed incomes and do not have access to air-conditioning on a regular basis. This population is sometimes isolated, with no immediate family or friends to look out for their well-being.

### LOCATION

There is no specific geographic scope for the extreme heat hazard. Extreme heat could occur anywhere within the Saratoga County planning area, including all participating jurisdictions. Municipalities with significant agricultural land may be more vulnerable due to the potential effect of extreme heat on crops.

### EXTENT

The magnitude or intensity of an extreme heat event is measured according to temperature in relation to the percentage of humidity. According to the National Oceanic Atmospheric Administration (NOAA), this relationship is referred to as the “Heat Index” and is depicted in Figure 9-1. This index measures how hot it feels outside when humidity is combined with high temperatures.

## SECTION 9: EXTREME HEAT

**Figure 9-1. Extent Scale for Extreme Summer Heat<sup>1</sup>**

Temperatures (°F)		Temperatures (°F)		Temperatures (°F)		Temperatures (°F)	
40	80 - 88: CAUTION	40	90 - 96: EXTREME CAUTION	40	98 - 106: DANGER	40	108 - 110: EXTREME DANGER
45	80 - 88: CAUTION	45	90 - 94: EXTREME CAUTION	45	96 - 104: DANGER	45	106 - 110: EXTREME DANGER
50	80 - 86: CAUTION	50	88 - 94: EXTREME CAUTION	50	96 - 102: DANGER	50	104 - 110: EXTREME DANGER
55	80 - 86: CAUTION	55	88 - 92: EXTREME CAUTION	55	94 - 100: DANGER	55	102 - 110: EXTREME DANGER
60	80 - 84: CAUTION	60	86 - 90: EXTREME CAUTION	60	92 - 98: DANGER	60	100 - 110: EXTREME DANGER
65	80 - 84: CAUTION	65	86 - 90: EXTREME CAUTION	65	92 - 96: DANGER	65	98 - 110: EXTREME DANGER
70	80 - 84: CAUTION	70	86 - 88: EXTREME CAUTION	70	90 - 94: DANGER	70	96 - 110: EXTREME DANGER
75	80 - 82: CAUTION	75	84 - 88: EXTREME CAUTION	75	90 - 94: DANGER	75	96 - 110: EXTREME DANGER
80	80 - 82: CAUTION	80	84 - 86: EXTREME CAUTION	80	88 - 92: DANGER	80	94 - 110: EXTREME DANGER
85	80 - 82: CAUTION	85	84 - 86: EXTREME CAUTION	85	88 - 90: DANGER	85	92 - 110: EXTREME DANGER
90	80: CAUTION	90	82 - 84: EXTREME CAUTION	90	86 - 90: DANGER	90	92 - 110: EXTREME DANGER
95	80: CAUTION	95	82 - 84: EXTREME CAUTION	95	86 - 88: DANGER	95	90 - 110: EXTREME DANGER
100	80: CAUTION	100	82 - 84: EXTREME CAUTION	100	86 - 88: DANGER	100	90 - 110: EXTREME DANGER

### Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

The Extent Scale in Figure 9-1 displays varying categories of caution depending on the relative humidity combined with the temperature. For example, when the temperature is at 90 degrees Fahrenheit (°F) or lower, caution should be exercised if the humidity level is at or above 40 percent.

The shaded zones on the chart indicate varying symptoms or disorders that could occur depending on the magnitude or intensity of the event. “Caution” is the first category of intensity, and it indicates when fatigue due to heat exposure is possible. “Extreme Caution” indicates that sunstroke, muscle cramps, or heat exhaustion are possible, and a “Danger” level means that these symptoms are likely. “Extreme Danger” indicates that heat stroke is likely. The National Weather Service (NWS) initiates alerts based on the Heat Index as shown in Table 9-1.

<sup>1</sup> Source: NOAA

## SECTION 9: EXTREME HEAT

**Table 9-1. Heat Index and Warnings**

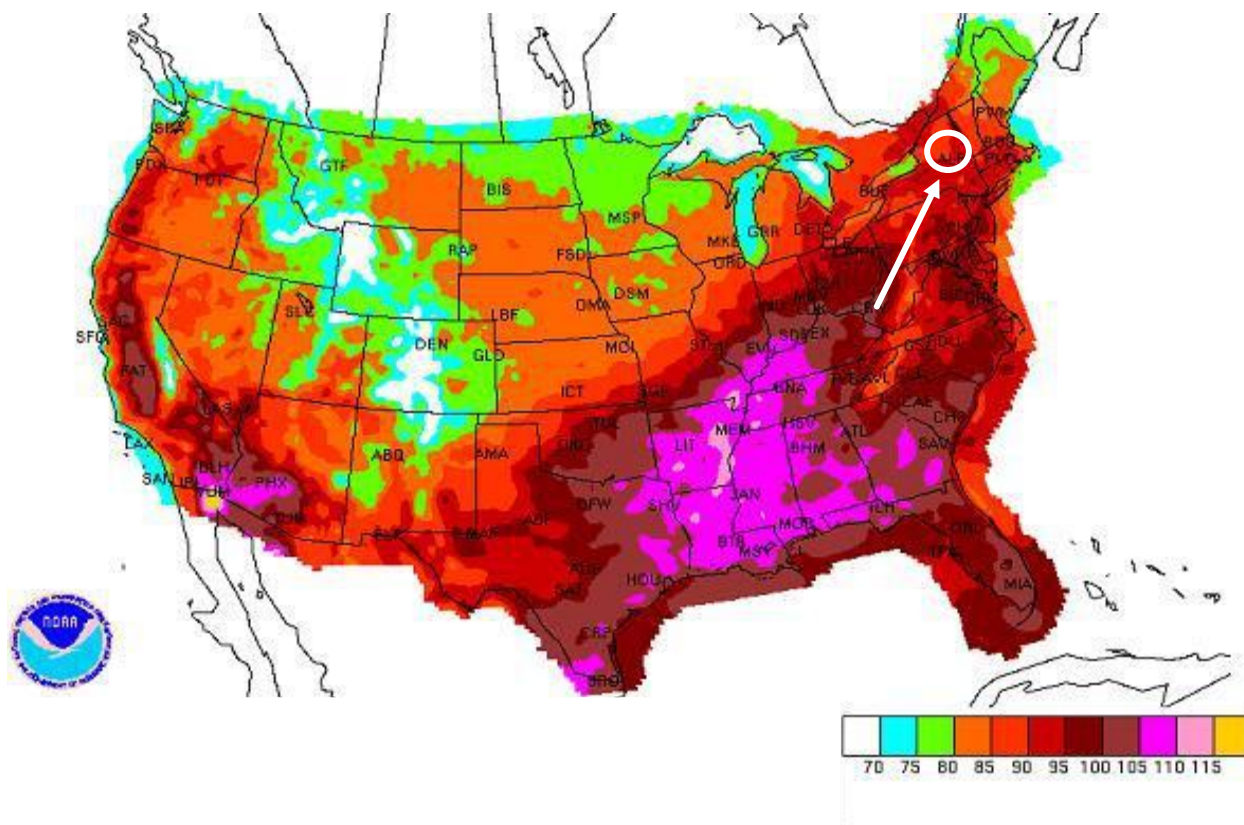
CATEGORY	HEAT INDEX	POSSIBLE HEAT DISORDERS	WARNING TYPE
Extreme Danger	125°F and higher	Heat stroke or sun stroke likely.	An Excessive Heat Warning is issued if the Heat Index rises above 105°F at least 3 hours during the day or above 80°F at night.
Danger	103 – 124°F	Sunstroke, muscle cramps, and/or heat exhaustion are likely. Heatstroke possible with prolonged exposure and/or physical activity.	
Extreme Caution	90 – 103°F	Sunstroke, muscle cramps, and/or heat exhaustion possible with prolonged exposure and/or physical activity.	A heat advisory will be issued to warn that the Heat Index may exceed 105°F.
Caution	80 – 90°F	Fatigue is possible with prolonged exposure and/or physical activity.	

Saratoga County lies within a humid continental climate zone, as is the case for most of New York State. Humid continental climates are characterized by four distinct seasons, large temperature differences between seasons, and precipitation spread throughout the year. Saratoga County typically experiences four distinct seasons throughout the year with temperatures averaging above 80°F in the summer months. Due to its geography and humid summers, the Saratoga County planning area can expect varying degrees of extreme heat each summer season. Citizens, especially children and the elderly should exercise caution by staying out of the heat for prolonged periods when a heat advisory or excessive heat warning is issued. In addition, those working or remaining outdoors for extended periods of time are at greater risk.

Figure 9-2 displays the daily maximum heat index as derived from NOAA based on data compiled from 1838 to 2015. The white circle shows the Saratoga County planning area. The primary orange and partial red colors indicate a daily maximum heat index of 85-95°F. However, historical records indicate portions of the Saratoga County planning area have experienced heat indices as high as 105°F to 110°F, consistent with the Danger category in Table 9-1 above. Therefore, the Saratoga County planning area, including all participating jurisdictions, could experience extreme heat from 105°F to 110°F and should mitigate to the extent of “Danger”, which can include sunstroke, muscle cramps, heat exhaustion, as well as heatstroke with prolonged exposure and/or physical activity. This is the highest temperature (danger category) the planning area can anticipate based on historical records.

## SECTION 9: EXTREME HEAT

**Figure 9-2. Average Daily Maximum Heat Index Days<sup>2</sup>**



### HISTORICAL OCCURRENCES

Every summer, the hazard of heat-related illness becomes a significant public health issue throughout much of the country. Mortality from all causes increases during heat waves, and excessive heat is an important contributing factor to deaths from other causes, particularly among the elderly. Statewide there have been 43 deaths related to extreme heat between 2010 and 2023, though none of those fatalities occurred in Saratoga County. Table 9-2 depicts the historical occurrences of mortality from heat in New York according to reports in the NCEI database.

**Table 9-2. Extreme Heat Related Deaths in New York, 2010-2023**

YEAR	DEATHS
2010	10
2011	20
2012	1
2013	10
2014 - 2023	2

<sup>2</sup> Source: NRDC and the white circle indicates the Saratoga County planning area.

# SECTION 9: EXTREME HEAT

According to information provided by the NCEI, there have been 85 recorded heat-related incidents within the Saratoga County planning area between January 1996 and June 2024. However, none of these heat events resulted in any reported injuries, fatalities, or damages to crops or property. It is highly likely additional extreme heat occurrences have gone unreported before and during the reporting period. Average high temperatures have also been analyzed in order to determine the probability of future events. In the Saratoga County planning area, the highest maximum temperature takes place in the months of June through September with average maximum temperatures exceeding 80°F. The Saratoga Springs 4 SW Weather Station has recorded record high temperatures of 99°F on three occasions; once on June 30, 1964, and for two days in a row on July 21-22, 2011.<sup>3</sup>

**Table 9-3. Historical Extreme Heat Events, January 1996 – June 2024<sup>4</sup>**

JURISDICTION	NUMBER OF EVENTS	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Saratoga County	85	0	0	\$0	\$0

Based on the list of historical extreme heat events for the Saratoga County planning area including all participating jurisdictions, 44 events have been reported to the NCEI since the 2019 plan.

## SIGNIFICANT EVENTS

### September 3, 2018 – Saratoga County

A late-season heat wave impacted eastern New York during the first week of September. A persistent warm and moist airmass characterized by daytime highs in the 90s and dewpoints in the 70s resulted in heat index values reaching 95°F to 105°F during the afternoon hours. Daily record high temperatures were set or tied at Albany on the 5<sup>th</sup> and 6<sup>th</sup>, and a daily record high minimum temperature was set on the 3<sup>rd</sup>. This heat wave coincided with the first week of school for many, and the heat prompted some schools to dismiss classes early and postpone or cancel sports practices.

### August 4, 2022 – Saratoga County

A dome of high pressure brought a stretch of hot and humid weather resulting in multiple days of heat indices between 95°F and 104°F degrees across eastern New York between August 4 through 9, 2022. On August 4, record high temperatures were set near the planning area at both Albany and Poughkeepsie, each reaching 99°F degrees. Albany and Poughkeepsie also set a record for the hottest 8-day start to August on record. The stretch of hot weather led to the opening of multiple cooling centers across the region.

## PROBABILITY OF FUTURE EVENTS

Saratoga County has not been severely impacted by extreme heat due in part to the duration of these conditions being relatively short. However, it can be assumed that many events have gone unreported due to the short duration and frequency of events. With 85 heat events in a 28.5-year reporting period, per NCEI data, the Saratoga County planning area can anticipate between 2 and 3 extreme heat events each year. Therefore, based on best available data, historical records,

<sup>3</sup> Northeast Regional Climate Center. Northeast RCC CLIMOD 2. <http://climod2.nrcc.cornell.edu/>

<sup>4</sup> Reported events from January 1996 through June 2024.



# SECTION 9: EXTREME HEAT

and average daily maximum heat index, an extreme heat event is “Highly Likely”, or an event probable in the next year.

## VULNERABILITY AND IMPACT

There is no defined geographic boundary for extreme heat events. While the entire Saratoga County planning area, including all participating jurisdictions, is exposed to extreme high temperatures, existing buildings, infrastructure, and critical facilities are not likely to sustain significant damage from extreme heat events. Therefore, any estimated property losses associated with the extreme heat hazard are anticipated to be minimal across the area.

Extreme temperatures do, however, present a significant threat to life and safety for the population of the County as a whole. Heat casualties, for example, are typically caused by a lack of adequate air-conditioning or heat exhaustion. The most vulnerable population to heat casualties are the elderly or infirmed who frequently live on low fixed incomes and cannot afford to run air-conditioning on a regular basis. This population is sometimes isolated, with no immediate family or friends to look out for their well-being.

Another segment of the population at risk is those who are experiencing homelessness. Unhoused populations are especially susceptible to hyperthermia, heat stroke, heat exhaustion, and dehydration during extreme periods of above normal temperatures. Data regarding the local population experiencing homelessness is limited and difficult to track from year to year; but according to the US Department of Housing and Urban Development’s (HUD) Homeless Shelter Directory database, 268 homeless individuals were located in Saratoga County in 2019.<sup>5</sup>

Children may also be more vulnerable if left unattended in vehicles. In addition, populations living below the poverty level are unable to run air-conditioning on a regular basis and are limited in their ability to seek medical treatment. Another segment of the population at risk are those whose jobs consist of strenuous labor outdoors. Additionally, livestock and crops can become stressed, decreasing in quality or in production, during times of extreme heat.

The population over 65 in the Saratoga County planning area is estimated at 19 percent of the total population and children under the age of 5 are estimated at 5 percent, or an estimated total of 55,821 potentially vulnerable residents in the planning area based on age. In addition, an estimated 7 percent of the planning area population live below the poverty level (Table 9-4). Under-privileged populations are disproportionately impacted by extreme heat events as they are less likely to be able to afford air conditioning during the hot summer months as well as less likely to have access to medical care.

**Table 9-4. Populations at Greater Risk by Jurisdiction<sup>6</sup>**

JURISDICTION	POPULATION				
	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Saratoga County	44,772	11,049	26,426	15,598	4,430
Town of Ballston	1,957	521	964	538	84

<sup>5</sup> <https://www.homelesshelterdirectory.org/county/ny-saratoga>

<sup>6</sup> U.S. Census Bureau, American Community Survey, 2022

## SECTION 9: EXTREME HEAT

JURISDICTION	POPULATION				
	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Village of Ballston Spa	670	158	357	338	262
Town of Charlton	1,137	245	470	191	26
Town of Clifton Park	6,988	2,095	3,220	762	953
Town of Corinth	1,369	443	910	641	107
Village of Corinth	476	181	424	373	58
Town of Day	281	0	179	123	2
Town of Edinburg	406	47	220	200	0
Town of Galway	859	234	497	319	0
Village of Galway	44	21	26	29	0
Town of Greenfield	1,704	429	1,202	867	15
Town of Hadley	492	114	303	197	7
Town of Halfmoon	4,509	1251	2,833	979	987
Town of Malta	3,666	579	2,035	1,287	305
City of Mechanicville	964	317	906	1,072	37
Town of Milton	3,010	460	2,142	941	298
Town of Moreau	3,017	902	2,392	1,752	312
Town of Northumberland	822	259	541	330	126
Town of Providence	262	77	223	259	5
Village of Round Lake	152	53	68	25	12
Town of Saratoga	928	277	651	321	36
City of Saratoga Springs	5,997	1,018	3,323	2,879	880
Village of Schuylerville	209	106	199	151	12
Village of South Glens Falls	687	204	506	387	23
Town of Stillwater	1,645	621	654	893	48
Village of Stillwater	211	56	164	225	0
Village of Victory	115	57	112	108	7
Town of Waterford	1,685	254	992	478	68
Village of Waterford	570	107	310	199	0
Town of Wilton	3,074	906	1769	539	134

# SECTION 9: EXTREME HEAT

Extreme high temperatures can have significant secondary impacts, leading to droughts, water shortages, increased fire danger, and prompt excessive demands for energy. The possibility of rolling blackouts increases with unseasonably high temperatures in what is a normally mild month with low power demands. Typically, more than 12 hours of warning time would be given before the onset of an extreme heat event.

With no significant impacts due to heat-related events reported historically, the potential impact of extreme heat for the entire Saratoga County planning area, including participating jurisdictions, can be considered “Limited”. It is possible that critical facilities and infrastructure could be shut down for 24 hours if cooling units are running constantly, leading to a temporary power outage. Less than ten percent of residential and commercial property could be damaged if extreme heat events lead to structure fires. Based on historical records over a 28.5-year period, annualized property and crop losses for the Saratoga County planning area are considered negligible.

The Saratoga County Planning Team identified the following critical facilities as assets that are considered the most important to the planning area and are susceptible to a range of impacts caused by extreme heat events. The following critical facilities would be vulnerable to extreme heat events in the Saratoga County planning area, including participating jurisdictions. For a comprehensive list by participating jurisdiction please see Appendix C.

**Table 9-5. Critical Facilities Vulnerable to Extreme Heat**

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Services (EOC, Fire, Police, EMS, Hospitals)	<ul style="list-style-type: none"> <li>Emergency operations, services and response times may be significantly impacted due to power outages, and/or loss of communications.</li> <li>Exposure to heat can cause heat illnesses in first responders, especially for those in heavy equipment.</li> <li>Roads may become impassable due to excessive heat causing asphalt roads to soften and concrete roads to shift or buckle impacting response times by emergency services.</li> <li>Extended power outages due to increased usage may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.</li> </ul>
Airport, Academic Institutions, Community Residential Facilities, Evacuation Centers & Shelters, Governmental Facilities	<ul style="list-style-type: none"> <li>Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable.</li> <li>Power outages due to increased usage could disrupt critical care.</li> <li>Backup power sources could be damaged.</li> <li>Evacuations may be necessary due to extended power outages, breaks in water main lines or other associated damage to facilities.</li> <li>Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable.</li> <li>Economic disruption due to power outages negatively impact airport services as well as area businesses reliant on airport operations.</li> </ul>
Commercial Suppliers (food, gas, etc.)	<ul style="list-style-type: none"> <li>Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable.</li> <li>Essential supplies like medicines, water, food, and equipment deliveries may be delayed.</li> </ul>
Utility Services and Infrastructure (electric, water,	<ul style="list-style-type: none"> <li>Emergency operations, services and response times may be significantly impacted due to power outages, and/or loss of communications.</li> </ul>

## SECTION 9: EXTREME HEAT

CRITICAL FACILITIES	POTENTIAL IMPACTS
wastewater, communications)	<ul style="list-style-type: none"> <li>Roads may become impassable due to excessive heat causing asphalt roads to soften and concrete roads to shift or buckle impacting response times by emergency services.</li> <li>Breaks in water main lines or other associated damage to facilities</li> </ul>

### ASSESSMENT OF IMPACTS

The greatest risk from extreme heat is to public health and safety. The impact of climate change could produce longer, more severe heat waves, exacerbating the current impacts. Worsening extreme heat conditions can be frequently associated with a variety of impacts, including:

- Vulnerable populations, particularly the elderly (19% of total population) and children under 5 (5% of total population), can face serious or life-threatening health problems from exposure to extreme heat including hyperthermia, heat cramps, heat exhaustion, and heat stroke (or sunstroke).
- Response personnel, including utility workers, public works personnel, and any other professions where individuals are required to work outside, are more subject to extreme heat related illnesses since their exposure would typically be greater.
- High energy demand periods can outpace the supply of energy, potentially creating the need for rolling brownouts which would elevate the risk of illness to vulnerable residents.
- Highways and roads may be damaged by excessive heat causing asphalt roads to soften and concrete roads to shift or buckle.
- Vehicle engines and cooling systems typically run harder during extreme heat events resulting in increases in mechanical failures.
- Extreme heat events during times of drought can exacerbate the environmental impacts associated with drought, decreasing water and air quality and further degrading wildlife habitat.
- Extreme heat increases ground-level ozone (smog), increasing the risk of respiratory illnesses.
- Food suppliers can anticipate an increase in food costs due to increases in production costs and crop and livestock losses.
- Fisheries may be negatively impacted by extreme heat, suffering damage to fish habitats (either natural or man-made) and a loss of fish and/or other aquatic organisms due to decreased water flows or availability.
- Negatively impacted water suppliers may face increased costs resulting from the transport of water resources or development of supplemental water resources.
- Tourism and recreational activities areas may be negatively impacted during extreme heat events, reducing seasonal revenue.

The economic and financial impacts of extreme heat on the community will depend on the duration of the event, demand for energy, drought associated with extreme heat, and many other factors. The level of preparedness and the amount of planning done by the community, local businesses, and citizens will impact the overall economic and financial conditions before, during, and after an extreme heat event.

## SECTION 9: EXTREME HEAT

### CLIMATE CHANGE CONSIDERATIONS

Climate change is expected to lead to an increase in average temperatures as well as an increase in frequency, duration, and intensity of extreme heat events. According to the 2019 New York State Hazard Mitigation Plan, New York is the 8th-fastest warming state in the country, in terms of annual average temperature. Climate change projections show that by 2050, statewide the number of heat wave days will increase by five times over.<sup>7</sup> Regionally in the Northeast, heat wave events are more severe than in the past and are lasting longer.<sup>8</sup> Future heat wave events statewide are also projected to increase along with the morbidity and mortality rates as a result.

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<sup>7</sup> New York State Hazard Mitigation Plan, 2019

<sup>8</sup> Fifth National Climate Assessment, U.S. Global Change Research Program.  
<https://nca2023.globalchange.gov/chapter/21/>



**SARATOGA**  
**COUNTY** NEW YORK

SECTION 10  
**FLOOD**

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### HAZARD DESCRIPTION

Floods generally result from excessive precipitation. The severity of a flood event is determined by a combination of several major factors, including stream and river basin topography and physiography; precipitation and weather patterns; recent soil moisture conditions; and the degree of vegetative clearing and impervious surface. Typically, floods are long-term events that may last for several days.

Due to Saratoga County's location, only inland, flash, groundwater, ice jam, and beaver dam flooding is profiled in this section as they are known to impact the Saratoga County planning area.



Inland or riverine flooding is a result of excessive precipitation levels and water runoff volumes within the watershed of a stream or river. Inland or riverine flooding is overbank flooding of rivers and streams. This typically results from large-scale weather systems that generate prolonged rainfall over a wide geographic area, thus it is a naturally occurring and inevitable event. Some river floods occur seasonally when winter or spring rainfalls fill river basins with too much water, too quickly. Torrential rains from decaying hurricanes or tropical systems can also produce riverine flooding.

Flash flooding can occur anywhere and is caused by heavy rainfall in a short period of time, often less than six hours. Flash floods are characterized by raging torrents after heavy precipitation and can occur within minutes or a few hours of excessive rainfall. They can also occur if no rain has fallen, for example, after the release of an ice jam.<sup>1</sup>

Groundwater flooding occurs when the soil is so saturated that water rises and causes flooding. This is different from riverine type flooding, as it originates from underground sources. However,

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<sup>1</sup> NOAA. Severe Weather 101. <https://www.nssl.noaa.gov/education/svrwx101/floods/types/>.

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groundwater flooding commonly occurs during periods of heavy rain which saturates the ground, causing water to build up under the ground's surface. According to the planning team, groundwater flooding is more common in the Towns of Moreau and Wilton. Overall, areas of groundwater flood risk can vary and are determined by soil type, local topography, and land use patterns.

Ice jam flooding happens when large pieces of ice accumulate and block the flow of water in a river. Ice jams cause flooding for communities closest to large rivers. It happens most often during the winter months when rivers and streams begin to freeze and in the spring months when the ice and snow begin to melt. The New York State Hazard Mitigation Plan states that ice jams are relatively common, especially along major rivers, like the Hudson and Mohawk Rivers, which pass through the Saratoga County planning area.

The last type of flooding is beaver dam flooding. This occurs when beavers build a dam using logs or mud which blocks or slows down the flow of water in a river. According to the planning team, incidents of beaver dam flooding have been reported in the Towns Ballston, Charlton, Corinth, Greenfield and Galway.

### LOCATION

Flooding is one of the more severe hazards facing Saratoga County and the planning area. The Flood Insurance Rate Maps (FIRMs) prepared by FEMA provide an overview of flood risk but can also be used to identify the areas of the County that are vulnerable to flooding. FIRMs are used to regulate new development and to control the substantial improvement and repair of substantially damaged buildings. Flood Insurance Studies (FIS) are often developed in conjunction with FIRMs. The FIS typically contains a brief narrative of the flood history of a community and discusses the engineering methods used to develop the FIRMs. The FIS also contains flood profiles for studied flood sources and can be used to determine Base Flood Elevations (BFEs) for some areas.

The FIS for Saratoga County is dated August 16, 1995, and is comprised of three volumes. The study includes 26 jurisdictions in the planning area.<sup>2</sup> The FIS compiles all previous flood information and includes data collected on numerous waterways as well as areas that are most vulnerable to flooding, including low-lying areas throughout the county. According to the study, the principal flood sources in Saratoga County are the Hudson and Mohawk Rivers. It also notes that the location of the Town and Village of Waterford at the confluence of the two major rivers makes the eastern part of the town subject to flooding whenever a major flood occurs on either stream. The principal flood sources in the Village of Stillwater are the Hudson River and Schuyler Creek, where low lying areas experience periodic flooding. The FIS states that heavy rainfall in the spring, combined with snowmelt, causes high water and local flooding throughout Saratoga County and is frequently aggravated by ice jams. Floods also occur in the summer and fall when produced by storms.

The Flood Insurance Rate Map (FIRM) data provided by FEMA for the Saratoga County planning area shows the following flood hazard areas:

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<sup>2</sup> The Town of Day, Town of Edinburg, Town of Wilton, and Village of Galway are not included in the FIS.



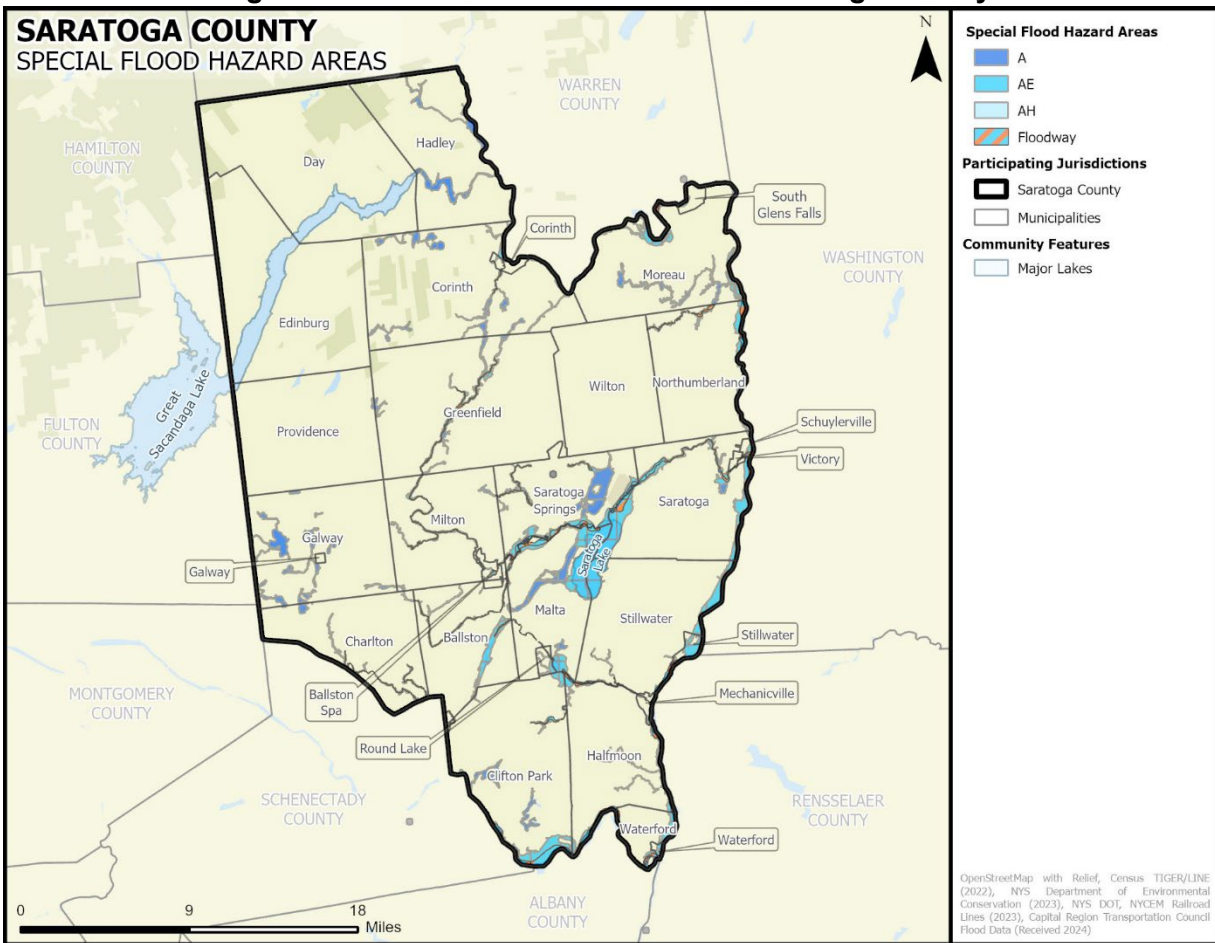
## SECTION 10: FLOOD

- Zone A: Areas subject to inundation by the 1-percent-annual-chance flood event generally determined using approximate methodologies. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown. Mandatory flood insurance requirements and floodplain management standards apply.
- Zone AE: Areas subject to inundation by 1-percent-annual-chance shallow flooding. It is the base floodplain where BFEs are provided. AE zones are now used on new format FIRMs instead of A1-30 zones.
- Zone AH: Areas subject to inundation by 1-percent-annual-chance shallow flooding, usually in the form of a pond, with an average depth ranging from one to three feet. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.

There are no digital Flood Insurance Rate Maps (DFIRMs) or preliminary flood data available. Locations of flood zones in the Saratoga County planning area, including participating jurisdictions, are illustrated in Figure 10-1 and are based on the best available data provided by the Capitol Region Transportation Council. The maps shown are not current effective FIRM boundaries for permitting or insurance, but they represent the best available data for planning purposes. The current regulatory flood insurance rate maps (effective FIRMs) for each participating jurisdiction can be found in Appendix H.

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**Figure 10-1. Estimated Flood Zones in Saratoga County<sup>3</sup>**



### EXTENT

The severity of a flood event is determined by a combination of several factors including stream and river basin topography and physiography; precipitation and weather patterns; recent soil moisture conditions; and degree of vegetative clearing and impervious surface. Typically, floods are long-term events that may last for several days.

Determining the intensity and magnitude of a flood event is dependent upon the flood zone and location of the flood hazard area in addition to depths of flood waters. The extent of flood damage can be expected to be more damaging in the areas that will convey a base flood. FEMA categorizes areas on the terrain according to how the area will convey flood water. Flood zones are the categories that are mapped on Flood Insurance Rate Maps. Table 10-1 provides a description of FEMA flood zones and the flood impact in terms of severity or potential harm. Flood Zones A, AE, and AH are the only hazard areas mapped in the planning area. Figure 10-1 should be read in conjunction with the extent for flooding in Tables 10-1 and 10-2 to determine the intensity of a potential flood event.

<sup>3</sup> Map sources: ESRI OpenStreetMap (Custom: no labels), Census TIGER/LINE (2022), Saratoga County Information Technology Department (2023), Saratoga County Preliminary Flood Data (2023)

## SECTION 10: FLOOD

**Table 10-1. Flood Zones**

INTENSITY	ZONE	DESCRIPTION
HIGH	ZONE A	Areas with a one percent annual chance of flooding and a 26 percent chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas, no depths or base flood elevations are shown within these zones.
	ZONE A1-30	These are known as numbered A Zones (e.g., A7 or A14). This is the base floodplain where the FIRM shows a Base Flood Elevation (BFE) (old format).
	ZONE AE	The base floodplain where base flood elevations are provided. AE Zones are now used on the new format FIRMs instead of A1-A30 Zones.
	ZONE AO	River or stream flood hazard areas and areas with a one percent or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from one to three feet. These areas have a 26 percent chance of flooding over the life of a 30-year mortgage. Average flood depths derived from detailed analyses are shown within these zones.
	ZONE AH	Areas with a one percent annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from one to three feet. These areas have a 26 percent chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
	ZONE A99	Areas with a one percent annual chance of flooding that will be protected by a federal flood control system where construction has reached specified legal requirements. No depths or base flood elevations are shown within these zones.
	ZONE AR	Areas with a temporarily increased flood risk due to the building or restoration of a flood control system (such as a levee or a dam). Mandatory flood insurance purchase requirements will apply, but rates will not exceed the rates for unnumbered A zones if the structure is built or restored in compliance with Zone AR floodplain management regulations.
MODERATE to LOW	ZONE X 500	An area inundated by 500-year flooding; an area inundated by 100-year flooding with average depths of less than one foot or with drainage areas less than one square mile; or an area protected by levees from 100-year flooding.

Zone A is interchangeably referred to as the 100-year flood, the one percent-annual chance flood, the Special Flood Hazard Area (SFHA), or more commonly, the base flood. This is the area that will convey the base flood and constitutes a threat to the planning area. The impact from a flood event can be more damaging in areas that will convey a base flood.

Structures built in the SFHA are subject to damage by rising waters and floating debris. Moving flood water exerts pressure on everything in its path and causes erosion of soil and solid objects. Utility systems, such as heating, ventilation, air conditioning, fuel, electrical systems, sewage maintenance systems and water systems, if not elevated above base flood elevation, may also be damaged.

The intensity and magnitude of a flood event is also determined by the depth of flood water. Table 10-2 describes the stream gauge data provided by the United States Geological Survey (USGS).

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**Table 10-2. Extent for Saratoga County<sup>4</sup>**

JURISDICTION <sup>5</sup>	PEAK FLOOD EVENT
Town of Hadley	Hudson River in the Town of Hadley reached an overflow elevation of 21 feet in April of 2011. The average overflow elevation for Hudson River is 12 feet at this site.
Town of Hadley	Sacandaga River at Stewart’s Bridge in the Town of Hadley reached an overflow elevation of 12 feet in March of 1913. The average overflow elevation for Sacandaga River is 7 feet at this site.
Town of Milton	Glowegee Creek near Canandaigua in the western part of the Town of Milton reached an overflow elevation of 7 feet in April of 2022. The average overflow elevation of Schaeffer Creek is 6 feet at this site.

The range of flood intensity that the planning area can experience is high, or Zone A. Based on historical occurrences, the Saratoga County planning area could expect to experience up to 6 inches of rain within a 4-hour period, resulting in flash flooding.

The data described in Tables 10-1 and 10-2, together with Figure 10-1, and historical occurrences for the area, provides an estimated potential magnitude and severity for the Saratoga County planning area, including participating jurisdictions.

**HISTORICAL OCCURRENCES**

The National Centers for Environmental Information (NCEI) Storm Events database is a national data source organized under the National Oceanic and Atmospheric Administration (NOAA). The NCEI is the largest archive available for historic storm events data; however, it is important to note that only incidents recorded in the NCEI have been factored into this risk assessment unless otherwise noted, therefore it is likely that additional flood occurrences have gone unreported before and during the recording period. Historical evidence indicates that areas within the planning area are susceptible to flooding, especially in the form of flash flooding. Table 10-3 identifies historical flood events in the Saratoga County planning area that resulted in damages, injuries, or fatalities. Table 10-4 provides a historical flood event summary for each participating jurisdiction. There have been 145 recorded flood events in Saratoga County, including all participating jurisdictions.

**Table 10-3. Historical Flood Events, January 1996 – June 2024<sup>6</sup>**

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Saratoga County	1/19/1996	0	0	\$9,933,500	\$0
Saratoga County	1/19/1996	0	0	\$9,933,500	\$0

<sup>4</sup> Severity estimated by averaging floods at certain stage level over the history of flood events. Severity and peak events are based on U.S. Geological Survey data.

<sup>5</sup> Severity is provided for jurisdictions where peak data was provided.

<sup>6</sup> Only recorded events with fatalities, injuries, and/or damages are listed, values are in 2024 dollars. Historical events are listed from January 1996 through June 2024.

## SECTION 10: FLOOD

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Saratoga County	4/16/1996	0	0	\$39,300	\$0
Saratoga County	4/16/1996	0	0	\$39,300	\$0
Saratoga County	5/12/1996	0	0	\$9,800	\$0
Saratoga County	5/12/1996	0	0	\$5,900	\$0
Saratoga County	11/10/1996	0	0	\$3,900	\$0
Saratoga County	11/10/1996	0	0	\$3,900	\$0
Saratoga County	12/2/1996	0	0	\$9,700	\$0
Saratoga County	12/2/1996	0	0	\$15,500	\$0
Saratoga County	1/8/1998	0	0	\$57,000	\$0
Saratoga County	1/8/1998	0	0	\$949,100	\$0
Saratoga County	1/8/1998	0	0	\$237,300	\$0
Saratoga County	4/1/1998	0	0	\$1,900	\$0
Town and Village of Stillwater <sup>7</sup>	1/25/1999	0	0	\$74,700	\$0
Saratoga County	2/27/2000	0	0	\$361,400	\$0
Saratoga County	2/28/2000	0	0	\$1,900	\$0
Saratoga County	6/6/2000	0	0	\$26,700	\$0
Town of Clifton Park	8/2/2000	0	0	\$88,800	\$0
Town of Halfmoon	8/2/2000	0	0	\$44,400	\$0
City of Mechanicville	8/2/2000	0	0	\$8,900	\$0
Saratoga County	12/17/2000	0	0	\$335,000	\$0
City of Mechanicville	5/28/2001	0	0	\$8,700	\$0
Saratoga County	5/13/2002	0	0	\$42,700	\$0
Town of Halfmoon	8/10/2003	0	0	\$16,700	\$0
City of Mechanicville	8/10/2003	0	0	\$166,200	\$0
Town and Village of Stillwater	8/10/2003	0	0	\$83,100	\$0
Town and Village of Stillwater	3/5/2008	0	0	\$1,500	\$0
Town of Hadley	4/9/2008	0	0	\$321,300	\$0
Village of Waterford <sup>8</sup>	8/28/2011	0	0	\$1,402,571	\$0

<sup>7</sup> The Town and Village of Stillwater are not listed separately in the NCEI. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their close proximity.

<sup>8</sup> The Village of Waterford provided self-reported damage estimates as a result of flooding impacts sustained during Tropical Storm Irene.

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JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town of Ballston / Village of Ballston Spa <sup>9</sup>	2/8/2019	0	0	\$1,300	\$0
Town of Northumberland	4/15/2019	0	0	\$1,300	\$0
Town and Village of Stillwater	4/15/2019	0	0	\$1,300	\$0
Town of Day	10/31/2019	0	0	\$59,600	\$0
Town of Day	10/31/2019	0	0	\$59,600	\$0
Town of Greenfield	10/31/2019	0	0	90400	\$0
Town of Moreau	7/29/2021	0	0	\$5,700	\$0
Town of Wilton	7/29/2021	0	0	\$22,500	\$0
Town of Wilton	7/29/2021	0	0	\$11,300	\$0
Town of Edinburg	4/7/2022	0	0	\$1,100	\$0
Town of Greenfield	4/7/2022	0	0	\$5,400	\$0
Town and Village of Stillwater	4/7/2022	0	0	\$79,600	\$0
Town of Day	7/7/2023	0	0	\$1,100	\$0
Town of Day	7/7/2023	0	0	\$30,200	\$0
City of Mechanicville	7/9/2023	0	0	\$30,200	\$0
Village of Round Lake	7/16/2023	0	0	\$10,100	\$0
Village of Round Lake	7/16/2023	0	0	\$5,100	\$0
Town and Village of Stillwater	7/16/2023	0	0	\$50,200	\$10,100
Town and Village of Corinth <sup>10</sup>	12/18/2023	0	0	\$2,000	0
<b>TOTALS</b>		<b>0</b>	<b>0</b>	<b>\$24,692,171</b>	<b>\$10,100</b>

**Table 10-4. Summary of Historical Flood Events, January 1996 – June 2024<sup>11</sup>**

JURISDICTION	NUMBER OF EVENTS	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Saratoga County	40	0	0	\$22,007,300	\$0
Town of Ballston / Village of Ballston Spa	3	0	0	\$1,300	\$0
Town of Charlton	1	0	0	\$0	\$0
Town of Clifton Park	11	0	0	\$88,800	\$0

<sup>9</sup> The Town of Ballston and Village of Ballston Spa are not listed separately in the NCEI. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their close proximity.

<sup>10</sup> The Town and Village of Corinth are not listed separately in the NCEI. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their close proximity.

<sup>11</sup> Participating jurisdictions with no reported events show a “-” in table columns where damages, deaths or injuries would otherwise be reported.

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JURISDICTION	NUMBER OF EVENTS	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town and Village of Corinth	2	0	0	\$2,000	\$0
Town of Day	4	0	0	\$150,500	\$0
Town of Edinburg	2	0	0	\$1,100	\$0
Town and Village of Galway <sup>12</sup>	1	0	0	\$0	\$0
Town of Greenfield	3	0	0	\$95,800	\$0
Town of Hadley	2	0	0	\$321,300	\$0
Town of Halfmoon	5	0	0	\$61,100	\$0
Town of Malta	4	0	0	\$0	\$0
City of Mechanicville	9	0	0	\$214,000	\$0
Town of Milton	0	-	-	-	-
Town of Moreau	2	0	0	\$5,700	\$0
Town of Northumberland	6	0	0	\$1,300	\$0
Town of Providence	3	0	0	\$0	\$0
Village of Round Lake	9	0	0	\$15,200	\$0
Town of Saratoga	2	0	0	\$0	\$0
City of Saratoga Springs	8	0	0	\$0	\$0
Village of Schuylerville	5	0	0	\$0	\$0
Village of South Glens Falls	0	-	-	-	-
Town and Village of Stillwater	14	0	0	\$290,400	\$10,100
Village of Victory	0	-	-	-	-
Town and Village of Waterford <sup>13</sup>	5	0	0	\$1,402,571.36	\$0
Town of Wilton	4	0	0	\$33,800	\$0
<b>TOTALS</b>	<b>145</b>	<b>0</b>	<b>0</b>	<b>\$24,692,171</b>	<b>\$10,100</b>

Based on the list of historical flood events for the Saratoga County planning area (listed above), 33 events have occurred since the 2019 Plan.

In addition to the flood events reported to the NCEI, the U.S. Army Corps of Engineers (USACE) has an Ice Jams Database which currently includes over 18,000 records of ice jam flood events from across the United States. There are 38 reported ice jam events for the Saratoga County planning area between 1914 and 2024. There are no reported monetary damages for these events, however, it is highly likely that damage estimates were simply not recorded. The event on July 3, 2004, caused homes to flood and the event on March 28, 1914, wrecked bridges, forced

<sup>12</sup> The Town and Village of Galway are not listed separately in the NCEI. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their close proximity.

<sup>13</sup> The Town and Village of Waterford are not listed separately in the NCEI. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their close proximity.

## SECTION 10: FLOOD

hundreds of residents from their homes, and resulted in several deaths. There are no additional or separate reports of flooding related to groundwater or beaver dam flood events.



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**Table 10-5. Historical Ice Jam Events, 1914-2024**

JURISDICTION	JAM DATE	RIVER/CREEK
Saratoga County	3/28/1914	Mohawk River
Town of Hadley	3/19/1927	Hudson River
Town of Milton	3/5/1934	Kayaderosseras Creek
Saratoga County	1/10/1935	Mohawk River
Town of Milton	1/10/1935	Kayaderosseras Creek
Saratoga County	3/12/1936	Mohawk River
Town of Milton	12/30/1942	Kayaderosseras Creek
Town of Hadley	3/23/1948	Hudson River
Town of Milton	1/26/1950	Glowegee Creek
Town of Milton	2/18/1954	Kayaderosseras Creek
Town of Milton	3/1/1955	Kayaderosseras Creek
Town of Milton	3/11/1955	Glowegee Creek
Town of Milton	1/23/1957	Kayaderosseras Creek
Town of Milton	1/28/1958	Kayaderosseras Creek
Saratoga County	3/6/1964	Mohawk River
Saratoga County	3/6/1964	Mohawk River
Saratoga County	1/11/1978	Hudson River
Town of Milton	3/7/1979	Kayaderosseras Creek
Town and Village of Corinth <sup>14</sup>	2/1/1985	Hudson River
Saratoga County	2/21/1997	Mohawk River
Saratoga County	2/22/1997	Mohawk River
Saratoga County	2/27/1997	Mohawk River
Saratoga County	1/20/1999	Batten Kill
Saratoga County	2/4/1999	Mohawk River
Saratoga County	2/29/2000	Mohawk River
Saratoga County	2/29/2000	Mohawk River
Saratoga County	3/20/2003	Mohawk River
Saratoga County	3/21/2003	Mohawk River
Saratoga County	3/22/2003	Mohawk River
Town of Hadley	3/26/2003	Hudson River

<sup>14</sup> The Town and Village of Corinth are not listed separately in the Ice Jam Database. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their proximity.

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JURISDICTION	JAM DATE	RIVER/CREEK
Town and Village of Corinth	1/13/2004	Hudson River
Saratoga County	3/7/2004	Mohawk River
Saratoga County	3/7/2004	Mohawk River
Saratoga County	3/7/2004	Mohawk River
Village of Schuylerville	2/7/2007	Hudson River
Town and Village of Ballston Spa <sup>15</sup>	1/13/2014	Kayaderosseras Creek
Saratoga County	1/13/2018	Mohawk River
Town and Village of Ballston Spa	2/9/2019	Kavaderosseras Creek

### SIGNIFICANT EVENTS

#### **March 28, 1914 – Ice Jam in Saratoga County / Mohawk River**

An extreme blizzard followed by a heavy thaw created a destructive flood event on March 28, 1914. The sudden surge of melted water into a frozen river resulted in ice jams that destroyed every bridge designated for pedestrians, cars, and wagons for a 56 mile stretch, from Waterford to Palentine Bridge.<sup>16</sup> According to the USACE, in addition to destroying bridges, this event forced hundreds of residents from their homes and resulted in several deaths. This event was part of a broader regional flood affecting parts of upstate New York.

#### **January 19, 1996 – Saratoga County (DR-1095-NY)**

Known as the Northeast Floods of January 1996, an intense area of low pressure produced unseasonably warm temperatures, high dewpoints and strong winds. These conditions resulted in the rapid melting of one to three feet of snow. In addition to the rapid snowmelt, up to three inches of rain fell as the system moved northeast along the coast. This resulted in widespread flooding across the Saratoga County planning area, including the flooding of the Mohawk and Hudson Rivers. The flooding inundated 250 homes and businesses and over 20 roads were closed throughout the entire county.

Flooding was most severe in the Towns of Waterford, Stillwater and Halfmoon. In the Town of Waterford, the flooding of the Mohawk and Hudson Rivers forced the evacuation of 150 people, and 180 homes were damaged. Many businesses along the Hudson River sustained damage including the Ursula of Switzerland which lost more than \$1 million worth of merchandise. Many roads were closed during the event, including Route 67 between Route 9 and the City of Mechanicville, Routes 4 and 32 north of the Town of Stillwater, and parts of Route 50. A 70-foot section of Vischer Ferry Road in the Town of Clifton Park was also washed out.

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<sup>15</sup> The Town and Village of Ballston Spa are not listed separately in the Ice Jam Database. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their proximity.

<sup>16</sup> Union College. Bridging the Mohawk River. [https://minerva.union.edu/garverj/mohawk/bridge\\_mohawk.html](https://minerva.union.edu/garverj/mohawk/bridge_mohawk.html).

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Federal Disaster Assistance was made available by a presidential disaster declaration (DR-1095-NY). There are two reports in the NCEI for this event, which caused a total of \$19,867,000 (2024 dollars) in property damages.

### PROBABILITY OF FUTURE EVENTS

Based on the NCEI’s 145 recorded historical occurrences of flooding within a 28.5-year reporting period within the Saratoga County planning area, flooding is considered “Highly Likely” with 5 events per year anticipated. It is noted that the probability of ice jam floods is slightly lower when evaluated independently with an ice jam related flood event probable in the next three years.

### VULNERABILITY AND IMPACT

A property’s vulnerability to a flood depends primarily on its location and proximity to the floodplain. Structures that lie along the banks of a waterway are the most vulnerable and can often be repetitive loss structures. In terms of structure and infrastructure damages the impact of flooding on the planning area is considered Limited with critical facilities shutdown for 24-hours or less and less than ten percent of structures destroyed or with major damage. However, with historical fatalities related to ice jam flood events, the impact is considered “Substantial” with multiple deaths possible depending on the extent and duration of the event.

Table 10-6 includes the critical facilities identified in Appendix C that were determined to be located within the SFHA by FIRM mapping. Each jurisdiction annex includes the name and type of each critical facility located in the SFHA along with a mitigation action to address the flood risk.

**Table 10-6. Critical Facilities in the Floodplain**

CRITICAL FACILITIES	FACILITIES AT RISK	POTENTIAL IMPACTS
Emergency Response Departments (EOC, Fire, Police, EMS), Hospitals, Police Stations, Fire Stations	Town of Corinth: 1 EMS Town of Greenfield: 1 Fire Station Town of Milton: 1 Fire Station Village of Waterford: 1 EMS, 1 Police Station	<ul style="list-style-type: none"> <li>Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications.</li> <li>Emergency vehicles can be damaged by rising flood waters.</li> <li>Flood-related rescues may be necessary at swift and low water crossings or in flooded neighborhoods where roads have become impassable, placing first responders in harm’s way.</li> <li>Evacuations may be required for entire neighborhoods because of rising floodwaters, further taxing limited response capabilities and increasing sheltering needs for displaced residents.</li> <li>Power outages could disrupt communications, delaying emergency response times.</li> <li>Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities.</li> <li>Washed out roads and bridges can impede emergency response vehicle access to areas.</li> <li>Increased number of structure fires due to gas line ruptures and downed power lines, further straining the capacity and resources of emergency personnel.</li> </ul>

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CRITICAL FACILITIES	FACILITIES AT RISK	POTENTIAL IMPACTS
		<ul style="list-style-type: none"> <li>• First responders are exposed to downed power lines, contaminated and unusual debris, hazardous materials, and generally unsafe conditions.</li> <li>• Extended power outages and evacuations may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.</li> </ul>
Airport, Academic Institutions, Animal Shelter, Evacuation Centers & Shelters, Governmental Facilities, Residential/ Assisted Living Facilities	Village of Ballston Spa: 1 School Town of Greenfield: 2 Municipal Village of Schuylerville: 1 Municipal Village of Stillwater: 3 Schools Village of Waterford: 1 Church, 2 Community Facilities, 1 Municipal	<ul style="list-style-type: none"> <li>• Structures can be damaged by rising flood waters.</li> <li>• Power outages could disrupt critical care.</li> <li>• Backup power sources could be damaged, inundated or otherwise inoperable.</li> <li>• Critical staff may be impacted and unable to report for duty, limiting response capabilities.</li> <li>• Evacuations may be necessary due to extended power outages, gas line ruptures, or inundation of facilities.</li> <li>• Additional emergency responders and critical aid workers may not be able to reach the area for days.</li> <li>• Power outages and infrastructure damage may prevent larger airports from acting as temporary command centers for logistics, communications, and emergency operations.</li> <li>• Temporary break in operations may significantly inhibit post event evacuations.</li> <li>• Damaged or destroyed highway infrastructure may substantially increase the need for airport operations.</li> </ul>
Commercial Suppliers (food, gas, etc.)	N/A	<ul style="list-style-type: none"> <li>• Facilities or infrastructure may be damaged, destroyed or otherwise inaccessible.</li> <li>• Essential supplies like medicines, water, food, and equipment deliveries may be significantly delayed.</li> </ul>
Utility Services and Infrastructure (electric, water, wastewater, communications)	Saratoga County: 10 Dams, 12 Sewage and Water City of Saratoga Springs: 1 Sewage and Water Town of Clifton Park: 1 Sewage and Water Town of Corinth: 1 Sewage and Water Town of Halfmoon: 1 Energy Utility Town of Malta: 1 Sewage and Water Town of Waterford: 1 Communications, 6 Sewage and Water Village of Corinth: 2 Sewage and Water Village of Schuylerville: 2 Sewage and Water	<ul style="list-style-type: none"> <li>• Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications.</li> <li>• Emergency service vehicles can be damaged by rising flood waters.</li> <li>• Flood-related rescues may be necessary at swift and low water crossings or in flooded neighborhoods where roads have become impassable, placing emergency service workers in harm's way.</li> <li>• Increased number of structure fires due to gas line ruptures and downed power lines, further straining the capacity and resources of emergency personnel.</li> <li>• Service responders are exposed to downed power lines, contaminated and unusual debris, hazardous materials, and generally unsafe conditions.</li> <li>• Extended power outages and evacuations may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.</li> </ul>

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CRITICAL FACILITIES	FACILITIES AT RISK	POTENTIAL IMPACTS
	Village of Victory: 2 Sewage and Water	
	Village of Waterford: 3 Sewage and Water	

Historic loss estimates due to flood are presented in Table 10-7 below. Considering 145 flood events over a 28.5-year period as reported by the NCEI, the frequency is approximately five events every year.

**Table 10-7. Potential Annualized Losses**

JURISDICTION	PROPERTY LOSS	ANNUAL LOSS ESTIMATES
Saratoga County	\$22,007,300	\$772,200
Town of Ballston / Village of Ballston Spa	\$1,300	\$0
Town of Charlton	\$0	\$0
Town of Clifton Park	\$88,800	\$3,100
Town and Village of Corinth	\$2,000	\$100
Town of Day	\$150,500	\$5,300
Town of Edinburg	\$1,100	\$0
Town and Village of Galway	\$0	\$0
Town of Greenfield	\$95,800	\$3,400
Town of Hadley	\$321,300	\$11,300
Town of Halfmoon	\$61,100	\$2,100
Town of Malta	\$0	\$0
City of Mechanicville	\$214,000	\$7,500
Town of Milton	\$0	\$0
Town of Moreau	\$5,700	\$200
Town of Northumberland	\$1,300	\$0
Town of Providence	\$0	\$0
Village of Round Lake	\$15,200	\$500
Town of Saratoga	\$0	\$0
City of Saratoga Springs	\$0	\$0
Village of Schuylerville	\$0	\$0

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JURISDICTION	PROPERTY LOSS	ANNUAL LOSS ESTIMATES
Village of South Glens Falls	\$0	\$0
Town and Village of Stillwater	\$300,500	\$10,500
Village of Victory	\$0	\$0
Town and Village of Waterford	\$1,402,571	\$49,213
Town of Wilton	\$33,800	\$1,200
<b>TOTALS</b>	<b>\$24,692,171</b>	<b>\$866,613</b>

While all citizens are at risk of the impacts of a flood, forced relocation and disaster recovery disproportionately impacts low-income residents who lack the financial means to travel, afford a long-term stay away from home, and to rebuild or repair their homes. In addition, due to factors like limited mobility, communication difficulties, medical needs, reliance on support services, transportation challenges, housing accessibility issues, and possible shortages in emergency shelter accommodations, the elderly, children, and people with disabilities are also disproportionately affected by flooding events. People who speak a language other than English may face increased vulnerability due to language barriers that limit their access to important information such as weather-related warnings and instructions regarding safety measures.

The population over 65 in the Saratoga County planning area is estimated at 19 percent of the total population and children under the age of 5 are estimated at 5 percent. The population with a disability is estimated at 11 percent of the total population. In addition, an estimated 7 percent of the planning area population live below the poverty level and 2 percent of the population speaks English 'less than very well'.

**Table 10-8. Populations at Greater Risk<sup>17</sup>**

JURISDICTION	POPULATION				
	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Saratoga County	44,772	11,049	26,426	15,598	4,430
Town of Ballston	1,957	521	964	538	84
Village of Ballston Spa	670	158	357	338	262
Town of Charlton	1,137	245	470	191	26
Town of Clifton Park	6,988	2,095	3,220	762	953
Town of Corinth	1,369	443	910	641	107
Village of Corinth	476	181	424	373	58
Town of Day	281	0	179	123	2
Town of Edinburg	406	47	220	200	0

<sup>17</sup> U.S. Census Bureau, American Community Survey, 2022

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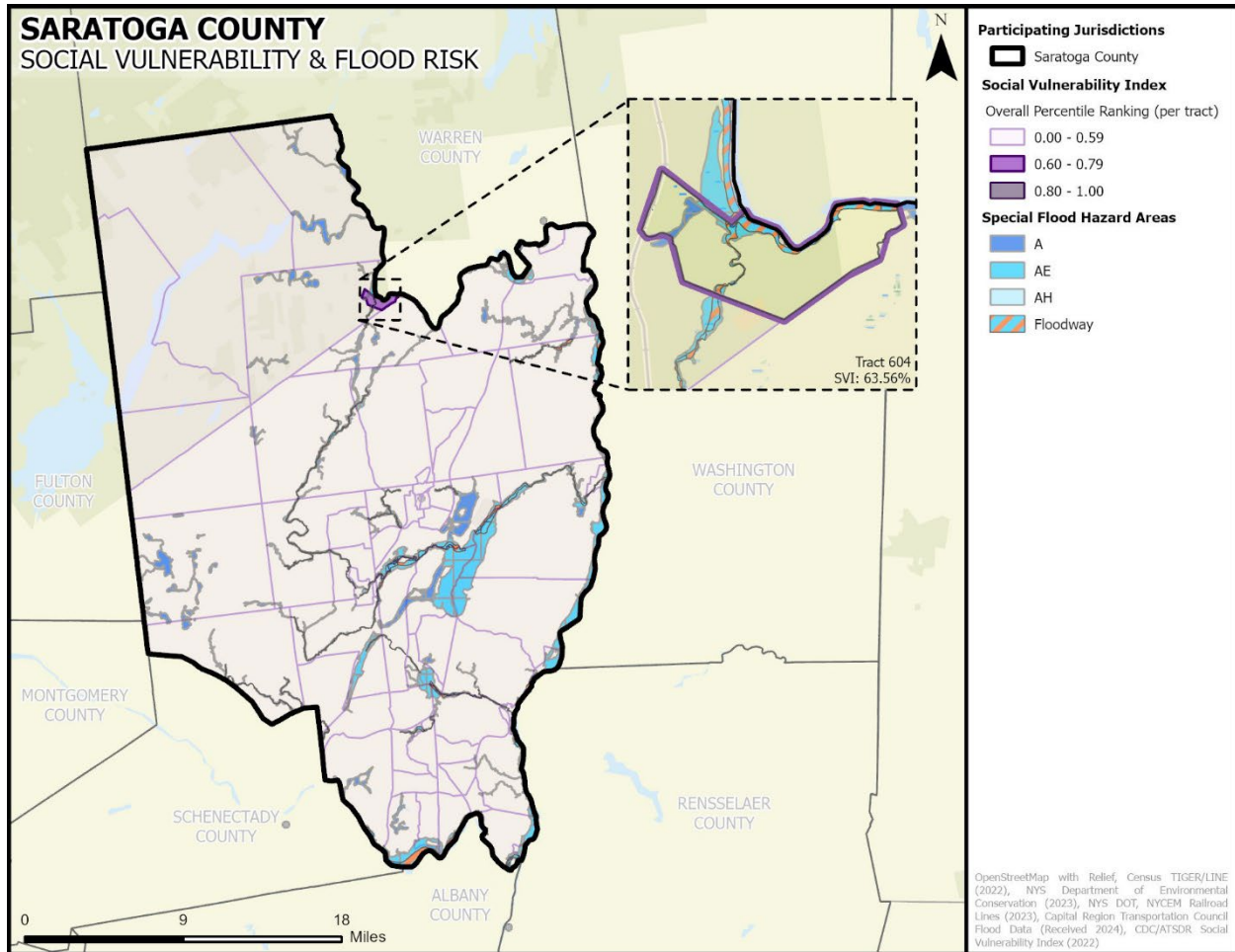
JURISDICTION	POPULATION				
	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Town of Galway	859	234	497	319	0
Village of Galway	44	21	26	29	0
Town of Greenfield	1,704	429	1,202	867	15
Town of Hadley	492	114	303	197	7
Town of Halfmoon	4,509	1251	2,833	979	987
Town of Malta	3,666	579	2,035	1,287	305
City of Mechanicville	964	317	906	1,072	37
Town of Milton	3,010	460	2,142	941	298
Town of Moreau	3,017	902	2,392	1,752	312
Town of Northumberland	822	259	541	330	126
Town of Providence	262	77	223	259	5
Village of Round Lake	152	53	68	25	12
Town of Saratoga	928	277	651	321	36
City of Saratoga Springs	5,997	1,018	3,323	2,879	880
Village of Schuylerville	209	106	199	151	12
Village of South Glens Falls	687	204	506	387	23
Town of Stillwater	1,645	621	654	893	48
Village of Stillwater	211	56	164	225	0
Village of Victory	115	57	112	108	7
Town of Waterford	1,685	254	992	478	68
Village of Waterford	570	107	310	199	0
Town of Wilton	3,074	906	1769	539	134

The Center for Disease Control (CDC) created a Social Vulnerability Index (SVI) which includes a database and mapping application that identifies and quantifies communities experiencing social vulnerability. The current CDC SVI uses 16 U.S. census variables from the 5-year American Community Survey (ACS) to identify communities that may need support before, during, or after disasters. All 16 variables fall under four broad categories including socioeconomic status (population in poverty, unemployment, etc.), household characteristics (age, disability status, etc.), racial and ethnic minority status, and housing type and transportation (mobile homes, no vehicles, etc.). Populations experiencing social vulnerability may be adversely impacted by natural hazards, disasters, and other community-level stressors. Figure 10-2 identifies areas of social vulnerability using the CDC's SVI and where these areas overlap with Saratoga County

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flood hazard areas. Specifically, the Town of Corinth has a high concentration of social vulnerability that overlaps with the identified flood hazard area.

**Figure 10-2. Saratoga County’s Social Vulnerability and Flood Hazard Areas**



The severity of a flooding event varies depending on the relative risk to citizens and structures located within the planning area. Table 10-9 depicts the level of impact for the Saratoga County planning area, including participating jurisdictions.

**Table 10-9. Impact by Jurisdiction**

JURISDICTION	IMPACT	DESCRIPTION
Saratoga County	Substantial	While it is anticipated that the Saratoga County could anticipate an impact of limited with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged, the historical property damages and injuries resulting from flood indicate a “major” impact.
Town of Ballston	Limited	It is anticipated that the Town could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.



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JURISDICTION	IMPACT	DESCRIPTION
Village of Ballston Spa	Limited	It is anticipated that the Village could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
Town of Charlton	Limited	It is anticipated that the Town could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
Town of Clifton Park	Limited	It is anticipated that the Town could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
Town of Corinth	Limited	It is anticipated that the Town could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
Village of Corinth	Limited	It is anticipated that the Village could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
Town of Day	Limited	It is anticipated that the Town could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
Town of Edinburg	Limited	It is anticipated that the Town could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
Town of Galway	Limited	It is anticipated that the Town could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
Village of Galway	Limited	It is anticipated that the Village could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
Town of Greenfield	Limited	It is anticipated that the Town could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
Town of Hadley	Limited	It is anticipated that the Town could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
Town of Halfmoon	Limited	It is anticipated that the Town could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
Town of Malta	Limited	It is anticipated that the Town could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
City of Mechanicville	Limited	It is anticipated that the City could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
Town of Milton	Limited	It is anticipated that the Town could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
Town of Moreau	Limited	It is anticipated that the Town could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.

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JURISDICTION	IMPACT	DESCRIPTION
Town of Northumberland	Limited	It is anticipated that the Town could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
Town of Providence	Limited	It is anticipated that the Town could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
Village of Round Lake	Limited	It is anticipated that the Village could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
Town of Saratoga	Limited	It is anticipated that the Town could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
City of Saratoga Springs	Limited	It is anticipated that the City could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
Village of Schuylerville	Limited	It is anticipated that the Village could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
Village of South Glens Falls	Limited	It is anticipated that the Village could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
Town of Stillwater	Limited	It is anticipated that the Town could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
Village of Stillwater	Limited	It is anticipated that the Village could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
Village of Victory	Limited	It is anticipated that the Village could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
Town of Waterford	Limited	It is anticipated that the Town could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
Village of Waterford	Limited	It is anticipated that the Village could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.
Town of Wilton	Limited	It is anticipated that the Town could anticipate an impact of “limited” with critical facilities shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.

### ASSESSMENT OF IMPACTS

Flooding is the deadliest natural disaster that occurs in the U.S. each year, and it poses a constant and significant threat to the health and safety of the people in the Saratoga County planning area. The impact of climate change could produce larger, more severe flood events, exacerbating the current flood impacts. Worsening flood conditions can be frequently associated with a variety of impacts, including:

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- Flood-related rescues may be necessary at swift and low water crossings or in flooded neighborhoods where roads have become impassable, placing first responders in harm's way.
- Evacuations may be required for entire neighborhoods because of rising floodwaters, further taxing limited response capabilities, and increasing sheltering needs for displaced residents.
- When an ice jam or beaver dam breaks, the release of large volumes of water can lead to flash flooding in previously unaffected areas.
- Health risks and threats to residents are elevated after the flood waters have receded due to contaminated flood waters (untreated sewage and hazardous chemicals) and mold growth typical in flooded buildings and homes.
- Significant flood events often result in widespread power outages increasing the risk to more vulnerable portions of the population who rely on power for health and/or life safety.
- Extended power outage can result in an increase in structure fires and/or carbon monoxide poisoning as individuals attempt to cook or heat their home with alternate, unsafe cooking or heating devices, such as grills.
- Floods can destroy or make residential structures uninhabitable, requiring shelter or relocation of residents in the aftermath of the event.
- Underground structural components like foundations and basements are particularly vulnerable to groundwater flooding, leading to costly repairs and damages.
- First responders are exposed to downed power lines, contaminated and potentially unstable debris, hazardous materials, and generally unsafe conditions, elevating the risk of injury to first responders and potentially diminishing emergency response capabilities.
- Emergency operations and services may be significantly impacted due to damaged facilities.
- Significant flooding can result in the inability of emergency response vehicles to access areas of the community.
- Critical staff may suffer personal losses or otherwise impacted by a flood event and unable to report for duty, limiting response capabilities.
- County, City, Town, and Village departments may be flooded, delaying response and recovery efforts for the entire community.
- Private sector entities that the jurisdiction and its residents rely on, such as utility providers, financial institutions, and medical care providers may not be fully operational and may require assistance from neighboring communities until full services can be restored.
- Damage to infrastructure may slow economic recovery since repairs may be extensive and lengthy.
- Some businesses not directly damaged by the flood may be negatively impacted while utilities are being restored or water recedes, further slowing economic recovery.
- When the community is affected by significant property damage it is anticipated that funding would be required for infrastructure repair and restoration, temporary services and facilities, overtime pay for responders, and normal day-to-day operating expenses.
- Displaced residents may not be able to immediately return to work, furthering a slow economic recovery.

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- Residential structures substantially damaged by a flood may not be rebuilt for years and uninsured or underinsured residential structures may never be rebuilt, reducing the tax base for the community.
- Large floods may result in a dramatic population fluctuation, as people are unable to return to their homes or jobs and must seek shelter and/or work outside of the affected area.
- Businesses that are uninsured or underinsured may have difficulty reopening, which results in a net loss of jobs for the community and a potential increase in the unemployment rate.
- Flooding may cause significant disruptions of clean water and sewer services, elevating health risks and delaying recovery efforts.
- The psycho-social effects on flood victims and their families can traumatize them for long periods of time, creating long term increases in medical treatment and services.
- Extensive or repetitive flooding can lead to decreases in property value for the affected community.
- Flood poses a potential catastrophic risk to annual and perennial crop production and overall crop quality leading to higher food costs.
- Flood related declines in production may lead to an increase in unemployment.
- Cascading hazard events such as mudslides are possible following or during a flood event.
- Recreation activities at areas such as at the five county parks may be unavailable and tourism can be unappealing for years following a large flood event, devastating directly related local businesses and negatively impacting economic recovery.
- Parks, recreational areas and nature preserves may suffer significant wildlife mortality during and following a flood due to damaged or destroyed ecosystems and water contamination.
- Ice jams and beaver dams can change the natural flow of streams and rivers, leading to new wetland areas but also increasing flood risk for nearby infrastructure.

The overall extent of damages caused by floods is dependent on the extent, depth and duration of flooding, and the velocities of flows in the flooded areas. The level of preparedness and pre-event planning done by the community, local businesses, and citizens will contribute to the overall economic and financial conditions in the aftermath of a flood event.

## CLIMATE CHANGE CONSIDERATIONS

Across the Northeast, the number of days with extreme precipitation since 1958 has increased more than any other region in the U.S.<sup>18</sup> According to climate change projections for New York State the frequency and intensity of heavy precipitation events leading to inland flooding is projected to increase statewide.<sup>19</sup> Precipitation during the winter and springs months is also projected to increase.<sup>20</sup> For the Saratoga County planning area, climate change is likely to increase the frequency and severity and intensity of flood events in the future. Studies suggest

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<sup>18</sup> Fifth National Climate Assessment, U.S. Global Change Research Program.

<https://nca2023.globalchange.gov/chapter/21/>

<sup>19</sup> Fourth National Climate Assessment, U.S. Global Change Research Program.

<https://nca2018.globalchange.gov/chapter/18/>

<sup>20</sup> NOAA National Centers for Environmental Information State Climate Summaries <https://statesummaries.ncics.org/chapter/ny/>

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that flooding at the current 100-year flood level may occur 19 times more often by the end of the century.<sup>21</sup>

According to the Climate Risk and Resilience Portal (ClimRR), the historical annual total precipitation for Saratoga County is 41.09 inches and the current ClimRR climate change projections estimate the annual minimum precipitation at mid-century to be 45.86 inches, which represents a 4.77 inch increase from current averages. End of century projections are even higher with a new annual minimum precipitation at 48.34 inches, which is a 7.25 increase from current averages. This aligns with broader regional and state climate change projections and provides further evidence that climate change may increase the risk of future flood events for the planning area.

### NATIONAL FLOOD INSURANCE PROGRAM (NFIP) PARTICIPATION

Flood insurance offered through the National Flood Insurance Program (NFIP) is one of the best ways for home and business owners to protect themselves financially against the flood hazard. All participating jurisdictions, except Saratoga County, Town of Edinburg, and the Village of Galway, are currently participating in the NFIP and are in good standing. The Town of Edinburg and the Village of Galway current floodplain maps indicate no SFHA in either community. Both communities will continue to evaluate the benefits of joining the NFIP. Table 10-10 shows information on each community's NFIP participation including the community's entry date into the program, initial FIRM date, current effective FIRM date, Community Rating System date and class, and NFIP policies in force, where applicable.

New York State is one of only five states with no unincorporated land. As such, regulating development is a function of local governments. Towns, Cities, and Villages in the planning area have specific authority from the State Legislature to oversee or regulate floodplain development. Counties with no unincorporated areas do not have the authority to regulate development within municipal boundaries. Therefore, all New York counties, including Saratoga County, are not eligible applicants for the NFIP.

**Table 10-10. Participation in NFIP by Jurisdiction<sup>22</sup>**

JURISDICTION	INITIAL FIRM IDENTIFIED	CURRENT EFFECTIVE DATE	ENTRY DATE	CRS ENTRY DATE	CRS CLASS	POLICIES IN FORCE
Saratoga County	N/A	N/A	N/A	N/A	N/A	0
Town of Ballston	06/01/84	08/16/95	06/01/84	N/A	N/A	18
Village of Ballston Spa	06/01/84	08/16/95	06/01/84	N/A	N/A	20
Town of Charlton	07/18/85	08/16/95	07/18/85	N/A	N/A	3
Town of Clifton Park	03/01/84	08/16/95	03/01/84	N/A	N/A	203
Town of Corinth	03/01/84	08/16/95	03/01/84	N/A	N/A	8

<sup>21</sup> Source: <https://www.nyscrda.ny.gov/About/Publications/Energy-Analysis-Reports-and-Studies/Environmental-Research-and-Development-Technical-Reports/Response-to-Climate-Change-in-New-York>

<sup>22</sup> FEMA Community Status Book. Accessed October 7, 2024

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JURISDICTION	INITIAL FIRM IDENTIFIED	CURRENT EFFECTIVE DATE	ENTRY DATE	CRS ENTRY DATE	CRS CLASS	POLICIES IN FORCE
Village of Corinth	03/01/84	08/16/95	03/01/84	N/A	N/A	2
Town of Day	08/16/95	(NSFHA) <sup>23</sup>	06/22/84	N/A	N/A	0
Town of Edinburg	-	-	-	-	-	-
Town of Galway	05/01/85	08/16/95	05/01/85	N/A	N/A	4
Village of Galway	-	-	-	-	-	-
Town of Greenfield	06/05/85	08/16/95	06/05/85	N/A	N/A	14
Town of Hadley	09/15/83	08/16/95	09/15/83	N/A	N/A	5
Town of Halfmoon	03/01/84	08/16/95	03/01/84	N/A	N/A	26
Town of Malta	03/01/84	08/16/95	03/01/84	N/A	N/A	59
City of Mechanicville	01/05/84	08/16/95	01/05/84	N/A	N/A	15
Town of Milton	05/15/85	08/16/95	05/15/85	N/A	N/A	4
Town of Moreau	06/15/84	08/16/95	06/15/84	N/A	N/A	14
Town of Northumberland	12/15/82	08/16/95	12/15/82	N/A	N/A	6
Town of Providence	08/16/95	08/16/95	12/02/85	N/A	N/A	0
Village of Round Lake	01/05/84	08/16/95	01/05/84	N/A	N/A	1
Town of Saratoga	06/15/84	08/16/95	06/15/84	N/A	N/A	59
City of Saratoga Springs	06/15/84	08/16/95	06/15/84	N/A	N/A	34
Village of Schuylerville	06/01/84	08/16/95	06/01/84	N/A	N/A	8
Village of South Glens Falls	06/05/85	08/16/95	06/05/85	N/A	N/A	0
Town of Stillwater	06/01/84	08/16/95	06/01/84	N/A	N/A	37
Village of Stillwater	01/05/84	08/16/95	01/05/84	N/A	N/A	24
Village of Victory	01/05/84	08/16/95	08/12/85	N/A	N/A	1
Town of Waterford	12/04/79	08/16/95	12/04/79	N/A	N/A	50
Village of Waterford	05/01/80	08/16/95	05/01/80	N/A	N/A	140
Town of Wilton	08/16/95	(NSFHA) <sup>24</sup>	11/20/85	N/A	N/A	5

While Saratoga County does not participate in the NFIP, the county does help guide incorporated communities within the county on making decisions related to flood and water management. All NFIP participating jurisdictions currently have in place standard flood damage prevention ordinances which include minimum NFIP standards for new construction and substantial

<sup>23</sup> Jurisdiction has no Special Flood Hazard Area – All Zone C

<sup>24</sup> Jurisdiction has no Special Flood Hazard Area – All Zone C

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Improvements of structures. All NFIP participating jurisdictions are considering adopting higher regulatory NFIP standards to limit or further regulate floodplain development.

The flood hazard areas throughout the planning area are subject to periodic inundation, which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, and extraordinary public expenditures for flood protection and relief, of which adversely affect public safety.

Flood losses are the result of obstructions in floodplains that cause an increase in flood heights and velocities, and the presence of vulnerable structures in flood prone areas that are inadequately elevated, flood-proofed, or otherwise protected from flood damage. Mitigation actions are included to address flood maintenance issues as well, including routinely clearing debris from drainage systems and bridges and expanding drainage culverts and storm water structures to more adequately convey flood waters.

It is the purpose of all NFIP participating jurisdictions to continue to promote public health, safety and general welfare by minimizing public and private losses due to flood conditions in identified high risk areas. The Cities, Towns, Villages are guided by their local Flood Damage Prevention Ordinance. Each community will continue to comply with NFIP requirements through local permitting, inspection, and record-keeping requirements for new and substantially developed construction. Further, the NFIP program promotes sound development in floodplain areas and includes provisions designed to:

- Protect human life and health;
- Minimize expenditure of public money for costly flood control projects;
- Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- Minimize prolonged business interruptions;
- Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in floodplains;
- Help maintain a stable tax base by providing for the sound use and development of flood-prone areas in such a manner as to minimize future flood blight areas; and
- Ensure that potential buyers are notified that property is in a flood area.

In order to accomplish these tasks, the NFIP participating jurisdictions seek to follow these guidelines to achieve flood mitigation by:

- Restrict or prohibit uses that are dangerous to health, safety, or property in times of flood, such as filling or dumping, that may cause excessive increases in flood heights and/or velocities;
- Require that uses vulnerable to floods, including facilities, which serve such uses, be protected against flood damage at the time of initial construction as a method of reducing flood losses;
- Control the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of floodwaters;
- Control filling, grading, dredging, and other development, which may increase flood damage; and
- Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.

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### NFIP COMPLIANCE AND MAINTENANCE

Saratoga County and the NFIP participating jurisdictions have developed mitigation actions that relate to either NFIP maintenance or compliance. Compliance and maintenance actions can be found in Section 23.

Flooding was identified as a high-risk hazard during hazard ranking activities at the Risk Assessment Workshop by the majority of the planning team. As such, many of the mitigation actions were developed with flood mitigation in mind. A majority of these flood actions address compliance with the NFIP and implementing flood risk reduction actions. All participating jurisdictions recognize the need and are working towards adopting higher NFIP regulatory standards to further minimize flood risk in their community. In addition, some jurisdictions are focusing on public flood awareness activities. This includes promoting the availability of flood insurance by placing NFIP brochures and flyers in public libraries or public meeting places in participating jurisdictions.

Each NFIP participating jurisdiction has a designated floodplain administrator (Table 10-11). The floodplain administrator in the planning area will continue to maintain compliance with the NFIP including continued floodplain administration, zoning ordinances, and development regulation. The flood damage prevention ordinance adopted by participating jurisdictions outlines the requirements for development in special flood hazard areas.

**Table 10-11. Floodplain Administrators**

JURISDICTION	TITLE	PERMIT AUTHORITY
Town of Ballston	Building Inspector	Yes
Village of Ballston Spa	Building Inspector	Yes
Town of Charlton	Code Enforcement Officer	Yes
Town of Clifton Park	Code Enforcement Officer	Yes
Town of Corinth	Building Inspector	Yes
Village of Corinth	Building Inspector	Yes
Town of Day	Code Enforcement Officer	Yes
Town of Galway	Code Enforcement Officer	Yes
Town of Greenfield	Planning Board	Yes
Town of Hadley	Code Enforcement Officer	Yes
Town of Halfmoon	Code Enforcement Officer	Yes
Town of Malta	Enforcement Officer	Yes
City of Mechanicville	Code Enforcement Officer	Yes
Town of Milton	Zoning Enforcement Official	Yes
Town of Moreau	Building Inspector	Yes
Town of Northumberland	Zoning Administrator	Yes
Town of Providence	Code Enforcement Officer	Yes
Village of Round Lake	Board of Trustees	Yes



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JURISDICTION	TITLE	PERMIT AUTHORITY
Town of Saratoga	Zoning Administrative Officer	Yes
City of Saratoga Springs	Building Inspector	Yes
Village of Schuylerville	Code Enforcement Officer	Yes
Village of South Glens Falls	Building Inspector	Yes
Town of Stillwater	Code Enforcement Officer	Yes
Village of Stillwater	Code Enforcement Officer	Yes
Village of Victory	Planning Board	Yes
Town of Waterford	Building Inspector	Yes
Village of Waterford	Zoning Inspector	Yes
Town of Wilton	Zoning Board	Yes

**Table 10-12. Flood Damage Prevention Ordinance**

JURISDICTION	FLOOD DAMAGE PREVENTION ORDINANCE
Town of Ballston	<a href="https://ecode360.com/6232200#6232200">https://ecode360.com/6232200#6232200</a>
Village of Ballston Spa	<a href="https://ecode360.com/9055615#9055615">https://ecode360.com/9055615#9055615</a>
Town of Charlton	<a href="https://www.townofcharlton.org/sites/g/files/vyhliif2921f/uploads/2015_final_zoningordin.pdf">https://www.townofcharlton.org/sites/g/files/vyhliif2921f/uploads/2015_final_zoningordin.pdf</a>
Town of Clifton Park	<a href="https://ecode360.com/6712181#6712181">https://ecode360.com/6712181#6712181</a>
Town of Corinth	<a href="https://ecode360.com/7213219#7213219">https://ecode360.com/7213219#7213219</a>
Village of Corinth	<a href="https://ecode360.com/26962023#26962023">https://ecode360.com/26962023#26962023</a>
Town of Day	Available Upon Request at Town Hall
Town of Edinburg	Not Participating
Town of Galway	<a href="https://ecode360.com/6487861#6487861">https://ecode360.com/6487861#6487861</a>
Village of Galway	Not Participating
Town of Greenfield	<a href="https://ecode360.com/8220078#8220078">https://ecode360.com/8220078#8220078</a>
Town of Hadley	Available Upon Request at Town Hall
Town of Halfmoon	<a href="https://ecode360.com/6502320#6502320">https://ecode360.com/6502320#6502320</a>
Town of Malta	<a href="https://ecode360.com/8556226#8556226">https://ecode360.com/8556226#8556226</a>
City of Mechanicville	<a href="https://cms3.revize.com/revize/hudsonny/Boards%20and%20Committees/Legal%20Committee/2022%20Docs%20and%20Agendas/Charter-Code_mechanicville.pdf">https://cms3.revize.com/revize/hudsonny/Boards%20and%20Committees/Legal%20Committee/2022%20Docs%20and%20Agendas/Charter-Code_mechanicville.pdf</a>
Town of Milton	<a href="https://ecode360.com/9163087#9163087">https://ecode360.com/9163087#9163087</a>
Town of Moreau	<a href="https://ecode360.com/6820855#6820855">https://ecode360.com/6820855#6820855</a>
Town of Northumberland	<a href="https://documents.dps.ny.gov/search/Home/ViewDoc/Find?id=%7BEF735C13-6FF9-457B-8D8F-F9A309B96E0C%7D&amp;ext=pdf">https://documents.dps.ny.gov/search/Home/ViewDoc/Find?id=%7BEF735C13-6FF9-457B-8D8F-F9A309B96E0C%7D&amp;ext=pdf</a>
Town of Providence	<a href="https://townprovidence.digitaltowpath.org:10105/content/Laws/View/25:fileId=documents:/content/Documents/File/459.pdf">https://townprovidence.digitaltowpath.org:10105/content/Laws/View/25:fileId=documents:/content/Documents/File/459.pdf</a>
Village of Round Lake	<a href="https://ecode360.com/6615652#6615652">https://ecode360.com/6615652#6615652</a>

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JURISDICTION	FLOOD DAMAGE PREVENTION ORDINANCE
Town of Saratoga	<a href="https://ecode360.com/11100605#11100605">https://ecode360.com/11100605#11100605</a>
City of Saratoga Springs	<a href="https://ecode360.com/6519278#6519278">https://ecode360.com/6519278#6519278</a>
Village of Schuylerville	<a href="https://villageofschuylerville.org/wp-content/uploads/2020/09/Schuylerville-Draft-Zoning-Code-12082021.pdf">https://villageofschuylerville.org/wp-content/uploads/2020/09/Schuylerville-Draft-Zoning-Code-12082021.pdf</a>
Village of South Glens Falls	<a href="https://ecode360.com/6746052#6746052">https://ecode360.com/6746052#6746052</a>
Town of Stillwater	<a href="https://ecode360.com/11863341#11863341">https://ecode360.com/11863341#11863341</a>
Village of Stillwater	Available Upon Request at Village Hall
Village of Victory	Available Upon Request at the Village Office
Town of Waterford	<a href="https://ecode360.com/13678122#13678122">https://ecode360.com/13678122#13678122</a>
Village of Waterford	<a href="https://ecode360.com/8238211#8238211">https://ecode360.com/8238211#8238211</a>
Town of Wilton	Available Upon Request at Town Hall

In accordance with local flood damage prevention ordinances, each floodplain administrator responsibilities include:

- Permitting and inspecting construction activity in the floodplain;
- Ensuring conformance with floodplain permit requirements;
- Enforcing floodplain regulations;
- Identifying substantially damaged structures and ensuring compliance during reconstruction;
- Identifying substantial improvements in proposed development permit applications and ensuring compliance;
- Providing floodplain map and flood insurance information to the public;
- Coordinating with FEMA to maintain the community’s participation in the NFIP; and
- Keeping records of construction in the floodplain.

Each jurisdiction’s flood damage prevention ordinance includes standard language defining substantial damage and substantial improvement using the minimum required threshold of fifty percent of market value.

A component of the NFIP is the Community Assistance Program. Through Community Assistance Visits (CAV) and Community Assistance Calls (CAC) to and with communities, FEMA or representatives from New York State Department of Environmental Conservation, provide technical assistance and ensure a community is in compliance with the NFIP and adequately enforcing floodplain regulations. Table 10-12 provides the most recent CAV and CAC dates for each participating jurisdiction.

**Table 10-12. CAC and CAV Dates in Saratoga County<sup>25</sup>**

JURISDICTION	CAV DATE	CAC DATE
Town of Ballston	11/03/2006	05/11/1994

<sup>25</sup> New York State Department of Environmental Conservation, Division of Water, Bureau of Flood Protection & Dam Safety

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JURISDICTION	CAV DATE	CAC DATE
Village of Ballston Spa	N/A	12/11/2007
Town of Charlton	12/27/2016	N/A
Town of Clifton Park	N/A	08/23/1994
Town of Corinth	07/11/2011	08/14/2008
Village of Corinth	04/16/2021	10/02/2013
Town of Day	06/24/2021	N/A
Town of Edinburg	N/A	N/A
Town of Galway	09/22/1995	N/A
Village of Galway	N/A	N/A
Town of Greenfield	N/A	10/21/2020
Town of Hadley	N/A	08/02/2016
Town of Halfmoon	N/A	08/23/1994
Town of Malta	N/A	11/18/2008
City of Mechanicville	10/20/2008	04/09/2020
Town of Milton	N/A	08/24/1994
Town of Moreau	07/12/2011	05/27/2010
Town of Northumberland	N/A	10/12/2018
Town of Providence	12/27/2019	N/A
Village of Round Lake	07/28/2016	08/17/1995
Town of Saratoga	06/16/2006	10/13/2005
City of Saratoga Springs	N/A	11/28/2006
Village of Schuylerville	07/14/2011	01/23/2014
Village of South Glens Falls	N/A	05/27/2010
Town of Stillwater	02/06/2012	11/22/2005
Village of Stillwater	05/16/2013	10/18/2007
Village of Victory	N/A	N/A
Town of Waterford	N/A	09/28/2004
Village of Waterford	11/23/2011	09/14/2004
Town of Wilton	06/28/2021	02/26/2015

## REPETITIVE LOSS

The Severe Repetitive Loss (SRL) Grant Program under FEMA provides federal funding to assist states and communities in implementing mitigation measures to reduce or eliminate the long-term risk of flood damage to severe repetitive loss residential structures insured under the NFIP. The

## SECTION 10: FLOOD

New York State Department of Environmental Conservation administers the SRL grant program for the New York State. One of the goals of the FMA program is to reduce the burden of repetitive loss and severe repetitive loss properties on the NFIP through mitigation activities that significantly reduce or eliminate the threat of future flood damages.

Repetitive Loss properties are defined as structures that are:

- Any insurable building for which 2 or more claims of more than \$1,000 each, paid by the National Flood Insurance Program (NFIP) within any 10-year period, since 1978;
- May or may not be currently insured under the NFIP.

Severe Repetitive Loss properties are defined as residential properties that are:

- Covered under the NFIP and have at least four flood related damage claim payments (building and contents) over \$5,000.00 each, and the cumulative amount of such claims payments exceed \$20,000; or
- At least two separate claim payments (building payments only) have been made with the cumulative amount of the building portion of such claims exceeding the market value of the building.

In either scenario, at least two of the referenced claims must have occurred within any ten-year period and must be greater than 10 days apart.<sup>26</sup> Table 10-13 shows repetitive loss and severe repetitive loss properties for the Saratoga County planning area.

**Table 10-13. Repetitive Loss and Severe Repetitive Loss Properties<sup>27</sup>**

JURISDICTION	BUILDING TYPE	NUMBER OF LOSSES	SEVERE REPETITIVE LOSS
Village of Ballston Spa	2-4 Family Building	2	No
	Single Family	2	No
Town of Ballston	Single Family	2	No
Town of Clifton Park	Single Family	2	No
	Single Family	4	No
	Single Family	3	No
	Single Family	2	No
Town of Halfmoon	Single Family	3	No
	Single Family	2	No
City of Mechanicville	Single Family	4	No
	2-4 Family Building	3	No
Town of Saratoga	Single Family	2	No
	Single Family	3	No

<sup>26</sup> FEMA, NFIP Manual, Guidance for Severe Repetitive Loss Properties

<sup>27</sup> Each line in Table 10-12 represents a single structure.

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JURISDICTION	BUILDING TYPE	NUMBER OF LOSSES	SEVERE REPETITIVE LOSS
Town of Stillwater	Single Family	2	No
	Single Family	4	No
	Single Family	9	No
	Single Family	2	No
Town of Waterford	Single Family	7	Yes
	Single Family	11	Yes
	Single Family	5	No
	Single Family	3	No
	Single Family	4	No
	Single Family	2	No
	Non-residential	3	No
	Non-residential	3	No
	Single Family	3	No
	2-4 Family Building	4	No
	2-4 Family Building	3	No
	Single Family	3	No
	Single Family	2	No
	Single Family	2	No
Village of Waterford	Single Family	3	No
	Single Family	8	Yes
	Non-residential	2	No
	2-4 Family Building	3	No
	Single Family	2	No
	2-4 Family Building	3	No
	2-4 Family Building	4	No
	Single Family	3	No
	Single Family	4	No
	2-4 Family Building	4	No
	Single Family	3	No
	2-4 Family Building	3	No

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JURISDICTION	BUILDING TYPE	NUMBER OF LOSSES	SEVERE REPETITIVE LOSS
	2-4 Family Building	2	No
	2-4 Family Building	4	Yes
	2-4 Family Building	3	No
	Non-residential	3	No



**SARATOGA**  
**COUNTY** NEW  
YORK

SECTION 11  
**HAIL**

## SECTION 11: HAIL

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### HAZARD DESCRIPTION



Hail is precipitation in the form of round masses and irregular lumps consisting of layers of ice and compact snow. Hail is formed inside of thunderstorm updrafts and can be particularly damaging to the built environment and infrastructure.

During the developmental stages of a hailstorm, ice crystals form within a low-pressure front due to the rapid rising of warm air into the upper atmosphere, and the subsequent cooling of the air mass. Frozen droplets gradually accumulate into ice crystals until they fall as precipitation that is round or irregularly shaped masses of ice typically greater than 0.75 inches in diameter. The size of hailstones is a direct result of the size and severity of the storm. High velocity updraft winds are required to keep hail in suspension in thunderclouds. The strength of the updraft is a by-product of heating on the Earth's surface. Higher temperature gradients above Earth's surface result in increased suspension time and hailstone size.

Hail falls when it becomes heavy enough to overcome the strength of the thunderstorm updraft and is pulled toward the earth by gravity. Smaller hailstones can be blown away from the updraft by horizontal winds, so larger hail typically falls closer to the updraft than smaller hail. If the winds near the surface are strong enough, hail can fall at an angle or even nearly sideways. Wind-driven hail can tear up siding on houses, break windows and blow into houses, break side windows on cars, and cause severe injury or death to people and animals.

There is no clear distinction between storms that do and do not produce hailstones. Nearly all severe thunderstorms probably produce hail aloft, though it may melt before reaching the ground. In all cases, the hail falls when the thunderstorm's updraft can no longer support the weight of the ice. The stronger the updraft, the larger the hailstone can grow, and the greater the potential for loss or damage.<sup>1</sup>

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<sup>1</sup> National Oceanic and Atmospheric Administration, National Severe Storms Laboratory, Severe Weather 101.



## SECTION 11: HAIL

### LOCATION

Hailstorms are an extension of severe thunderstorms that could potentially cause severe damage. Similar to thunderstorms, they are not confined to any specific geographic location and can vary greatly in size, location, intensity, and duration. Therefore, the entire Saratoga County planning area, including all participating jurisdictions, are equally at risk to the hazard of hail. Refer to Figure 11-1 for the location of past hail events in the planning area.

### EXTENT

The National Weather Service (NWS) classifies a storm as “severe” if there is hail three-quarters of an inch in diameter (approximately the size of a penny) or greater, based on radar intensity or as seen by observers. The intensity category of a hailstorm depends on hail size and the potential damage it could cause, as depicted in the National Centers for Environmental Information (NCEI) Intensity Scale in Table 11-1.

**Table 11-1. Hail Intensity and Magnitude<sup>2</sup>**

SIZE CODE	INTENSITY CATEGORY	SIZE (Diameter Inches)	DESCRIPTIVE TERM	TYPICAL DAMAGE
H0	Hard Hail	Up to 0.33	Pea	No damage
H1	Potentially Damaging	0.33 – 0.60	Marble	Slight damage to plants and crops
H2	Potentially Damaging	0.60 – 0.80	Dime	Significant damage to plants and crops
H3	Severe	0.80 – 1.20	Nickel	Severe damage to plants and crops
H4	Severe	1.2 – 1.6	Quarter	Widespread glass and auto damage
H5	Destructive	1.6 – 2.0	Half Dollar	Widespread destruction of glass, roofs, and risk of injuries
H6	Destructive	2.0 – 2.4	Ping Pong Ball	Aircraft bodywork dented and brick walls pitted
H7	Very Destructive	2.4 – 3.0	Golf Ball	Severe roof damage and risk of serious injuries
H8	Very Destructive	3.0 – 3.5	Hen Egg	Severe damage to all structures
H9	Super Hailstorms	3.5 – 4.0	Tennis Ball	Extensive structural damage, could cause fatal injuries
H10	Super Hailstorms	4.0 +	Baseball	Extensive structural damage, could cause fatal injuries

The intensity scale in Table 11-1 ranges from H0 to H10, with increments of intensity or damage potential in relation to hail size (distribution and maximum), texture, fall speed, speed of storm translation, and strength of the accompanying wind. Based on the best available data regarding the previous occurrences for the area, the Saratoga County planning area may experience hailstorms ranging from an H0 (pea size) to an H7 (golf ball size). The largest reported hail event in the Saratoga County planning area took place on June 1, 2011, in the City of Saratoga Springs,

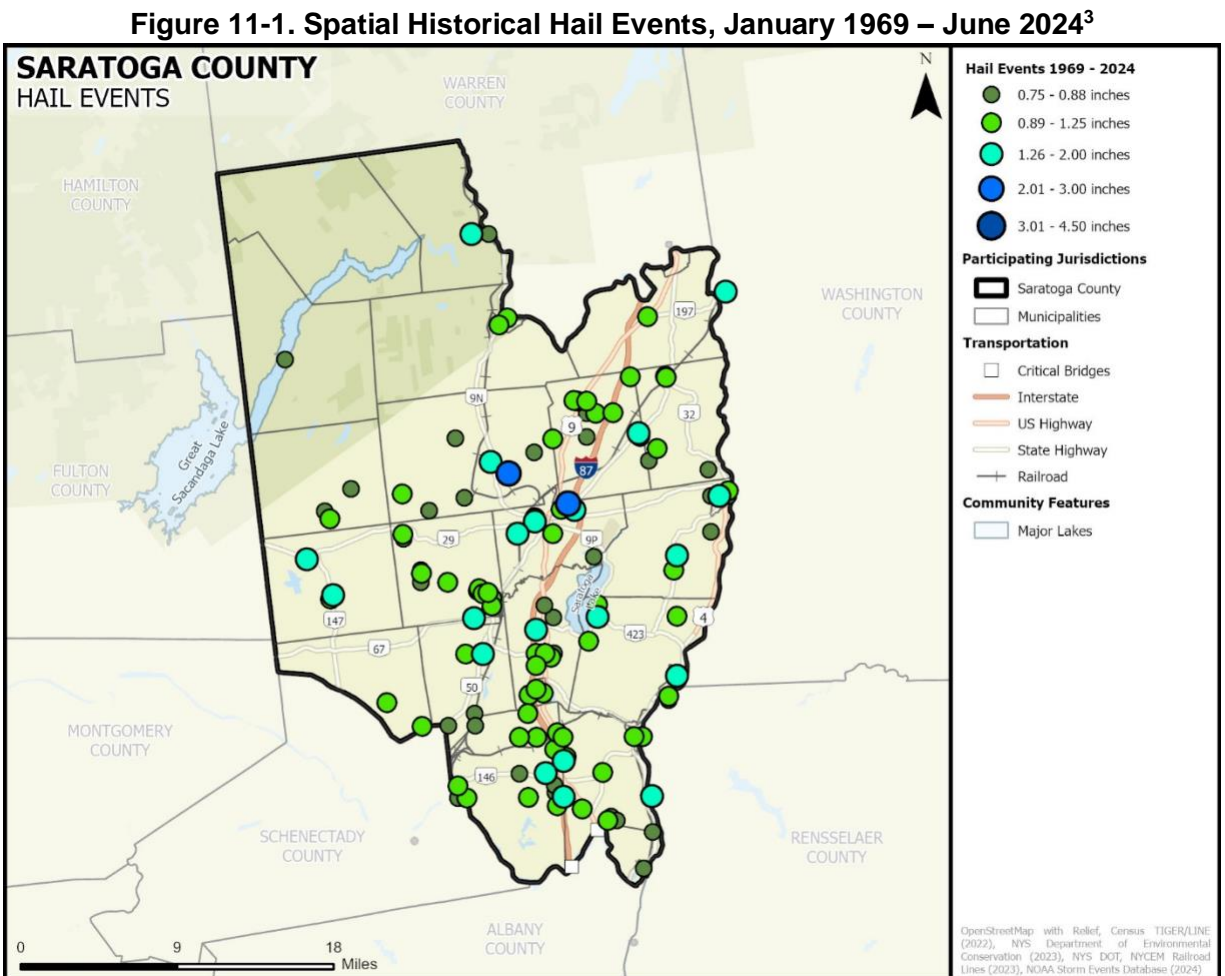
<sup>2</sup> NCEI Intensity Scale, based on the TORRO Hailstorm Intensity Scale.

## SECTION 11: HAIL

and resulted in hailstone measuring 2.75 inches in diameter, or an H7, which is considered a very destructive hailstorm. Refer to the Historical Occurrences section below for more details on previous hail events. This is the maximum extent the planning area can anticipate in the future, based on historic records.

### HISTORICAL OCCURRENCES

Historical evidence shown in Figure 11-1 demonstrates that the planning area is vulnerable to hail events overall. Historical events with reported damage, injuries, or fatalities are shown in Table 11-2 includes all damaging events from January 1969 through June 2024, as recorded in the NCEI Storm Events Database. In total, 195 reported historical hail events have occurred within the Saratoga County planning area. These events were reported to NCEI and NOAA databases and may not represent all hail events that have occurred during the past 55.5 years. Only those events for the Saratoga County planning area with latitude and longitude available were plotted (Figure 11-1).



<sup>3</sup> Map sources: ESRI OpenStreetMap (Custom: no labels), Census TIGER/LINE (2022), NOAA Storm Events Database (2023)

## SECTION 11: HAIL

**Table 11-2. Historical Hail Events, January 1969 – June 2024<sup>4</sup>**

JURISDICTION	DATE	MAGNITUDE (Inches)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
City of Saratoga Springs	8/28/1988	0.75	0	1	\$0	\$0
City of Saratoga Springs	6/11/1991	1	0	0	\$0	\$456,400
Town of Greenfield	7/28/1995	1	0	0	\$4,100	\$0
Town of Providence	7/28/1995	0.88	0	0	\$4,100	\$0
Town of Providence	7/28/1995	1.75	0	0	\$4,100	\$0
Town of Wilton	7/15/1997	1	0	0	\$193,300	\$0
City of Saratoga Springs	8/22/1997	0.88	0	0	\$5,800	\$0
City of Saratoga Springs	8/22/1997	0.88	0	0	\$3,900	\$0
City of Saratoga Springs	5/31/1998	1.75	0	0	\$18,900	\$0
Town of Milton	5/31/1998	1	0	0	\$9,500	\$0
City of Mechanicville	9/21/1998	1	0	0	\$1,900	\$0
City of Saratoga Springs	5/10/2000	1	0	0	\$1,800	\$0
Town and Village of Galway <sup>5</sup>	6/2/2000	1	0	0	\$8,900	\$0
Town and Village of Galway	7/21/2000	1	0	0	\$17,800	\$0
Town of Providence	7/21/2000	1	0	0	\$3,600	\$0
City of Mechanicville	5/28/2001	1.25	0	0	\$13,900	\$0
Town of Clifton Park	5/28/2001	0.75	0	0	\$0	\$345,300
Town and Village of Galway	5/24/2004	0.88	0	0	\$129,800	\$0
<b>TOTALS</b>		<b>(Max Extent)</b>	<b>0</b>	<b>1</b>	<b>\$421,400</b>	<b>\$801,700</b>

**Table 11-3. Historical Hail Events Summary, January 1969 – June 2024<sup>6</sup>**

JURISDICTION	NUMBER OF EVENTS	MAX MAGNITUDE (Inches)	INJURIES	DEATHS	PROPERTY DAMAGE	CROP DAMAGE
Saratoga County	6	1.75	0	0	\$0	\$0
Town of Ballston / Village of Ballston Spa <sup>7</sup>	17	1.75	0	0	\$0	\$0

<sup>4</sup> Only recorded events with damages are listed. No reports of injuries or fatalities were recorded in the NCEI database. Events reported from January 1969 through June 2024. No events resulting in damages were reported prior to 1988 or after 2004. Damages are presented in 2024 dollar amounts.

<sup>5</sup> Town and Village of Galway are not listed separately in the NCEI. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their close proximity.

<sup>6</sup> Participating jurisdictions with no reported events show a “-” in table columns where damages, deaths or injuries would otherwise be reported.

<sup>7</sup> Town of Ballston and Village of Ballston Spa are not listed separately in the NCEI. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their close proximity.

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JURISDICTION	NUMBER OF EVENTS	MAX MAGNITUDE (Inches)	INJURIES	DEATHS	PROPERTY DAMAGE	CROP DAMAGE
Town of Charlton	5	1	0	0	\$0	\$0
Town of Clifton Park	19	1.5	0	0	\$0	\$345,300
Town and Village of Corinth <sup>8</sup>	2	1	0	0	\$0	\$0
Town of Day	0	-	-	-	-	-
Town of Edinburg	1	0.75	0	0	\$0	\$0
Town and Village of Galway	11	1.5	0	0	\$156,500	\$0
Town of Greenfield	15	2.5	0	0	\$4,100	\$0
Town of Hadley	2	1.75	0	0	\$0	\$0
Town of Halfmoon	8	1.75	0	0	\$0	\$0
Town of Malta	15	1.75	0	0	\$0	\$0
City of Mechanicville	5	1.25	0	0	\$15,800	\$0
Town of Milton	10	1.75	0	0	\$9,500	\$0
Town of Moreau	1	1	0	0	\$0	\$0
Town of Northumberland	8	1.25	0	0	\$0	\$0
Town of Providence	6	1.75	0	0	\$11,800	\$0
Village of Round Lake	7	1	0	0	\$0	\$0
City of Saratoga Springs	21	2.75	0	1	\$30,400	\$456,400
Town of Saratoga	3	1.75	0	0	\$0	\$0
Village of Schuylerville	5	1.5	0	0	\$0	\$0
Village of South Glens Falls	0	-	-	-	-	-
Town and Village of Stillwater <sup>9</sup>	12	1.75	0	0	\$0	\$0
Village of Victory	0	-	-	-	-	-
Town and Village of Waterford <sup>10</sup>	3	0.88	0	0	\$0	\$0
Town of Wilton	13	1.75	0	0	\$193,300	\$0
<b>TOTALS</b>	<b>195</b>	<b>2.75</b>	<b>0</b>	<b>1</b>	<b>\$1,223,100</b>	

<sup>8</sup> Town and Village of Corinth are not listed separately in the NCEI. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their close proximity.

<sup>9</sup> Town and Village of Stillwater are not listed separately in the NCEI. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their close proximity.

<sup>10</sup> Town and Village of Waterford are not listed separately in the NCEI. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their close proximity.

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Both the Town of Clifton Park and City of Saratoga Springs have had the greatest number of events (21) over the reporting period. The event with the most significant crop damage reported occurred on June 11, 1991, in the City of Saratoga Springs, with an estimated \$456,400 (2024 dollars) in damages. There have been 35 hail events reported since the 2019 plan.

### SIGNIFICANT EVENTS

#### **July 15, 1997 – Town of Wilton**

An extremely hot and humid airmass formed over eastern New York, leading to scattered severe thunderstorms which included hail falling over the Saratoga County planning area. In the Town of Wilton, 1-inch hail caused an estimated \$193,000 (2024 dollars) in property damage.

#### **May 31, 1998 – City of Saratoga Springs and Town of Milton**

A strong low-pressure system formed in the morning hours over the upper Great Lakes, pushing a warm front across eastern New York. This set the stage for a major severe weather outbreak, including hail as big as 1.75 inches in diameter falling over Saratoga County. Damages from this event were reported for two participating jurisdictions, those being the City of Saratoga Springs and the Town of Milton. In total, property damages were estimated at \$28,400 (2024 dollars).

#### **May 24, 2004 – Town and Village of Galway**

In the evening hours, hail occurred over the Saratoga County planning area, primarily affecting the Town and Village of Galway, where relatively small hail (0.88 inches) caused an estimated \$129,800 (2024 dollars) in property damages. Hail damage was reported to have primarily occurred to roadways within the planning area.

## PROBABILITY OF FUTURE EVENTS

Hail events are most likely to occur during the spring and summer months and during the afternoon and evening hours, but they may occur at any time of the year. Based on available records of historic events, 195 events in a 55.5-year reporting period for Saratoga County results in an average annual occurrence of approximately three to four events each year. This frequency supports a “Highly Likely” probability of future events for the Saratoga County planning area, including participating jurisdictions. Future conditions, specifically climate change, could impact the probability of future hail events.

## VULNERABILITY AND IMPACT

Much of the damage inflicted by hail is to crops. Even relatively small hail can shred plants to ribbons in a matter of minutes. According to the 2019 New York State Hazard Mitigation Plan, agriculture is typically the most affected by hailstorms due to crop damage. Infrastructure such as the roofs of buildings and homes as well as vehicles are also commonly damaged by hail.

Utility systems on the roofs of buildings and critical facilities county-wide would be vulnerable and could be damaged. Hail could cause a significant threat to people as they could be struck by hail and falling trees and branches. Outdoor activities and events may elevate the risk to residents and visitors when a hailstorm strikes with little warning.

The Saratoga County planning area features mobile or manufactured home parks throughout the planning area. These parks are typically more vulnerable to hail events than typical site-built structures. In addition, manufactured homes are located sporadically throughout the planning area including most participating jurisdictions which would also be more vulnerable. The U.S.

## SECTION 11: HAIL

Census data indicates a total of 7,153 (6 percent of total housing stock) manufactured homes located in the Saratoga County planning area. In addition, 46 percent (approximately 51,143 structures) of the housing structures in the Saratoga County planning area were built before 1980. These structures would typically be built to lower or less stringent construction standards than newer construction and may be more susceptible to damage during significant hail events.

**Table 11-4. Structures at Greater Risk by Participating Jurisdiction<sup>11</sup>**

JURISDICTION	BUILT PRIOR TO 1980	PERCENT OF HOUSING STOCK	MOBILE HOME	PERCENT OF HOUSING STOCK
Saratoga County <sup>12</sup>	51,143	46%	7,153	6%
Town of Ballston	2,298	45%	52	1%
Village of Ballston Spa	1,938	78%	0	0%
Town of Charlton	1,357	77%	0	0%
Town of Clifton Park	7,504	48%	76	1%
Town of Corinth	1,967	62%	426	14%
Village of Corinth	938	76%	10	1%
Town of Day	949	67%	198	14%
Town of Edinburg	1,086	59%	407	22%
Town of Galway	1,037	57%	42	2%
Village of Galway	68	86%	10	13%
Town of Greenfield	1,158	31%	497	13%
Town of Hadley	590	56%	101	10%
Town of Halfmoon	2,958	25%	903	8%
Town of Malta	2,968	33%	930	10%
City of Mechanicville	2,492	86%	0	0%
Town of Milton	3,690	46%	1,052	13%
Town of Moreau	3,527	51%	499	7%
Town of Northumberland	528	27%	135	7%
Town of Providence	338	34%	132	13%
Village of Round Lake	256	65%	8	2%
Town of Saratoga	1,479	55%	191	7%
City of Saratoga Springs	8,709	60%	133	1%
Village of Schuylerville	521	74%	23	3%

<sup>11</sup> U.S. Census Bureau, American Community Survey, 2022

<sup>12</sup> County totals include all housing units within the county lines, including unincorporated areas and non-participating jurisdictions within the County.

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JURISDICTION	BUILT PRIOR TO 1980	PERCENT OF HOUSING STOCK	MOBILE HOME	PERCENT OF HOUSING STOCK
Village of South Glens Falls	1,297	74%	0	0%
Town of Stillwater	1,940	46%	260	6%
Village of Stillwater	506	56%	49	5%
Village of Victory	172	64%	49	18%
Town of Waterford	2,950	72%	48	1%
Village of Waterford	1,103	96%	26	2%
Town of Wilton	1,618	22%	1,065	15%

While all citizens are at risk of the impacts of hail, forced relocation and disaster recovery disproportionately impacts low-income residents who lack the financial means to travel, afford a long-term stay away from home, and to rebuild or repair their homes. An estimated 7 percent of the planning area’s population live below the poverty level (Table 11-5).

**Table 11-5. Populations at Greater Risk by Jurisdiction<sup>13</sup>**

JURISDICTION	BELOW POVERTY LEVEL
Saratoga County	15,598
Town of Ballston	538
Village of Ballston Spa	338
Town of Charlton	191
Town of Clifton Park	762
Town of Corinth	641
Village of Corinth	373
Town of Day	123
Town of Edinburg	200
Town of Galway	319
Village of Galway	29
Town of Greenfield	867
Town of Hadley	197
Town of Halfmoon	979
Town of Malta	1,287
City of Mechanicville	1,072

<sup>13</sup> US Census Bureau 2022 data for Saratoga County.

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JURISDICTION	BELOW POVERTY LEVEL
Town of Milton	941
Town of Moreau	1,752
Town of Northumberland	330
Town of Providence	259
Village of Round Lake	25
Town of Saratoga	321
City of Saratoga Springs	2,879
Village of Schuylerville	151
Village of South Glens Falls	387
Town of Stillwater	893
Village of Stillwater	225
Village of Victory	108
Town of Waterford	478
Village of Waterford	199
Town of Wilton	539

The Saratoga County Planning identified the following critical facilities as assets that are considered the most important to the planning area and are susceptible to a range of impacts caused by hail events. The following critical facilities would be vulnerable to hail events in the Saratoga County planning areas. For a comprehensive list by participating entity please see Appendix C.

**Table 11-6. Critical Facilities Vulnerable to Hail**

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Departments (EOC, Fire, Police, EMS), Hospitals	<ul style="list-style-type: none"> <li>Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications.</li> <li>Emergency vehicles can be damaged by hailstones.</li> <li>Power outages could disrupt communications, delaying emergency response times.</li> <li>Accumulated hail on the streets may impede emergency response vehicle access to areas.</li> <li>Extended power outages and evacuations may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.</li> </ul>
Airport, Academic Institutions, Community Residential Facilities, Day	<ul style="list-style-type: none"> <li>Structures can be damaged by hailstones.</li> <li>Power outages could disrupt critical care.</li> <li>Backup power sources could be damaged.</li> <li>Evacuations may be necessary due to extended power outages, gas line ruptures, or structural damage to facilities.</li> </ul>



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CRITICAL FACILITIES	POTENTIAL IMPACTS
Care Facilities, Evacuation Centers and Shelters, Governmental Facilities	<ul style="list-style-type: none"> <li>• Power outages and infrastructure damage may prevent larger airports from acting as temporary command centers for logistics, communications, and emergency operations.</li> <li>• Temporary break in operations may significantly inhibit post event evacuations.</li> <li>• Damaged or destroyed highway infrastructure may substantially increase the need for airport operations.</li> </ul>
Commercial Suppliers (food, gas, etc.)	<ul style="list-style-type: none"> <li>• Facilities or infrastructure may be damaged, destroyed or otherwise inaccessible.</li> <li>• Essential supplies like medicines, water, food, and equipment deliveries may be significantly delayed.</li> </ul>
Utility Services and Infrastructure (electric, water, wastewater, communications)	<ul style="list-style-type: none"> <li>• Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications.</li> <li>• Power outages could disrupt communications, delaying emergency response times.</li> <li>• Accumulated hail on the streets may impede service response vehicle access to areas.</li> <li>• Extended power outages and evacuations may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.</li> </ul>

Hail has been known to cause injury to humans and occasionally has been fatal. Overall, the total losses to property and crops due to hail in the planning area is estimated at \$1,223,100 (2024 dollars) with an average annualized loss of \$22,000. Hail events have also caused one reported injury within the planning area. Based on historic records, the impact severity of hail damages on the Saratoga County planning area, including participating jurisdictions can be considered “Limited”, meaning injuries and illnesses are treatable with first aid, shutdown of critical facilities and services for 24 hours or less, and less than 10 percent of property destroyed or with major damage.

**Table 11-7. Estimated Annualized Losses by Jurisdiction**

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATE
Saratoga County	\$0	\$0
Town of Ballston / Village of Ballston Spa	\$0	\$0
Town of Charlton	\$0	\$0
Town of Clifton Park	\$345,300	\$6,200
Town and Village of Corinth	\$0	\$0
Town of Day	\$0	\$0
Town of Edinburg	\$0	\$0
Town and Village of Galway	\$156,500	\$2,800
Town of Greenfield	\$4,100	\$100
Town of Hadley	\$0	\$0
Town of Halfmoon	\$0	\$0

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JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATE
Town of Malta	\$0	\$0
City of Mechanicville	\$15,800	\$300
Town of Milton	\$9,500	\$200
Town of Moreau	\$0	\$0
Town of Northumberland	\$0	\$0
Town of Providence	\$11,800	\$200
Village of Round Lake	\$0	\$0
City of Saratoga Springs	\$486,800	\$8,800
Town of Saratoga	\$0	\$0
Village of Schuylerville	\$0	\$0
Village of South Glens Falls	\$0	\$0
Town and Village of Stillwater	\$0	\$0
Village of Victory	\$0	\$0
Town and Village of Waterford	\$0	\$0
Town of Wilton	\$193,300	\$3,500
<b>TOTALS</b>	<b>\$1,223,100</b>	<b>\$22,000</b>

## ASSESSMENT OF IMPACTS

Hail events have the potential to pose a significant risk to people and can create dangerous situations. Hail conditions can be frequently associated with a variety of impacts, including:

- Hail may create hazardous road conditions during and immediately following an event, delaying first responders from providing for or preserving public health and safety.
- Individuals and first responders who are exposed to the storm may be struck by hail, falling branches, or downed trees resulting in injuries or possible fatalities.
- Residential structures can be damaged by falling branches, which can result in physical harm to occupants.
- Large hail events will likely cause extensive roof damage to residential structures along with siding damage and broken windows, creating a spike in insurance claims and a rise in premiums.
- Automobile damage may be extensive depending on the size of the hail and length of the storm.
- Hail events can result in power outages over widespread areas increasing the risk to more vulnerable portions of the population who rely on power for health and/or life safety.
- Extended power outage can result in an increase in structure fires and/or carbon monoxide poisoning, as individuals attempt to cook or heat their home with alternate, unsafe cooking or heating devices, such as grills.

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- First responders are exposed to downed power lines, damaged structures, hazardous spills, and debris that often accompany hail events, elevating the risk of injury to first responders and potentially diminishing emergency response capabilities.
- Downed power lines and large debris, such as downed trees, can result in the inability of emergency response vehicles to access areas of the community.
- Hazardous road conditions may prevent critical staff from reporting for duty, limiting response capabilities.
- Economic disruption negatively impacts the programs and services provided by the community due to short- and long-term loss in revenue.
- Some businesses not directly damaged by the hail event may be negatively impacted while roads are cleared and utilities are being restored, further slowing economic recovery.
- Businesses that are more reliant on utility infrastructure than others may suffer greater damage without a backup power source.
- Hazardous road conditions will likely lead to increases in automobile accidents, further straining emergency response capabilities.
- Depending on the severity and scale of damage caused by large hail events, damage to power transmission and distribution infrastructure can require days or weeks to repair.
- A significant hail event could significantly damage agricultural crops, resulting in extensive economic losses for the community and surrounding area.
- Hail events may injure or kill livestock, destroy crops as well as injure or kill wildlife or destroy wildlife habitat.
- A large hail event could impact the accessibility of recreational areas and parks due to extended power outages or debris clogged access roads.
- There are a total of 82 buildings, districts, and sites listed on the National Register of Historic Places in Saratoga County. Each of these structures is placed at a higher risk of impact, as their construction pre-dates modern building codes.

The economic and financial impacts of hail will depend entirely on the scale of the event, what is damaged, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning conducted by the community, local businesses, and citizens will contribute to the overall economic and financial conditions in the aftermath of any hail event.

## CLIMATE CHANGE CONSIDERATIONS

Although the impact of climate change on the frequency and severity of hail events is uncertain, some climate studies attempt to give insight on the future conditions of hailstorms. As ocean temperatures rise due to climate change, more moisture is evaporating into the atmosphere. The warm and moist air masses that fuel severe weather may become more unstable on average, which could favor the increased development of thunderstorms and hail. However, it is also suggested that in a warming climate, the average melting level will rise in thunderstorms, meaning small hailstones will have more of a chance to melt as they fall to the ground. Therefore, hail may become less frequent, but large hail can be expected when it does occur, leading to the possibility of increased damage.<sup>14</sup>

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<sup>14</sup> Yale Climate Connections, Hailstorms and Climate Change, March 17, 2022.



**SARATOGA**  
**COUNTY** NEW YORK

SECTION 12  
**HURRICANE/  
TROPICAL STORM**

## SECTION 12: HURRICANE / TROPICAL STORM

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### HAZARD DESCRIPTION

According to the National Oceanic and Atmospheric Administration (NOAA), a hurricane is an intense tropical weather system of strong thunderstorms with well-defined surface circulation and maximum sustained winds of 74 mph or higher. In the Northern Hemisphere, circulation of winds near the Earth’s surface is counterclockwise.

Hurricanes often begin as tropical depressions that intensify into tropical storms when maximum sustained winds increase to between 35–64 knots (39–73 mph). At these wind speeds, the storm becomes more organized and circular in shape and begins to resemble a hurricane. Tropical storms can be equally problematic without ever becoming a hurricane. Tropical storms resulting in high winds and heavy rainfall can be dangerous to people and property, as Hurricane Irene was, which was downgraded to a tropical storm before crossing southeastern New York in August of 2011. Once sustained winds reach or exceed 74 mph, the storm becomes a hurricane. The intensity of a landfalling hurricane is expressed in categories relating wind speeds to potential damage. Tropical storm-force winds are strong enough to be dangerous to those caught in them. For this reason, emergency managers plan to have evacuations completed and personnel sheltered before winds of tropical storm-force arrive, which precedes the arrival of hurricane-force winds.



### LOCATION

The location of the Saratoga County planning area is approximately 170 miles from the coast making the planning area vulnerable to threats directly and indirectly related to a hurricane event, such as high-force winds and flooding. While Saratoga County is not located directly along the Atlantic Coast, due to the regional nature of hurricanes and tropical storms, the County is exposed and susceptible to the impacts of hurricane and tropical storm events. Hurricanes and tropical storms can impact Saratoga County from June to November, the official Atlantic U.S. hurricane season. The Saratoga County planning area is in a low risk area for hurricane wind speeds up to 160 miles per hour (mph).

## SECTION 12: HURRICANE / TROPICAL STORM

### EXTENT

As a hurricane develops, the barometric pressure (measured in millibars or inches) at its center falls and winds increase. If the atmospheric and oceanic conditions are favorable, it can intensify into a tropical depression. When maximum sustained winds reach or exceed 39 miles per hour, the system is designated a tropical storm, given a name, and closely monitored by the National Hurricane Center in Miami, Florida. When sustained winds reach or exceed 74 miles per hour, the storm is deemed a hurricane.

Hurricanes are categorized according to the strength and intensity of their winds using the Saffir-Simpson Hurricane Scale (Table 12-1). A Category 1 storm has the lowest wind speeds, while a Category 5 hurricane has the highest. However, a lower category storm can inflict greater damage than higher category storms depending on where they strike, the amount of storm surge, other weather they interact with, and how slow they move.

**Table 12-1. Extent Scale for Hurricanes<sup>1</sup>**

CATEGORY	MAXIMUM SUSTAINED WIND SPEED (mph)	MINIMUM SURFACE PRESSURE (millibars)	STORM SURGE (feet)
1	74 – 95	Greater than 980	3 – 5
2	96 – 110	979 – 965	6 – 8
3	111 – 130	964 – 945	9 – 12
4	131 – 155	944 – 920	13 – 18
5	155+	Less than 920	19+

Based on the historical storm tracks, most hurricanes turn into tropical storms or tropical depressions by the time they reach Saratoga County, however, the average estimated extent to be mitigated for is a Category 1 storm.<sup>2</sup>

### HISTORICAL OCCURRENCES

Saratoga County is located inland and is not directly along the coastline. As hurricanes typically form over the ocean and affect coastal areas, Saratoga County is less prone to direct impacts from hurricanes. The hurricanes usually fade and downgrade to tropical storms or tropical depressions as they move away from the coast. However, it is important to note that the remnants of tropical systems, including hurricanes, can still bring heavy rainfall and potential flooding to inland areas.

Hurricanes and tropical storms do not typically track across the planning area. The last known system to track across Saratoga County was Hurricane Isaias in 2020. While tropical storms and hurricanes frequently make landfall along the Atlantic Coast, these systems weaken over land. By the time these systems reach the planning area they have typically been downgraded to a tropical storm or tropical depression. Historical systems that have tracked in close proximity to the planning area, bringing storm systems, excessive precipitation and potentially damaging wind to

<sup>1</sup> Source: National Hurricane Center, [https://www.nhc.noaa.gov/HAW2/english/basics/saffir\\_simpson.shtml](https://www.nhc.noaa.gov/HAW2/english/basics/saffir_simpson.shtml)

<sup>2</sup> Determined by the storm category recorded at landfall.

## SECTION 12: HURRICANE / TROPICAL STORM

the Saratoga County planning area, including all participating jurisdictions, are listed in Table 12-2 below.

According to the historical hurricane tracks from NOAA’s National Hurricane Center, there have been 6 storms that are known to have come within 60 miles of the Saratoga County planning area from January 1996 through June 2024.

**Table 12-2. Historical Hurricane/Tropical Storm Events, January 1996 – June 2024<sup>3</sup>**

DATE	STORM NAME	CATEGORY (Max)
08/21/2011 – 08/30/2011	Irene	Category 3
10/03/2017 – 10/11/2017	Nate	Category 1
08/30/2018 – 09/18/2018	Florence	Category 4
07/05/2020 – 07/11/2020	Fay	Tropical Storm
07/28/2020 – 08/05/2020	Isaias	Category 1
08/09/2021 – 08/20/2021	Fred	Tropical Storm

Table 12-3 lists the storms that have impacted the Saratoga County planning area from January of 1996 through June of 2024 as reported in the NCEI. Not all events are recorded in the NCEI, so damages and events are often unreported or underreported. Historical hurricane data for Saratoga County is provided on a countywide basis per the NCEI and NOAA databases. There were no reported damages, deaths, or injuries for the Saratoga County planning area.

**Table 12-3. Historical Hurricane Events, January 1996 – June 2024<sup>4</sup>**

JURISDICTION	DATE	TROPICAL SYSTEM	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Saratoga County	8/28/2011	Hurricane Irene	0	0	\$0	\$0
Saratoga County	8/28/2011	Hurricane Irene	0	0	\$0	\$0
<b>TOTALS</b>			<b>0</b>	<b>0</b>	<b>\$0</b>	<b>\$0</b>

Based on the list of historical hurricane events for Saratoga County planning area, three events have occurred since the 2019 Plan based on the NOAA’s historical hurricane tracks.

### SIGNIFICANT EVENTS

There have been 4 declared disasters and emergency declarations between 1996 and 2024 (Table 12-4). These declarations were related to Hurricane Katrina, Hurricane Irene, Hurricane Sandy, and Hurricane Henri.

<sup>3</sup> Source: NOAA Historical Hurricane Tracks, <https://coast.noaa.gov/hurricanes/#map=4/32/-80>

<sup>4</sup> Values are in 2024 dollars.

## SECTION 12: HURRICANE / TROPICAL STORM

**Table 12-4. Disaster Declarations for Hurricane/Tropical Storm, 1996-2024**

YEAR	DECLARATION TITLE	DECLARATION TYPE	DISASTER NO.
2005	New York Hurricane Katrina Evacuation	EM	EM-3262-NY
2011	Hurricane Irene in New York	DR	DR-4020-NY
2012	Hurricane Sandy in New York	EM	EM-3351-NY
2021	New York Hurricane Henri	EM	3565-EM-NY

### **August 28, 2011 – Hurricane / Tropical Storm Irene (DR-4020-NT)**

Hurricane Irene left a devastating impact on portions of New England in August of 2011. Hurricane Irene made landfall across western Long Island, New York and was downgraded to a Tropical Storm as it moved into and through New England. The storm produced widespread, devastating flooding in the states of Vermont, New Hampshire, New Jersey, and New York with damaging storm surge along the coasts of North Carolina and Connecticut. The storm did extensive damage to property and infrastructure caused mostly by high winds and flooding.<sup>5</sup>

In Saratoga County, reports from the Storm Events Database indicate high winds caused numerous trees and power lines to fall, leading to power outages and road closures. Affected areas include Wrights Loop and Route 4 between Park Avenue and Lake Street in Stillwater.

## PROBABILITY OF FUTURE EVENTS

Based on historical occurrences of significant hurricane events, including storms that tracked in close proximity to the planning area, the probability of future events is considered “Occasional”, with an event probable in the next five years for the Saratoga County planning area, including all participating jurisdictions. Impacts of climate change are not expected to increase the average frequency of events but may lead to an increase in the intensity of these storms.

## VULNERABILITY AND IMPACT

Hurricane and tropical storm events can cause major damage to large areas; hence, all existing buildings, facilities, and populations are equally exposed and vulnerable to this hazard and could potentially be impacted. Saratoga County planning area features multiple mobile or manufactured home parks throughout the planning area. These mobile home parks are typically more vulnerable to hurricane events than typical site-built structures. The U.S. Census data indicates a total of 7,153 (6 percent of total housing stock) manufactured homes located in the Saratoga County planning area. In addition, 46 percent (approximately 51,143 structures) of the housing structures in the Saratoga County planning area were built before 1980.<sup>6</sup> These structures would typically be built to lower or less stringent construction standards than newer construction and may be more susceptible to damages during significant events.

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<sup>5</sup> National Weather Service. Hurricane Irene: 10 Years Later. [https://www.weather.gov/gyx/Irene\\_Anniversary](https://www.weather.gov/gyx/Irene_Anniversary).

<sup>6</sup> Source: US Census Bureau data estimates for 2022.



## SECTION 12: HURRICANE / TROPICAL STORM

**Table 12-5. Structures at Greater Risk<sup>7</sup>**

JURISDICTION	SFR STRUCTURES BUILT BEFORE 1980	MANUFACTURED HOMES
Saratoga County	51,143	7,153
Town of Ballston	2,298	58
Village of Ballston Spa	1,938	0
Town of Charlton	1,357	0
Town of Clifton Park	7,504	76
Town of Corinth	1,967	426
Village of Corinth	938	10
Town of Day	949	198
Town of Edinburg	1,086	407
Town of Galway	1,037	42
Village of Galway	68	10
Town of Greenfield	1,158	497
Town of Hadley	590	101
Town of Halfmoon	2,958	903
Town of Malta	2,968	930
City of Mechanicville	2,492	0
Town of Milton	3,690	1,052
Town of Moreau	3,527	499
Town of Northumberland	528	135
Town of Providence	338	132
Village of Round Lake	256	8
Town of Saratoga	1,479	191
City of Saratoga Springs	8,709	133
Village of Schuylerville	521	23
Village of South Glens Falls	1,297	0
Town of Stillwater	1,940	260
Village of Stillwater	506	49
Village of Victory	172	49
Town of Waterford	2,950	48

<sup>7</sup> US Census Bureau American Community Survey Five-Year Estimates 2018-2022 data for Saratoga County.

## SECTION 12: HURRICANE / TROPICAL STORM

JURISDICTION	SFR STRUCTURES BUILT BEFORE 1980	MANUFACTURED HOMES
Village of Waterford	1,103	26
Town of Wilton	1,618	1,065

Saratoga County identified the following critical facilities as assets that are considered the most important to the planning area and are susceptible to a range of impacts caused by hurricane and tropical storm events. For a comprehensive list by participating jurisdiction, please see Appendix C.

**Table 12-6. Critical Facilities Vulnerable to Hurricane and Tropical Storm Events**

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Services (EOC, Fire, Police, EMS), Hospitals and Medical Centers	<ul style="list-style-type: none"> <li>Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications.</li> <li>Emergency vehicles can be damaged by falling trees or flying debris.</li> <li>Power outages could disrupt communications, delaying emergency response times.</li> <li>Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities.</li> <li>Debris/downed trees can impede emergency response vehicle access to areas.</li> <li>Increased number of structure fires due to gas line ruptures and downed power lines, further straining the capacity and resources of emergency personnel.</li> <li>First responders are exposed to downed power lines, unstable and unusual debris, hazardous materials, and generally unsafe conditions.</li> <li>Extended power outages and evacuations may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.</li> </ul>
Academic Institutions, Animal Shelter, Evacuation Centers & Shelters, Governmental Facilities, Residential/ Assisted Living Facilities	<ul style="list-style-type: none"> <li>Structures can be damaged by falling trees or flying debris.</li> <li>Power outages could disrupt critical care.</li> <li>Backup power sources could be damaged.</li> <li>Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities.</li> <li>Evacuations may be necessary due to extended power outages, gas line ruptures, or structural damages to facilities.</li> </ul>
Commercial Supplier (Food, fuel, etc.)	<ul style="list-style-type: none"> <li>Facilities or infrastructure may be damaged, destroyed or otherwise inaccessible.</li> <li>Essential supplies like medicines, water, food, and equipment deliveries may be significantly delayed.</li> <li>Additional emergency responders and critical aid workers may not be able to reach the area for days.</li> </ul>
Utility Services and Infrastructure (electric, water, wastewater, communications)	<ul style="list-style-type: none"> <li>Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications.</li> <li>Emergency vehicles can be damaged by falling trees or flying debris.</li> <li>Power outages could disrupt communications, delaying emergency response times.</li> <li>Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities.</li> <li>Debris/downed trees can impede emergency response vehicle access to areas.</li> </ul>

# SECTION 12: HURRICANE / TROPICAL STORM

CRITICAL FACILITIES	POTENTIAL IMPACTS
	<ul style="list-style-type: none"> <li>Increased number of structure fires due to gas line ruptures and downed power lines, further straining the capacity and resources of emergency personnel.</li> <li>First responders are exposed to downed power lines, unstable and unusual debris, hazardous materials, and generally unsafe conditions.</li> </ul>

Storm track data was available for the past 150 years, however, there is no property and crop loss data available for hurricane and tropical storm events in Saratoga County. With limited reported damages and no reported injuries or fatalities, the potential severity of impact from a hurricane in the Saratoga County planning area is considered to be “Limited”, meaning injuries and illnesses are treatable with first aid, shutdown of critical facilities and services for 24-hours or less, and less than ten percent of property destroyed or with major damage.

## ASSESSMENT OF IMPACTS

Hurricane and tropical storm events have the potential to pose a significant risk to people and can create dangerous and difficult situations for public health and safety officials. The impact of climate change could produce larger, more severe hurricane events, exacerbating the current hurricane impacts. Impacts to the planning area can include:

- Individuals exposed to the storm can be struck by flying debris, falling limbs, or downed trees causing serious injury or death.
- Structures can be damaged or crushed by falling trees, which can result in physical harm to the occupants.
- Driving conditions in the planning area may be dangerous during a hurricane event, especially over elevated bridges, elevating the risk of injury and accidents during evacuations if not timed properly.
- Emergency evacuations may be necessary prior to a hurricane landfall, requiring emergency responders, evacuation routing, and temporary shelters.
- Significant debris and downed trees can result in emergency response vehicles being unable to access areas of the community.
- Downed power lines may result in roadways being unsafe for use, which may prevent first responders from answering calls for assistance or rescue.
- During hurricane landfall, first responders may be prevented from responding to calls as the winds may reach a speed in which their vehicles and equipment are unsafe to operate.
- Hurricane events often result in widespread power outages increasing the risk to more vulnerable portions of the population who rely on power for health and/or life safety.
- Extended power outage often results in an increase in structure fires and carbon monoxide poisoning as individuals attempt to cook or heat their homes with alternate, unsafe cooking or heating devices, such as grills.
- Extended power outages can also be deadly for individuals reliant on electricity to live independently in their homes.
- Extreme hurricane events may rupture gas lines and down trees and power lines, increasing the risk of structure fires during and after a storm event.
- Extreme hurricane events may lead to prolonged evacuations during search and rescue, and immediate recovery efforts requiring additional emergency personnel and resources to prevent entry, protect residents, and protect property.

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- First responders are exposed to downed power lines, unstable and unusual debris, hazardous materials, and generally unsafe conditions.
- Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications.
- Critical staff may be unable to report for duty, limiting response capabilities.
- County, City, Town, and Village departments may be damaged, delaying response and recovery efforts for the entire community.
- Private sector entities that the County, Cities, Towns, Villages, and residents rely on, such as utility providers, financial institutions, and medical care providers may not be fully operational and may require assistance from neighboring communities until full services can be restored.
- Economic disruption negatively impacts the programs and services provided by the community due to short- and long-term loss in revenue.
- Some businesses not directly damaged by the hurricane may be negatively impacted while roads are cleared and utilities are being restored, further slowing economic recovery.
- Older structures built to less stringent building codes may suffer greater damage as they are typically more vulnerable to hurricane damage. In Saratoga County, 46 percent of homes were built before 1980, and 82 buildings, districts, and sites are listed on the National Register of Historic Places, many of which pre-date modern building codes.
- Vegetation in urban parks may become flattened or oversaturated from high winds and heavy rains.
- Large scale hurricanes can have significant economic impact on the affected area, as it must now fund expenses such as infrastructure repair and restoration, temporary services and facilities, overtime pay for responders, as well as normal day-to-day operating expenses.
- Businesses that are more reliant on utility infrastructure than others may suffer greater damage without a backup power source.
- As the Saratoga County planning area continues to increase in population, the number of people and housing developments exposed to the hazard increases. Continued public education on the planning area's risks to hurricane and tropical storm events will continue to be key to the Planning Team's overall mitigation strategy.

The economic and financial impacts of hurricane events on the area will depend on the scale of the event, what is damaged, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by the community, local businesses, and citizens will also contribute to the overall economic and financial conditions in the aftermath of any hurricane event.

## CLIMATE CHANGE CONSIDERATIONS

Generally, research shows that the global frequency of hurricanes or tropical storms is likely to remain unchanged, however, the hurricanes that do form are likely to increase in intensity. In a hurricane or tropical storm, strong spiraling winds draw moist air toward the center, fueling the surrounding thunderstorms. Warming air and sea water due to climate change can cause

## SECTION 12: HURRICANE / TROPICAL STORM

hurricanes to hold more water vapor, producing more intense rainfall rates.<sup>8</sup> According to the Fifth National Climate Assessment for the Northeastern United States, extreme precipitation events have increased by an estimated 60 percent in the region, which may partially be due to the impact of tropical systems during the Atlantic hurricane season in September and October.<sup>9</sup> Other aspects of Atlantic hurricanes such as location, tracks, extent, and magnitude may also change, but there is a lack of general consensus in currently available projections.

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<sup>8</sup> NASA. Hurricanes in a Changing Climate. <https://science.nasa.gov/earth/climate-change/a-force-of-nature-hurricanes-in-a-changing-climate/>

<sup>9</sup> Fifth National Climate Assessment, U.S. Global Change Research Program. <https://nca2023.globalchange.gov/chapter/21/>



**SARATOGA**  
**COUNTY** NEW YORK

SECTION 13  
**ICE STORM**

## SECTION 13: ICE STORM

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### HAZARD DESCRIPTION



An ice storm is when rain freezes on surface contact with significant ice accumulations of 0.25 inches or greater. Ice accumulations on roads can greatly impact travel and are especially hazardous to pedestrians and motorists. Bridges and overpasses are particularly dangerous because they freeze before other surfaces. Heavy accumulations of ice can bring down trees and topple utility poles, causing power outages and disrupting critical facility operations. In the Saratoga County planning area, where agriculture and farming are prominent, ice storms

have the potential to ruin crops and cause costly damage.

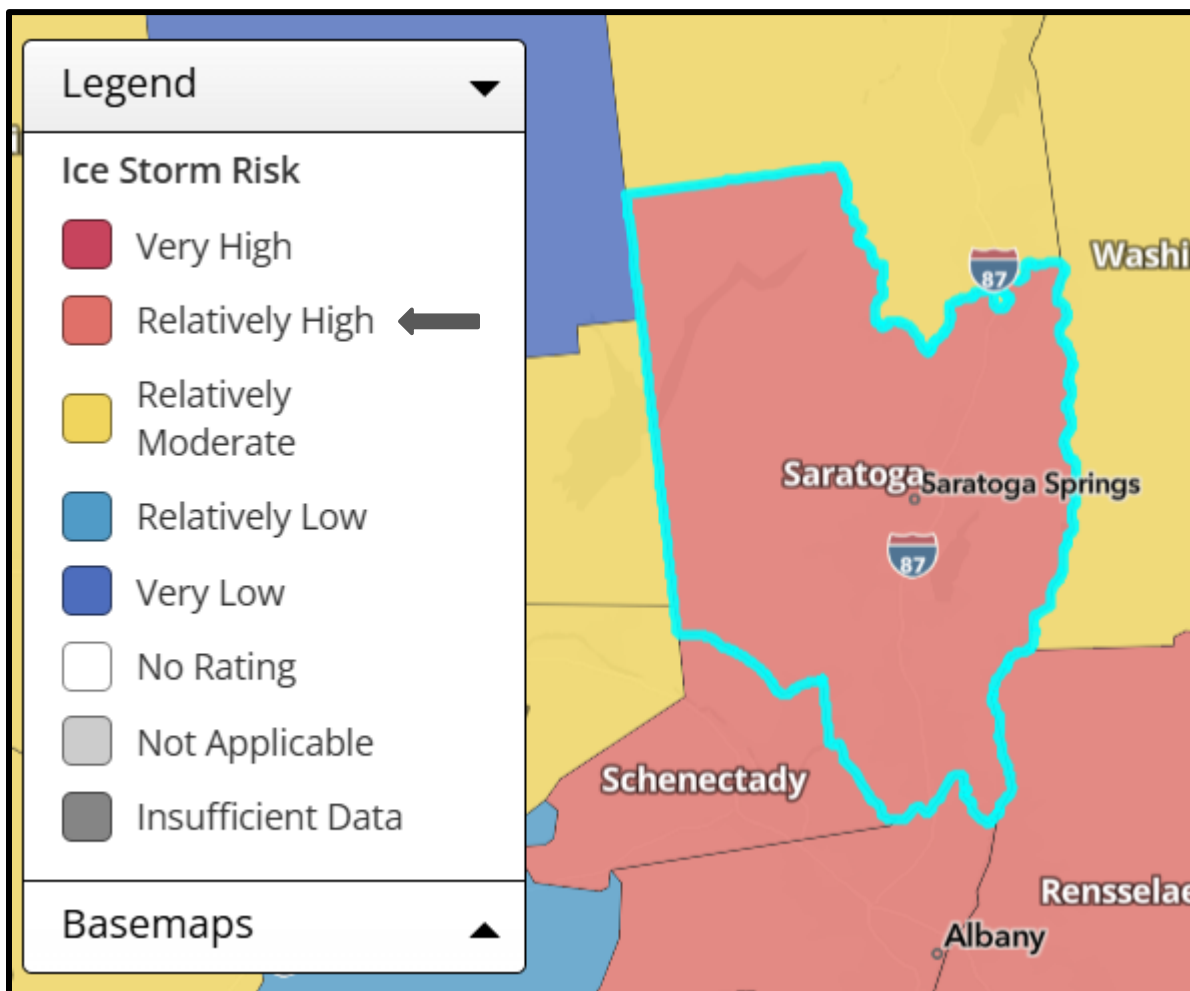
In the National Risk Index, a Risk Index score and rating for ice storm represent a community's relative risk for ice storms when compared to the rest of the United States. As indicated in Figure 13-1, the Saratoga County planning area has a “relatively high” ice storm risk score. This means the Saratoga County planning area can expect a higher level of building and population loss each year due to ice storm when compared to the rest of the nation.<sup>1</sup>

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<sup>1</sup> FEMA, National Risk Index, Ice Storm

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Figure 13-1. Saratoga County Ice Storm Risk, National Risk Index



### LOCATION

Ice storm events are not confined to specific geographic boundaries. Therefore, all existing and future buildings, facilities, and populations in the Saratoga County planning area, including all participating jurisdictions, are exposed to an ice storm hazard, and could potentially be impacted.

### EXTENT

The National Weather Service developed an Ice Storm Severity Index (WSSI) to provide professionals and the public with an indication of the level of winter precipitation, snow and ice, severity, and its potential impacts. The levels are based on the amount of ice accumulation and range from “minor” to “extreme” impacts. These levels and their corresponding impacts are shown in Table 13-1. Based on historical occurrences, the Saratoga County planning area has experienced every level of the WSSI. The planning area can anticipate future “extreme” WSSI level events, based on historical occurrences.



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**Table 13-1. NWS Ice Storm Severity Index**

WSSI INDICATOR	IMPACTS
None	Impacts not expected.
Limited	Rarely is a direct threat to life and property. Typically results in little inconveniences.
Minor	Rarely is a direct threat to life and property. Typically results in an inconvenience to daily life.
Moderate	Often threatening to life and property, some damage is unavoidable. Typically results in disruptions to daily life.
Major	Extensive property damage is likely, lifesaving actions needed. Will likely result in major disruptions to daily life.
Extreme	Extensive and widespread severe property damage, lifesaving actions will be needed. Results in extreme disruptions to daily life.

**HISTORICAL OCCURRENCES**

According to best available historical records there have been 6 recorded ice storm events in the Saratoga County planning area. Historical ice storm information, as provided by the National Centers for Environmental Information (NCEI), identifies ice storm activity across a multi-county forecast area for each event. The appropriate percentage of the total property and crop damage reported for the entire forecast area has been allocated to each county impacted by the event, when appropriate. Historical ice storm data for the planning area is provided on a County-wide basis per the NCEI database. Table 13-2 shows historical incident information for the planning area. There are no deaths, injuries, property, or crop damages reported for ice storm events in Saratoga County. It is highly likely that historical ice storm events have caused damages to structures and infrastructure that simply have not been reported.

**Table 13-2. Historical Ice Storm Events, January 1996 – June 2024<sup>2</sup>**

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Saratoga County	1/15/2007	0	0	\$0	\$0
Saratoga County	1/15/2007	0	0	\$0	\$0
Saratoga County	2/13/2008	0	0	\$0	\$0
Saratoga County	12/11/2008	0	0	\$0	\$0
Saratoga County	12/11/2008	0	0	\$0	\$0
Saratoga County	2/7/2017	0	0	\$0	\$0
<b>TOTALS</b>		<b>0</b>	<b>0</b>	<b>\$0</b>	

<sup>2</sup> Values are in 2024 dollars. Database was searched for events between January 1996 and June 2024. No events were reported for the Saratoga County planning area in the database after February 7, 2017.

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**Table 13-3. Historical Ice Storm Events Summary, January 1996 – June 2024**

JURISDICTION	NUMBER OF EVENTS	DEATHS	INJURIES	PROPERTY DAMAGES	CROP DAMAGES
Saratoga County	6	0	0	\$0	\$0

Based on the list of historical ice storm events for the Saratoga County planning area, no events have been reported since the 2019 Plan.

## SIGNIFICANT EVENTS

### December 11, 2008 – Saratoga County

In mid-December, a significant ice storm impacted the Saratoga County planning area. On December 11, 2008, a cold front moved through eastern New York and a low-pressure system developed over the area. As the storm approached, warmer air moved in aloft, while cold air remained at the surface, leading to a major mixed precipitation event. Freezing rain began falling heavily, with hourly precipitation rates reaching up to one-third of an inch. In southern Saratoga County, ice accumulation ranged from 0.5 to 1 inch.

The ice storm resulted in significant tree damage and power outages, affecting 220,000 customers in eastern New York. Many roads were impassable, and schools and businesses were closed for several days. Southern Saratoga County was among the hardest hit areas, including the Towns of Clifton Park and Halfmoon. States of emergency were declared across large regions of Eastern New York and numerous warming shelters were set up to assist those who were without power and heat.

## PROBABILITY OF FUTURE EVENTS

According to historical records, the Saratoga County planning area has an approximately 21 percent chance of experiencing an ice storm in any given year. The probability of a future ice storm event affecting the Saratoga County planning area, including participating jurisdictions, is considered “Occasional”, with an ice storm probable in the next five years. It is noted that the estimated return interval for an ice storm is separate and apart from estimated return intervals for extreme cold and snowstorm events, which are covered in sections 8 and 16, respectively.

## VULNERABILITY AND IMPACT

Ice storms most commonly impact travel and road conditions. When ice accumulates on roads and bridges, the use of automobiles can become especially dangerous. Black ice is a deadly driving hazard, defined as patchy ice on roadway surfaces that cannot be easily seen. Black ice can cause cars to lose control which results in accidents, injuries, and even potential fatalities.

Ice storms also cause power outages because heavy ice accumulation frequently damages powerlines. Trees may also break and damage electrical infrastructure during an ice storm, which leaves residents and businesses without power. The lack of power during an ice storm can pose a threat to human health and safety. Without proper heating systems, people may develop extreme cold related illnesses such as hypothermia or frostbite.

Long lasting ice storms can also cause rivers and lakes to freeze. During an ice storm, freezing rain coats the surface of rivers, lakes, and other bodies of water, forming a layer of ice. As the storm progresses and temperatures change, this ice layer thickens or breaks up into chunks,

## SECTION 13: ICE STORM

which become jammed at manmade and natural obstructions. Ice jams can act as a dam, increasing the risk of severe flooding after an ice storm. This flooding can be sudden and severe, especially if a significant amount of ice is formed.

Saratoga County has a prominent agricultural sector and features more than 600 farms including dairy, beef, sheep, poultry, swine, vegetables, fruits, and greenhouse farms. These farms are a vital part of the food and agricultural industry in the planning area. Saratoga County’s annual market value of agricultural products sold is over \$115,000,000.<sup>3</sup> Ice storm events may severely damage crops, crippling portions of the local economy. The most dangerous time for an ice storm event to occur is during the spring months, when crops are the most vulnerable to damage. An ice storm event in the planning area may impact the County’s agricultural assets causing severe economic loss.

The Saratoga County Planning Team identified the following critical facilities (Table 13-4) as assets that are considered the most important to the planning area and are susceptible to a range of impacts caused by ice storm events. For a comprehensive list by participating jurisdiction see Appendix C.

**Table 13-4. Critical Facilities Vulnerable to Ice Storm Events**

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Departments (EOC, Fire, Police, EMS), Hospitals and Medical Centers	<ul style="list-style-type: none"> <li>Emergency operations, services and response times may be significantly impacted due to power outages, and/or loss of communications.</li> <li>Exposure to extreme cold can cause illnesses in first responders if exposed for a period of time.</li> <li>Roads may become impassable due to ice, impacting response times by emergency services.</li> <li>Extended power outages may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.</li> </ul>
Airport, Academic Institutions, Animal Shelter, Evacuation Centers & Shelters, Governmental Facilities, Residential/ Assisted Living Facilities	<ul style="list-style-type: none"> <li>Power outages could disrupt critical care.</li> <li>Backup power sources could be damaged.</li> <li>Increased number of patients due to exposure to cold temperatures could lead to a strain on staff.</li> <li>Water pipes can freeze and burst leading to flooding within facilities.</li> <li>Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable.</li> <li>Essential supplies like medicines, water, food, and equipment deliveries may be delayed.</li> <li>Economic disruption due to power outages negatively impact airport services as well as area businesses reliant on airport operations.</li> <li>Exposure risks to outdoor workers.</li> </ul>
Commercial Supplier (food, gas/fuel, etc.)	<ul style="list-style-type: none"> <li>Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable.</li> <li>Essential supplies like medicines, water, food, and equipment deliveries may be delayed.</li> </ul>
Utility Services and Infrastructure (electric, water, wastewater, communications)	<ul style="list-style-type: none"> <li>Emergency operations, services and response times may be significantly impacted due to power outages, and/or loss of communications.</li> <li>Roads may become impassable due to ice, impacting response times by emergency services.</li> </ul>

<sup>3</sup> Census of Agriculture. Saratoga County, New York County Profile. 2022.

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CRITICAL FACILITIES	POTENTIAL IMPACTS
	<ul style="list-style-type: none"> <li>• Power outages due to increased usage could disrupt critical care.</li> <li>• Backup power sources could be damaged.</li> <li>• Water pipes can freeze and burst leading to flooding within facilities.</li> </ul>

Due to travel restrictions and road closures during ice storms, the elderly may be especially vulnerable because they have delayed access to essential resources. Both the elderly and children have an increased risk of developing hypothermia and other extreme cold illnesses, especially if an ice storm results in power outages. People living below the poverty level may have fewer resources to prepare for and recover from ice storms. They may lack access to adequate heating and emergency supplies.

Due to factors like limited mobility, communication difficulties, medical needs, sensitivity to cold temperatures, reliance on support services, transportation challenges, housing accessibility issues, and possible shortages in emergency shelter accommodations, people with disabilities are particularly vulnerable to ice storms. In addition, people who speak a language other than English may face increased vulnerability due to language barriers that limit their access to important information such as weather-related warnings and instructions regarding safety measures. Inclusive measures are crucial to address these vulnerabilities and ensure their safety during severe weather events.

The population over 65 in the Saratoga County planning area is estimated at 19 percent of the total population and children under the age of 5 are estimated at 5 percent. The population with a disability is estimated at 11 percent of the total population. In addition, an estimated 7 percent of the planning area population live below the poverty level and 2 percent of the population of the speaks English ‘less than very well’.

**Table 13-5. Populations at Greater Risk of Ice Storm Events<sup>4</sup>**

JURISDICTION	POPULATION				
	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Saratoga County	44,772	11,049	26,426	15,598	4,430
Town of Ballston	1,957	521	964	538	84
Village of Ballston Spa	670	158	357	338	262
Town of Charlton	1,137	245	470	191	26
Town of Clifton Park	6,988	2,095	3,220	762	953
Town of Corinth	1,369	443	910	641	107
Village of Corinth	476	181	424	373	58
Town of Day	281	0	179	123	2
Town of Edinburg	406	47	220	200	0

<sup>4</sup> U.S. Census Bureau, American Community Survey, 2022

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JURISDICTION	POPULATION				
	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Town of Galway	859	234	497	319	0
Village of Galway	44	21	26	29	0
Town of Greenfield	1,704	429	1,202	867	15
Town of Hadley	492	114	303	197	7
Town of Halfmoon	4,509	1251	2,833	979	987
Town of Malta	3,666	579	2,035	1,287	305
City of Mechanicville	964	317	906	1,072	37
Town of Milton	3,010	460	2,142	941	298
Town of Moreau	3,017	902	2,392	1,752	312
Town of Northumberland	822	259	541	330	126
Town of Providence	262	77	223	259	5
Village of Round Lake	152	53	68	25	12
Town of Saratoga	928	277	651	321	36
City of Saratoga Springs	5,997	1,018	3,323	2,879	880
Village of Schuylerville	209	106	199	151	12
Village of South Glens Falls	687	204	506	387	23
Town of Stillwater	1,645	621	654	893	48
Village of Stillwater	211	56	164	225	0
Village of Victory	115	57	112	108	7
Town of Waterford	1,685	254	992	478	68
Village of Waterford	570	107	310	199	0
Town of Wilton	3,074	906	1769	539	134

Older homes tend to be more vulnerable to the impacts of ice storm events. Their heating and electrical systems may be outdated and prone to outages. Pipes may no longer be well insulated as materials can degrade over long periods of time leading to frozen and busted pipes in homes and businesses. Aging roofs and structures may also experience greater damage during an ice storm, as the accumulation becomes heavy, roofing can collapse. Approximately 46 percent (51,143 structures) of the housing structures in the Saratoga County planning area were built before 1980 (Table 13-6).

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**Table 13-6. Structures at Greater Risk of Ice Storm Events<sup>5</sup>**

JURISDICTION	SFR STRUCTURES BUILT BEFORE 1980	PERCENT OF TOTAL HOUSING UNITS (%)
Saratoga County	51,143	46.5
Town of Ballston	2,298	44.7
Village of Ballston Spa	1,938	78.2
Town of Charlton	1,357	76.9
Town of Clifton Park	7,504	47.5
Town of Corinth	1,967	62.4
Village of Corinth	938	76.3
Town of Day	949	66.8
Town of Edinburg	1,086	58.5
Town of Galway	1,037	56.7
Village of Galway	68	86.1
Town of Greenfield	1,158	31.3
Town of Hadley	590	55.7
Town of Halfmoon	2,958	25.4
Town of Malta	2,968	33.0
City of Mechanicville	2,492	85.9
Town of Milton	3,690	46.3
Town of Moreau	3,527	50.6
Town of Northumberland	528	26.8
Town of Providence	338	34.0
Village of Round Lake	256	65.3
Town of Saratoga	1,479	54.8
City of Saratoga Springs	8,709	59.7
Village of Schuylerville	521	73.6
Village of South Glens Falls	1,297	73.5
Town of Stillwater	1,940	46.0
Village of Stillwater	506	56.0
Village of Victory	172	64.2
Town of Waterford	2,950	71.5

<sup>5</sup> U.S. Census Bureau, American Community Survey, 2022

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JURISDICTION	SFR STRUCTURES BUILT BEFORE 1980	PERCENT OF TOTAL HOUSING UNITS (%)
Village of Waterford	1,103	95.8
Town of Wilton	1,618	22.2

Impacts of past ice storm events experienced in the Saratoga County planning area have not resulted in injuries or fatalities. This supports a “Limited” severity of impact, meaning injuries and/or illnesses are treatable with first aid, shutdown of facilities and services for 24-hours or less and less than 10 percent of property is destroyed or with major damage.

## ASSESSMENT OF IMPACTS

The greatest risk from an ice storm hazard is to public health and safety. The impact of climate change could produce more frequent and intense ice storm events, exacerbating current impacts. Worsening ice storm conditions can be frequently associated with a variety of impacts, including:

- Vulnerable populations, particularly the elderly (19 percent of total population) and children under 5 (5 percent of total population), can face serious or life-threatening health problems from exposure to extreme cold including hypothermia and frostbite.
- Loss of electric power or other heat source can result in increased potential for fire injuries or hazardous gas inhalation because residents burn candles for light or use fires or generators to stay warm.
- Response personnel, including utility workers, public works personnel, debris removal staff, tow truck operators, and other first responders, are subject to injury or illness resulting from hazardous icy road conditions and exposure to extreme cold temperatures.
- Response personnel would be required to travel in potentially hazardous conditions, elevating the life safety risk due to accidents.
- Operations or service delivery may experience delays due to travel restrictions and electricity blackouts due to ice storms.
- Power outages are possible throughout the planning area due to downed trees and power lines and/or rolling blackouts.
- Critical facilities without emergency backup power may not be operational during power outages.
- Emergency response and service operations may be impacted by limitations on access and mobility if roadways are closed, unsafe, or obstructed.
- Hazardous road conditions will likely lead to increases in automobile accidents, further straining emergency response capabilities.
- Depending on the severity and scale of damage caused by ice and snow events, damage to power transmission and distribution infrastructure can require days or weeks to repair.
- An ice storm event could lead to tree, shrub, plant, and crop damage or death.
- Severe cold and ice could significantly damage vegetation in county parks.
- Older structures built to less stringent building codes may suffer greater damage as they are typically more vulnerable to impacts of ice storm events. An estimated 46 percent of homes in the County were built before 1980. Within Saratoga County, 82 buildings, districts, and sites are listed on the National Register of Historic Places, many of which pre-date modern building codes.

## SECTION 13: ICE STORM

- Schools may be forced to shut early due to treacherous driving conditions.
- Exposed water pipes may be damaged by severe or late season ice storms at both residential and commercial structures, causing significant damages.

The economic and financial impacts of ice storm events on the community will depend on the scale of the event, what is damaged, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by businesses and citizens will also contribute to the overall economic and financial conditions in the aftermath of an ice storm event.

### CLIMATE CHANGE CONSIDERATIONS

Climate change may slightly decrease the risk of ice storms in the planning area. According to the Fourth National Climate Assessment, seasonal differences in Northeast U.S. temperatures have decreased in recent years as winters have warmed three times faster than summers. By the middle of this century, winters are projected to be milder, with fewer cold extremes, particularly across inland and northern portions of the Northeast. This will likely result in a shorter and less pronounced cold season with fewer frost days and a longer transition out of winter. Under the higher scenario, the trend of decreasing seasonality continues for the northern half of the region through the end of the century, but by then summer temperatures across the Mid-Atlantic are projected to rise faster than those in winter.<sup>6</sup>

In addition, according to the Climate Risk and Resilience Portal (ClimRR), the historical annual minimum temperature is about 35°F. Under the RCP 4.5 climate model, the annual minimum temperature at mid-century is projected to be about 40°F which represents a 5°F change from the current annual minimum temperature. This projection is consistent with the Fourth National Climate Assessment showing a potential increase in average minimum temperature for the Saratoga County planning area.

It can be inferred with milder winters and fewer cold extremes in the Northeastern U.S. that Saratoga County may see a decrease in ice storm events, but data and research is still limited. However, it is important to note that data on future impacts is limited and these projections are subject to change as the research evolves.

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<sup>6</sup> U.S. Global Change Research Program, Fourth National Climate Assessment, Chapter 18: Northeast





**SARATOGA**  
**COUNTY** NEW YORK

SECTION 14  
**LANDSLIDE**

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### HAZARD DESCRIPTION

Landslides are defined as the downward movement of a sloped land mass under the force of gravity. Based upon historic information, minor landslides have occurred in the Saratoga County planning area on a localized basis. In a landslide, large rock, earth, or debris moves along a downward slope. Mudflow and debris flow are rivers of rock, earth, and other debris that become saturated with water. When water collects in the ground during heavy rains or quick snowmelts, this modifies the earth into flowing rivers of mud in essence



creating landslides. They flow rapidly striking at avalanche speeds that can travel several miles growing in size as they pick up trees, boulders, cars and other materials.

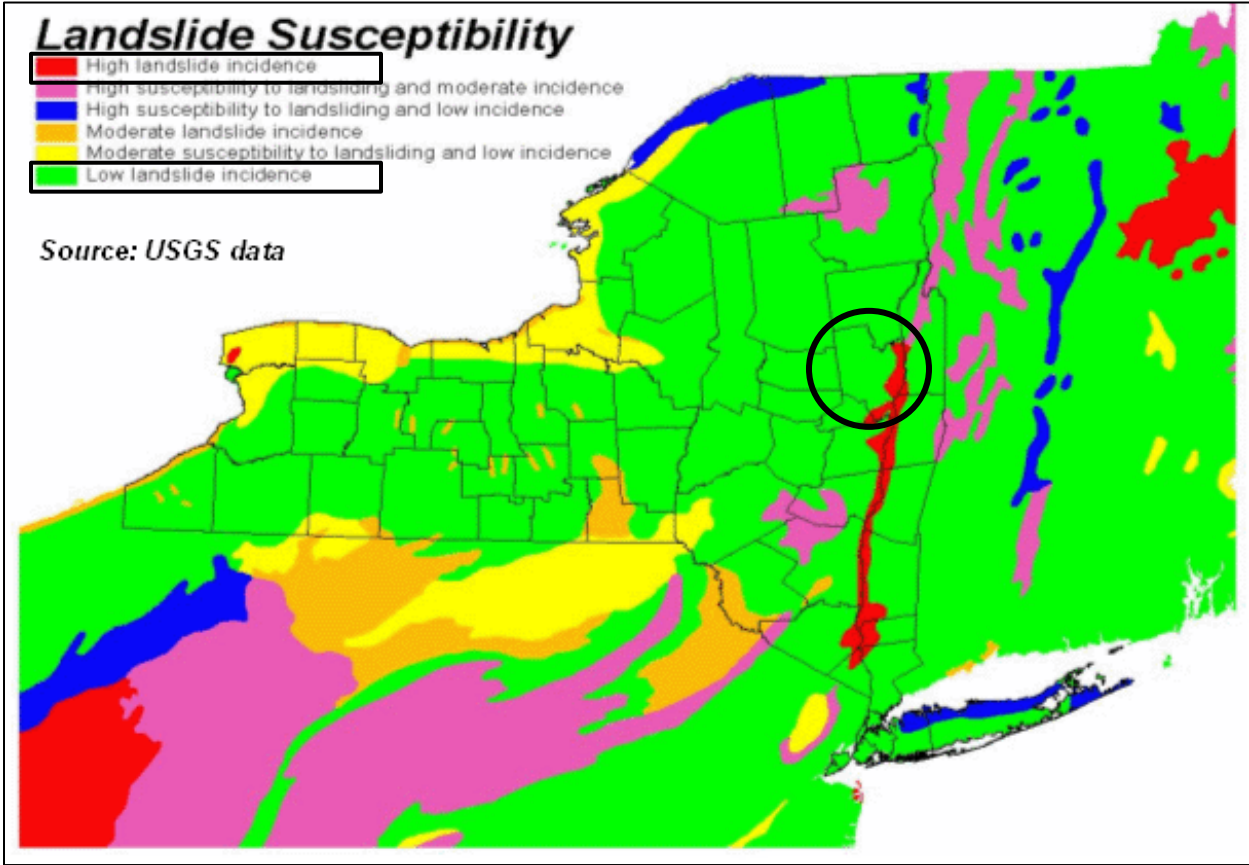
According to the U.S. Geological Survey (USGS), the term landslide includes a wide range of ground movement, such as rock falls, deep failure of slopes, and shallow debris flows. Although gravity acting on an over steepened slope is the primary reason for a landslide, there are other contributing factors. Among the contributing factors are: (1) erosion by rivers, glaciers, or ocean waves which create over steepened slopes; (2) rock and soil slopes weakened through saturation by snowmelt or heavy rains; (3) earthquakes which create stresses making weak slopes fail; and (4) excess weight from rain/snow accumulation, rock/ore stockpiling, waste piles, or man-made structures. Landslide materials may be composed of natural rock, soil, artificial fill, or a combination of these materials. Landslides can transpire quickly, oftentimes with little to no warning. Depending on where they occur, landslides can pose significant risks to health, safety, transportation, as well as other services.

SECTION 14: LANDSLIDE

LOCATION

Saratoga County is located in an area of the state that is classified as mostly having a low susceptibility for landslides; however the County’s eastern border along the Hudson River is classified as having high landslide susceptibility (Figure 14-1). Areas favorable for landslides can be found along major rivers and lake valleys that were formerly occupied by glacial lakes resulting in glacial lake deposits and are usually associated with steeper slopes. The Saratoga County planning area has several areas that exhibit conditions favorable for landslides. Participating jurisdictions which contain areas of high landslide susceptibility include Town of Moreau, Town of Northumberland, Town of Providence, Village of Schuylerville, Village of Victory, Town of Saratoga, Town and Village of Stillwater, City of Mechanicville, Town of Halfmoon, and Town and Village of Waterford. All of these jurisdictions have portions of land containing or near riverbanks of the Mohawk and Hudson Rivers, which are the areas most susceptible to landslides within the planning area. Figure 14-1 shows the landslide susceptibility map for the Saratoga County planning area.

Figure 14-1. Landslide Susceptibility<sup>1</sup>



EXTENT

To determine the extent of a landslide hazard, the affected areas need to be identified and the probability of the landslide occurring within some time period needs to be assessed. Natural

<sup>1</sup> Source: USGS. The Saratoga County planning area indicated by black circle.

## SECTION 14: LANDSLIDE

variables that contribute to the overall extent of potential landslide activity in any particular area include soil properties, topographic position and slope, and historical incidence. Predicting a landslide is difficult, even under ideal conditions and with reliable information. The landslide hazard is usually represented by landslide incidence and /or susceptibility.

Landslide incidence is the number of landslides that have occurred in a given geographic area. High incidence means greater than 15-percent of the area has experience a landslide; medium incidence means that 1.5 to 15-percent of an area has been involved; and low incidence means that less than 1.5-percent of an area has been involved.

Landslide susceptibility is defined as the degree of response of geologic formations to natural or artificial cutting, to loading of slopes, or to unusually high precipitation. It can be assumed that unusually high precipitation or changes in existing conditions can initiate landslides in areas where rocks and soils have experienced numerous landslides in the past. Only potentially affected areas are identified by landslide susceptibility, not a time frame for when a landslide might occur. The same percentages that are used for landslide incidence are used for landslide susceptibility (high 15+%, medium 1.5-15%, low 0-1.5%).

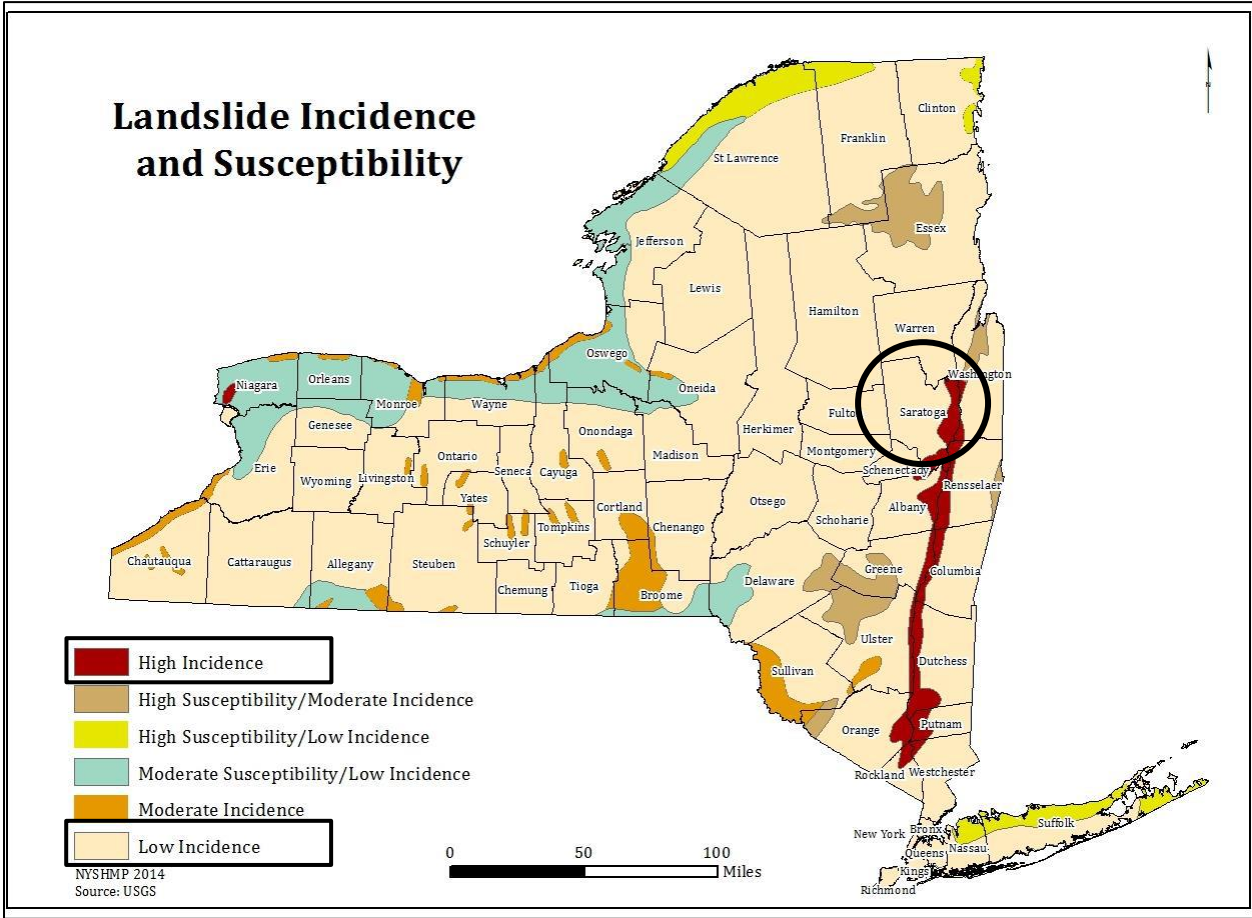
Landslides incidents within the Saratoga County planning area are caused by heavy rainfall events which rapidly increase soil moisture. Susceptible areas throughout the planning area include rock cut locations and steep slopes along roadways, steep hillsides, and along creek banks. These locations are not typically in densely populated areas and tend to have a low potential to impact private property. Landslides that occur near streams and result in blocked flow could result in flooding.

Figure 14-2 contains the landslide incidence and susceptibility of New York, identifying areas that have the potential for landslides. These areas are determined by looking at factors that contribute to causing landslides, such as steep slopes, weak geologic areas that lose strength when saturated, and poorly drained rock or soil, with the past distribution of landslides.

According to the 2019 New York State Hazard Mitigation Plan, the majority of the population in the Saratoga County planning area is at a low risk of incidence and low risk for landslide susceptibility (0-1.5%), as shown in Figure 14-2 with the eastern and southeastern edges of the planning area along the Hudson and Mohawk Rivers at high risk of incident (15+%).

SECTION 14: LANDSLIDE

Figure 14-2. Landslide Incidence<sup>2</sup>



While the planning area may currently experience low incidence of landslides in small, isolated areas, climate change is expected to bring more frequent and significant rainfall events. This is expected to increase the frequency and size of landslide incidents in higher risk areas of the Saratoga County planning area in the future.

**HISTORICAL OCCURRENCES**

The New York State Museum Geological Survey estimates approximately 100-400 landslides occur each year within the State. However, landslide incidents across the State and in Saratoga County are often left undocumented as many have no immediate impacts or occur in areas unoccupied by people. Several significant landslide events have been reported throughout the Saratoga County planning area, affecting the Town of Providence, Village of Schuylerville, and Town of Waterford (Table 14-1). The USGS landslide inventory does show several points within the Saratoga County planning area with high confidence of a consequential landslide having occurred, however this data does not provide further details on the nature of each event or other information such as damages.

<sup>2</sup> Source: USGS. Saratoga County planning area indicated by black circle.

## SECTION 14: LANDSLIDE

**Table 14-1. Historical Landslide Events, January 1996 – June 2024**

JURISDICTION	YEAR	INJURIES	FATALITIES	PROPERTY DAMAGE	CROP DAMAGE
Town of Providence	2007	0	0	\$0	\$0
Village of Schuylerville	2008	0	0	\$70,000	\$0
Town of Waterford	2020	0	0	\$0	\$0
<b>TOTALS</b>		<b>0</b>	<b>0</b>	<b>\$70,000</b>	

### SIGNIFICANT EVENTS

#### **2007 - Town of Providence**

In April 2007, a 200-foot section of hillside in the Town of Providence slid and caused substantial damage. This information was provided by County officials, and further information on the nature or monetary value of these damages was unavailable.

#### **2008 – Village of Schuylerville**

In the Spring of 2008, an underground viaduct blew out from a heavy rain event in the Village of Schuylerville. This event caused significant damage to both public and private property; public property damages were estimated at \$70,000 while the value of private property damages are unknown.

#### **2020 – Town of Waterford**

On May 3, 2020, a large landslide struck the Town of Waterford, impacting a residential area. Four houses, containing a total of 12 people, were evacuated due to the event. No injuries occurred and no structures were totally destroyed, however several homes located at the origin point of the slide were left with their foundations exposed as the ground failed directly in front of them (Figure 14-3). Additionally, a private road at the bottom of the slope where the landslide occurred was covered in 25 to 30 feet of debris. In the time since the initial landslide, one home and part of a neighboring garage continue to slowly break and slip down the hillside and the home cannot be occupied; recovery efforts have not begun due to ongoing legal issues. Monetary damage estimates from this event were unavailable.

## SECTION 14: LANDSLIDE

**Figure 14-3. Town of Waterford Landslide, May 3, 2020<sup>3</sup>**



### PROBABILITY OF FUTURE EVENTS

Based on available records of historic events, 3 known historic events in a 28.5-year reporting period for the Saratoga County Planning Area supports an “Occasional” probability, or an event probable in the next five years for the Saratoga County planning area, including all participating jurisdictions.

### VULNERABILITY AND IMPACT

Depending on where they occur, landslides can pose significant risks to health, safety, transportation, and other services. The magnitude of the landslide, measured in geographic area (acres) as well as tonnage of material displaced, coupled with location would determine the severity of the incident.

In general, landslides within the Saratoga County planning area have occurred in low-populated areas and have not caused significant damage to private property. However, significant damage to public infrastructure could occur as the number and size of landslides increase. Historical damages resulting from landslides have been minimal throughout the planning area. According to the 2023 New York State Hazard Mitigation Plan, most of the population in the Saratoga County planning area is at a low risk of incidence, except for areas along the Hudson and Mohawk Rivers, which are highly susceptible to landslide incidents, as shown in Figure 14-2 above.

No known critical facilities were considered vulnerable to landslide events in the Saratoga County planning area. The impact of landslides in the Saratoga County planning area are considered

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<sup>3</sup> Source: <https://www.cnn.com/2020/05/04/us/new-york-waterford-landslide-trnd/index.html>

## SECTION 14: LANDSLIDE

minor based on historical events. The Saratoga County planning area is predominantly at low risk for landslides. Future vulnerability is not expected to be substantial but could be significant if roadways and/or structures are impacted. Overall, the total losses due to landslide events in the planning area are estimated at \$70,000 with an average annualized loss of \$2,500. The impact of landslides experienced in the Saratoga County planning area has resulted in no injuries and fatalities, supporting a “Limited” severity of impact meaning injuries and/or illnesses are treatable with first aid, shutdown of facilities and services for 24 hours or less, and less than 10 percent of property is destroyed or with major damage.

### CLIMATE CHANGE CONSIDERATIONS

The majority of landslide incidents within Saratoga County planning area are spurred by heavy rainfall events. These heavy rainfall events are expected to increase in the future, mostly in areas that have historically documented bank failures or slope subsidence. Annual average precipitation in the state is projected to increase by 5 to 10 percent by 2080. With this the frequency of landslides occurring in the planning area will likely increase. In addition, climate models also project that the frequency of heavy rainfall events will increase. These predicted changes in weather patterns are likely to result in an increase in the frequency of landslides, potentially with greater levels of property damage.





**SARATOGA**  
**COUNTY** NEW  
YORK

SECTION 15  
**LIGHTNING**

## SECTION 15: LIGHTNING

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### HAZARD DESCRIPTION

Lightning is a discharge of electrical energy resulting from the buildup of positive and negative charges within a thunderstorm, creating a “bolt” when the buildup of charges becomes strong enough. This flash of light usually occurs within the clouds or between the clouds and the ground. A bolt of lightning can reach temperatures approaching 50,000 degrees Fahrenheit. Lightning rapidly heats the sky as it flashes but the surrounding air cools following the bolt. This rapid heating and cooling of the surrounding air causes the thunder which often accompanies lightning strikes. While most often affiliated with severe thunderstorms, lightning often strikes outside of heavy rain and might occur as far as 10 miles away from any rainfall.

According to the National Weather Service (NWS), the 10-year (2012–2021) average for fatalities is 23 people with an average of 300 injuries in the United States each year by lightning. Lightning can occur as cloud to ground flashes or as intra-cloud lightning flashes. Direct lightning strikes can cause significant damage to buildings, critical facilities, infrastructure, and communication equipment affecting emergency response. Lightning is also responsible for igniting wildfires that can result in widespread damages to property before firefighters have the ability to contain and suppress the resultant fire. According to the NYS Forest Rangers Division between 1993 and 2017, 5 percent of wildfires in New York State were caused by lightning.

### LOCATION

Lightning can strike in any geographic location and is considered a common occurrence in New York. The Saratoga County planning area is in a region of the country that is moderately susceptible to a lightning strike. Lightning has no geographical boundary; therefore, lightning could occur at any location within the entire planning area. It is assumed that the entire Saratoga County planning area, including participating jurisdictions, is uniformly exposed to the threat of lightning.

### EXTENT

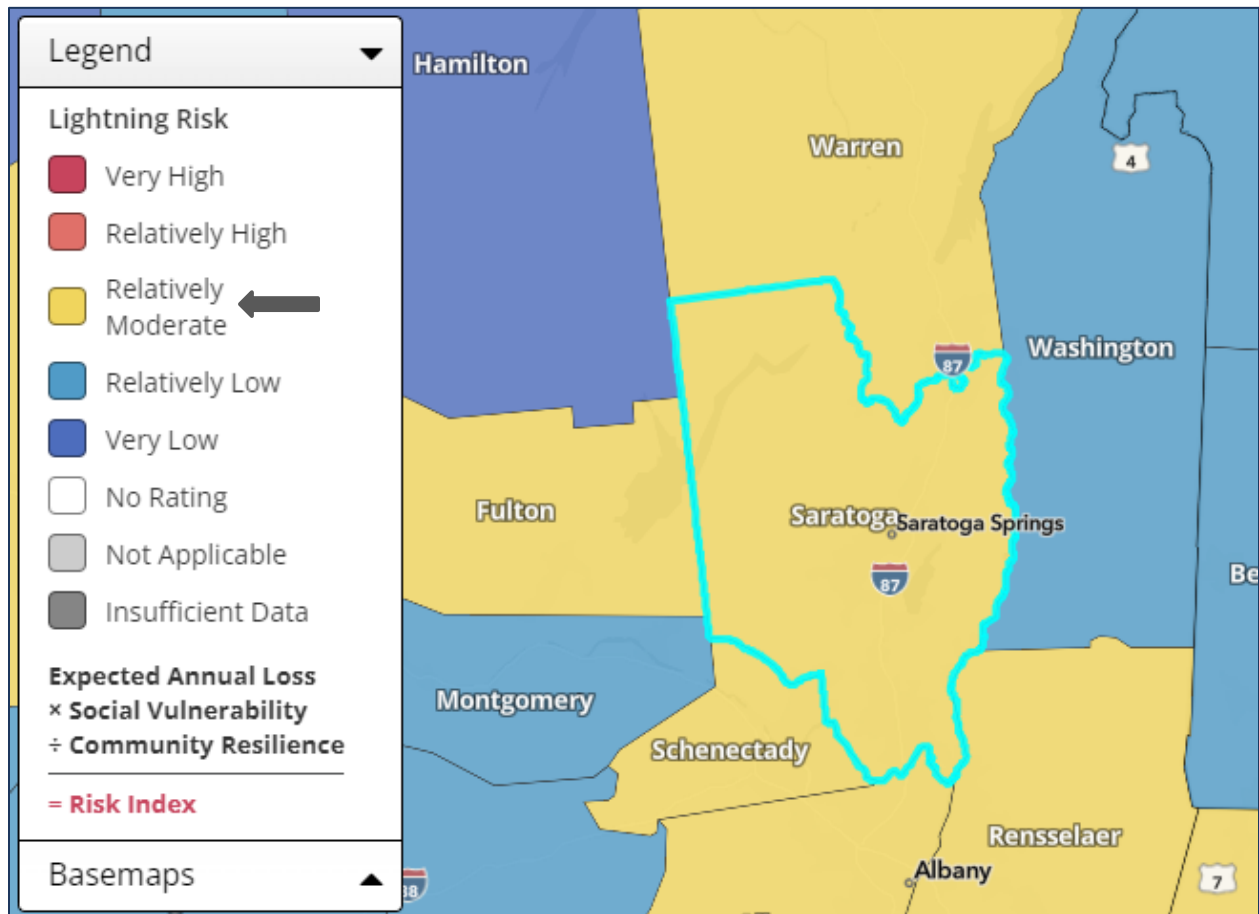
According to the 2023 Annual Lightning Report by Vaisala, New York State ranks number 38 in the U.S. for strikes with an average of 17.9 flashes per square mile. Vaisala’s U.S. National Lightning Detection Network lightning flash density map shows a range of 17.1 cloud-to-ground lightning flashes per square mile for the entire Saratoga County planning area. This rate equates

## SECTION 15: LIGHTNING

to approximately 14,400 flashes per year for the entire planning area, or one to two flashes per 15-minute interval during storm events.

FEMA's National Risk Index includes an analysis of the planning area's expected annual loss and the community's risk factor which incorporates social vulnerability as well as community resilience to determine the lightning risk for the area, compared to the rest of the United States. Saratoga County is located in an area where the extent is classified as relatively moderate (Figure 15-1).

**Figure 15-1. Saratoga County Lightning Risk, National Risk Index, October 2024**



## HISTORICAL OCCURRENCES

According to the National Centers for Environmental Information (NCEI), there have been 29 recorded events for the Saratoga County planning area between January 1996 and June 2024. It is highly likely multiple lightning occurrences have gone unreported before and during the recording period. The NCEI is a national data source organized under the National Oceanic and Atmospheric Administration and considered a reliable resource for hazards. However, lightning is historically underreported, in large part because most lightning strikes do not strike assets or otherwise create damages. As a result, the planning team utilized the flash density for the planning area along with the National Risk Index and input from local team members to conclude that lightning occurrences are common for the area but are simply not reported. Table 15-1 includes the NCEI reported lightning events from January 1996 through June 2024.

## SECTION 15: LIGHTNING

**Table 15-1. Historical Lightning Events, January 1996 – June 2024<sup>1</sup>**

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
City of Saratoga Springs	6/12/1996	0	1	\$0	\$0
Town of Saratoga	7/15/1997	0	0	\$77,800	\$0
Village of South Glens Falls	7/15/1997	0	1	\$0	\$0
City of Saratoga Springs	6/1/1999	0	0	\$47,000	\$0
Town of Halfmoon	6/28/1999	0	0	\$94,000	\$0
Village of South Glens Falls	7/18/1999	0	0	\$5,600	\$0
Town of Ballston / Village of Ballston Spa <sup>2</sup>	5/18/2000	0	0	\$45,500	\$0
Town and Village of Stillwater <sup>3</sup>	8/16/2002	0	0	\$0	\$0
Town of Clifton Park	6/30/2003	0	0	\$85,000	\$0
Town of Malta	5/13/2004	0	0	\$0	\$0
Town of Moreau	5/24/2004	0	0	\$1,700	\$0
Town of Clifton Park	6/9/2004	0	0	\$0	\$0
City of Mechanicville	7/18/2004	0	0	\$0	\$0
Town and Village of Waterford <sup>4</sup>	6/27/2007	1	0	\$0	\$0
City of Mechanicville	8/25/2007	0	0	\$195,300	\$0
Town of Ballston / Village of Ballston Spa	7/18/2008	0	2	\$0	\$0
City of Saratoga Springs	7/26/2008	0	0	\$0	\$0
Town of Providence	5/4/2010	0	0	\$7,200	\$0
City of Mechanicville	6/1/2011	0	0	\$1,400	\$0
City of Saratoga Springs	7/23/2014	0	0	\$6,600	\$0
Town of Moreau	8/7/2014	0	0	\$2,600	\$0
City of Saratoga Springs	8/13/2016	0	0	\$19,500	\$0
City of Saratoga Springs	8/17/2018	0	0	\$1,200	\$0
Town and Village of Galway <sup>5</sup>	6/21/2021	0	0	\$23,000	\$0

<sup>1</sup> Damages are presented in 2024 dollar amounts.

<sup>2</sup> Town of Ballston and Village of Ballston Spa are not listed separately in the NCEI. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their close proximity.

<sup>3</sup> Town and Village of Stillwater are not listed separately in the NCEI. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their close proximity.

<sup>4</sup> Town and Village of Waterford are not listed separately in the NCEI. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their close proximity.

<sup>5</sup> Town and Village of Galway are not listed separately in the NCEI. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their close proximity.

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JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town of Moreau	8/30/2022	0	0	\$42,200	\$0
Town of Hadley	8/30/2022	0	0	\$210,900	\$0
City of Mechanicville	7/9/2023	0	0	\$40,900	\$0
Town and Village of Stillwater	8/4/2023	0	0	\$1,000	\$0
Town of Greenfield	4/30/2024	0	0	\$40,000	\$2,000
<b>TOTALS</b>		<b>1</b>	<b>4</b>	<b>\$948,400</b>	<b>\$2,000</b>

**Table 15-2. Summary of Historical Lightning Events, January 1996 – June 2024<sup>6</sup>**

JURISDICTION	NUMBER OF EVENTS	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Saratoga County	0	-	-	-	-
Town of Ballston / Village of Ballston Spa	2	0	2	\$45,500	\$0
Town of Charlton	0	-	-	-	-
Town of Clifton Park	2	0	0	\$85,000	\$0
Town and Village of Corinth <sup>7</sup>	0	-	-	-	-
Town of Day	0	-	-	-	-
Town of Edinburg	0	-	-	-	-
Town and Village of Galway	1	0	0	\$23,000	\$0
Town of Greenfield	1	0	0	\$40,000	\$2,000
Town of Hadley	1	0	0	\$210,900	\$0
Town of Halfmoon	1	0	0	\$94,000	\$0
Town of Malta	1	0	0	\$0	\$0
City of Mechanicville	4	0	0	\$237,600	\$0
Town of Milton	0	-	-	-	-
Town of Moreau	3	0	0	\$46,500	\$0
Town of Northumberland	0	-	-	-	-
Town of Providence	1	0	0	\$7,200	\$0
Village of Round Lake	0	-	-	-	-
City of Saratoga Springs	6	0	1	\$74,300	\$0
Town of Saratoga	1	0	0	\$77,800	\$0

<sup>6</sup> Participating jurisdictions with no reported events show a “-“ in table columns where damages, deaths or injuries would otherwise be reported.

<sup>7</sup> Town and Village of Corinth are not listed separately in the NCEI. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their close proximity.

# SECTION 15: LIGHTNING

JURISDICTION	NUMBER OF EVENTS	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Village of Schuylerville	0	-	-	-	-
Village of South Glens Falls	2	0	1	\$5,600	\$0
Town and Village of Stillwater	2	0	0	\$1,000	\$0
Village of Victory	0	-	-	-	-
Town and Village of Waterford	1	1	0	\$0	\$0
Town of Wilton	0	-	-	-	-
<b>TOTALS</b>	<b>29</b>	<b>1</b>	<b>4</b>	<b>\$950,400</b>	

Based on the list of historical lightning events for the Saratoga County planning area including participating jurisdictions, six reported events have occurred since the 2019 Plan, all of which caused property damage.

## SIGNIFICANT EVENTS

### June 27, 2007 – Town and Village of Waterford

Lightning struck a steel pylon at Alcathy’s Marina, near where a 17-year-old male was standing. He was knocked unconscious by the strike and transported to a nearby hospital, where he was pronounced dead the following morning.

### August 25, 2007 – City of Mechanicville

A house in the City of Mechanicville was struck by lightning late in the evening, causing significant damage to the second floor and attic. The back of the house was gutted and furniture inside the home was ruined. Property damage was estimated at \$195,300 (2024 dollars).

### July 18, 2008 – Village of Ballston Spa

Lightning struck a tree near a main gate at the Saratoga County Fairgrounds in the Village of Ballston Spa, injuring two females. One, a 15-year-old girl, was rushed to the intensive care unit at Albany Medical Center; the other, a 34-year-old woman, was rushed to Saratoga Hospital.

### August 30, 2022 – Town of Hadley and Town of Moreau

Severe thunderstorms led to two separate lightning strikes which resulted in damages within the Saratoga County planning area. The first occurred in the Town of Moreau, where a house on Redmond Road suffered a fire after being struck by lightning. Another home in the Town of Hadley near the Bend of the River Golf Club was struck by lightning, sparking an electrical fire and rendering the home unlivable. These two house fires resulted in an estimated total of \$ \$253,100 (2024 dollars) in property damage.

## PROBABILITY OF FUTURE EVENTS

Based on historical records, the annual flash density and input from the planning team the probability of occurrence for future lightning events in the Saratoga County planning area, including participating jurisdictions, is considered “Highly Likely”, or an event probable in the next year. Given this estimated probability of events, it can be expected that future lightning events will continue to threaten life and cause minor property damage throughout the planning area. Impacts

# SECTION 15: LIGHTNING

of climate change are not expected to increase the average frequency of lightning events but may lead to an increase in the intensity of events when they do occur.

## VULNERABILITY AND IMPACT

Vulnerability is difficult to evaluate since lightning events can occur at different strength levels, in random locations, and can create a broad range of damage depending on the strike location. Due to the randomness of these events, all existing and future structures and facilities in the Saratoga County planning area could potentially be impacted and remain vulnerable to possible injury and property loss from lightning strikes.

The direct and indirect losses associated with these events include injury and loss of life, damage to structures and infrastructure, agricultural losses, utility failure (power outages), and stress on community resources. The entire population of the Saratoga County planning area, including participating jurisdictions, are considered exposed to the lightning hazard. The peak lightning season in New York State is from June to August; however, the most fatalities occur in July. Fatalities occur most often when people are outdoors and/or participating in some form of recreation. Population located outdoors is considered at risk and more vulnerable to a lightning strike compared to being inside a structure. Moving to a lower risk location will decrease a person’s vulnerability.

The entire general building stock and all infrastructure of the Saratoga County planning area is considered exposed to the lightning hazard. Lightning can be responsible for damages to buildings, cause electrical, forest and/or wildfires, and damage infrastructure such as power transmission lines and communication towers.

While all citizens are at risk to the impacts of lightning, forced relocation and disaster recovery drastically impacts low-income residents who lack the financial means to travel, afford a long-term stay away from home, and to rebuild or repair their homes. An estimated 7 percent of the planning area population live below the poverty level (Table 15-3).

**Table 15-3. Populations at Greater Risk by Jurisdiction<sup>8</sup>**

JURISDICTION	BELOW POVERTY LEVEL
Saratoga County	15,598
Town of Ballston	538
Village of Ballston Spa	338
Town of Charlton	191
Town of Clifton Park	762
Town of Corinth	641
Village of Corinth	373
Town of Day	123

<sup>8</sup> US Census Bureau, American Community Survey, 2022

## SECTION 15: LIGHTNING

JURISDICTION	BELOW POVERTY LEVEL
Town of Edinburg	200
Town of Galway	319
Village of Galway	29
Town of Greenfield	867
Town of Hadley	197
Town of Halfmoon	979
Town of Malta	1,287
City of Mechanicville	1,072
Town of Milton	941
Town of Moreau	1,752
Town of Northumberland	330
Town of Providence	259
Village of Round Lake	25
Town of Saratoga	321
City of Saratoga Springs	2,879
Village of Schuylerville	151
Village of South Glens Falls	387
Town of Stillwater	893
Village of Stillwater	225
Village of Victory	108
Town of Waterford	478
Village of Waterford	199
Town of Wilton	539

The Saratoga County Planning Team identified the following critical facilities as assets that are considered the most important to the planning area and are susceptible to a range of impacts caused by lightning events. The following critical facilities would be vulnerable to lightning events in the Saratoga County planning area, including all participating jurisdictions. For a comprehensive list by participating jurisdiction please see Appendix C.



## SECTION 15: LIGHTNING

**Table 15-4. Critical Facilities Vulnerable to Lightning Events**

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Services (EOC, Fire, Police, EMS, Hospitals and Medical Centers)	<ul style="list-style-type: none"> <li>• Emergency operations and services may be significantly impacted due to power outages, damaged facilities, fires and/or loss of communications as a result of lightning strikes.</li> <li>• Emergency vehicles, including critical equipment, can be damaged by lightning strikes or by falling trees damaged by lightning.</li> <li>• Power outages could disrupt communications, delaying emergency response times.</li> <li>• Downed trees due to lightning strikes can impede emergency response vehicle access to areas.</li> <li>• Lightning strikes can be associated with structure fires and wildfires, further straining the capacity and resources of emergency personnel.</li> <li>• Extended power outages may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.</li> </ul>
Airport, Academic Institutions, Animal Shelters, Evacuation Centers & Shelters, Governmental Facilities, Residential/ Assisted Living Facilities	<ul style="list-style-type: none"> <li>• Structures can be damaged by falling trees damaged by lightning.</li> <li>• Power outages could disrupt critical care.</li> <li>• Backup power sources could be damaged.</li> <li>• Evacuations may be necessary due to extended power outages, fires, or other associated damages to facilities.</li> <li>• Economic disruption due to power outages and fires negatively impact airport services as well as area businesses reliant on airport operations.</li> </ul>
Commercial Suppliers (food, gas, etc.)	<ul style="list-style-type: none"> <li>• Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable.</li> <li>• Essential supplies like medicines, water, food, and equipment deliveries may be delayed.</li> </ul>
Utility Services and Infrastructure (electric, water, wastewater, communications)	<ul style="list-style-type: none"> <li>• Emergency operations and critical services may be significantly impacted due to power outages, damaged facilities, fires and/or loss of communications as a result of lightning strikes.</li> <li>• Emergency vehicles, including critical equipment, can be damaged by lightning strikes or by falling trees damaged by lightning.</li> <li>• Power outages could disrupt communications, delaying emergency response times.</li> <li>• Downed trees due to lightning strikes can impede emergency response vehicle access to areas.</li> <li>• Lightning strikes can be associated with structure fires and wildfires, further straining the capacity and resources of emergency personnel.</li> <li>• Extended power outages may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.</li> </ul>

The impact of lightning experienced in the Saratoga County planning area has resulted in one fatality and four injuries. In terms of the built environment, the total loss estimate for the planning area is \$950,400 (in 2024 dollars) with annualized losses of \$33,300 (Table 15-5). While the damages to structures and infrastructure are considered Limited, with services shut down for 24 hours or less and less than 10 percent of property destroyed, the historical fatality and injuries, indicate a “Substantial” severity of impact with multiple deaths possible depending on the force and location of the strike.

## SECTION 15: LIGHTNING

**Table 15-5. Potential Annualized Losses by Jurisdiction<sup>9</sup>**

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATE
Saratoga County	\$0	\$0
Town of Ballston / Village of Ballston Spa	\$45,500	\$1,600
Town of Charlton	\$0	\$0
Town of Clifton Park	\$85,000	\$3,000
Town and Village of Corinth	\$0	\$0
Town of Day	\$0	\$0
Town of Edinburg	\$0	\$0
Town and Village of Galway	\$23,000	\$800
Town of Greenfield	\$42,000	\$1,500
Town of Hadley	\$210,900	\$7,400
Town of Halfmoon	\$94,000	\$3,300
Town of Malta	\$0	\$0
City of Mechanicville	\$237,600	\$8,300
Town of Milton	\$0	\$0
Town of Moreau	\$46,500	\$1,600
Town of Northumberland	\$0	\$0
Town of Providence	\$7,200	\$300
Village of Round Lake	\$0	\$0
City of Saratoga Springs	\$74,300	\$2,600
Town of Saratoga	\$77,800	\$2,700
Village of Schuylerville	\$0	\$0
Village of South Glens Falls	\$5,600	\$200
Town and Village of Stillwater	\$1,000	\$0
Village of Victory	\$0	\$0
Town and Village of Waterford	\$0	\$0
Town of Wilton	\$0	\$0
<b>TOTALS</b>	<b>\$950,400</b>	<b>\$33,300</b>

<sup>9</sup> Damage values are in 2024 dollars.

## SECTION 15: LIGHTNING

### ASSESSMENT OF IMPACTS

Lightning events have the potential to pose a significant risk to people and can create dangerous and difficult situations for public health and safety officials. Additional impacts to the planning area can include:

- The Saratoga County planning area features park space developed parks and green spaces. Lightning events could impact recreational activities, placing residents and visitors in imminent danger, potentially requiring emergency services or park evacuation.
- Older structures built to less stringent building codes may suffer greater damage from a lightning strike as they are typically built with less fire-resistant materials and often lack any fire mitigation measures such as sprinkler systems. 46 percent of homes in the county were built before 1980. Within Saratoga County, 82 buildings, districts, and sites are listed on the National Register of Historic Places, many of which similarly lack fire mitigation materials or measures.
- Vegetation in urban parks may be destroyed by lightning caused brush fires, impacting air quality and public health.
- Individuals exposed to the storm can be directly struck, posing significant health risks and potential death.
- Structures can be damaged or crushed by falling trees damaged by lightning, which can result in physical harm to the occupants.
- Lightning strikes can result in widespread power outages increasing the risk to more vulnerable portions of the population who rely on power for health and/or life safety.
- Extended power outage often results in an increase in structure fires and carbon monoxide poisoning as individuals attempt to cook or heat their homes with alternate, unsafe cooking or heating devices, such as grills.
- Lightning strikes can be associated with structure fires and wildfires, creating additional risk to residents and first responders.
- Emergency operations and services may be significantly impacted due to power outages and/or loss of communications.
- County, City, Town, and Village departments may be damaged, delaying response and recovery efforts for the entire community.
- Economic disruption due to power outages and fires negatively impacts the programs and services provided by the community due to short- and long-term loss in revenue.
- Some businesses not directly damaged by lightning events may be negatively impacted while utilities are being restored, further slowing economic recovery.
- Businesses that are more reliant on utility infrastructure than others may suffer greater damage without a backup power source.

The economic and financial impacts of lightning on the area will depend entirely on the scale of the event, what is damaged, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by the community, local businesses, and citizens will also contribute to the overall economic and financial conditions in the aftermath of any significant lightning event.

### CLIMATE CHANGE CONSIDERATIONS

As CO<sub>2</sub> increases and the land surface warms, stronger updrafts are more likely to produce lightning. In a climate with double the amount of CO<sub>2</sub>, we may see fewer lightning storms overall,

## SECTION 15: LIGHTNING

but 25 percent stronger storms, with a 5 percent increase in lightning. Lightning damage is also likely to increase because of its role in igniting forest fires, where dry vegetation, also caused by rising temperatures, creates more 'fuel' for fires, so even a small climate change may have huge consequences. While the impact climate change will have on our weather still remains uncertain, researchers agree that implementing simple measures like lightning detection systems and installing grounding systems in buildings could go a long way in avoiding deaths and injuries.<sup>10</sup>

Lightning events have the potential to pose a significant risk to people and property throughout the planning area. The economic and financial impacts of lightning on the area will depend entirely on the scale of the event, what is damaged, and how quickly repairs to critical components of the economy can be implemented. While no increase in the number of hazard events is anticipated, the impact of the hazard may see an increase in losses. As populations grow and urban development continues to rise, the overall vulnerability and impact are expected to increase in the next five years.

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<sup>10</sup> Environmental Journal, Nathan Neal, January 11, 2021.



**SARATOGA**  
**COUNTY** NEW YORK

SECTION 16  
**SNOW STORM**

## SECTION 16: SNOW STORM

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### HAZARD DESCRIPTION



A snow storm occurs when precipitation falls as snow. In the winter, most precipitation forms as snow within the clouds because temperatures at the top of the storm are cold enough to make snowflakes. If temperatures remain at or below 32°F between the clouds and the ground, the precipitation will fall as snow. If the temperatures are above freezing point, the precipitation will melt to form rain or freezing rain.

Most snow storms form due to low-pressure systems that lift moist air into the atmosphere. However, the U.S. East Coast is a prime location for Nor'easters which often develop when cold Arctic air from Canada moves southward into the northeastern U.S. Nor'easters are cyclonic storms that are notorious for causing heavy snow, rain, and strong winds. Some of the most well-known snow storms have been nor'easters, including the Blizzard of 1888 and the Blizzard of 1993 (known as the Storm of the Century) which both impacted the State of New York.

Other types of snow storms include blizzards, snow squalls, snow showers, and more. A blizzard is considered a severe snow storm due to wind strength and accumulation of snow. The National Weather Service defines several types of snow storms, which are described in Table 16-1, and each may impact the entire Saratoga County planning area.

**Table 16-1. NWS Types of Snow Storms**

TYPE OF WINTER WEATHER	DESCRIPTION
Blizzard	Sustained winds or frequent gusts of 35 mph or more with snow and blowing snow frequently reducing visibility to less than a quarter mile for 3 hours or more.
Blowing Snow	Wind-driven snow that reduces visibility. Blowing snow may be falling snow and/or snow on the ground picked up by the wind.
Snow Squalls	Brief, intense snow showers accompanied by strong, gusty winds. Accumulation may be significant.

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TYPE OF WINTER WEATHER	DESCRIPTION
Snow Showers	Snow falling at varying intensities for brief periods of time. Some accumulation is possible.
Flurries	Light snow falling for short durations with little or no accumulation.
Avalanche	A mass of tumbling snow. More than 80 percent of midwinter avalanches are triggered by a rapid accumulation of snow and 90 percent of those avalanches occur within 24 hours of snowfall. An avalanche may reach a mass of a million tons and travel at speeds up to 200 mph.

## LOCATION

Snow storm events are not confined to specific geographic boundaries. Therefore, all existing and future buildings, facilities, and populations in the Saratoga County planning area, including all participating jurisdictions, may experience snow storms and could be impacted.

## EXTENT

The extent or magnitude of a severe snow storm can be measured in intensity based on the Northeast Snowfall Impact Scale (NESIS) as shown in Table 16-2. NESIS is an index developed by the National Centers for Environmental Information (NCEI). The NESIS ranks snow storm impacts on a scale from 1 to 5, similar to the Fujita scale for tornadoes or the Saffir-Simpson scale for hurricanes.

This index is different from other meteorological indices because it uses population data in addition to meteorological measurements. Therefore, the NESIS gives an indication of a storm's societal impacts. This scale was developed because of the impact Northeast snow storms can have on the rest of the country in terms of transportation and economic impact. NESIS values account for the area affected by the snow storm, the amount of snow, and the number of people living in the path of the storm. Each storm will fall into one of five categories as described below. It is possible that the planning area could experience the full extent of a snow storm and experience the full range of impacts on the NESIS scale.

**Table 16-2. Northeastern Snowfall Impact Scale**

NESIS Category	NESIS Value	Level of Impact
1	1 - 2.4	Notable
2	2.5 – 3.9	Significant
3	4 – 5.9	Major
4	6 – 9.9	Crippling
5	10.0+	Extreme

The National Weather Service issues winter weather warnings, watches, and advisories in advance of an event to give people enough time to prepare for an event. The Saratoga County planning area could be under any of these warning types in advance of a winter storm event. Table 16-3 describes when each warning type would be issued.

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**Table 16-3. Snow Storm Warning, Watch, Advisory Descriptions**

TYPE OF WINTER WEATHER	DESCRIPTION
Blizzard Warning	Blizzard warnings are issued for frequent gusts greater than or equal to 35 mph accompanied by falling and/or blowing snow, frequently reducing visibility to less than 1/4 mile for three hours or more. A Blizzard Warning means severe winter weather conditions are expected or occurring. Falling and blowing snow with strong winds and poor visibilities are likely, leading to whiteout conditions making travel extremely difficult.
Winter Storm Warning	Winter Storm Warnings are issued for a significant winter weather event including snow, ice, sleet or blowing snow or a combination of these hazards. Travel will become difficult or impossible in some situations.
Lake Snow Effect Warning	Lake Effect Snow Warnings are issued when widespread or localized lake induced snow squalls or heavy showers are expected to produce significant snowfall accumulation. Lake effect snow usually develops in narrow bands and impacts a limited area. These bands can produce very heavy snow with sudden restrictions in visibility. Driving conditions may become hazardous at times.
Winter Storm Watch	Winter Storm Watches are issued when conditions are favorable for a significant winter storm event (heavy sleet, heavy snow, ice storm, heavy snow and blowing snow or a combination of events.)
Winter Weather Advisories	Winter Weather Advisories are issued when snow, blowing snow, ice, sleet, or a combination of these wintry elements is expected but conditions should not be hazardous enough to meet warning criteria.
Lake Snow Advisory	Lake Effect Snow Advisory are issued for widespread or localized lake effect snowfall accumulation (and blowing snow) remaining below warning criteria. Expects lake effect snow showers and assume travel will be difficult in some areas. Some localized snow bands will be intense enough to produce several inches in a few areas with sudden restrictions in visibility.

### HISTORICAL OCCURRENCES

According to historical records and the best available data there have been 377 recorded snow storm events in the Saratoga County planning area from January 1996 through June 2024. Historical snow storm information, as provided by the NCEI, identifies snow storm activity across a multi-county forecast area for each event. The appropriate percentage of the total property and crop damage reported for the entire forecast area has been allocated to each county impacted by the event, when appropriate. Historical winter storm data for the planning area is provided on a Countywide basis per the NCEI database. Table 16-4 shows historical incident information for the planning area. Only those events with reported damages, injuries or fatalities have been included in the table.



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**Table 16-4. Historical Snow Storm Events, January 1996 – June 2024<sup>1</sup>**

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Saratoga County	3/14/1997	0	0	\$19,200	\$0
Saratoga County	3/31/1997	0	0	\$383,500	\$0
Saratoga County	3/31/1997	0	0	\$383,500	\$0
Saratoga County	12/8/1998	0	5	\$18,800	\$0
Saratoga County	1/2/1999	0	0	\$1,900	\$0
Saratoga County	1/2/1999	0	0	\$7,500	\$0
Saratoga County	1/8/1999	0	0	\$2,300	\$0
Saratoga County	1/14/1999	0	0	\$3,000	\$0
Saratoga County	1/14/1999	0	0	\$2,900	\$0
Saratoga County	1/18/1999	0	0	\$1,900	\$0
Saratoga County	3/6/1999	0	0	\$3,800	\$0
Saratoga County	3/6/1999	0	0	\$3,800	\$0
Saratoga County	1/25/2000	0	0	\$23,700	\$0
Saratoga County	1/25/2000	0	0	\$63,700	\$0
Saratoga County	1/31/2000	0	0	\$38,200	\$0
Saratoga County	1/31/2000	0	0	\$14,600	\$0
Saratoga County	2/14/2000	0	0	\$104,800	\$0
Saratoga County	2/14/2000	0	0	\$27,100	\$0
Saratoga County	2/18/2000	0	0	\$1,900	\$0
Saratoga County	2/18/2000	0	0	\$5,500	\$0
Saratoga County	4/9/2000	0	0	\$80,600	\$0
Saratoga County	4/9/2000	0	0	\$107,500	\$0
Saratoga County	11/5/2002	0	0	\$42,300	\$0
Saratoga County	11/5/2002	0	0	\$42,300	\$0
Saratoga County	11/17/2002	0	0	\$17,000	\$0
Saratoga County	11/17/2002	0	0	\$17,000	\$0
Saratoga County	1/3/2003	0	0	\$126,700	\$0
Saratoga County	11/11/2003	0	2	\$0	\$0
<b>TOTALS</b>		<b>0</b>	<b>7</b>	<b>\$1,545,000</b>	

<sup>1</sup> Values are in 2024 dollars. Database was search for events between January 1996 and June 2024. Only those events with reported damages, injuries or fatalities have been included in the table. This data includes blizzard, heavy snow, winter weather, and winter storm events from the NCEI Storm Events Database.

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**Table 16-5. Historical Snow Storm Events Summary, 1996-2023**

JURISDICTION	NUMBER OF EVENTS	DEATHS	INJURIES	PROPERTY DAMAGES	CROP DAMAGES
Saratoga County	377	0	7	\$1,545,000	\$0

Based on the list of historical winter storm events for the Saratoga County planning area, 95 of the events have occurred since the 2019 Plan.

## SIGNIFICANT EVENTS

### March 31, 1997 – Saratoga County

On March 31<sup>st</sup> and April 1<sup>st</sup> of 1997, a late season nor'easter moved from the Chesapeake Bay area to coastal New Jersey before heading out to sea. The storm brought rain to Saratoga County and much of eastern New York on the morning of March 31<sup>st</sup>, transitioning to heavy, wet snow by the afternoon. Snowfall amounts varied significantly by elevation, with the City of Saratoga Springs receiving 10 inches. Higher elevations saw totals exceeding 2 feet, with 15 inches recorded at Albany Airport and up to 37 inches in East Jewett, Greene County. The storm caused widespread power outages and road closures, particularly in Greene, Dutchess, and Ulster counties where a State of Emergency was declared. In Saratoga County, residents faced hazardous travel conditions due to the heavy snow. In total, 50,000 customers in the Capital District lost power.

### December 8, 1998 – Saratoga County

An atmospheric disturbance produced freezing rain and sleet across the Lake George Saratoga Region on December 8<sup>th</sup> of 1998. The freezing rain produced slick roads that lead to a five-car collision resulting in reported injuries in the Town of Wilton in Saratoga County.

### November 11, 2003 – Saratoga County

A warm front over the Ohio Valley brought light precipitation to eastern New York. In Warren, Washington, and northern Saratoga Counties, cold air caused the precipitation to fall as light freezing rain and sleet, creating very slick roads. Numerous accidents occurred, particularly on the Adirondack Northway north of Glens Falls. In Saratoga County, a child was injured in a crash near the Batchellerville Bridge in the Town of Edinburg. Another person sustained minor injuries in the Town of Corinth after losing control of their vehicle on icy roads.

### March 13, 2023 – Saratoga County

A powerful Nor'easter brought heavy snow and gusty winds to eastern New York from March 13<sup>th</sup> to 15<sup>th</sup> in 2023. Snowfall amounts ranged from 15 to 30 inches, with some areas in the southwest Adirondacks and eastern Catskills seeing over 30 inches. Valley areas received 7 to 15 inches, while parts of the western Mohawk and mid-Hudson Valleys had less than 6 inches. The storm caused widespread power outages, with National Grid reporting 141,000 customers affected, many within the Saratoga County planning area. Some locations were without power for up to two days. Numerous trees and powerlines were downed, schools were closed, and travel restrictions, including bans on empty tractor trailers, were implemented. Several jurisdictions declared a State of Emergency due to the storm's impact.

# SECTION 16: SNOW STORM

## PROBABILITY OF FUTURE EVENTS

According to historical records, the Saratoga County planning area is expected to experience approximately 13 snow storm events each year. The probability of a future winter storm event affecting the Saratoga County planning area, including participating jurisdictions, is considered “Highly Likely”, with a winter storm likely to occur within the next year.

## VULNERABILITY AND IMPACT

Snow storms have the ability to immobilize an entire region, stranding commuters, closing airports, stopping the flow of supplies, and disrupting emergency and medical services. Snow greatly impacts roadways and transportation systems which results in school and business closures. The weight of snow can cause roofs to collapse, potentially disrupting critical facilities and causing significant property damage. Snow can knock down trees and power lines resulting in power outages. Homes and farms may be isolated for days, and unprotected livestock may be lost. The cost of snow removal, repairing damages, and the loss of business can have severe economic impacts on cities and towns. Melting snow can cause localized flooding, especially if temperatures rise rapidly. Creeks and rivers often overflow from the rush of melting snow and ice, resulting in an ice jam or snowmelt flood.

Saratoga County has a prominent agricultural sector and features more than 600 farms including dairy, beef, sheep, poultry, swine, vegetables, fruits, and greenhouse farms. These farms are a vital part of the food and agricultural industry in the planning area. Saratoga County’s annual market value of agricultural products sold is over \$115,000,000.<sup>2</sup> Snow storm events may severely damage crops and may even cause low crop yields by restricting stem growth. The most dangerous time for a snow storm to occur is during the spring months, when crops are the most vulnerable to damage. A snow storm event in the planning area may impact the County’s agricultural assets causing severe economic loss.

The Saratoga County Planning Team identified the following critical facilities (Table 16-6) as assets that are considered the most important to the planning area and are susceptible to a range of impacts caused by snow storm events. For a comprehensive list by participating jurisdiction see Appendix C.

**Table 16-6. Critical Facilities Vulnerable to Snow Storm Events**

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Departments (EOC, Fire, Police, EMS), Hospitals and Medical Centers	<ul style="list-style-type: none"> <li>• Emergency operations, services and response times may be significantly impacted due to power outages, and/or loss of communications.</li> <li>• Exposure to extreme cold can cause illnesses in first responders if exposed for a period of time.</li> <li>• Roads may become impassable due to snow impacting response times by emergency services.</li> <li>• Extended power outages due to increased usage may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.</li> </ul>
Airport, Academic Institutions, Animal	<ul style="list-style-type: none"> <li>• Power outages due to increased usage could disrupt critical care.</li> <li>• Backup power sources could be damaged.</li> </ul>

<sup>2</sup> Census of Agriculture. Saratoga County, New York County Profile. 2022.

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CRITICAL FACILITIES	POTENTIAL IMPACTS
Shelter, Evacuation Centers & Shelters, Governmental Facilities, Residential/ Assisted Living Facilities	<ul style="list-style-type: none"> <li>• Increased number of patients due to exposure to cold temperatures could lead to a strain on staff.</li> <li>• Water pipes can freeze and burst leading to flooding within facilities.</li> <li>• Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable.</li> <li>• Essential supplies like medicines, water, food, and equipment deliveries may be delayed.</li> <li>• Economic disruption due to power outages negatively impact airport services as well as area businesses reliant on airport operations.</li> <li>• Exposure risks to outdoor workers.</li> </ul>
Commercial Supplier (food, gas/fuel, etc.)	<ul style="list-style-type: none"> <li>• Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable.</li> <li>• Essential supplies like medicines, water, food, and equipment deliveries may be delayed as snow causes hazardous travel conditions.</li> </ul>
Utility Services and Infrastructure (electric, water, wastewater, communications)	<ul style="list-style-type: none"> <li>• Emergency operations, services and response times may be significantly impacted due to power outages, and/or loss of communications.</li> <li>• Roads may become impassable due to snow impacting response times by emergency services.</li> <li>• Power outages due to increased usage could disrupt critical care.</li> <li>• Backup power sources could be damaged.</li> </ul>

Due to travel restrictions and road closures during ice storms, the elderly may be especially vulnerable because they have delayed access to essential resources. Both the elderly and children have an increased risk of developing hypothermia and other extreme cold illnesses, especially if a snow storm results in power outages. People living in poverty may have less access to resources such as proper winter clothing, adequate heating systems, and reliable transportation

Due to factors like limited mobility, communication difficulties, medical needs, sensitivity to cold temperatures, reliance on support services, transportation challenges, housing accessibility issues, and possible shortages in emergency shelter accommodations, people with disabilities are particularly vulnerable to snow storms. In addition, people who speak a language other than English may face increased vulnerability due to language barriers that limit their access to important information such as weather-related warnings and instructions regarding safety measures. Inclusive measures are crucial to address these vulnerabilities and ensure their safety during severe weather events.

The population over 65 in the Saratoga County planning area is estimated at 19 percent of the total population and children under the age of 5 are estimated at 5 percent. The population with a disability is estimated at 11 percent of the total population. In addition, an estimated 7 percent of the planning area population live below the poverty level and 2 percent of the population of the speaks English ‘less than very well’.

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**Table 16-7. Populations at Greater Risk of Snow Storm Events**

JURISDICTION	POPULATION				
	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Saratoga County	44,772	11,049	26,426	15,598	4,430
Town of Ballston	1,957	521	964	538	84
Village of Ballston Spa	670	158	357	338	262
Town of Charlton	1,137	245	470	191	26
Town of Clifton Park	6,988	2,095	3,220	762	953
Town of Corinth	1,369	443	910	641	107
Village of Corinth	476	181	424	373	58
Town of Day	281	0	179	123	2
Town of Edinburg	406	47	220	200	0
Town of Galway	859	234	497	319	0
Village of Galway	44	21	26	29	0
Town of Greenfield	1,704	429	1,202	867	15
Town of Hadley	492	114	303	197	7
Town of Halfmoon	4,509	1251	2,833	979	987
Town of Malta	3,666	579	2,035	1,287	305
City of Mechanicville	964	317	906	1,072	37
Town of Milton	3,010	460	2,142	941	298
Town of Moreau	3,017	902	2,392	1,752	312
Town of Northumberland	822	259	541	330	126
Town of Providence	262	77	223	259	5
Village of Round Lake	152	53	68	25	12
Town of Saratoga	928	277	651	321	36
City of Saratoga Springs	5,997	1,018	3,323	2,879	880
Village of Schuylerville	209	106	199	151	12
Village of South Glens Falls	687	204	506	387	23
Town of Stillwater	1,645	621	654	893	48
Village of Stillwater	211	56	164	225	0
Village of Victory	115	57	112	108	7

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JURISDICTION	POPULATION				
	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Town of Waterford	1,685	254	992	478	68
Village of Waterford	570	107	310	199	0
Town of Wilton	3,074	906	1769	539	134

Older homes tend to be more vulnerable to the impacts of winter storm events. Those living in inadequate or substandard housing may lack insulation or heating. Aging structures and roofs are also more likely to collapse due to heavy snow accumulation. Approximately 46 percent (51,143 structures) of the housing structures in the Saratoga County planning area were built before 1980 (Table 16-8).

**Table 16-8. Structures at Greater Risk of Snow Storm Events<sup>3</sup>**

JURISDICTION	SFR STRUCTURES BUILT BEFORE 1980	PERCENT OF TOTAL HOUSING UNITS (%)
Saratoga County	51,143	46.5
Town of Ballston	2,298	44.7
Village of Ballston Spa	1,938	78.2
Town of Charlton	1,357	76.9
Town of Clifton Park	7,504	47.5
Town of Corinth	1,967	62.4
Village of Corinth	938	76.3
Town of Day	949	66.8
Town of Edinburg	1,086	58.5
Town of Galway	1,037	56.7
Village of Galway	68	86.1
Town of Greenfield	1,158	31.3
Town of Hadley	590	55.7
Town of Halfmoon	2,958	25.4
Town of Malta	2,968	33.0
City of Mechanicville	2,492	85.9
Town of Milton	3,690	46.3
Town of Moreau	3,527	50.6
Town of Northumberland	528	26.8

<sup>3</sup> U.S. Census Bureau, American Community Survey, 2022

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JURISDICTION	SFR STRUCTURES BUILT BEFORE 1980	PERCENT OF TOTAL HOUSING UNITS (%)
Town of Providence	338	34.0
Village of Round Lake	256	65.3
Town of Saratoga	1,479	54.8
City of Saratoga Springs	8,709	59.7
Village of Schuylerville	521	73.6
Village of South Glens Falls	1,297	73.5
Town of Stillwater	1,940	46.0
Village of Stillwater	506	56.0
Village of Victory	172	64.2
Town of Waterford	2,950	71.5
Village of Waterford	1,103	95.8
Town of Wilton	1,618	22.2

Overall, the total losses of property and crops in the planning area due to snow storms is estimated at \$1,545,000 with an average annualized loss of \$54,200. Based on historic loss and damages, the impact of snow storm damages in the Saratoga County planning area, including participating jurisdictions, can be considered Limited severity of impact, meaning critical facilities and services shut down for 24 hours or less, and less than 10 percent of property destroyed or with major damage. However, with 7 reported injuries the impact is considered “Major” with multiple injuries and illnesses potentially resulting in permanent disability possible depending on the extent and duration of the event.

**Table 16-9. Snow Storm Event Damage Totals, January 1996 - June 2024**

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATES
Saratoga County	\$1,545,000	\$54,200

## ASSESSMENT OF IMPACTS

The greatest risk from an extreme cold event is to public health and safety. The impact of climate change could produce more frequent and intense extreme cold events, exacerbating the current winter storm impacts. Extreme cold conditions are associated with a variety of impacts, including:

- Vulnerable populations, particularly the elderly (19 percent of total population) and children under 5 (5 percent of total population), can face serious or life-threatening health problems from exposure to cold. These populations may also become isolated and may be unable to leave their homes due to snow.
- Loss of electric power or other heat source can result in increased potential for fire injuries or hazardous gas inhalation because residents burn candles for light or use fires and generators to stay warm.

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- Response personnel, including utility workers, public works personnel, debris removal staff, tow truck operators, and other first responders, are subject to injury or illness resulting from exposure to cold temperatures.
- Response personnel would be required to travel in potentially hazardous conditions, elevating the life safety risk due to accidents and potential contact with downed power lines.
- Operations or service delivery may experience impacts from electricity blackouts due to heavy snow accumulations and related damages.
- Power outages are possible throughout the planning area due to downed trees and power lines and/or rolling blackouts. Outages are also possible due to an increase in electricity usage and demand when using electric heating systems.
- Critical facilities without emergency backup power may not be operational during power outages.
- Heavy snow and snow storm events could significantly damage vegetation and crops.
- Exposed water pipes may freeze and break when exposed to cold temperatures, both residential and commercial structures are vulnerable to infrastructure damage, especially roofs.
- Older structures built to less stringent building codes may suffer greater damage as they are typically more vulnerable to impacts of snow storm events. An estimated 46 percent of homes in the County were built before 1980. Within Saratoga County, 82 buildings, districts, and sites are listed on the National Register of Historic Places, many of which pre-date modern building codes.

The economic and financial impacts of snow storm events on the community will depend on the scale of the event, what is damaged, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by the community, local businesses and citizens will also contribute to the overall economic and financial conditions in the aftermath of a snow storm.

## CLIMATE CHANGE CONSIDERATIONS

Climate change may slightly decrease the risk of snow storms in the planning area. According to the Fourth National Climate Assessment, seasonal differences in Northeast U.S. temperatures have decreased in recent years as winters have warmed three times faster than summers. By the middle of this century, winters are projected to be milder, with fewer cold extremes, particularly across inland and northern portions of the Northeast. This will likely result in a shorter and less pronounced cold season with fewer frost days and a longer transition out of winter. Under the higher scenario, the trend of decreasing seasonality continues for the northern half of the region through the end of the century, but by then summer temperatures across the Mid-Atlantic are projected to rise faster than those in winter.<sup>4</sup>

According to the Climate Risk and Resilience Portal (ClimRR), the historical annual minimum temperature is about 35°F. Under the RCP 4.5 climate model, the annual minimum temperature at mid-century is projected to be about 40°F which represents a 5°F change from the current annual minimum temperature. This projection is consistent with the Fourth National Climate

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<sup>4</sup> U.S. Global Change Research Program, Fourth National Climate Assessment, Chapter 18: Northeast



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Assessment showing a potential increase in average minimum temperature for the Saratoga County planning area. In addition, the historical annual total precipitation is 41.09 inches and the ClimRR projections estimate the annual minimum precipitation at mid-century to be 45.86 inches, which represents a 4.77 inch increase from current averages.

Due to milder winters and warming temperatures, the Northeastern U.S. has experienced an increase in the proportion of winter precipitation as rain rather than snow. This trend is projected to continue over the next century.



**SARATOGA**  
**COUNTY** NEW  
YORK

SECTION 17  
**TORNADO**

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### HAZARD DESCRIPTION



Tornadoes are among the most violent storms on the planet. A tornado is a rapidly rotating column of air extending between, and in contact with, a cloud and the surface of the earth. The most violent tornadoes are capable of tremendous destruction and have wind speeds of 250 miles per hour or more. In extreme cases, winds may approach 300 miles per hour. Damage paths can be in excess of one mile wide and 50 miles long.

The most powerful tornadoes are produced by “Supercell Thunderstorms.” These thunderstorms are created when horizontal wind shears (winds moving in different directions at different altitudes) begin to rotate the storm. This horizontal rotation can be tilted vertically by violent updrafts, and the rotation radius can shrink, forming a vertical column of very quickly swirling air. This rotating air can eventually reach the ground, forming a tornado.

**Table 17-1. Variations among Tornadoes**

WEAK TORNADOES	STRONG TORNADOES	VIOLENT TORNADOES
<ul style="list-style-type: none"> <li>• 69% of all tornadoes</li> <li>• Less than 5% of tornado deaths</li> <li>• Lifetime 1-10+ minutes</li> <li>• Winds less than 110 mph</li> </ul>	<ul style="list-style-type: none"> <li>• 29% of all tornadoes</li> <li>• Nearly 30% of all tornado deaths</li> <li>• May last 20 minutes or longer</li> <li>• Winds 110 – 205 mph</li> </ul>	<ul style="list-style-type: none"> <li>• 2% of all tornadoes</li> <li>• 70% of all tornado deaths</li> <li>• Lifetime can exceed one hour</li> <li>• Winds greater than 205 mph</li> </ul>

### LOCATION

Tornadoes do not have any specific geographic boundary and can occur throughout the County uniformly. It is assumed that the entire Saratoga County planning area, including participating jurisdictions, are uniformly exposed to tornado activity. The entire Saratoga County planning area is located in Wind Zone II (Figure 17-1), where tornado winds can be as high as 160 mph.

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Figure 17-1. FEMA Wind Zones in the United States<sup>1</sup>

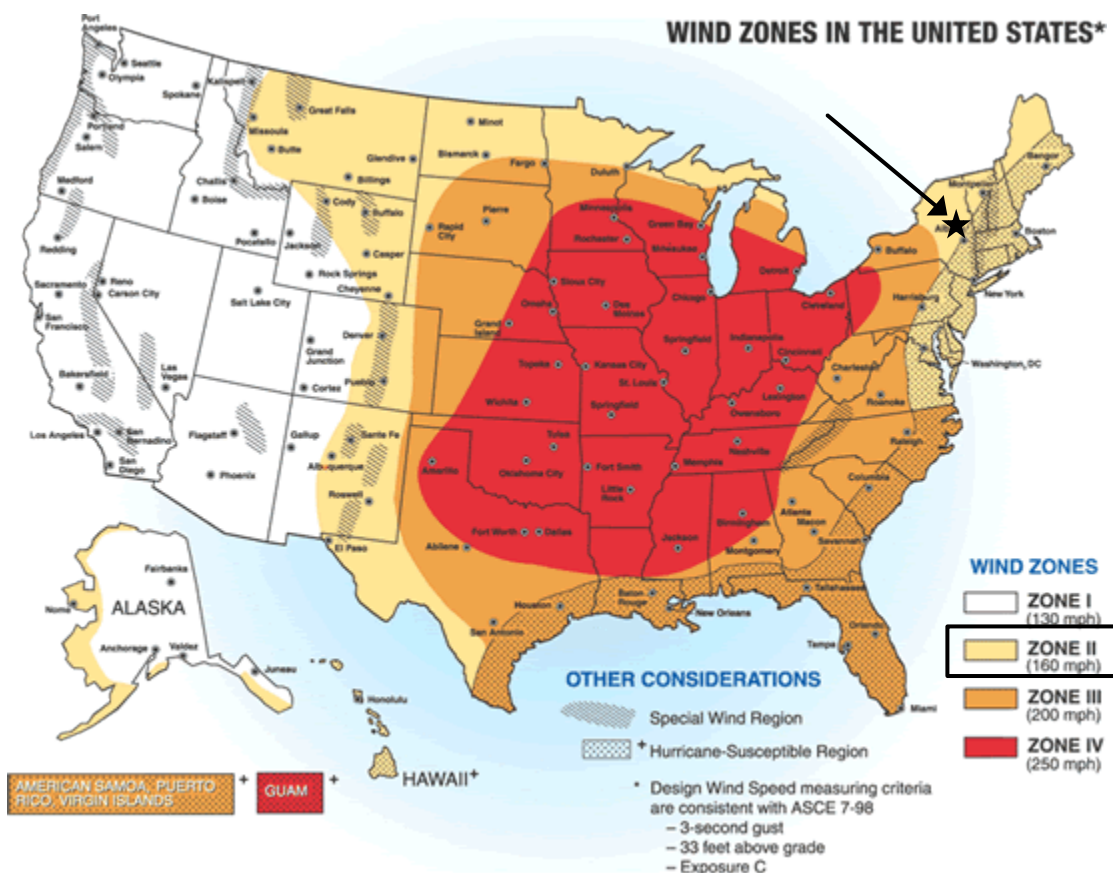


Figure 17-2 shows the locations of historic tornado events in the Saratoga County planning area between January 1974 and June 2024; only those events with available latitude and longitude coordinates are included in the figure below.

### EXTENT

The destruction caused by tornadoes ranges from light to inconceivable, depending on the intensity, size, and duration of the storm. Typically, tornadoes cause the greatest damage to structures of light construction, such as residential homes (particularly mobile homes).

Tornado magnitudes prior to 2007 were determined using the traditional version of the Fujita Scale, which estimated tornado wind speeds based on the damage caused by an event. Since February 2007, the Enhanced Fujita Scale has been utilized to classify tornadoes, which included improvements to the original scale. The original Fujita scale had limitations, such as a lack of damage indicators, no account for construction quality and variability, and no definitive correlation between damage and wind speed. These limitations led to some tornadoes being rated in an inconsistent manner and, in some cases, an overestimate of tornado wind speeds. The Enhanced Fujita scale retains the same basic design and six strength categories as the previous scale. The newer scale reflects more refined assessments of tornado damage surveys, standardization, and

<sup>1</sup> The Saratoga County planning area is indicated by the star.

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damage consideration to a wider range of structures. Table 17-2 includes both scales for reference when analyzing historical tornados since tornado events prior to 2007 will follow the original Fujita Scale.

**Table 17-2. The Fujita Tornado Scale<sup>2</sup>**

ENHANCED FUJITA SCALE				FUJITA SCALE			
Category	Wind Speed	Damage Level	Damage	Category	Wind Speed	Intensity	Damage
EF0	65-85 MPH	Gale	The environment sustained minor damage: tree branches are broken, some shallow-rooted trees are uprooted, and some chimneys are damaged.	F0	45-78 MPH	Gale	Some damage to chimneys; branches broken off trees; shallow-rooted trees pushed over; sign boards damaged.
EF1	86-110 MPH	Weak	The environment sustained moderate damage: mobile homes are tipped over, windows are broken, roof tiles may be blown off, and some tree trunks have snapped.	F1	79-117 MPH	Moderate	Peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos blown off roads.
EF2	111-135 MPH	Strong	The environment sustained considerable damage: mobile homes are destroyed, roofs are damaged, debris flies in the air, and large trees are snapped or uprooted.	F2	118-161 MPH	Significant	Roofs torn off frame houses; mobile homes demolished; boxcars overturned; large trees snapped or uprooted; light-object missiles generated; cars lifted off ground.
EF3	136-165 MPH	Severe	The environment sustained severe damage: roofs and walls are ripped off buildings, small buildings are destroyed, and most trees are uprooted.	F3	162-209 MPH	Severe	Roofs and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; heavy cars lifted off the ground and thrown.
EF4	166-200 MPH	Devastating	The environment sustained devastating damage: well-built homes are destroyed, buildings are lifted off their foundations, cars are blown away, and large debris flies in the air.	F4	210-261 MPH	Devastating	Well-constructed houses leveled; structures with weak foundations blown away some distance; cars thrown, and large missiles generated.
EF5	200+ MPH	Incredible	The environment sustained incredible damage: well-built homes are lifted from their foundations, reinforced concrete buildings are damaged, the bark is stripped from trees, and car-sized debris flies through the air.	F5	262-317 MPH	Incredible	Strong frame houses leveled off foundations and swept away; automobile-sized missiles fly through the air in excess of 100 meters (109 yds); trees debarked; incredible phenomena will occur.

<sup>2</sup> Source: <http://www.tornadoproject.com/fscale/fscale.htm>

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Both the Fujita Scale and Enhanced Fujita Scale should be referenced in reviewing previous occurrences since tornado events prior to 2007 will follow the original Fujita Scale. The greatest magnitude reported within the planning area is an F3 on the Fujita Scale, a “Severe Tornado” which occurred on May 31, 1998. Based on the planning area’s location in Wind Zone II, all participating jurisdictions have the potential to experience anywhere from an EF0 to an EF3 depending on the wind speed. Previous tornado events in the Saratoga County planning area have been between EF0 and F3 (which, when converted to the Enhanced Fujita Scale, could equate to anywhere from an EF3 to a low-end EF5) (Table 17-3).

### HISTORICAL OCCURRENCES

The National Center for Environmental Information (NCEI) Storm Events database is a national data source organized under the National Oceanic and Atmospheric Administration. The NCEI is the largest archive available for historic storm events data; however, it is important to note that only incidents recorded in the NCEI have been factored into this risk assessment unless otherwise noted. It is likely that a high number of occurrences have gone unreported over the past 50.5 years.

Figure 17-2 identifies the locations of previous occurrences in the Saratoga County planning area from January 1974 through June 2024. A total of 12 events have been recorded by NOAA’s Storm Prediction Center and National Centers for Environmental Information (NCEI) databases for the Saratoga County planning area during that time. The strongest event reported in the planning area was an F3 tornado which touched down in the Town of Halfmoon. That tornado was also the most significant event in Saratoga County in terms of reported damages, resulting in \$113,051,400 (2024 dollars) in property damage and 68 injuries.

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Figure 17-2. Spatial Historical Tornado Events, January 1974 – June 2024<sup>3</sup>

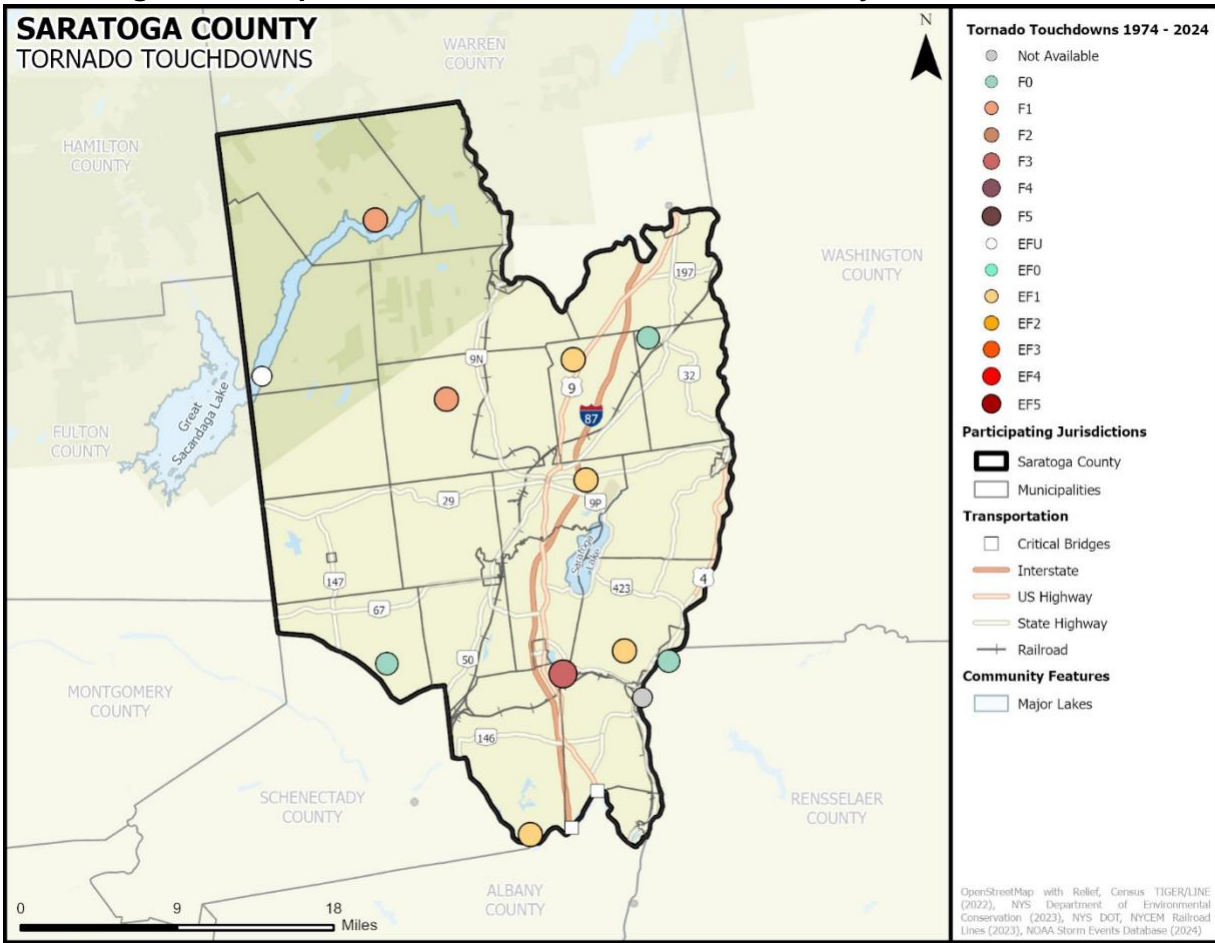


Table 17-3. Historical Tornado Events, January 1974 – June 2024<sup>4</sup>

JURISDICTION	DATE	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town of Day	7/29/1974	F1	0	0	\$0	\$0
Saratoga County	5/9/1978	Unknown	0	0	\$0	\$0
Town of Greenfield	11/16/1989	F1	0	1	\$609,200	\$0
Town of Northumberland	11/16/1989	F0	0	0	\$61,000	\$0
Town of Charlton	7/5/1992	F0	0	0	\$54,600	\$0
Saratoga County	7/5/1992	F0	0	0	\$54,600	\$0
Town of Halfmoon	5/31/1998	F3	0	68	\$113,051,400	\$0
Town of Clifton Park	5/29/2013	EF1	0	0	\$0	\$0

<sup>3</sup> Map sources: ESRI OpenStreetMap (Custom: no labels), Census TIGER/LINE (2022), NOAA Storm Events Database (2023)

<sup>4</sup> Events reported from January 1974 and June 2024. Only recorded events with damages are listed. Magnitude is listed when available. Damage values are in 2024 dollars.

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JURISDICTION	DATE	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town of Edinburg	8/4/2017	EFU	0	0	\$0	\$0
City of Saratoga Springs	8/21/2019	EF1	0	0	\$0	\$0
Town of Wilton	5/15/2020	EF1	0	0	\$0	\$0
Town and Village of Stillwater <sup>5</sup>	8/29/2020	EF1	0	1	\$41,400	\$23,700
<b>TOTALS</b>		<b>(MAX EXTENT)</b>	<b>0</b>	<b>70</b>	<b>\$113,872,200</b>	<b>\$23,700</b>

**Table 17-4. Summary of Historical Tornado Events, January 1974 – June 2024<sup>6</sup>**

JURISDICTION	NUMBER OF EVENTS	MAX MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Saratoga County	2	F0	0	0	\$54,600	\$0
Town of Ballston / Village of Ballston Spa <sup>7</sup>	0	-	-	-	-	-
Town of Charlton	1	F0	0	0	\$54,600	\$0
Town of Clifton Park	1	EF1	0	0	\$0	\$0
Town and Village of Corinth <sup>8</sup>	0	-	-	-	-	-
Town of Day	1	F1	0	0	\$0	\$0
Town of Edinburg	1	EFU	0	0	\$0	\$0
Town and Village of Galway <sup>9</sup>	0	-	-	-	-	-
Town of Greenfield	1	F1	0	1	\$609,200	\$0
Town of Hadley	0	-	-	-	-	-
Town of Halfmoon	1	F3	0	68	\$113,051,400	\$0
Town of Malta	0	-	-	-	-	-
City of Mechanicville	0	-	-	-	-	-
Town of Milton	0	-	-	-	-	-
Town of Moreau	0	-	-	-	-	-
Town of Northumberland	1	F0	0	0	\$61,000	\$0
Town of Providence	0	-	-	-	-	-

<sup>5</sup> Town and Village of Stillwater are not listed separately in the NCEI. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their close proximity.

<sup>6</sup> Participating jurisdictions with no reported events show a “-“ in table columns where damages, deaths or injuries would otherwise be reported.

<sup>7</sup> Town of Ballston and Village of Ballston Spa are not listed separately in the NCEI. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their close proximity.

<sup>8</sup> Town and Village of Corinth are not listed separately in the NCEI. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their close proximity.

<sup>9</sup> Town and Village of Galway are not listed separately in the NCEI. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their close proximity.



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JURISDICTION	NUMBER OF EVENTS	MAX MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Village of Round Lake	0	-	-	-	-	-
City of Saratoga Springs	1	EF1	0	0	\$0	\$0
Town of Saratoga	0	-	-	-	-	-
Village of Schuylerville	0	-	-	-	-	-
Village of South Glens Falls	0	-	-	-	-	-
Town and Village of Stillwater	1	EF1	0	1	\$41,400	\$23,700
Village of Victory	0	-	-	-	-	-
Town and Village of Waterford <sup>10</sup>	0	-	-	-	-	-
Town of Wilton	1	EF1	0	0	\$0	\$0
<b>TOTALS</b>	<b>12</b>	<b>F3</b>	<b>0</b>	<b>1</b>	<b>\$113,895,900</b>	

Based on the list of historical tornado events for the Saratoga County planning area including all participating jurisdictions, there have been three recorded events since the 2019 Plan.

### SIGNIFICANT EVENTS

#### July 5, 1992 – Town of Charlton and Saratoga County

Severe storms moved across eastern New York ahead of a strong cold front, bringing seven tornadoes across the region during this outbreak. Two of the tornadoes occurred inside the Saratoga County planning area, both of which were classified as F0. One tornado touched down in the Town of Charlton, causing minor damage to multiple homes along Peaceable Street and Sweetman Road. The other small tornado occurred near the Town of Stillwater, damaging a home and mobile home along Blizzard Road as well as uprooting trees and downing power lines. Total property damages from this event were estimated at \$109,200 (2024 dollars).

#### May 31, 1998 – Town of Halfmoon and Saratoga County

An early morning warm front moved over eastern New York, setting the stage for a major severe weather outbreak in the region. Severe thunderstorms affected every County in the area and three tornadoes also formed, one of which occurred in the Saratoga County planning area. This tornado touched down at Ushers Road in the Town of Halfmoon and moved due east into the City of Mechanicville, where the tornado intensified to an F3 magnitude. The tornado caused heavy damage in multiple jurisdictions, including destroying the DiSiena Furniture Company, devastating several housing developments, and destroying or heavily damaging numerous businesses and warehouses. In Saratoga County, it was estimated that 55 homes were destroyed and 230 were damaged. Approximately 68 injuries were reported in Saratoga County, but the tornado did not result in any fatalities. Total property damage was estimated at \$113,051,400 (2024 dollars).

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<sup>10</sup> Town and Village of Waterford are not listed separately in the NCEI. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their close proximity.

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### **August 29, 2020 – Town and Village of Stillwater**

An afternoon system of thunderstorms led to the formation of an EF1 tornado in the Town of Stillwater. This tornado resulted in several impacts, including severely damaging a mobile home, uprooted and downed trees, and additional damages to several residences and other structures. Reports estimated roughly \$23,700 (2024 dollars) in damages to crops and \$41,400 in damages to property, resulting in a total damage estimate of \$65,100.

## PROBABILITY OF FUTURE EVENTS

Tornadoes can occur at any time of year and at any time of day, but they are typically more common in the spring months during the late afternoon and evening hours. A smaller, high frequency period can emerge in the fall during the brief transition between the warm and cold seasons. With 12 historical events over a 50.5-year reporting period, Saratoga County, including participating jurisdictions, can anticipate a tornado touchdown approximately once every three to four years. This frequency supports a “Likely” probability of future events for the Saratoga County planning area.

## VULNERABILITY AND IMPACT

Because tornadoes often cross jurisdictional boundaries, all existing and future buildings, facilities, and populations in the entire Saratoga County planning area, including participating jurisdictions, are considered to be exposed to this hazard and could potentially be impacted. The damage caused by a tornado is typically a result of high wind velocity, wind-blown debris, lightning, and large hail.

The average tornado moves from southwest to northeast, but tornadoes have been known to move in any direction. Consequently, vulnerability of humans and property is difficult to evaluate since tornadoes form at different strengths, in random locations, and create relatively narrow paths of destruction. Although tornadoes strike at random, making all buildings vulnerable, three types of structures are more likely to suffer damage:

- Manufactured Homes;
- Homes on crawlspaces (more susceptible to lift); and
- Buildings with large spans, such as shopping malls, gymnasiums, and factories.

Tornadoes can cause a significant threat to people as they could be struck by flying debris, falling trees/branches, utility lines, and poles. Blocked roads could prevent first responders to respond to calls. Tornadoes commonly cause power outages which could cause health and safety risks to residents and visitors, as well as to patients in hospitals.

The Saratoga County planning area features mobile or manufactured home parks throughout the planning area. These parks are typically more vulnerable to tornado events than typical site built structures. In addition, manufactured homes are located sporadically throughout the planning area which would also be more vulnerable. The U.S. Census data indicates a total of 7,153 (6 percent of total housing stock) manufactured homes located in the Saratoga County planning area. In addition, 46 percent (approximately 51,143 structures) of the single family residential (SFR) structures in the entire planning area were built before 1980. These structures would typically be built to lower or less stringent construction standards than newer construction and may be more susceptible to damage during significant wind events (Table 17-5). Based on 2022

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American Community Survey (ACS) five-year estimates, the City of Saratoga Springs and the Town of Clifton Park have the highest reported number of single-family residences built before 1980, causing these jurisdictions to potentially sustain more structural damage due to a tornado event. For additional information on building inventory growth rates please refer to Section 3 of this plan.

**Table 17-5. Structures at Greater Risk by Participating Jurisdiction<sup>11</sup>**

JURISDICTION	BUILT PRIOR TO 1980	PERCENT OF HOUSING STOCK	MOBILE HOME	PERCENT OF HOUSING STOCK
Saratoga County <sup>12</sup>	51,143	46%	7,153	6%
Town of Ballston	2,298	45%	52	1%
Village of Ballston Spa	1,938	78%	0	0%
Town of Charlton	1,357	77%	0	0%
Town of Clifton Park	7,504	48%	76	1%
Town of Corinth	1,967	62%	426	14%
Village of Corinth	938	76%	10	1%
Town of Day	949	67%	198	14%
Town of Edinburg	1,086	59%	407	22%
Town of Galway	1,037	57%	42	2%
Village of Galway	68	86%	10	13%
Town of Greenfield	1,158	31%	497	13%
Town of Hadley	590	56%	101	10%
Town of Halfmoon	2,958	25%	903	8%
Town of Malta	2,968	33%	930	10%
City of Mechanicville	2,492	86%	0	0%
Town of Milton	3,690	46%	1,052	13%
Town of Moreau	3,527	51%	499	7%
Town of Northumberland	528	27%	135	7%
Town of Providence	338	34%	132	13%
Village of Round Lake	256	65%	8	2%
Town of Saratoga	1,479	55%	191	7%
City of Saratoga Springs	8,709	60%	133	1%

<sup>11</sup> U.S. Census Bureau, American Community Survey, 2022

<sup>12</sup> County totals include all housing units within the county lines, including unincorporated areas and non-participating jurisdictions within the County.

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JURISDICTION	BUILT PRIOR TO 1980	PERCENT OF HOUSING STOCK	MOBILE HOME	PERCENT OF HOUSING STOCK
Village of Schuylerville	521	74%	23	3%
Village of South Glens Falls	1,297	74%	0	0%
Town of Stillwater	1,940	46%	260	6%
Village of Stillwater	506	56%	49	5%
Village of Victory	172	64%	49	18%
Town of Waterford	2,950	72%	48	1%
Village of Waterford	1,103	96%	26	2%
Town of Wilton	1,618	22%	1,065	15%

While all citizens are at risk to the impacts of a tornado, forced relocation and disaster recovery disproportionately impacts low-income residents who lack the financial means to travel, afford a long-term stay away from home, and to rebuild or repair their homes. An estimated 7 percent of the planning area population live below the poverty level (Table 17-6), with the Village of Naples having the highest percentage of residents living below poverty level.

**Table 17-6. Populations at Greater Risk by Jurisdiction<sup>13</sup>**

JURISDICTION	BELOW POVERTY LEVEL
Saratoga County	15,598
Town of Ballston	538
Village of Ballston Spa	338
Town of Charlton	191
Town of Clifton Park	762
Town of Corinth	641
Village of Corinth	373
Town of Day	123
Town of Edinburg	200
Town of Galway	319
Village of Galway	29
Town of Greenfield	867
Town of Hadley	197
Town of Halfmoon	979

<sup>13</sup> U.S. Census Bureau, American Community Survey, 2022

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JURISDICTION	BELOW POVERTY LEVEL
Town of Malta	1,287
City of Mechanicville	1,072
Town of Milton	941
Town of Moreau	1,752
Town of Northumberland	330
Town of Providence	259
Village of Round Lake	25
Town of Saratoga	321
City of Saratoga Springs	2,879
Village of Schuylerville	151
Village of South Glens Falls	387
Town of Stillwater	893
Village of Stillwater	225
Village of Victory	108
Town of Waterford	478
Village of Waterford	199
Town of Wilton	539

The Saratoga County Planning Team identified the following critical facilities as assets that are considered the most important to the planning area and are susceptible to a range of impacts caused by tornado events (Table 17-7). The critical infrastructure with the greatest vulnerability to tornadoes are power and communications facilities. Failures of these facilities can result in a loss of service and cascading impacts such as posing enormous risk to individuals dependent on electricity as a medical necessity. For a comprehensive list of identified critical facilities for each participating entity please see Appendix C.

**Table 17-7. Critical Facilities Vulnerable to Tornado Event**

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Services (EOC, Fire, Police, EMS, Hospitals and Medical Centers)	<ul style="list-style-type: none"> <li>Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications.</li> <li>Emergency vehicles can be damaged by falling trees or flying debris.</li> <li>Power outages could disrupt communications, delaying emergency response times.</li> <li>Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities.</li> <li>Debris/downed trees can impede emergency response vehicle access to areas.</li> </ul>

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CRITICAL FACILITIES	POTENTIAL IMPACTS
	<ul style="list-style-type: none"> <li>Increased number of structure fires due to gas line ruptures and downed power lines, further straining the capacity and resources of emergency personnel.</li> <li>First responders are exposed to downed power lines, unstable and unusual debris, hazardous materials, and generally unsafe conditions.</li> <li>Extended power outages and evacuations may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.</li> </ul>
Airport, Academic Institutions, Animal Shelters, Evacuation Centers & Shelters, Governmental Facilities, Residential/ Assisted Living Facilities	<ul style="list-style-type: none"> <li>Structures can be damaged by falling trees damaged by lightning.</li> <li>Power outages could disrupt critical care.</li> <li>Backup power sources could be damaged.</li> <li>Evacuations may be necessary due to extended power outages, fires, or other associated damage to facilities.</li> <li>Power outages and infrastructure damage may prevent larger airports from acting as temporary command centers for logistics, communications, and emergency operations.</li> <li>Temporary break in operations may significantly inhibit post event evacuations.</li> <li>Damaged or destroyed highway infrastructure may substantially increase the need for airport operations.</li> </ul>
Commercial Suppliers (food, gas, etc.)	<ul style="list-style-type: none"> <li>Facilities or infrastructure may be damaged, destroyed or otherwise inaccessible.</li> <li>Essential supplies like medicines, water, food, and equipment deliveries may be significantly delayed.</li> <li>Additional emergency responders and critical aid workers may not be able to reach the area for days.</li> </ul>
Utility Services and Infrastructure (electric, water, wastewater, communications)	<ul style="list-style-type: none"> <li>Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications.</li> <li>Emergency vehicles can be damaged by falling trees or flying debris.</li> <li>Power outages could disrupt communications, delaying emergency response times.</li> <li>Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities.</li> <li>Debris/downed trees can impede emergency response vehicle access to areas.</li> <li>Increased number of structure fires due to gas line ruptures and downed power lines, further straining the capacity and resources of emergency personnel.</li> <li>First responders are exposed to downed power lines, unstable and unusual debris, hazardous materials, and generally unsafe conditions.</li> <li>Extended power outages and evacuations may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.</li> </ul>

Tornadoes in the Saratoga County planning area have historically resulted in 70 injuries and no fatalities. The total loss estimate due to past tornado events is \$113,895,900 (in 2024 dollars), having an approximate annual loss estimate of \$2,255,400. Based on historic damages and best available data the impact of a tornado event on the Saratoga County planning area in terms of structures and infrastructure would be considered Limited, with a complete shutdown of facilities for 24-hours or less and less than ten percent of property destroyed or with major damage.

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However, with historical 70 injuries, the impact is considered “Major” with multiple with injuries resulting in permanent disability depending on the size of the event.

**Table 17-8. Estimated Average Annual Losses by Jurisdiction**

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATE
Saratoga County	\$54,600	\$1,100
Town of Ballston / Village of Ballston Spa	\$0	\$0
Town of Charlton	\$54,600	\$1,100
Town of Clifton Park	\$0	\$0
Town and Village of Corinth	\$0	\$0
Town of Day	\$0	\$0
Town of Edinburg	\$0	\$0
Town and Village of Galway	\$0	\$0
Town of Greenfield	\$609,200	\$12,100
Town of Hadley	\$0	\$0
Town of Halfmoon	\$113,051,400	\$2,238,600
Town of Malta	\$0	\$0
City of Mechanicville	\$0	\$0
Town of Milton	\$0	\$0
Town of Moreau	\$0	\$0
Town of Northumberland	\$61,000	\$1,200
Town of Providence	\$0	\$0
Village of Round Lake	\$0	\$0
City of Saratoga Springs	\$0	\$0
Town of Saratoga	\$0	\$0
Village of Schuylerville	\$0	\$0
Village of South Glens Falls	\$0	\$0
Town and Village of Stillwater	\$65,100	\$1,300
Village of Victory	\$0	\$0
Town and Village of Waterford	\$0	\$0
Town of Wilton	\$0	\$0
<b>TOTALS</b>	<b>\$113,895,900</b>	<b>\$2,255,400</b>

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### ASSESSMENT OF IMPACTS

Tornadoes have the potential to pose a significant risk to the population and can create dangerous situations. Often times, providing and preserving public health and safety is difficult. The impact of climate change could produce larger, more severe tornado events, exacerbating the current tornado impacts. More destructive tornado conditions can be frequently associated with a variety of impacts, including:

- Individuals exposed to the storm can be struck by flying debris, falling limbs, or downed trees causing serious injury or death.
- Structures can be damaged or crushed by falling trees, which can result in physical harm to the occupants.
- Manufactured homes may suffer substantial damage as they would be more vulnerable than typical site-built structures.
- Portable classrooms may also suffer substantial damage as they would be more vulnerable than other classroom structures.
- Significant debris and downed trees can result in emergency response vehicles being unable to access areas of the community.
- Downed power lines may result in roadways being unsafe for use, which may prevent first responders from answering calls for assistance or rescue.
- Tornadoes often result in widespread power outages increasing the risk to more vulnerable portions of the population who rely on power for health and/or life safety.
- Extended power outages can result in an increase in structure fires and/or carbon monoxide poisoning as individuals attempt to cook or heat their home with alternate, unsafe cooking or heating devices, such as grills.
- Tornadoes can destroy or make residential structures uninhabitable, requiring shelter or relocation of residents in the aftermath of the event, especially within this planning area where a majority of the participating jurisdictions have more than 50 percent of their residential structures constructed prior to 1980.
- First responders must enter the damage area shortly after the tornado passes to begin rescue operations and to organize cleanup and assessments efforts, therefore they are exposed to downed power lines, unstable and unusual debris, hazardous materials, and generally unsafe conditions, elevating the risk of injury to first responders and potentially diminishing emergency response capabilities.
- Emergency operations and services may be significantly impacted due to damaged facilities, loss of communications, and damaged emergency vehicles and equipment.
- County, City, Town, and/or Village departments may be damaged or destroyed, delaying response and recovery efforts for the entire community.
- Private sector entities such as utility providers, financial institutions, and medical care providers may not be fully operational and may require assistance from neighboring communities until full services can be restored.
- Economic disruption negatively impacts the programs and services provided by the community due to short- and long-term loss in revenue, especially if damage is sustained to major employers within the planning area.
- Damage to infrastructure may slow economic recovery since repairs may be extensive and lengthy.
- Some businesses not directly damaged by the tornado may be negatively impacted while roads and utilities are being restored, further slowing economic recovery.



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- When the community is affected by significant property damage it is anticipated that funding would be required for infrastructure repair and restoration, temporary services and facilities, overtime pay for responders, and normal day-to-day operating expenses.
- Displaced residents may not be able to immediately return to work, further slowing economic recovery.
- Residential structures destroyed by a tornado may not be rebuilt for years, reducing the tax base for the community.
- Large or intense tornadoes may result in a dramatic population fluctuation, as people are unable to return to their homes or jobs and must seek shelter and/or work outside of the affected area.
- Businesses that are uninsured or underinsured may have difficulty reopening, which results in a net loss of jobs for the community and a potential increase in the unemployment rate.
- Recreation activities may be unavailable, and tourism can be unappealing for years following a large tornado, devastating directly-related local businesses.
- Historical sites and properties: a total of 82 buildings, districts, and sites are listed on the National Register of Historic Places and are placed at a higher risk of impact.

The economic and financial impacts of a tornado event on the community will depend on the scale of the event, what is damaged, costs of repair or replacement, lost business days in impacted areas, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by the community, local businesses, and citizens will contribute to the overall economic and financial conditions in the aftermath of a tornado event. Warning sirens/alert systems have been integrated into some participating communities to promote early warning and communication, reducing the potential economic and financial impacts of tornadic events.

## CLIMATE CHANGE CONSIDERATIONS

Due to the short duration and limited geographic area of tornado events, it is challenging to project future trends of tornado events due to climate change. Tornadoes spawn from less than 10 percent of thunderstorms, usually supercell thunderstorms that are in a wind shear environment that promotes rotation.<sup>14</sup> Each of the factors that create tornadoes, warm, moist air at ground level, cool dry air higher and wind shear, may be affected by climate change differently.<sup>15</sup> At this time, the impacts of climate change on the frequency and severity of tornado events are unclear and should be revisited in future updates of this plan.

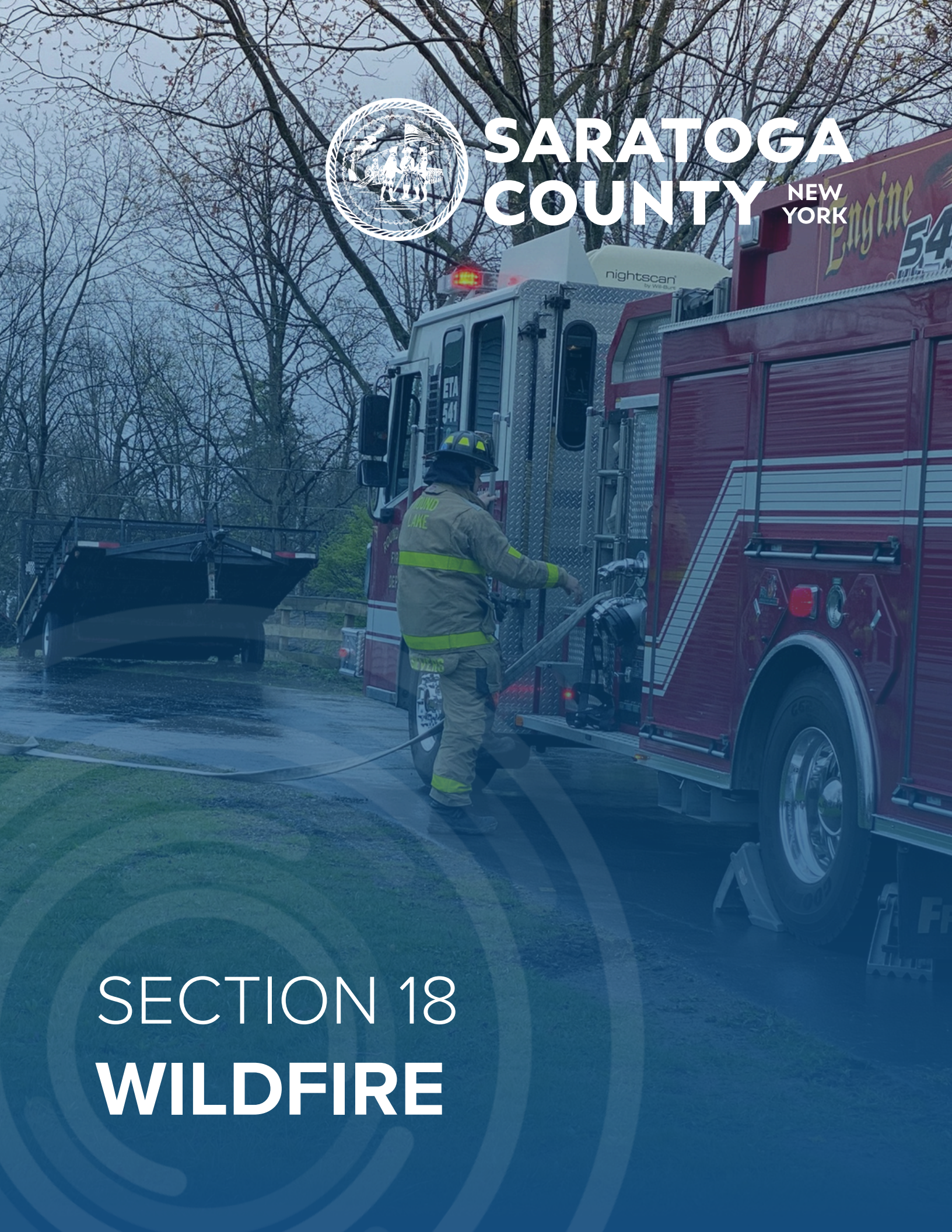
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<sup>14</sup> Treisman, Rachel. *The exact link between tornadoes and climate change is hard to draw. Here's why.* NPR. December 13, 2021. <https://www.npr.org/2021/12/13/1063676832/the-exact-link-between-tornadoes-and-climate-change-is-hard-to-draw-heres-why>

<sup>15</sup> Choi-Schagrin, Winston. Zhong, Raymond. *What We Know About Tornadoes and Climate Change.* The New York Times. April 3, 2023. Effects of Climate Change on Tornadoes: What We Know - The New York Times (nytimes.com)



**SARATOGA  
COUNTY** NEW YORK



**SECTION 18  
WILDFIRE**

## SECTION 18: WILDFIRE

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### HAZARD DESCRIPTION

A wildfire event can rapidly spread out of control and occurs most often in the summer when the brush is dry, and flames can move unchecked through a highly vegetative area. Wildfires can start as a slow burning fire along the forest floor, killing and damaging trees. The fires often spread more rapidly as they reach the tops of trees with wind carrying the flames from tree to tree. Usually, dense smoke is the first indication of a wildfire.

The entirety of New York State can be affected by wildfires, either directly through a wildfire event or indirectly through wildfire smoke. Wildland fires are fueled almost exclusively by natural vegetation, while interface or intermix fires are urban / wildland fires in which vegetation and the built environment provide fuel.

A wildfire event often begins unnoticed and spreads quickly, lighting brush, trees, and homes on fire. For example, a wildfire may be started by a campfire that was not doused properly, a tossed cigarette, burning debris, or arson. Within New York State, 95 percent of wildfires are caused by human activity. Three conditions determine how a wildfire will grow and spread, including fuel, weather, and topography.

### LOCATION

A wildfire event can be a potentially damaging consequence of drought conditions, lightning, or wind event, if the conditions allow. Wildfires can vary greatly in terms of size, location, intensity, and duration. While wildfires are not confined to any specific geographic location, they are most likely to occur in open space and forest areas. Throughout the 30.9 million acres in New York State, 18.9 million acres are non-federal forested land and an undetermined amount of open space with significant potential to a wildfire event.<sup>1</sup>

According to the 2023 New York State Hazard Mitigation Plan, most of the state has a low to minimal risk of wildfire based on geographic location. However, areas comprised of heavily wooded land, densely packed shrubs, and large expanses of brush have higher fire risk than areas with less vegetation. This includes the Adirondack and Catskill regions of the state which have forested landscapes and a higher susceptibility of wildfires. The northwestern portion of Saratoga County is in the Adirondack region and could be more susceptible to wildfire events.

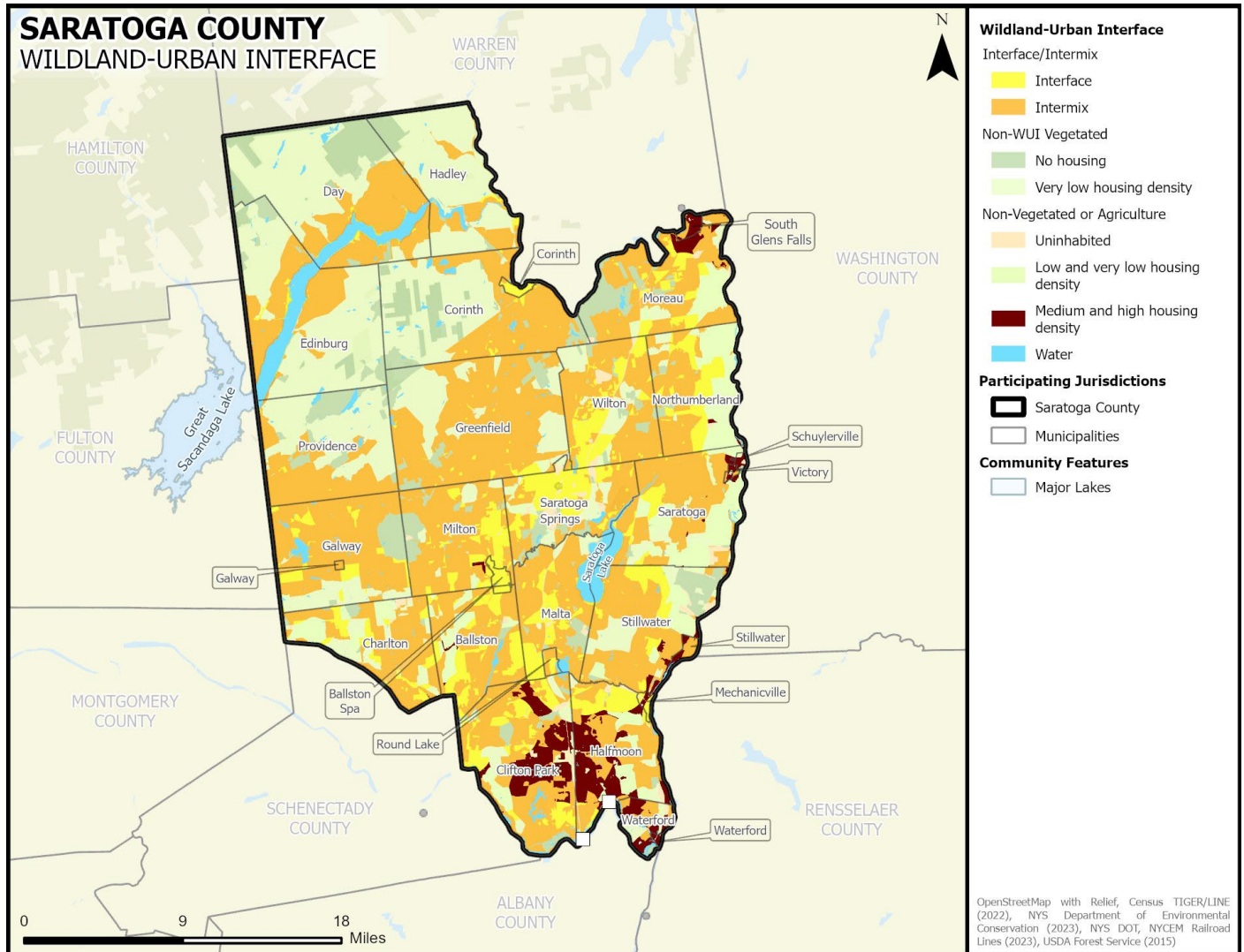
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<sup>1</sup> New York State Hazard Mitigation Plan. Division of Homeland Security and Emergency Services – Mitigation Planning. <https://mitigateny.availabs.org/hazards/wildfire>

## SECTION 18: WILDFIRE

The threat to people and property from a wildfire event is greater in the fringe areas where developed areas meet forested areas, such as the Wildland Urban Interface (Figure 18-1). However, the entire planning area is at some risk for wildfires.

**Figure 18-1. Wildland Urban Interface Map – Saratoga County<sup>2</sup>**



<sup>2</sup> Map sources: ESRI OpenStreetMap (Custom: no labels), Census TIGER/LINE (2022), Saratoga County Information Technology Department (2023), USGS ScienceBase Catalog (2022)

## SECTION 18: WILDFIRE

### EXTENT



The New York State Department of Environmental Conservation (DEC) Wildfire Predictive Services developed the Fire Danger Rating Area (FDRA) to categorize the potential risk of a wildfire event the potential level severity of the event if it was to take place in certain areas around the state. The FDRAs are determined by geographic areas with similar fuels, topography and weather conditions. The six categories of the fire danger ratings are color coded to explain factors influencing the potential severity of a wildfire

event and are determined based on fuel, wind conditions, temperature, drought conditions, and relative humidity.

In March 2023, the National Weather Service (NWS) Forecast Offices in New York aligned the fire weather zones which were on a county-level, with the state's Fire Danger Rating Areas. The alignment between NWS and DEC ensures fire severity information for firefighters and the public is consistent across jurisdictions.

**Table 18-1. Fire Danger Ratings<sup>3</sup>**

RATING AND COLOR CODE	RATING SEVERITY DESCRIPTION
Red Flag	A short-term, temporary warning, indicating the presence of a dangerous combination of temperature, wind, relative humidity, fuel, or drought conditions which can contribute to new fires or rapid spread of existing fires. A Red Flag Warning can be issued at any Fire Danger level.
Extreme (Red)	Fires start quickly, spread furiously, and burn intensely. All fires are potentially serious. Development into high intensity burning will usually be faster and occur from smaller fires than in the very high fire danger class. Direct attack is rarely possible and may be dangerous except immediately after ignition. Fires that develop headway in heavy slash or in conifer stands may be unmanageable while the extreme burning condition lasts. Under these conditions the only effective and safe control action is on the flanks until the weather changes, or the fuel supply lessens.
Very High (Orange)	Fires start easily from all causes and, immediately after ignition, spread rapidly and increase quickly in intensity. Spot fires are a constant danger. Fires burning in light fuels may quickly develop high intensity characteristics such as long-distance spotting and fire whirlwinds when they burn into heavier fuels.
High (Yellow)	All fine dead fuels ignite readily, and fires start easily from most causes. Unattended brush and campfires are likely to escape. Fires spread rapidly and short-distance spotting is common. High intensity burning may develop on slopes or in concentrations of fine fuels. Fires may become serious and their control difficult unless they are attacked successfully while small.
Moderate (Blue)	Fires can start from most accidental causes but, with the exception of lightning fires in some areas, the number of starts is generally low. Fires in open cured grasslands will burn briskly and spread rapidly on windy days. Timber fires spread slowly to moderately fast. The average fire is of moderate intensity, although heavy concentrations of fuel, especially draped fuel, may burn hot. Short-distance spotting may occur but is not persistent. Fires are not likely to become serious and control is relatively easy.

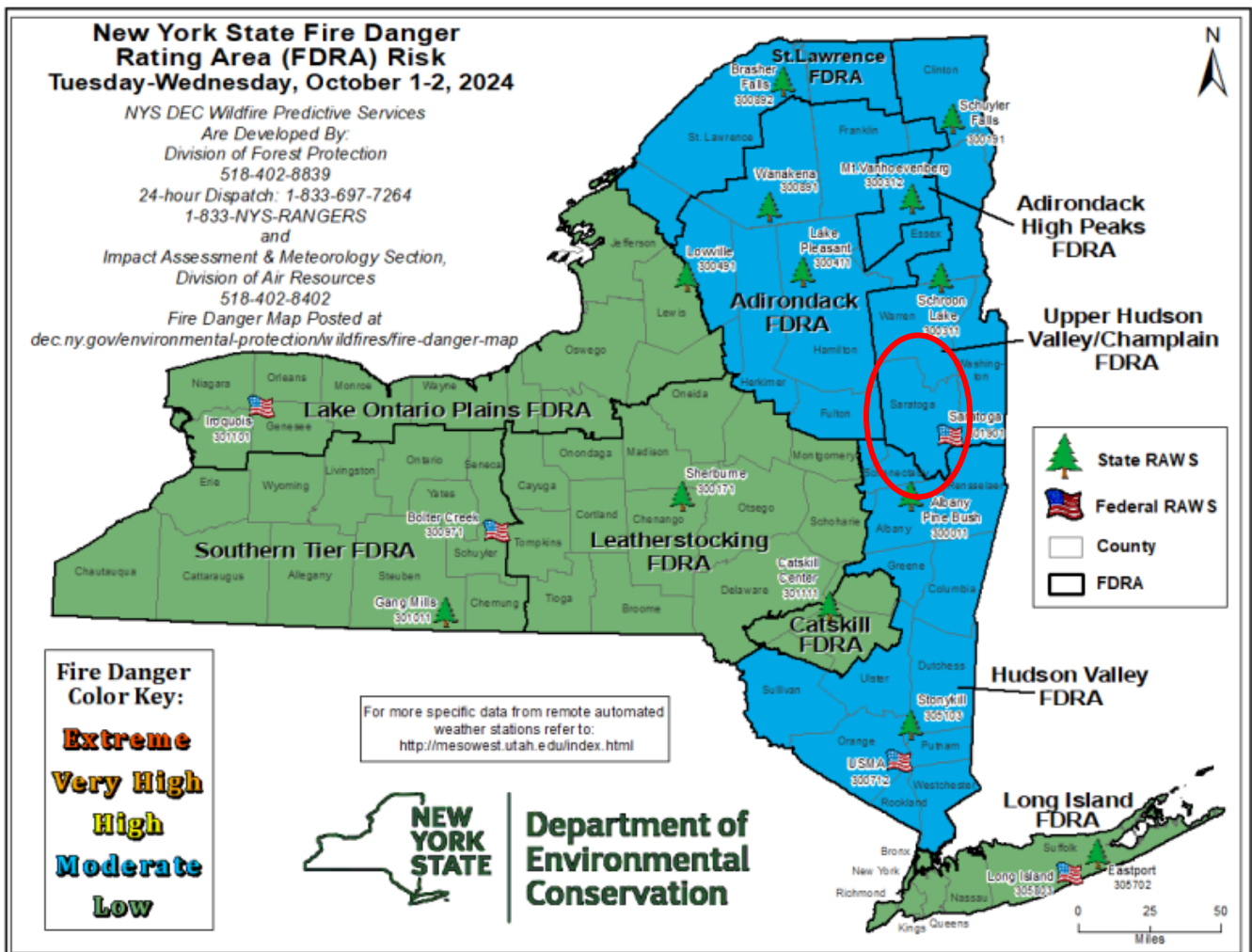
<sup>3</sup> NYS Department of Environmental Conservation, Fire Danger Map. <https://www.dec.ny.gov/lands/68329.html>

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RATING AND COLOR CODE	RATING SEVERITY DESCRIPTION
Low (Green)	Fuels do not ignite readily from small firebrands although a more intense heat source, such as lightning, may start fires in duff or punky wood. Fires in open cured grasslands may burn freely a few hours after rain, but woods fires spread slowly by creeping or smoldering, and burn in irregular fingers. There is little danger of spotting.

Fire conditions change daily and describe the conditions that reflect the potential, over a large area, for a fire to ignite, spread, and require suppression action. According to the New York State FDRA, the Saratoga County planning area is experiencing a moderate level of fire danger (as shown in Figure 18-2) at the time of plan development. However, the planning area could experience the full extent of fire danger at any time.

**Figure 18-2. New York State Fire Danger Rating Area (FDRA) Risk, October 2024**

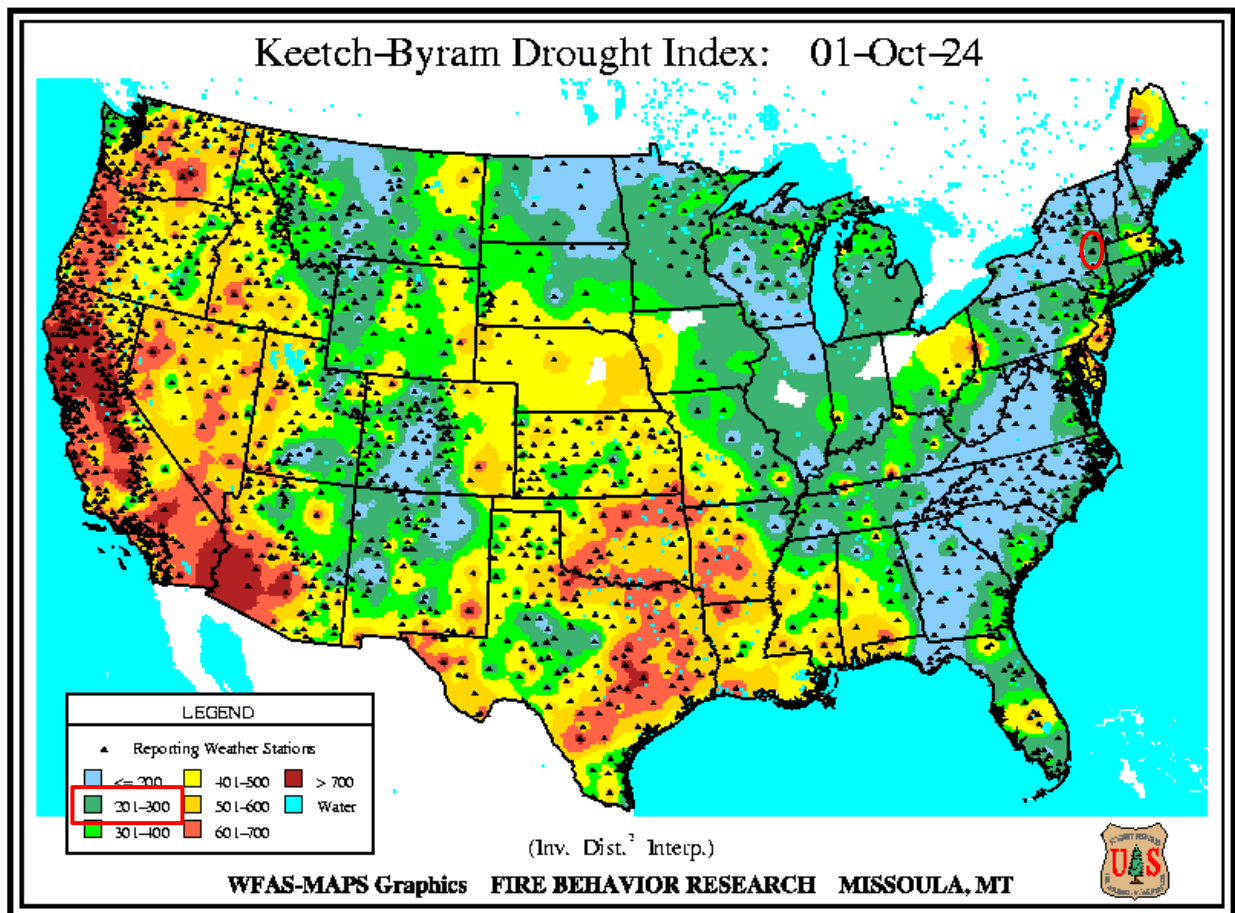


## SECTION 18: WILDFIRE

Risk for a wildfire event can also be measured in terms of magnitude and intensity using the Keetch Byram Drought Index (KBDI), a mathematical system for relating current and recent weather conditions to potential or expected fire behavior. The KBDI determines forest fire potential based on a daily water balance, derived by balancing a drought factor with precipitation and soil moisture (assumed to have a maximum storage capacity of eight inches), and is expressed in hundredths of an inch of soil moisture depletion.

Each color in Figure 18-3 and 18-4 represents the drought index at that location. The drought index ranges from 0 to 800. A drought index of 0 represents no moisture depletion, and a drought index of 800 represents absolutely dry conditions. The most current available data shows the planning area is currently experiencing minimal moisture depletion with a KBDI between 201 and 300 (Figure 18-3). However, the planning area has been subject to drier conditions historically with a KBDI range of 401-500 in August 2005 (Figure 18-4).

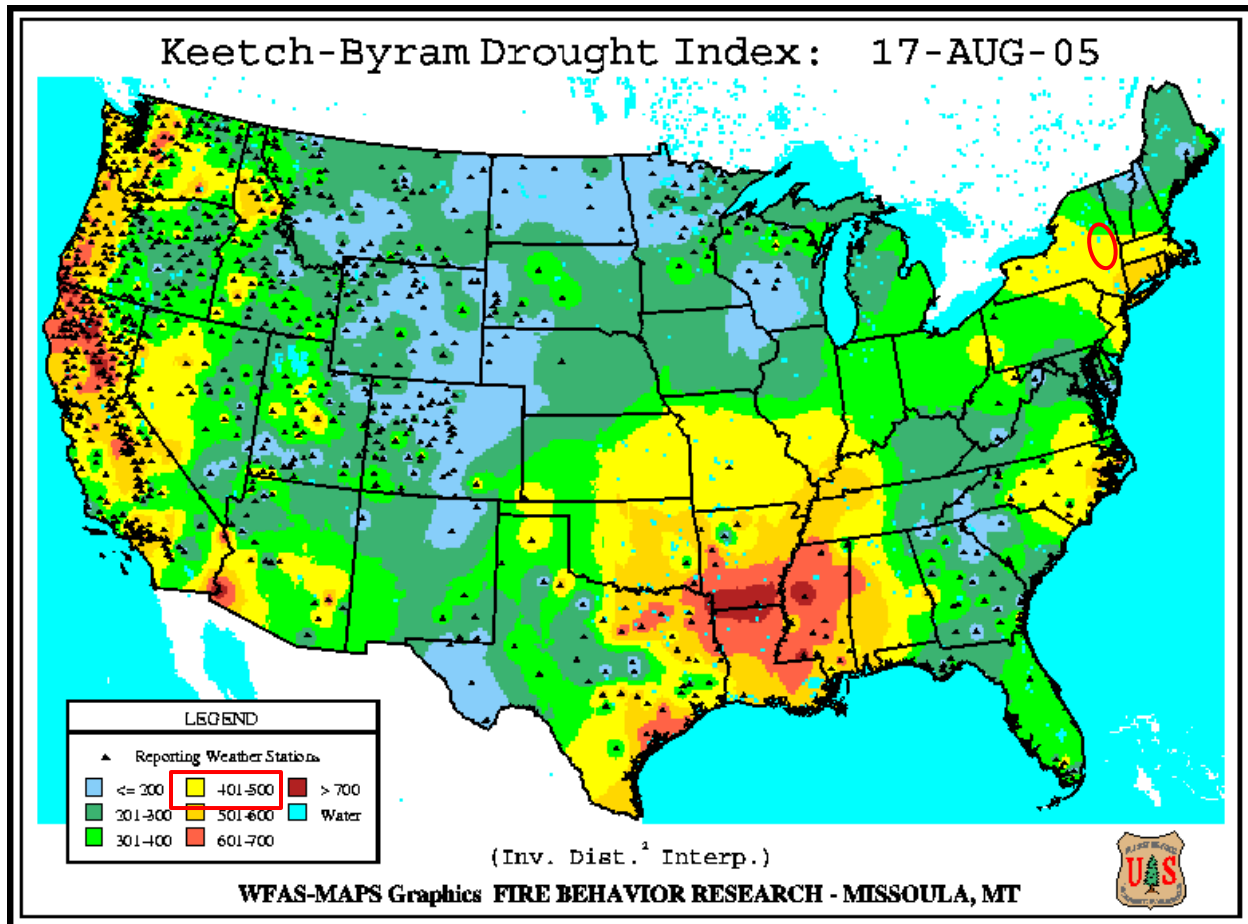
**Figure 18-3. Keetch-Byram Drought Index (KBDI), October 2024<sup>4</sup>**



<sup>4</sup> Saratoga County planning area is located within the red circle.

## SECTION 18: WILDFIRE

Figure 18-4. Keetch-Byram Drought Index (KBDI), August 2005<sup>5</sup>



Fire behavior can be categorized at four distinct levels on the KBDI:

- **0 -200:** Soil and fuel moisture are high. Most fuels will not readily ignite or burn. However, with sufficient sunlight and wind, cured grasses and some light surface fuels will burn in spots and patches.
- **200 -400:** Fires more readily burn and will carry across an area with no gaps. Heavier fuels will not readily ignite and burn. Expect smoldering and the resulting smoke to carry into and possibly through the night.
- **400 -600:** Fires intensity begins to significantly increase. Fires will readily burn in all directions exposing mineral soils in some locations. Larger fuels may burn or smolder for several days creating possible smoke and control problems.
- **600 -800:** Fires will burn to mineral soil. Stumps will burn to the end of underground roots and spotting will be a major problem. Fires will burn through the night and heavier fuels will actively burn and contribute to fire intensity.

<sup>5</sup> Saratoga County planning area is located within the red circle.



## SECTION 18: WILDFIRE

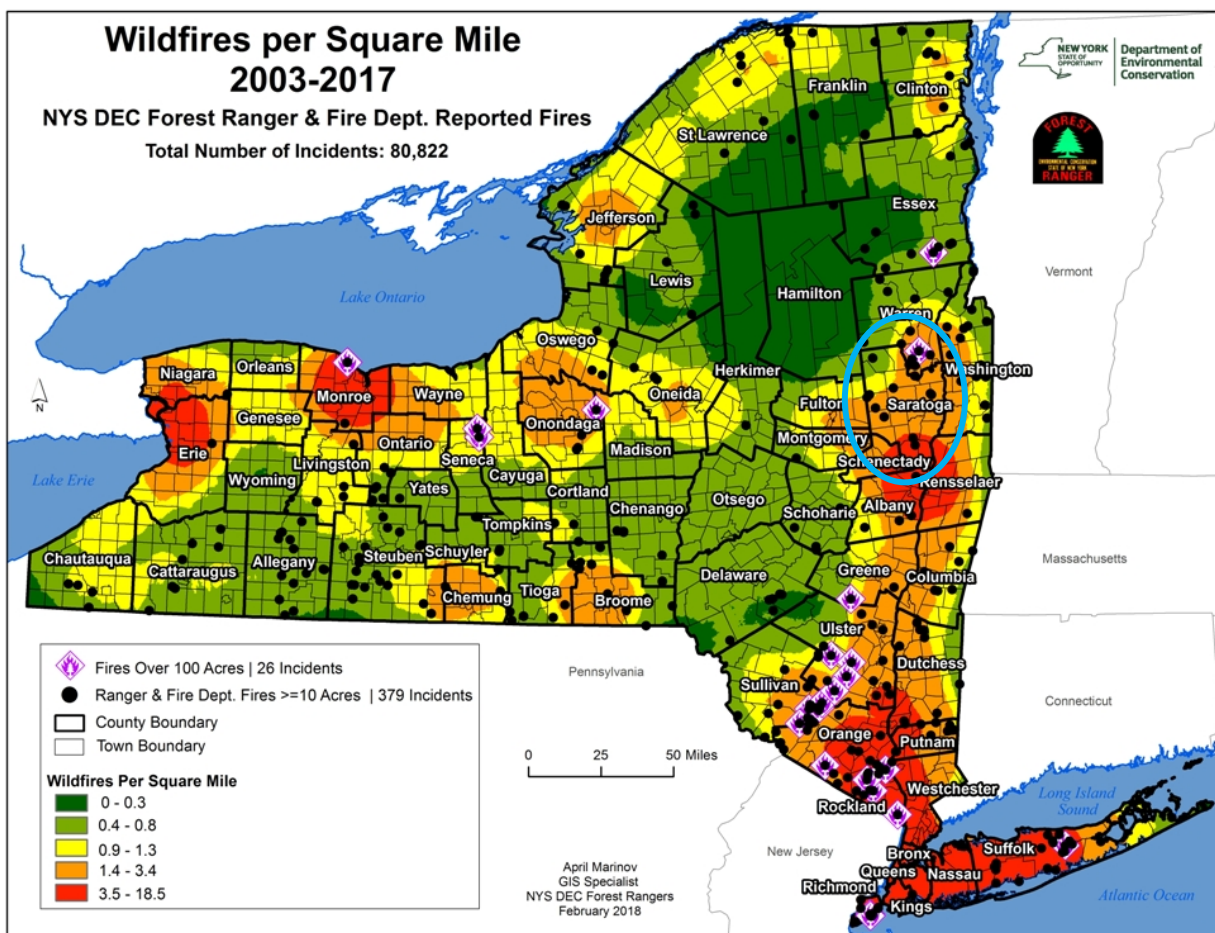
The KBDI is a good measure of the readiness of fuels for a wildfire event. It should be referenced as the area experiences changes in precipitation and soil moisture, while caution should be exercised in dryer, hotter conditions.

The range of intensity for the Saratoga County planning area, including participating jurisdictions, in a wildfire event is from 0 to 500. The average extent to be mitigated for the planning area is a KBDI of 200 to 400 or less. At this level soil and fuel moisture are high.

## HISTORICAL OCCURRENCES

New York State DEC Forest Ranger Division and Fire Department reported 80,822 total wildfire incidents statewide between 2003 and 2017. A majority of the incidents reported in that time period were human caused (95%), followed by debris burning (33%), and campfire caused fires (16%). Of all the events, 26 were wildfires over 100 acres and 379 were greater than 10 acres. No incidents over 100 acres were reported in Saratoga County but there was one incident just north of the Saratoga County boundary in Warren County. Saratoga County has experienced several incidents greater than 10 acres as shown in Figure 18-5.

**Figure 18-5. Wildfire Incidents in New York State, 2003-2017<sup>6</sup>**



<sup>6</sup> New York State Department of Environmental Conservation, Forest Ranger Division. Saratoga County is shown in the blue circle.

## SECTION 18: WILDFIRE

Only two wildfire incidents have been reported to the National Centers for Environmental Information (NCEI) Storm Events Database.<sup>7</sup> Both reported events are from July 5, 2002, when smoke from forest fires across the Nemiscau region of northern Quebec became trapped under a subsidence inversion and was transported south across eastern New York. The smoke obscured the sky, and even reduced surface visibility to as low as one mile. Advisories were issued to warn people with respiratory problems to remain indoors and all individuals to curb outside activity. No damages were reported to the National Weather Service for these events.

According to the New York State Ranger Wildland Fire Reporting Database, between 2008 and 2022 there were 62 reported wildfire events in Saratoga County, including all participating jurisdictions. Most of the incidents were timber fires (48), followed by grass fires (8), brush (4), and slash (2). A majority of incidents were caused by campfires, debris burning, and smoking. Due to a lack of recorded data for wildfire events prior to 2008 and after 2022, frequency calculations are based on a 15-year reporting period, using only data from recorded years.

**Table 18-2. NYS Forest Service Reported Wildfire Events in Saratoga County, 2008-2022<sup>8</sup>**

JURISDICTION	INCIDENT NAME	FIRE START DATES	ACRES LOST	FATALITIES	INJURIES	HOMES LOST	OTHER STRUCTURES LOST
Halfmoon	Upper New Town Road	4/19/2008	9	0	0	0	0
Wilton	Ruggles R Fire	4/19/2008	11.1	0	1	0	0
Providence	Rhodes Orchard	4/20/2008	17.7	0	0	0	0
Day	Stone Road Fire	4/26/2008	2.5	0	0	1	0
Corinth	Spier Fire	5/28/2010	3	0	0	0	0
Hadley	Stewart's Pond Fire	6/8/2011	0.3	0	0	0	0
Stillwater	Saratoga Battlefield RX	3/15/2012	5	0	0	0	0
Stillwater	Saratoga Battlefield RX 2	3/20/2012	30	0	0	0	0
Northumberland	Putnam Road Fire	3/24/2012	5	0	0	0	0
Clifton Park	Southwood Fire	4/9/2012	1.5	0	0	0	0
Stillwater	Stillwater Fires	4/10/2012	5.5	0	0	0	0
Edinburg	Airport Road Fire	4/17/2012	2	0	0	0	0
Providence	Rhodes Orchard Fire	4/30/2012	36	0	0	0	0
Edinburg	Military Road Fire	7/13/2012	1	0	0	0	0
Hadley	Gunther Fire	7/23/2012	0.1	0	0	0	0

<sup>7</sup> It is noted that the majority of wildfires are not reported to the NCEI database. Data provided from this source is supplemental and recognized as incomplete.

<sup>8</sup> NYS Forest Ranger Wildland Fire Reporting Database. [https://data.ny.gov/d/b7g8-5ywk?category=Energy-Environment&view\\_name=NYS-Forest-Ranger-Wildland-Fire-Reporting-Database](https://data.ny.gov/d/b7g8-5ywk?category=Energy-Environment&view_name=NYS-Forest-Ranger-Wildland-Fire-Reporting-Database)

## SECTION 18: WILDFIRE

JURISDICTION	INCIDENT NAME	FIRE START DATES	ACRES LOST	FATALITIES	INJURIES	HOMES LOST	OTHER STRUCTURES LOST
Clifton Park	Englemore Road Fire	5/4/2013	0.8	0	0	0	0
Providence	Clark Road Fire	5/7/2013	1.5	0	0	0	0
Hadley	Hadley Fire	4/24/2014	0.5	0	0	0	0
Stillwater	Lonesome Drive Fire	5/11/2014	4	0	0	0	0
Ballston	Brookline Road Fire	5/13/2014	3	0	0	0	0
Greenfield	Daniels Road Fire	10/15/2014	0.6	0	0	0	0
Malta	Exit 11 Fire	4/15/2015	17.1	0	0	0	0
Halfmoon	Troy Topsoil	5/2/2015	0.8	0	0	0	0
Greenfield	Greenfield RR Fire	5/2/2015	2.5	0	0	0	0
Greenfield	Ericson Road Fire	5/4/2015	5.5	0	0	0	0
Providence	Antioch Road Fire	5/4/2015	5	0	0	0	0
Corinth	Palmer Lake Fire	8/14/2015	0.1	0	0	0	0
Day	Waite Mountain Fire	9/4/2015	0.3	0	0	0	0
Moreau	Moreau State Park Fire	4/17/2016	8.5	0	0	0	0
Day	Sand Lake Road Fire	4/17/2016	16.5	0	0	0	0
Day	Maxfield Road Fire	10/19/2016	0.8	0	0	0	0
Northumberland	Devine Fire	3/12/2017	0.8	0	0	0	0
Galway	Old Mill Road	4/11/2017	19	0	0	0	0
Providence	Glen Wild Road	4/11/2017	4	0	0	0	0
Stillwater	Saratoga Battlefield Rx	4/18/2017	30	0	0	0	0
Moreau	Old Saratoga Road	5/19/2017	0.3	0	0	0	0
Edinburg	South Shore Road	10/21/2017	0.1	0	0	0	0
Moreau	Shield Fire	4/9/2018	0.1	0	0	0	0
Northumberland	Gallup	4/22/2018	0.6	0	0	0	0
Moreau	William Henry Fire	5/10/2018	0.5	0	0	0	0
Malta	Rocket Fire	5/11/2018	1	0	0	0	0
Corinth	Village Fire	7/8/2018	0.8	0	0	0	0
Corinth	Shanty Fire	7/21/2018	0.1	0	0	0	0

## SECTION 18: WILDFIRE

JURISDICTION	INCIDENT NAME	FIRE START DATES	ACRES LOST	FATALITIES	INJURIES	HOMES LOST	OTHER STRUCTURES LOST
Charlton	Platt	4/2/2019	0.2	0	0	0	0
Day	Auman	4/2/2019	1	0	0	0	0
Northumberland	Lock 5	4/3/2019	6	0	0	0	0
Greenfield	Boyhaven Road	4/4/2019	0.2	0	0	0	0
Greenfield	Brandell Road	4/5/2019	0.1	0	0	0	0
Hadley	Mount Anthony	8/5/2019	0.1	0	0	0	0
Wilton	Gailor Road Fire	4/7/2020	3	0	0	0	0
Greenfield	Greene Road Fire	4/7/2020	1	0	0	0	0
Corinth	Randall Road Fire	4/19/2020	2.3	0	0	0	0
Wilton	Hilltop Drive Fire	4/25/2020	0.5	0	0	0	0
Wilton	Putnam Lane Fire	3/20/2021	1.2	0	0	0	0
Hadley	N Shore Road	5/18/2021	1.5	0	0	0	0
Greenfield	Greene Road Fire	5/20/2021	1	0	0	0	0
Corinth	Black Pond	4/15/2022	7.8	0	0	0	0
Moreau	Substation Fire 1	4/25/2022	1.1	0	0	0	0
Moreau	Old Bend Fire	5/13/2022	16.4	0	0	0	0
Hadley	Meehan Fire	5/13/2022	1	0	0	0	0
Greenfield	Brigham Road Fire	11/10/2022	1.7	0	0	1	0
Providence	Sherman Road Fire	11/10/2022	0.5	0	0	0	1
<b>TOTALS</b>			<b>301.1</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>1</b>

Based on the list of historical wildfire events for the Saratoga County planning area (listed above), 19 events have occurred since the 2019 Plan.

### PROBABILITY OF FUTURE EVENTS

Wildfires can occur at any time of the year. As the county moves into wildland, the potential area of occurrence of wildfire increases. With 62 reported events in a 15-year period, a wildfire event within the Saratoga County planning area, including participating jurisdictions, is “Highly Likely” meaning an event is probable within the next year. According to NOAA, research shows that changes in climate create warmer, drier conditions, leading to longer and more active fire seasons, indicating an increase in the frequency and severity of events in the planning area going forward.

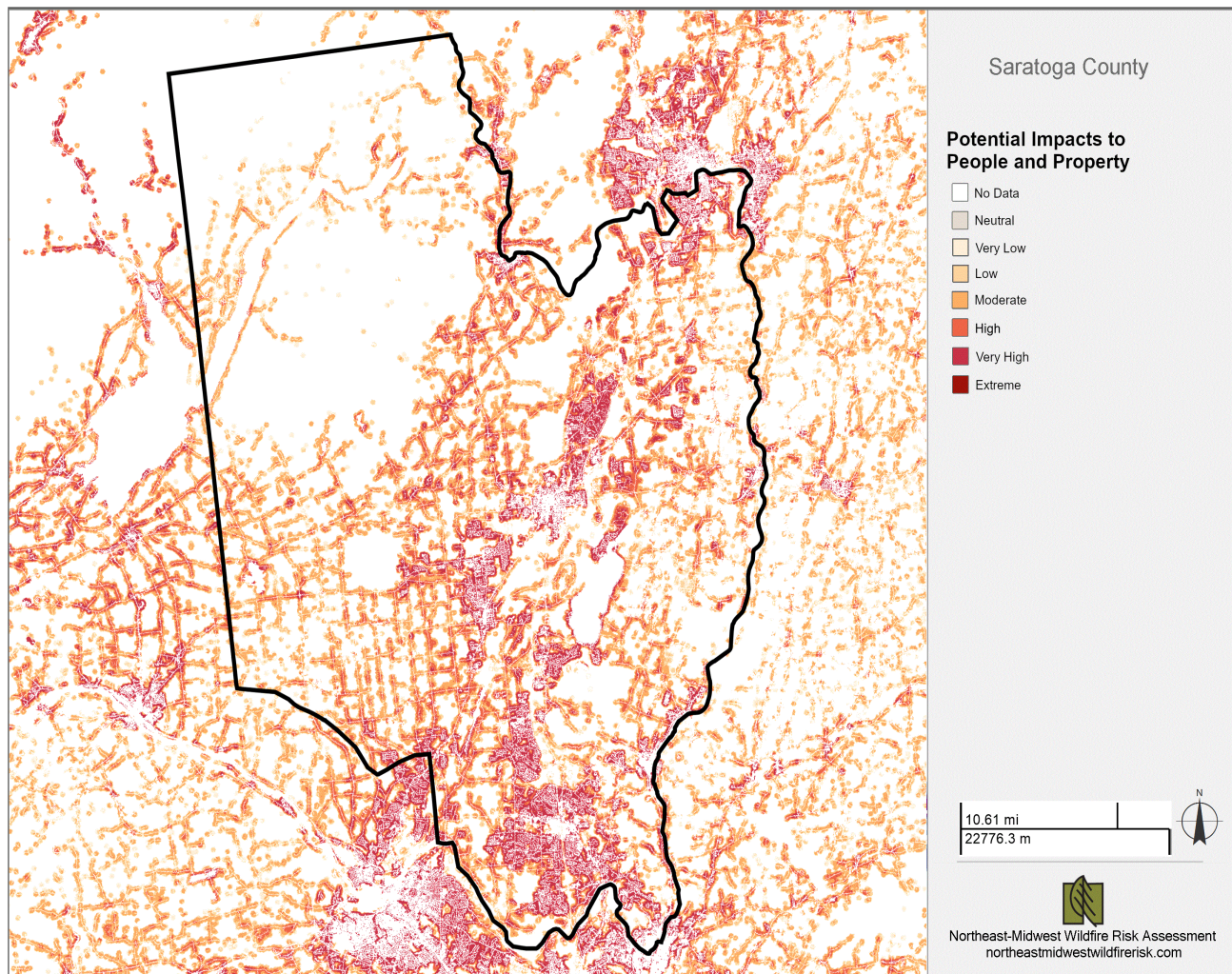
## SECTION 18: WILDFIRE

### VULNERABILITY AND IMPACT

Periods of drought, dry conditions, high temperatures, and low humidity are factors that contribute to the occurrence of a wildfire event. Areas along railroads and people whose homes are in woodland settings have an increased risk of being affected by wildfire.

Unoccupied buildings and open spaces that have not been maintained have the greatest vulnerability to wildfire. The overall level of concern for wildfires is located mostly along the perimeter of the study area where wildland and urban areas interface. Figure 18-1 illustrates the areas that are historically the most vulnerable to wildfire throughout the Saratoga County planning area, including all participating jurisdictions. Specific portions of the County, including the northwestern portion, that are heavily forested could be more susceptible to wildfire events. In addition, the Northeast-Midwest Wildfire Risk Assessment Portal provides an estimate of areas with potential impacts to people and property and represents “conditional” effects of wildfires as shown in Figure 18-6.

**Figure 18-6. Potential Impacts to People and Property<sup>9</sup>**



<sup>9</sup> Northeast-Midwest Wildfire Risk Explorer. <https://wrap.northeastmidwestwildfirerisk.com/Map/Public/#whats-your-risk>

## SECTION 18: WILDFIRE

The Saratoga County Planning Team identified the following critical facilities as assets that are considered the most important to the planning area and are susceptible to a range of impacts caused by wildfire events. The following critical facilities are located in the wildland urban interface and would be vulnerable to wildfire events in the Saratoga County planning area. For a comprehensive list by participating jurisdiction please see Appendix C.

**Table 18-3. Critical Facilities Vulnerable to Wildfire Events**

CRITICAL FACILITIES	FACILITIES AT RISK	POTENTIAL IMPACTS
Emergency Response Departments (EOC, Fire, EMS, Hospitals)	City of Mechanicville: 2 Fire Stations, 1 Police Station	<ul style="list-style-type: none"> <li>•</li> <li>• Emergency services may be disrupted during a wildfire if facilities are impacted, roadways are inaccessible, or personnel are unable to report for duty.</li> <li>• First responders are at greater risk of injury when in close proximity to the hazard while extinguishing flames, protecting property, or evacuating residents in the area.</li> <li>• Critical county and city departments may not be able to function and provide necessary services depending on the location of the fire and the structures or personnel impacted.</li> <li>• Roadways in or near the WUI could be damaged or closed due to smoke and limited visibility, slowing or preventing access for emergency response vehicles.</li> <li>• Fire suppression costs can be substantial, exhausting the financial resources of the community.</li> <li>• First responders can experience heart disease, respiratory problems, and other long-term related illnesses from prolonged exposure to smoke, chemicals, and heat.</li> <li>• Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications.</li> <li>• Power outages could disrupt communications, delaying emergency response times.</li> <li>• Structures can be damaged or destroyed in the path of the wildfire.</li> <li>• Power outages could disrupt critical care.</li> <li>• Backup power sources could be damaged or destroyed.</li> <li>• Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities.</li> </ul>
	City of Saratoga Springs: 3 Fire Stations, 1 Health Service, 1 Police Station	
	Town of Ballston: 4 Fire Stations	
	Town of Charlton: 3 Fire Stations	
	Town of Clifton Park: 1 EMS, 5 Fire Stations	
	Town of Corinth: 1 EMS, 1 Fire Station, 1 Health Service	
	Town of Edinburg: 1 Fire Station	
	Town of Galway: 1 EMS	
	Town of Greenfield: 1 Fire Station	
	Town of Halfmoon: 1 Fire Station	
	Town of Malta: 1 Fire Station, 1 Health Service, 1 Police Station	
	Town of Milton: 2 Fire Stations, 1 Health Service, 1 Police Station	
	Town of Moreau: 1 EMS, 2 Fire Stations	
	Town of Northumberland: 2 Fire Stations, 1 Police Station	
	Town of Providence: 2 Fire Stations	
Town of Wilton: 1 EMS, 3 Fire Stations		
Village of Ballston Spa: 2 Fire Stations, 1 Police Station		
Village of Galway: 1 EMS, 1 Fire Station		

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CRITICAL FACILITIES	FACILITIES AT RISK	POTENTIAL IMPACTS
	Village of Round Lake: 1 Fire Station	
	Village of South Glens Falls: 1 Fire Station, 1 Police Station	
Airport, Academic Institutions, Community Residential Facilities, Day Care Facilities, Evacuation Centers & Shelters, Governmental Facilities	City of Mechanicville: 1 Community Facility, 2 Municipal, 2 Schools	<ul style="list-style-type: none"> <li>• Facilities or infrastructure may be damaged, destroyed or otherwise inaccessible.</li> <li>• Essential supplies like medicines, water, food, and equipment deliveries may be significantly delayed.</li> <li>• Additional emergency responders and critical aid workers may not be able to reach the area for days.</li> <li>• Power outages and infrastructure damage may prevent larger airports from acting as temporary command centers for logistics, communications, and emergency operations.</li> </ul>
	City of Saratoga Springs: 2 Community Facilities, 1 Municipal, 2 Residential (Vulnerable Populations), 10 Schools	
	Town of Ballston: 6 Schools	
	Town of Charlton: 1 Community Center, 2 Municipal	
	Town of Clifton Park: 2 Schools	
	Town of Corinth: 4 Municipal, 3 Schools	
	Town of Day: 1 Community Facility, 5 Municipal	
	Town of Edinburg: 2 Municipal, 1 School	
	Town of Galway: 1 Municipal, 3 Schools	
	Town of Greenfield: 1 School	
	Town of Halfmoon: 1 Evacuation Shelter	
	Town of Malta: 1 Evacuation Shelter, 2 Municipal, 1 School	
	Town of Milton: 2 Municipal, 3 Schools	
	Town of Moreau: 4 Schools	
	Town of Northumberland: 1 Municipal	
	Town of Providence: 2 Municipal	
	Town of Waterford: 3 Schools	
	Town of Wilton: 2 Municipal, 2 Schools	
	Village of Ballston Spa: 2 Schools	
	Village of Corinth: 2 Municipal	
Village of Galway: 1 School		
Village of Round Lake: 2 Municipal		

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CRITICAL FACILITIES	FACILITIES AT RISK	POTENTIAL IMPACTS
	Village of South Glens Falls: 1 Municipal, 4 Schools  Village of Stillwater: 3 Schools	
Commercial Suppliers (food, gas, etc.)	N/A	<ul style="list-style-type: none"> <li>Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable.</li> <li>Essential supplies like medicines, water, food, and equipment deliveries may be delayed.</li> <li>Economic disruption due to power outages and fires negatively impact services as well as area businesses reliant on commercial suppliers.</li> </ul>
Utility Services and Infrastructure (electric, water, wastewater, communications) Water/Wastewater Facilities)	Saratoga County: 3 Communications, 4 Dams, 67 Sewage and Water  City of Saratoga Springs: 6 Sewage and Water  Town of Ballston: 4 Sewage and Water  Town of Charlton: 2 Sewage and Water  Town of Clifton Park: 1 Communication, 1 Energy Utility, 14 Sewage and Water  Town of Corinth: 3 Sewage and Water  Town of Day: 1 Sanitation/Waste  Town of Hadley: 10 Sewage and Water  Town of Halfmoon: 7 Communications, 4 Sewage and Water  Town of Malta: 1 Communications, 1 Sewage and Water  Town of Moreau: 4 Communications, 1 Energy Utility, 3 Sewage and Water  Town of Waterford: 1 Energy Utility, 5 Sewage and Water  Village of Victory: 1 Sewage and Water	<ul style="list-style-type: none"> <li>Wastewater and drinking water facilities and infrastructure may be damaged or destroyed resulting in service disruption or outage for multiple days or weeks.</li> <li>Disruptions and outages impact public welfare as safe drinking water is critical.</li> <li>A break in essential and effective wastewater collection and treatment is a health concern, potentially spreading disease.</li> <li>Exposure to untreated wastewater is harmful to people and the environment.</li> <li>Any service disruptions can negatively impact or delay emergency management operations.</li> </ul>

Within the Saratoga County planning area, a total of 62 fire events were reported from 2008 through 2022. The average frequency is approximately 4 wildfire events every year. Due to a lack of loss data, historic loss and annualized estimates due to wildfires are unable to be calculated based on the best available data.



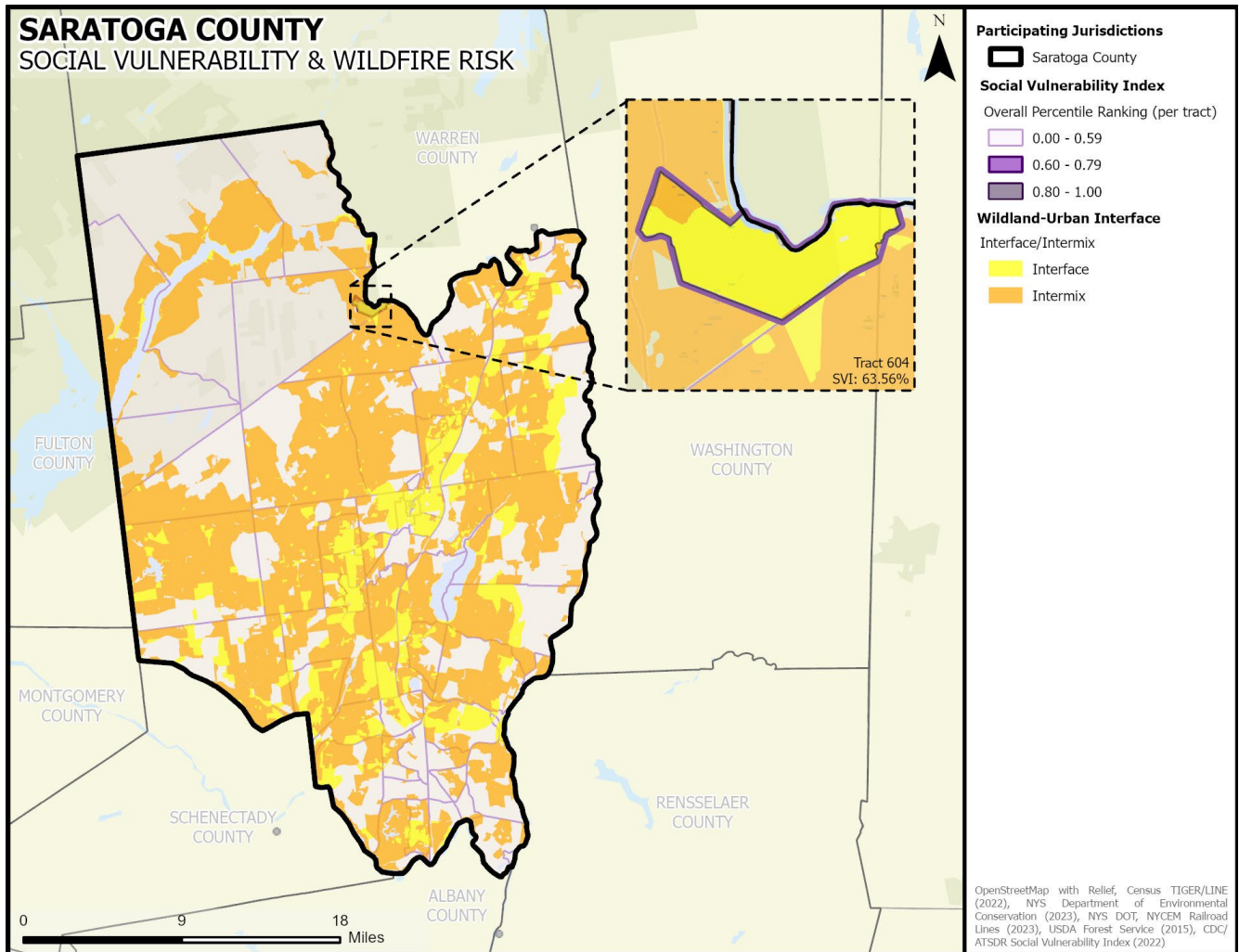
## SECTION 18: WILDFIRE

Diminished air quality is an environmental impact that can result from a wildfire event, even one outside of the planning, and pose a potential health risk. The smoke plumes from wildfires can contain potentially inhalable carcinogenic matter. Fine particles of invisible soot and ash that are too small for the respiratory system to filter can cause immediate and possibly long-term health effects. The elderly or those individuals with compromised respiratory systems may be more vulnerable to the effects of diminished air quality after a wildfire event. This was seen in the planning area with the events reported to the NCEI on July 5, 2002. In addition, during the summer of 2023, the planning area was impacted by wildfire smoke from fires burning in Canada. The dense smoke caused a noticeable decline in the planning area's air quality for multiple days.

The Center for Disease Control (CDC) created a Social Vulnerability Index (SVI) which includes a database and mapping application that identifies and quantifies communities experiencing social vulnerability. The current CDC SVI uses 16 U.S. census variables from the 5-year American Community Survey (ACS) to identify communities that may need support before, during, or after disasters. All 16 variables fall under four broad categories including socioeconomic status (population in poverty, unemployment, etc.), household characteristics (age, disability status, etc.), racial and ethnic minority status, and housing type and transportation (mobile homes, no vehicles, etc.). Populations experiencing social vulnerability may be adversely impacted by natural hazards, disasters, and other community-level stressors. Figure 18-7 identifies areas of social vulnerability using the CDC's SVI and where these areas overlap with the Saratoga County WUI areas, where wildfire risk is considered the highest.

## SECTION 18: WILDFIRE

**Figure 18-7. Saratoga County Social Vulnerability and WUI**



Climatic conditions such as severe freezes and drought can significantly increase the intensity of wildfires since these conditions kill vegetation, creating a prime fuel source for wildfires. The intensity and rate at which wildfires spread are directly related to wind speed, temperature, and relative humidity. The severity of impact from major wildfire events have the potential to be substantial. Severity of impact is gauged by acreage burned, homes and structures lost, and the number of resulting injuries and fatalities.

For the Saratoga County planning area, including participating jurisdictions, historical event data shows the impact from a wildfire event can be considered "Limited," meaning injuries and/or illnesses are likely treatable with first aid, shutdown of facilities and services for 24 hours or less and less than 10 percent of property is destroyed or with major damage.

### ASSESSMENT OF IMPACTS

A Wildfire event poses a potentially significant risk to public health and safety, particularly if the wildfire is initially unnoticed and spreads quickly. The impacts associated with a wildfire are not

## SECTION 18: WILDFIRE

limited to the direct damages. Significant wildfire events can be frequently associated with a variety of impacts, including:

- The Saratoga County planning area contains various public parks and open space areas that are vulnerable to the impacts of wildfire events. The County owns 3,000 acres of forestland (the Saratoga County Forest) that is open to the public and used for recreation purposes. Notable areas include the Saratoga Spa State Park in Saratoga Springs, Moreau Lake State Park in Gansevoort, and the Saratoga National Historical Park in Stillwater. Recreation and tourism can be unappealing for years following a large wildfire, devastating directly related businesses.
- The planning area has multiple state wildlife management areas including Saratoga Sand Plains (1,000 acres) in Wilton and Northumberland, and Victory Mills (47 acres) in Victory and Saratoga areas that are subject to extensive wildfire impacts. Wildfires may hinder the ability of an ecosystem to recover, potentially undermining conservation of native biodiversity by long-term or permanent loss of native vegetation, expansion of non-native, invasive species, and long-term or permanent loss of essential habitat for native plants and animals.
- Persons in the area at the time of the fire are at risk for injury or death from burns and/or smoke inhalation.
- First responders are at greater risk of physical injury when in close proximity to the hazard while extinguishing flames, protecting property, or evacuating residents in the area.
- First responders can experience heart disease, respiratory problems, and other long-term related illnesses from prolonged exposure to smoke, chemicals, and heat.
- Emergency services may be disrupted during a wildfire if facilities are impacted, roadways are inaccessible, or personnel are unable to report for duty.
- Critical County, City, Town and Village departments may not be able to function and provide necessary services depending on the location of the fire and the structures or personnel impacted.
- Non-critical businesses may be directly damaged, suffer loss of utility services, or be otherwise inaccessible, delaying normal operations and slowing the recovery process.
- Displaced residents may not be able to immediately return to work, further slowing economic recovery.
- Roadways in or near the WUI could be damaged or closed due to smoke and limited visibility.
- Older homes are generally exempt from modern building code requirements, which may require fire suppression equipment in the structure. 46 percent of homes in the planning area were built before 1980. Within Saratoga County, 82 buildings, districts, and sites are listed on the National Register of Historic Places, many of which pre-date modern building codes.
- Vegetation in parks may be destroyed in a wildfire, impacting air quality and public health.
- Some high-density neighborhoods feature small lots with structures close together, increasing the potential for fire to spread rapidly.
- Air pollution from smoke may exacerbate respiratory problems of vulnerable residents.
- Charred ground after a wildfire cannot easily absorb rainwater, increasing the risk of flooding and potential mudflows.
- Wildlife may be displaced or destroyed due to an event.
- Historical or cultural resources may be damaged or destroyed.

## SECTION 18: WILDFIRE

- Tourism can be significantly disrupted, further delaying economic recovery for the area.
- Economic disruption negatively impacts the programs and services provided by the community due to short- and long-term loss in revenue.
- Fire suppression costs can be substantial, exhausting the financial resources of the community.
- Residential structures lost in a wildfire may not be rebuilt for years, reducing the tax base for the community.
- Direct impacts to municipal water supply may occur through contamination of ash and debris during the fire, destruction of aboveground delivery lines, and soil erosion or debris deposits into waterways after the fire.

The economic and financial impacts of a wildfire event on local government will depend on the scale of the event, what is damaged, costs of repair or replacement, lost business days in impacted areas, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by the community, local businesses, and citizens will contribute to the overall economic and financial conditions in the aftermath of a wildfire event.

## CLIMATE CHANGE CONSIDERATIONS

Wildfires require the alignment of a number of factors, including temperature, humidity, and the lack of moisture in fuels, such as trees, shrubs, grasses, and forest debris. All these factors have strong direct or indirect ties to climate variability and climate change. Research shows that changes in climate create warmer, drier conditions, leading to longer and more active fire seasons. Increases in temperatures and the thirst of the atmosphere due to human-caused climate change have increased aridity of forest fuels during the fire season.<sup>10</sup>

Additionally, it is projected that future changes to Saratoga County will include increased temperatures, which according to the U.S. Climate Explorer, the planning area may experience a 7°F increase in the average extreme heat temperatures. Historically, extreme temperatures averaged 89°F in Saratoga County, but between 2035 and 2064 the average will be 96°F, increasing the severity and frequency of extreme heat events, contributing to favorable wildfire conditions. The increase in average extreme heat temperatures can be even higher but is dependent on overall future emissions.

Extreme heat and extended periods of drought contribute to wildfire risk in the planning area. Extreme temperatures and periods of drought destroy vegetation in the area, contributing to available fuels that spread wildfires. Additional climate change impacts from drought and extreme heat are discussed in Sections 6 and 9 of this Plan. The projected increases in favorable wildfire conditions, including drought and extreme heat, indicate an increase in favorable wildfire conditions. Additional information and studies are needed to determine the degree and rate of any increased wildfire risk.

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<sup>10</sup> NOAA Wildfire Climate Connection, August 2022: wildfire-climate-connection.



**SARATOGA**  
**COUNTY** NEW  
YORK

SECTION 19  
**WIND**

## SECTION 19: WIND

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### HAZARD DESCRIPTION

Wind is the horizontal motion of the air past a given point, beginning with differences in air pressures. Pressure that is higher at one place than another sets up a force pushing from the high toward the low pressure; the greater the difference in pressures, the stronger the force. The distance between the area of high pressure and the area of low pressure also determines how fast the moving air accelerates.

Damaging winds are often referred to as “straight-line” winds and are created by thunderstorms. Damaging winds are classified as those exceeding 50-60mph according to the National Oceanic and Atmospheric Administration (NOAA).



There are several types of damaging winds, including but not limited to the following.

The most common is the straight-line wind, which is used to define any thunderstorm wind that is not associated with rotation and is used to differentiate from tornado related winds.

A downburst is the general term for all strong wind events caused by a small area of rapidly descending air beneath a thunderstorm. A downburst can cause damage equivalent to a strong tornado and make air travel extremely hazardous.

Another type of wind is the derecho, which is a widespread, long-lived windstorm that occurs with rapidly moving showers and thunderstorms. Derechos have a wind path that extends more than 240 miles with wind gusts of 58 mph or greater. These type of wind events can cause significant damage.

### LOCATION

Dangerous and damaging wind events can develop in any geographic location and commonly occur with thunderstorm events. A wind event could occur at any location within the Saratoga County planning area, including all participating jurisdictions. These storms develop randomly and are not confined to any geographic area within the County. It is assumed that the entire Saratoga County planning area is uniformly exposed to the threat of damaging winds.

## SECTION 19: WIND

### EXTENT

The extent or magnitude of a wind event is measured by the Beaufort Wind Scale. Table 19-1 describes the different intensities of wind in terms of speed and effects, from calm to violent and destructive.

**Table 19-1. Beaufort Wind Scale<sup>1</sup>**

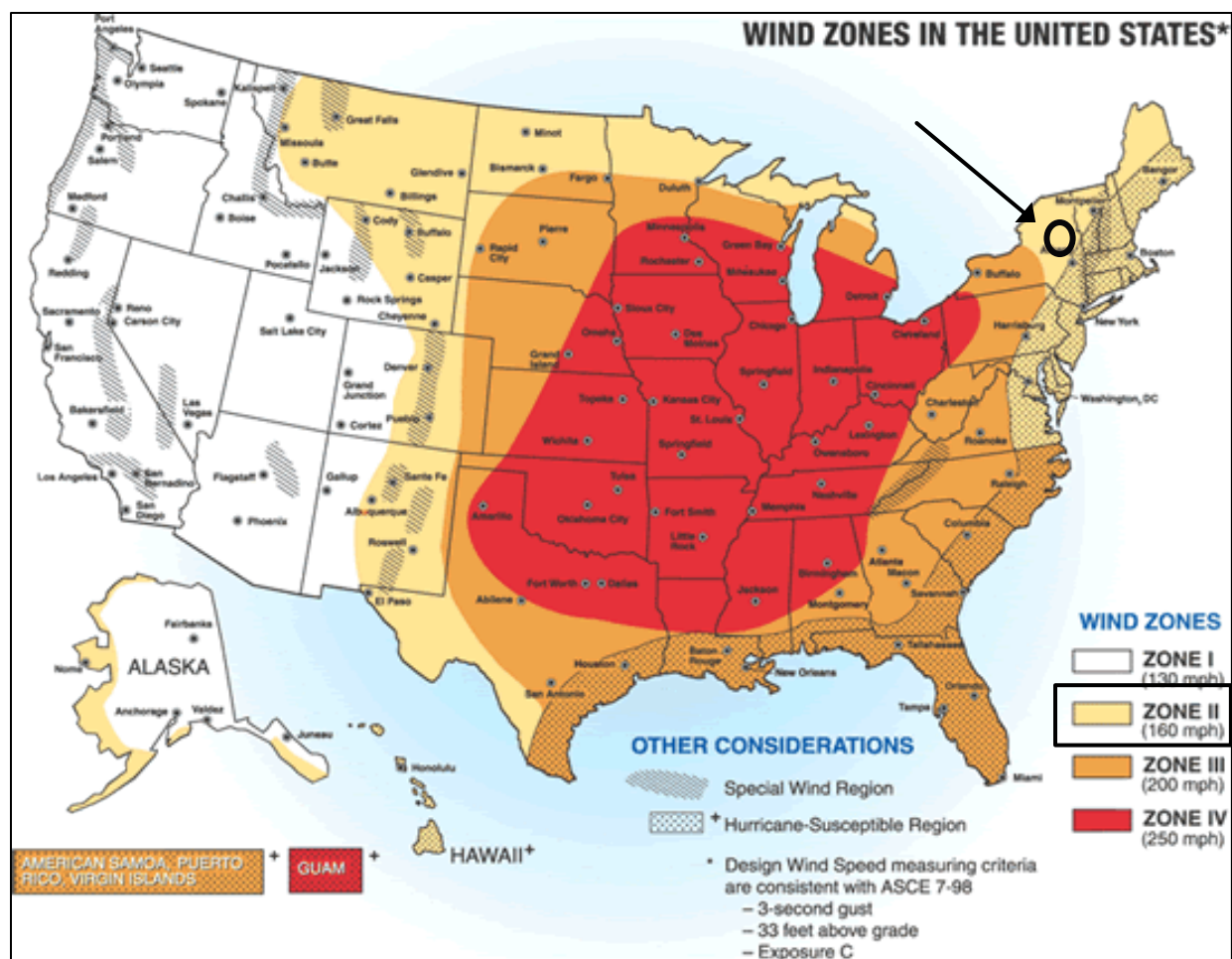
FORCE	WIND SPEED		WMO CLASSIFICATION	APPEARANCE OF WIND EFFECTS
	(mph)	(knots)		
0	Less than 1	Less than 1	Calm	Calm, smoke rises vertically
1	1-3	1-3	Light Air	Smoke drift indicates wind direction, still wind vanes
2	4-8	4-6	Light Breeze	Wind felt on face, leaves rustle, vanes begin to move
3	9-14	7-10	Gentle Breeze	Leaves and small twigs constantly moving, light flags extended
4	15-21	11-16	Moderate Breeze	Dust, leaves and loose paper lifted, small tree branches move
5	22-28	17-21	Fresh Breeze	Small trees in leaf begin to sway
6	29-36	22-27	Strong Breeze	Larger tree branches moving, whistling in wires
7	37-44	28-33	Near Gale	Whole trees moving, resistance felt walking against wind
8	45-53	34-40	Gale	Whole trees in motion, resistance felt walking against wind
9	54-62	41-47	Strong Gale	Slight structural damage occurs, slate blows off roofs
10	63-72	48-55	Storm	Seldom experienced on land, trees broken or uprooted, "considerable structural damage"
11	73-83	56-63	Violent Storm	If experienced on land, widespread damage
12	84+	64-71	Hurricane	Violence and destruction

Figure 19-1 displays the wind zones as derived from NOAA.

<sup>1</sup> Source: World Meteorological Organization

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Figure 19-1. Wind Zones in the United States<sup>2</sup>



On average, the planning area experiences 13 to 14 wind events every year. The Saratoga County planning area is located within Wind Zone II, meaning it can experience winds up to 160 mph. The Saratoga County planning area has experienced a significant wind event, or an event with winds in the range of “Force 12” on the Beaufort Wind Scale with winds of more than 64 knots, or 74 mph. The highest-level extent can be anticipated across the entire planning area.

Based on a search of past events from January 1960 through June 2024, the greatest magnitude wind event was recorded in the Town of Milton on February 17, 2006, with wind speeds of 98 knots, or 113 mph.

## HISTORICAL OCCURRENCES

The National Centers for Environmental Information (NCEI) Storm Events database is a national data source organized under the National Oceanic and Atmospheric Administration. The NCEI is the largest archive available for historic storm events data; however, it is important to note that only incidents recorded in the NCEI have been factored into this risk assessment unless otherwise noted. It is likely that a high number of occurrences have gone unreported over the past 64.5

<sup>2</sup> The Saratoga County planning area is indicated by the black circle.



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years. Tables 19-2 and 19-3 depict historical occurrences of thunderstorm wind events for the Saratoga County planning area according to the NCEI database.

Since 1960, 886 total wind events are known to have occurred in the Saratoga County planning area. Table 19-3 presents information on known historical events impacting the Saratoga County planning area, including all participating jurisdictions, resulting in property damages, injuries, or fatalities.

It is important to note that high wind events associated with other hazards, such as tornadoes, are not accounted for in this section. Property damage estimates are not always available. Where an estimate has been provided in a table for losses, the dollar amounts have been modified for inflation to indicate the damage in 2024 dollars.

**Table 19-2. Historical Wind Events, January 1960 – June 2024**

MAXIMUM WIND SPEED RECORDED (knots)	NUMBER OF REPORTED EVENTS
0-30	6
31-40	27
41-50	459
51-60	80
61-70	10
71-80	4
81-90	4
91-100+	1
Unknown	295

**Table 19-3. Damaging Historical Wind Events, January 1960 – June 2024<sup>3</sup>**

JURISDICTION	DATE	MAGNITUDE (knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town of Halfmoon	8/19/1987	Unknown	0	1	\$0	\$0
Town of Halfmoon	5/17/1991	Unknown	0	1	\$0	\$0
Town of Edinburg	4/16/1993	Unknown	0	0	\$1,100	\$0
Town and Village of Galway <sup>4</sup>	4/16/1993	Unknown	0	0	\$1,100	\$0
Town of Providence	4/16/1993	Unknown	0	0	\$1,100	\$0
Town of Clifton Park	8/2/1993	Unknown	0	0	\$10,600	\$0
Town of Greenfield	8/2/1993	Unknown	0	0	\$10,600	\$0
Town of Providence	8/2/1993	Unknown	0	0	\$10,600	\$0

<sup>3</sup> Only recorded events with fatalities, injuries or damages are listed. Magnitude is listed when available. Events reported from January 1960 through June 2024. Damage values are in 2024 dollars.

<sup>4</sup> Town and Village of Galway are not listed separately in the NCEI. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their close proximity.

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JURISDICTION	DATE	MAGNITUDE (knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town of Edinburg	8/24/1993	Unknown	0	0	\$106,000	\$0
Town of Providence	8/24/1993	Unknown	0	0	\$10,600	\$0
South Glens Falls	8/24/1993	Unknown	0	0	\$10,600	\$0
Town of Wilton	8/24/1993	Unknown	0	0	\$10,600	\$0
Town and Village of Waterford <sup>5</sup>	9/10/1993	Unknown	0	0	\$10,600	\$0
Town of Halfmoon	9/10/1993	Unknown	0	0	\$1,100	\$0
City of Mechanicville	4/27/1994	Unknown	0	0	\$10,500	\$0
Town of Day	6/12/1994	Unknown	0	0	\$1,100	\$0
Town of Charlton	6/27/1994	Unknown	0	0	\$10,400	\$0
Town of Clifton Park	6/27/1994	Unknown	0	0	\$10,400	\$0
Town of Clifton Park	6/27/1994	Unknown	0	0	\$10,400	\$0
Town of Clifton Park	6/27/1994	Unknown	0	0	\$10,400	\$0
Town of Halfmoon	6/27/1994	Unknown	0	0	\$10,400	\$0
Town of Milton	6/29/1994	Unknown	0	0	\$103,700	\$0
City of Saratoga Springs	6/29/1994	Unknown	0	0	\$103,700	\$0
Saratoga County	6/29/1994	Unknown	0	0	\$10,400	\$0
Town of Edinburg	6/29/1994	Unknown	0	0	\$10,400	\$0
Town of Greenfield	6/29/1994	Unknown	0	0	\$10,400	\$0
Town of Milton	6/29/1994	Unknown	0	0	\$10,400	\$0
Saratoga County	7/7/1994	Unknown	0	0	\$10,400	\$0
Town of Charlton	7/8/1994	Unknown	0	0	\$10,400	\$0
Town and Village of Galway	7/8/1994	Unknown	0	0	\$10,400	\$0
Town of Milton	7/8/1994	Unknown	0	0	\$10,400	\$0
Town of Clifton Park	7/9/1994	Unknown	0	0	\$10,400	\$0
Town and Village of Galway	7/9/1994	Unknown	0	0	\$10,400	\$0
Town of Milton	7/9/1994	Unknown	0	0	\$10,400	\$0
City of Saratoga Springs	7/9/1994	Unknown	0	0	\$10,400	\$0
Town and Village of Waterford	7/20/1994	Unknown	0	0	\$10,400	\$0
Town of Clifton Park	7/20/1994	Unknown	0	0	\$1,100	\$0
Town of Hadley	7/22/1994	Unknown	0	0	\$10,400	\$0
Town of Edinburg	7/25/1994	Unknown	0	0	\$10,400	\$0

<sup>5</sup> Town and Village of Waterford are not listed separately in the NCEI. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their close proximity.

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JURISDICTION	DATE	MAGNITUDE (knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town of Greenfield	7/25/1994	Unknown	0	0	\$10,400	\$0
Town and Village of Stillwater <sup>6</sup>	7/25/1994	Unknown	0	0	\$10,400	\$0
City of Saratoga Springs	7/26/1994	Unknown	0	0	\$10,335,200	\$0
Town of Northumberland	7/26/1994	Unknown	0	0	\$10,400	\$0
Town of Halfmoon	7/30/1994	Unknown	0	0	\$10,400	\$0
Town of Halfmoon	7/30/1994	Unknown	0	0	\$10,400	\$0
Town of Moreau	7/30/1994	Unknown	0	0	\$10,400	\$0
Village of South Glens Falls	7/30/1994	Unknown	0	0	\$10,400	\$0
Town of Ballston / Village of Ballston Spa <sup>7</sup>	8/2/1994	Unknown	0	0	\$10,300	\$0
Town of Clifton Park	8/2/1994	Unknown	0	0	\$10,300	\$0
Town of Halfmoon	8/2/1994	Unknown	0	0	\$10,300	\$0
Town of Ballston / Village of Ballston Spa	8/20/1994	Unknown	0	0	\$10,300	\$0
Town of Wilton	6/2/1995	Unknown	0	0	\$100,600	\$0
City of Saratoga Springs	6/2/1995	Unknown	0	1	\$10,100	\$0
Village of Schuylerville	6/2/1995	Unknown	0	0	\$10,100	\$0
Saratoga County	7/15/1995	Unknown	0	0	\$201,200	\$0
Town of Malta	7/15/1995	Unknown	0	0	\$4,100	\$0
Town of Greenfield	7/18/1995	Unknown	0	0	\$4,100	\$0
City of Saratoga Springs	7/18/1995	Unknown	0	0	\$4,100	\$0
Saratoga County	7/23/1995	Unknown	0	0	\$1,005,800	\$0
Town of Providence	7/28/1995	Unknown	0	0	\$4,100	\$0
Town of Greenfield	8/3/1995	Unknown	0	0	\$14,100	\$0
Village of Round Lake	8/3/1995	Unknown	0	0	\$14,100	\$0
Saratoga County	8/3/1995	Unknown	0	0	\$10,100	\$0
Saratoga County	8/3/1995	Unknown	0	0	\$10,100	\$0
Town of Ballston / Village of Ballston Spa	8/3/1995	Unknown	0	0	\$10,100	\$0
Town of Clifton Park	8/3/1995	Unknown	0	0	\$10,100	\$0
Saratoga County	8/3/1995	Unknown	0	0	\$8,100	\$0
Town of Charlton	8/3/1995	Unknown	0	0	\$8,100	\$0

<sup>6</sup> Town and Village of Stillwater are not listed separately in the NCEI. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their close proximity.

<sup>7</sup> Town of Ballston and Village of Ballston Spa are not listed separately in the NCEI. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their close proximity.

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JURISDICTION	DATE	MAGNITUDE (knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town of Clifton Park	8/3/1995	Unknown	0	0	\$8,100	\$0
Town of Clifton Park	8/3/1995	Unknown	0	0	\$8,100	\$0
Town of Malta	8/3/1995	Unknown	0	0	\$8,100	\$0
Village of Schuylerville	8/3/1995	Unknown	0	0	\$8,100	\$0
Town of Clifton Park	8/4/1995	Unknown	0	0	\$8,100	\$0
Town and Village of Galway	9/14/1995	Unknown	0	0	\$10,100	\$0
Town of Milton	9/14/1995	Unknown	0	0	\$10,100	\$0
Town of Providence	10/21/1995	Unknown	0	0	\$10,000	\$0
Saratoga County	1/19/1996	Unknown	0	0	\$10,000	\$0
Saratoga County	1/19/1996	Unknown	0	0	\$10,000	\$0
Town of Milton	1/19/1996	Unknown	0	0	\$10,000	\$0
Saratoga County	1/27/1996	Unknown	0	0	\$19,900	\$0
Saratoga County	1/27/1996	Unknown	0	0	\$19,900	\$0
Saratoga County	2/24/1996	Unknown	0	0	\$19,900	\$0
Saratoga County	2/24/1996	Unknown	0	0	\$19,900	\$0
Town and Village of Galway	4/22/1996	Unknown	0	0	\$9,900	\$0
Town of Milton	4/22/1996	Unknown	0	0	\$9,900	\$0
Town of Providence	4/22/1996	Unknown	0	0	\$9,900	\$0
Town of Clifton Park	6/11/1996	Unknown	0	0	\$9,800	\$0
Town and Village of Stillwater	6/12/1996	Unknown	0	0	\$11,800	\$0
Town and Village of Corinth <sup>8</sup>	6/12/1996	Unknown	0	0	\$7,900	\$0
City of Saratoga Springs	6/12/1996	Unknown	0	0	\$7,900	\$0
Town and Village of Stillwater	6/12/1996	Unknown	0	0	\$7,900	\$0
Saratoga County	7/19/1996	Unknown	0	0	\$4,000	\$0
Saratoga County	7/19/1996	Unknown	0	0	\$4,000	\$0
Saratoga County	11/8/1996	Unknown	0	0	\$19,400	\$0
Saratoga County	11/8/1996	Unknown	0	0	\$3,900	\$0
Saratoga County	12/1/1996	Unknown	0	0	\$38,700	\$0
Saratoga County	12/1/1996	Unknown	0	0	\$9,700	\$0
Saratoga County	2/22/1997	Unknown	0	0	\$23,100	\$0
Saratoga County	2/22/1997	Unknown	0	0	\$19,300	\$0

<sup>8</sup> Town and Village of Corinth are not listed separately in the NCEI. For the purposes of this evaluation, both jurisdictions will be evaluated as equal entities with similar exposure and vulnerability due to their close proximity.

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JURISDICTION	DATE	MAGNITUDE (knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Saratoga County	2/27/1997	Unknown	0	0	\$15,400	\$0
Saratoga County	3/6/1997	Unknown	0	0	\$57,600	\$0
Saratoga County	3/6/1997	Unknown	0	0	\$13,500	\$0
Town and Village of Galway	5/6/1997	Unknown	0	0	\$5,800	\$0
Town of Ballston / Village of Ballston Spa	5/6/1997	Unknown	0	0	\$2,000	\$0
Town of Milton	5/6/1997	Unknown	0	0	\$2,000	\$0
Town of Wilton	7/15/1997	Unknown	0	0	\$229,400	\$0
Village of South Glens Falls	7/15/1997	Unknown	0	0	\$11,500	\$0
Village of Schuylerville	7/15/1997	Unknown	0	0	\$7,700	\$57,400
Town and Village of Corinth	7/15/1997	Unknown	0	0	\$7,700	\$0
Town of Moreau	7/15/1997	Unknown	0	0	\$5,800	\$0
Village of Round Lake	7/17/1997	Unknown	0	0	\$38,300	\$0
Town and Village of Stillwater	7/17/1997	Unknown	0	0	\$19,200	\$0
Town of Charlton	7/17/1997	Unknown	0	0	\$9,600	\$0
Town of Ballston / Village of Ballston Spa	7/17/1997	Unknown	0	0	\$7,700	\$0
Town of Greenfield	7/17/1997	Unknown	0	0	\$3,900	\$0
Town of Malta	7/17/1997	Unknown	0	0	\$3,900	\$0
Town of Wilton	7/18/1997	Unknown	0	0	\$19,200	\$0
City of Saratoga Springs	8/22/1997	Unknown	0	0	\$47,700	\$0
Town of Clifton Park	5/29/1998	Unknown	0	0	\$37,700	\$0
Town of Malta	5/29/1998	Unknown	0	0	\$11,400	\$0
Town of Greenfield	5/29/1998	Unknown	0	0	\$7,600	\$0
Town of Milton	5/29/1998	Unknown	0	0	\$1,900	\$0
City of Mechanicville	5/31/1998	Unknown	0	0	\$7,600	\$0
Town of Ballston / Village of Ballston Spa	7/23/1998	Unknown	0	0	\$11,300	\$0
Town and Village of Galway	7/23/1998	Unknown	0	0	\$9,400	\$0
Town of Edinburg	7/23/1998	Unknown	0	0	\$7,600	\$0
Town of Wilton	8/24/1998	Unknown	0	0	\$5,700	\$0
Town of Greenfield	8/24/1998	Unknown	0	0	\$4,700	\$0
Town of Greenfield	8/24/1998	Unknown	0	0	\$3,800	\$0
Town of Northumberland	8/24/1998	Unknown	0	0	\$2,900	\$0
Town of Malta	9/2/1998	Unknown	0	0	\$5,700	\$0
Town and Village of Stillwater	9/2/1998	Unknown	0	0	\$3,800	\$0

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JURISDICTION	DATE	MAGNITUDE (knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town of Charlton	9/7/1998	Unknown	0	0	\$24,400	\$0
Town of Clifton Park	9/7/1998	Unknown	0	0	\$22,500	\$0
Town of Ballston / Village of Ballston Spa	9/7/1998	Unknown	0	0	\$18,800	\$0
Town of Edinburg	9/7/1998	Unknown	0	0	\$18,800	\$0
Town of Malta	9/7/1998	Unknown	0	0	\$16,900	\$0
Town of Ballston / Village of Ballston Spa	9/7/1998	Unknown	0	0	\$9,400	\$0
City of Mechanicville	9/21/1998	Unknown	0	2	\$37,500	\$0
Town of Halfmoon	9/21/1998	Unknown	0	0	\$18,800	\$0
Town of Milton	9/26/1998	Unknown	0	0	\$7,500	\$0
Town of Edinburg	9/26/1998	Unknown	0	0	\$5,700	\$0
Town of Halfmoon	9/26/1998	Unknown	0	0	\$5,700	\$0
Town and Village of Galway	9/26/1998	Unknown	0	0	\$2,900	\$0
Saratoga County	10/1/1998	Unknown	0	0	\$5,700	\$0
Saratoga County	10/1/1998	Unknown	0	0	\$4,700	\$0
Town of Clifton Park	7/6/1999	85	0	0	\$552,100	\$0
Town of Greenfield	7/6/1999	Unknown	0	0	\$12,900	\$0
Town of Ballston / Village of Ballston Spa	7/6/1999	Unknown	0	0	\$11,100	\$0
Town of Moreau	7/6/1999	Unknown	0	0	\$3,700	\$0
Town of Charlton	7/6/1999	Unknown	0	0	\$2,800	\$0
Town of Northumberland	7/18/1999	Unknown	0	0	\$1,900	\$0
Town of Clifton Park	8/13/1999	Unknown	0	0	\$27,600	\$0
Saratoga County	9/16/1999	Unknown	0	0	\$193,700	\$0
Clifton Park	5/18/2000	Unknown	0	0	\$55,500	\$0
Town of Ballston / Village of Ballston Spa	5/18/2000	Unknown	0	0	\$53,700	\$0
Town of Clifton Park	5/18/2000	Unknown	0	0	\$48,300	\$0
Town of Milton	6/2/2000	Unknown	0	0	\$1,779,300	\$0
Town and Village of Galway	6/2/2000	Unknown	0	0	\$355,900	\$0
Town of Ballston / Village of Ballston Spa	6/2/2000	Unknown	0	0	\$311,400	\$0
Town and Village of Stillwater	6/2/2000	Unknown	0	0	\$74,800	\$0
Town of Milton	6/2/2000	Unknown	0	0	\$53,400	\$0
Town of Malta	6/2/2000	Unknown	0	0	\$37,400	\$0
Town of Clifton Park	6/2/2000	Unknown	0	0	\$33,900	\$0

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JURISDICTION	DATE	MAGNITUDE (knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Village of Round Lake	6/2/2000	Unknown	0	0	\$26,700	\$0
Saratoga Springs	8/3/2000	Unknown	0	0	\$39,100	\$0
Town of Clifton Park	8/3/2000	Unknown	0	0	\$19,600	\$0
Town of Saratoga	8/3/2000	Unknown	0	0	\$12,500	\$0
Town of Ballston / Village of Ballston Spa	9/2/2000	Unknown	0	0	\$21,200	\$0
Town of Ballston / Village of Ballston Spa	9/21/2000	Unknown	0	2	\$441,500	\$0
Town and Village of Galway	9/21/2000	Unknown	0	0	\$31,800	\$0
Saratoga County	12/12/2000	Unknown	0	0	\$264,500	\$0
Saratoga County	12/12/2000	Unknown	0	0	\$88,200	\$0
Town of Clifton Park	5/28/2001	Unknown	0	0	\$25,900	\$172,700
Town of Clifton Park	5/28/2001	Unknown	0	0	\$22,500	\$0
Town and Village of Stillwater	5/28/2001	Unknown	0	0	\$15,600	\$0
Town of Milton	7/1/2001	Unknown	0	0	\$26,000	\$0
Village of Schuylerville	7/4/2001	Unknown	0	0	\$84,700	\$0
Town of Malta	7/4/2001	Unknown	0	0	\$32,900	\$0
Saratoga Springs	8/9/2001	Unknown	0	0	\$77,800	\$0
Saratoga Springs	8/9/2001	Unknown	0	0	\$69,200	\$0
Town and Village of Stillwater	8/9/2001	Unknown	0	0	\$36,300	\$0
Town of Edinburg	8/9/2001	Unknown	0	0	\$29,400	\$0
Town of Malta	8/9/2001	Unknown	0	0	\$29,400	\$0
Town of Clifton Park	8/9/2001	Unknown	0	0	\$19,100	\$0
Town and Village of Galway	8/20/2001	Unknown	0	0	\$26,000	\$0
Saratoga County	3/3/2002	Unknown	0	0	\$39,500	\$0
Saratoga County	3/3/2002	Unknown	0	0	\$25,800	\$0
Saratoga County	3/10/2002	Unknown	0	0	\$25,800	\$0
Saratoga County	3/10/2002	Unknown	0	0	\$15,500	\$0
Saratoga Springs	5/31/2002	Unknown	0	0	\$46,100	\$0
Saratoga Springs	5/31/2002	Unknown	0	0	\$34,200	\$0
Village of Round Lake	6/5/2002	Unknown	0	0	\$255,800	\$0
Town of Malta	6/5/2002	Unknown	0	0	\$20,500	\$0
Town of Malta	6/5/2002	Unknown	0	0	\$17,100	\$0
City of Saratoga Springs	6/27/2002	Unknown	0	0	\$85,300	\$0
Town of Saratoga	7/18/2002	Unknown	0	0	\$17,100	\$0

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JURISDICTION	DATE	MAGNITUDE (knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town and Village of Stillwater	7/18/2002	Unknown	0	0	\$17,100	\$0
Town of Edinburg	7/18/2002	Unknown	0	0	\$12,000	\$0
Town and Village of Stillwater	7/23/2002	Unknown	0	0	\$8,600	\$0
Town of Ballston / Village of Ballston Spa	8/14/2002	Unknown	0	0	\$17,000	\$0
Town of Clifton Park	8/16/2002	Unknown	0	0	\$17,000	\$0
Town and Village of Stillwater	8/16/2002	Unknown	0	0	\$17,000	\$0
Town of Clifton Park	7/21/2003	60	0	0	\$1,700	\$0
Town of Greenfield	4/19/2004	70	0	0	\$16,400	\$0
Town of Charlton	6/9/2004	60	0	0	\$8,100	\$0
Town of Wilton	11/25/2004	60	0	0	\$72,300	\$0
Saratoga County	2/17/2006	60	0	1	\$0	\$0
Saratoga County	9/15/2008	43	0	0	\$7,100	\$0
Saratoga County	9/15/2008	43	0	0	\$7,100	\$0
Saratoga County	10/25/2008	39	0	0	\$2,900	\$0
Saratoga County	12/7/2008	45	0	0	\$1,500	\$0
Saratoga County	12/7/2008	45	0	0	\$1,500	\$0
Saratoga County	12/25/2008	43	0	0	\$14,600	\$0
Saratoga County	12/25/2008	43	0	0	\$4,400	\$0
Saratoga County	12/30/2008	43	0	0	\$4,400	\$0
Saratoga County	12/30/2008	43	0	0	\$4,400	\$0
Saratoga County	4/4/2009	39	0	0	\$1,500	\$0
Saratoga County	5/14/2009	40	0	0	\$2,900	\$0
Saratoga County	5/31/2009	35	0	0	\$7,200	\$0
Saratoga County	11/18/2013	43	0	0	\$7,900	\$0
Saratoga County	11/18/2013	43	0	0	\$2,700	\$0
Saratoga County	5/12/2014	26	0	2	\$0	\$0
Saratoga County	2/29/2016	39	0	0	\$13,000	\$0
Saratoga County	3/1/2016	39	0	0	\$12,900	\$0
Saratoga County	4/3/2016	48	0	0	\$6,500	\$0
Town of Hadley	7/23/2016	50	0	1	\$0	\$0
Saratoga County	10/22/2016	43	0	0	\$1,300	\$0
Saratoga County	10/22/2016	43	0	0	\$1,300	\$0
Saratoga County	1/10/2017	43	0	0	\$6,400	\$0



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JURISDICTION	DATE	MAGNITUDE (knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Saratoga County	1/10/2017	43	0	0	\$6,400	\$0
Saratoga County	4/16/2017	30	0	0	\$1,300	\$0
Saratoga County	11/10/2017	40	0	0	\$1,300	\$1,300
Saratoga County	11/10/2017	40	0	0	\$1,300	\$1,300
Saratoga County	11/19/2017	45	0	0	\$1,300	\$1,300
Saratoga County	11/3/2018	43	0	0	\$1,300	\$0
Saratoga County	11/3/2018	43	0	0	\$1,300	\$0
Saratoga County	11/10/2018	43	0	0	\$1,300	\$0
Saratoga County	11/10/2018	43	0	0	\$1,300	\$0
Saratoga County	12/17/2018	30	0	0	\$1,300	\$0
Saratoga County	12/17/2018	30	0	0	\$1,300	\$0
Saratoga County	12/22/2018	28	0	0	\$1,300	\$0
Saratoga County	12/22/2018	28	0	0	\$1,300	\$0
Saratoga County	1/1/2019	40	0	0	\$1,300	\$0
Saratoga County	1/1/2019	40	0	0	\$1,300	\$0
Saratoga County	2/8/2019	49	0	0	\$1,300	\$0
Saratoga County	2/8/2019	49	0	0	\$1,300	\$0
Saratoga County	4/3/2019	39	0	0	\$1,300	\$0
Saratoga County	4/3/2019	45	0	0	\$1,300	\$0
Saratoga County	10/16/2019	49	0	0	\$1,200	\$0
Saratoga County	10/16/2019	49	0	0	\$1,200	\$0
Saratoga County	10/31/2019	45	0	0	\$1,200	\$0
Saratoga County	10/31/2019	45	0	0	\$1,200	\$0
Saratoga County	12/15/2019	45	0	0	\$1,200	\$0
Saratoga County	1/12/2020	45	0	0	\$1,200	\$0
Saratoga County	1/12/2020	45	0	0	\$1,200	\$0
Saratoga County	1/16/2020	40	0	0	\$1,200	\$0
Saratoga County	2/7/2020	45	0	0	\$0	\$1,200
Town of Ballston / Village of Ballston Spa	4/13/2020	45	0	0	\$6,000	\$0
Town of Ballston / Village of Ballston Spa	4/13/2020	45	0	0	\$6,000	\$0
Town of Milton	4/13/2020	45	0	0	\$6,000	\$0
Saratoga County	4/13/2020	45	0	0	\$1,200	\$0
Saratoga County	8/4/2020	45	0	0	\$1,200	\$0

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JURISDICTION	DATE	MAGNITUDE (knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Saratoga County	8/4/2020	45	0	0	\$1,200	\$0
Town of Halfmoon	10/7/2020	74	1	0	\$0	\$0
Saratoga County	3/1/2021	43	0	0	\$0	\$3,500
Saratoga County	3/1/2021	40	0	0	\$0	\$1,200
Saratoga County	3/12/2021	40	0	0	\$0	\$1,200
Saratoga County	3/12/2021	40	0	0	\$0	\$1,200
Town of Edinburg	7/12/2022	43	0	0	\$0	\$1,100
Town of Greenfield	4/1/2023	45	0	0	\$0	\$1,100
Saratoga Springs	4/1/2023	45	0	0	\$0	\$1,100
Town of Saratoga	9/7/2023	45	0	0	\$2,000	\$0
Saratoga County	6/7/2024	45	0	0	\$2,000	\$0
Town of Charlton	6/7/2024	45	0	0	\$2,000	\$0
Town of Malta	6/7/2024	45	0	0	\$2,000	\$0
Town of Ballston / Village of Ballston Spa	6/21/2024	50	0	0	\$1,500	\$0
Town of Ballston / Village of Ballston Spa	6/21/2024	50	0	0	\$1,000	\$0
Saratoga County	6/21/2024	50	0	0	\$1,000	\$0
Town of Clifton Park	6/21/2024	50	0	0	\$1,000	\$0
<b>TOTALS</b>		<b>(Max Extent)</b>	<b>1</b>	<b>11</b>	<b>\$19,700,800</b>	<b>\$245,600</b>

**Table 19-4. Summary of Historical Wind Events, January 1960 – June 2024**

JURISDICTION	NUMBER OF EVENTS	MAX MAGNITUDE (knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Saratoga County	178	67	0	3	\$2,385,200	\$12,200
Town of Ballston / Village of Ballston Spa	55	74	0	2	\$950,300	\$0
Town of Charlton	41	60	0	0	\$75,800	\$0
Town of Clifton Park	73	85	0	0	\$992,200	\$172,700
Town and Village of Corinth	25	50	0	0	\$15,600	\$0
Town of Day	2	50	0	0	\$1,100	\$0
Town of Edinburg	20	60	0	0	\$201,400	\$1,100
Town and Village of Galway	35	80	0	0	\$473,700	\$0
Town of Greenfield	47	70	0	0	\$98,900	\$1,100
Town of Hadley	11	60	0	1	\$10,400	\$0
Town of Halfmoon	41	74	1	2	\$67,100	\$0

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JURISDICTION	NUMBER OF EVENTS	MAX MAGNITUDE (knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town of Malta	47	87	0	0	\$189,400	\$0
City of Mechanicville	10	83	0	2	\$55,600	\$0
Town of Milton	43	98	0	0	\$2,041,000	\$0
Town of Moreau	26	60	0	0	\$19,900	\$0
Town of Northumberland	31	60	0	0	\$15,200	\$0
Town of Providence	8	55	0	0	\$46,300	\$0
Village of Round Lake	7	60	0	0	\$334,900	\$0
City of Saratoga Springs	73	60	0	1	\$10,870,800	\$1,100
Town of Saratoga	19	87	0	0	\$31,600	\$0
Village of Schuylerville	10	60	0	0	\$110,600	\$57,400
Village of South Glens Falls	8	60	0	0	\$32,500	\$0
Town and Village of Stillwater	28	55	0	0	\$222,500	\$0
Village of Victory	1	60	0	0	\$0	\$0
Town and Village of Waterford	9	62	0	0	\$21,000	\$0
Town of Wilton	38	65	0	0	\$437,800	\$0
<b>TOTALS</b>	<b>886</b>	<b>98</b>	<b>1</b>	<b>11</b>	<b>\$19,946,400</b>	

Based on the list of historical thunderstorm wind events for the Saratoga County planning area, including participating jurisdictions, 259 of the events have occurred since the 2019 Plan.

### SIGNIFICANT EVENTS

#### June 2, 2000 – Saratoga County

A powerful cold front swept through eastern New York, leading to severe weather events across the region, with the combination of unstable air and strong upper-level winds resulting in over 40 reported incidents of severe weather, primarily due to straight-line winds and hail. Numerous communities within Saratoga County experiencing significant damage, including trees falling on homes in the Village of Round Lake, two mobile homes destroyed in the Town of Galway, one mobile home crushed in the Village of Ballston Spa, and downed trees and power lines in the Town of Milton. Across eight different reports made for jurisdictions within the Saratoga County planning area, total property damage was estimated at \$2,672,800 (2024 dollars).

#### September 21, 2000 – Town of Ballston and Village of Ballston Spa

A line of thunderstorms that formed ahead of a fast-moving and powerful cold front became severe as they moved through eastern New York during the early morning. These severe storms impacted multiple counties, but most severely affected Saratoga County in the Village of Ballston Spa. Wind speeds in the area were estimated between 75 and 100 miles an hour, significantly damaging the Curtis Lumber facility. Impacts to the facility included destroying a portion of a barn, scattered heavy lumber across the yard, removed roofing, and sending a piece of roofing through the cab of a parked truck cab. Two people were inside the truck; the driver was critically injured

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and had to be removed with the Jaws of Life, another passenger sustained superficial injuries. The damage generally followed a large fan pattern consistent with an intense microburst. In addition to the two injuries, property damages were estimated at \$441,500 (2024 dollars).

### **June 5, 2002 – Town of Malta, Village of Ballston Spa, Town of Stillwater, and Town of Round Lake**

Severe thunderstorms developed across Saratoga County during a significant weather outbreak, including a macroburst that formed in the Town of Malta and moved through Village of Ballston Spa and Town of Stillwater. Wind speeds in the area reached up to 115 mph, causing significant damage. Impacts included a fan-like pattern of downed trees, several road closures, a house in Ballston Spa losing its roof, a tree downed onto a home in Round Lake, and up to 10,000 customers experiencing power outages. Altogether, damages were estimated at \$293,400 (2024 dollars).

### **April 13, 2020 – Town of Ballston, Village of Ballston Spa, Town of Milton, and Saratoga County**

A strong storm system impacted eastern New York throughout the day, resulting in severe thunderstorms with strong and damaging winds. Impacts were reported across the Saratoga County planning area, including a tree downed onto a house, a transformer being blown down, and roof damage to a storage facility along Route 50. Altogether, damages were estimated at \$19,200 (2024 dollars).

### **October 7, 2020 – Town of Halfmoon**

A severe thunderstorm wind event affected Saratoga County as part of a larger storm system across the Northeast. The region experienced significant wind gusts up to 85 mph, contributing to widespread damage and power outages. Across the region, more than 160,000 power outages occurred, and schools closed the following day due to the lack of power. In the Town of Halfmoon, one fatality occurred when a pine tree was blown down onto a man's car.

## PROBABILITY OF FUTURE EVENTS

Thunderstorms and damaging wind events in the planning area are most likely to occur during the spring and fall seasons when severe weather is most common. Based on available records of historic events, there have been a total of 886 events in a 64.5-year reporting period, which provides an estimated annual occurrence of 13 to 14 events every year. Even though the intensity of wind events is not always damaging for the Saratoga County planning area, the frequency of occurrence for a wind event is "Highly Likely". This means that an event is probable within the next year for the Saratoga County planning area, including all participating jurisdictions.

## VULNERABILITY AND IMPACT

Vulnerability is difficult to evaluate since wind events can occur at different strength levels, in random locations, and can create relatively narrow paths of destruction. Due to the randomness of these events, all existing and future structures and facilities within the Saratoga County planning area could potentially be impacted and remain vulnerable to possible injury and property loss from strong winds.

Trees, power lines and poles, signage, radio towers, concrete block walls, storage barns, windows, garbage receptacles, brick facades, and vehicles, unless reinforced, are vulnerable to

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wind events. More severe damage involves windborne debris; in some instances, patio furniture and other lawn items have been reported to have been blown around by wind and, very commonly, debris from damaged structures in turn have caused damage to other buildings not directly impacted by the event. In numerous instances roofs have been reported as having been torn off of buildings.

Mobile, or manufactured, homes are especially at risk for damage, injury, and death. Even anchored mobile homes are at an increased risk and can be severely damaged when wind gusts reach 80 mph or higher. According to the American Community Survey, five-year estimates for 2022, a total of 7,153 manufactured homes (6 percent of the total housing stock) are located in the Saratoga County planning area. In addition, 46 percent (approximately 51,143 structures) of the housing structures in the Saratoga County planning area were built before 1980. These structures would typically be built to lower or less stringent construction standards than newer construction and may be more susceptible to damage during significant wind events. Based on 2022 American Community Survey (ACS) five-year estimates, the City of Mechanicville, Village of Galway, and Village of Waterford have a greater vulnerability to wind events due to 85 percent or more of their housing stock being built before 1980.

**Table 19-5. Structures at Greater Risk by Participating Jurisdiction<sup>9</sup>**

JURISDICTION	BUILT PRIOR TO 1980	PERCENT OF HOUSING STOCK	MOBILE HOME	PERCENT OF HOUSING STOCK
Saratoga County <sup>10</sup>	51,143	47%	7,153	7%
Town of Ballston	2,298	45%	52	1%
Village of Ballston Spa	1,938	78%	0	0%
Town of Charlton	1,357	77%	0	0%
Town of Clifton Park	7,504	48%	76	1%
Town of Corinth	1,967	62%	426	14%
Village of Corinth	938	76%	10	1%
Town of Day	949	67%	198	14%
Town of Edinburg	1,086	59%	407	22%
Town of Galway	1,037	57%	42	2%
Village of Galway	68	86%	10	13%
Town of Greenfield	1,158	31%	497	13%
Town of Hadley	590	56%	101	10%
Town of Halfmoon	2,958	25%	903	8%
Town of Malta	2,968	33%	930	10%
City of Mechanicville	2,492	86%	0	0%

<sup>9</sup> U.S. Census Bureau, American Community Survey, 2022

<sup>10</sup> County totals include all housing units within the county lines, including unincorporated areas and non-participating jurisdictions within the County.

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JURISDICTION	BUILT PRIOR TO 1980	PERCENT OF HOUSING STOCK	MOBILE HOME	PERCENT OF HOUSING STOCK
Town of Milton	3,690	46%	1,052	13%
Town of Moreau	3,527	51%	499	7%
Town of Northumberland	528	27%	135	7%
Town of Providence	338	34%	132	13%
Village of Round Lake	256	65%	8	2%
Town of Saratoga	1,479	55%	191	7%
City of Saratoga Springs	8,709	60%	133	1%
Village of Schuylerville	521	74%	23	3%
Village of South Glens Falls	1,297	74%	0	0%
Town of Stillwater	1,940	46%	260	6%
Village of Stillwater	506	56%	49	5%
Village of Victory	172	64%	49	18%
Town of Waterford	2,950	72%	48	1%
Village of Waterford	1,103	96%	26	2%
Town of Wilton	1,618	22%	1,065	15%

While all citizens are vulnerable to the impacts of damaging winds, forced relocation and disaster recovery drastically impacts low-income residents who lack the financial means to travel, afford a long-term stay away from home, and to rebuild or repair their homes. An estimated 7 percent of the planning area population lives below the poverty level (Table 19-6).

**Table 19-6. Populations at Greater Risk by Jurisdiction<sup>11</sup>**

JURISDICTION	BELOW POVERTY LEVEL
Saratoga County	15,598
Town of Ballston	538
Village of Ballston Spa	338
Town of Charlton	191
Town of Clifton Park	762
Town of Corinth	641
Village of Corinth	373
Town of Day	123

<sup>11</sup> US Census Bureau, American Community Survey, 2022

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JURISDICTION	BELOW POVERTY LEVEL
Town of Edinburg	200
Town of Galway	319
Village of Galway	29
Town of Greenfield	867
Town of Hadley	197
Town of Halfmoon	979
Town of Malta	1,287
City of Mechanicville	1,072
Town of Milton	941
Town of Moreau	1,752
Town of Northumberland	330
Town of Providence	259
Village of Round Lake	25
Town of Saratoga	321
City of Saratoga Springs	2,879
Village of Schuylerville	151
Village of South Glens Falls	387
Town of Stillwater	893
Village of Stillwater	225
Village of Victory	108
Town of Waterford	478
Village of Waterford	199
Town of Wilton	539

The Saratoga County Planning Team identified the following critical facilities as assets that are considered the most important to the planning area and are susceptible to a range of impacts caused by wind events. The critical infrastructure with the greatest vulnerability to these events are power and communications facilities. Failures of these facilities can result in a loss of service as well as a variety of cascading impacts, which may pose enormous risk to individuals dependent on electricity as a medical necessity. For a comprehensive list of identified critical facilities for each participating entity please see Appendix C.

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**Table 19-7. Critical Facilities Vulnerable to Wind Events**

CRITICAL FACILITIES	POTENTIAL IMPACTS
<p>Emergency Response Departments (EOC, Fire, Police, EMS), Hospitals and Medical Centers</p>	<ul style="list-style-type: none"> <li>• Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications.</li> <li>• Emergency vehicles can be damaged by falling trees or flying debris.</li> <li>• Power outages could disrupt communications, delaying emergency response times.</li> <li>• Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities.</li> <li>• Debris/downed trees can impede emergency response vehicle access to areas.</li> <li>• Increased number of structure fires due to gas line ruptures and downed power lines, further straining the capacity and resources of emergency personnel.</li> <li>• First responders are exposed to downed power lines, unstable and unusual debris, hazardous materials, and generally unsafe conditions.</li> </ul>
<p>Airport, Academic Institutions, Animal Shelters, Evacuation Centers &amp; Shelters, Governmental Facilities, Residential/ Assisted Living Facilities</p>	<ul style="list-style-type: none"> <li>• Structures can be damaged by falling trees or flying debris.</li> <li>• Power outages could disrupt critical care.</li> <li>• Backup power sources could be damaged.</li> <li>• Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities.</li> <li>• Evacuations may be necessary due to extended power outages, gas line ruptures, or structural damage to facilities.</li> <li>• Power outages and infrastructure damage may prevent larger airports from acting as temporary command centers for logistics, communications, and emergency operations.</li> <li>• Temporary break in operations may significantly inhibit post event evacuations.</li> <li>• Damaged or destroyed highway infrastructure may substantially increase the need for airport operations.</li> </ul>
<p>Commercial Suppliers (food, gas, etc.)</p>	<ul style="list-style-type: none"> <li>• Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable.</li> <li>• Essential supplies like medicines, water, food, and equipment deliveries may be delayed.</li> <li>• Economic disruption due to power outages and fires negatively impact airport services as well as area businesses reliant on airport operations.</li> </ul>
<p>Utility Services and Infrastructure (electric, water, wastewater, communications)</p>	<ul style="list-style-type: none"> <li>• Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications.</li> <li>• Emergency vehicles can be damaged by falling trees or flying debris.</li> <li>• Power outages could disrupt communications, delaying emergency response times.</li> <li>• Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities.</li> <li>• Debris/downed trees can impede emergency response vehicle access to areas.</li> <li>• Increased number of structure fires due to gas line ruptures and downed power lines, further straining the capacity and resources of emergency personnel.</li> </ul>

A wind event can also result in traffic disruptions, injuries, and in rare cases, fatalities. Thunderstorm winds experienced in the Saratoga County planning area have resulted in one fatality and eleven injuries. In terms of structural and crop damages, the impact of wind events



## SECTION 19: WIND

experienced in the Saratoga County planning area in the past 64.5 years have resulted in an estimated total of \$19,946,400 (2024 dollars) in damages, with an average annualized loss of \$309,200. The severity of impact to the built environment and crops would be considered Limited, with less than 10 percent of property expected to be destroyed and critical facilities shut down for less than 24 hours. However, with eleven injuries and one fatality, the impact is considered “Substantial” with multiple injuries and fatalities possible depending on the severity of the event.

**Table 19-8 Estimated Annualized Losses by Participating Jurisdiction**

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATE
Saratoga County	\$2,397,400	\$37,200
Town of Ballston / Village of Ballston Spa	\$950,300	\$14,700
Town of Charlton	\$75,800	\$1,200
Town of Clifton Park	\$1,164,900	\$18,100
Town and Village of Corinth	\$15,600	\$200
Town of Day	\$1,100	\$0
Town of Edinburg	\$202,500	\$3,100
Town and Village of Galway	\$473,700	\$7,300
Town of Greenfield	\$100,000	\$1,600
Town of Hadley	\$10,400	\$200
Town of Halfmoon	\$67,100	\$1,000
Town of Malta	\$189,400	\$2,900
City of Mechanicville	\$55,600	\$900
Town of Milton	\$2,041,000	\$31,600
Town of Moreau	\$19,900	\$300
Town of Northumberland	\$15,200	\$200
Town of Providence	\$46,300	\$700
Village of Round Lake	\$334,900	\$5,200
City of Saratoga Springs	\$10,871,900	\$168,600
Town of Saratoga	\$31,600	\$500
Village of Schuylerville	\$168,000	\$2,600
Village of South Glens Falls	\$32,500	\$500
Town and Village of Stillwater	\$222,500	\$3,400
Village of Victory	\$0	\$0
Town and Village of Waterford	\$21,000	\$300
Town of Wilton	\$437,800	\$6,800
<b>TOTALS</b>	<b>\$19,946,400</b>	<b>\$309,200</b>

## SECTION 19: WIND

### ASSESSMENT OF IMPACTS

Wind events have the potential to pose a significant risk to people and can create dangerous and difficult situations for public health and safety officials. Wind conditions can be frequently associated with a variety of impacts, including:

- Individuals exposed to the storm can be struck by flying debris, falling limbs, or downed trees causing serious injury or death.
- Structures can be damaged or crushed by falling trees, which can result in physical harm to the occupants.
- Significant debris and downed trees can result in emergency response vehicles being unable to access areas of the community.
- Downed power lines may result in roadways being unsafe for use, which may prevent first responders from answering calls for assistance or rescue.
- During exceptionally heavy wind events, first responders may be prevented from responding to calls, as the winds may reach a speed at which their vehicles and equipment are unsafe to operate.
- Wind events often result in widespread power outages increasing the risk to more vulnerable portions of the population who rely on power for health and/or life safety.
- Extended power outage often results in an increase in structure fires and carbon monoxide poisoning, as individuals attempt to cook or heat their homes with alternate, unsafe cooking or heating devices, such as grills.
- First responders are exposed to downed power lines, unstable and unusual debris, hazardous materials, and generally unsafe conditions.
- Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications.
- Critical staff may be unable to report for duty, limiting response capabilities.
- County, City, Town, or Village departments may be damaged, delaying response and recovery efforts for the entire community.
- Private sector entities that residents rely on, such as utility providers, financial institutions, and medical care providers may not be fully operational and may require assistance from neighboring communities until full services can be restored.
- Economic disruption negatively impacts the programs and services provided by the community due to short- and long-term loss in revenue.
- Some businesses not directly damaged by wind events may be negatively impacted while roads are cleared and utilities are being restored, further slowing economic recovery.
- Older structures (46 percent of the planning area) built to less stringent building codes may suffer greater damage as they are typically more vulnerable to winds.
- Large scale wind events can have significant economic impact on the affected area, as it must now fund expenses such as infrastructure repair and restoration, temporary services and facilities, overtime pay for responders, and normal day-to-day operating expenses.
- Businesses that are more reliant on utility infrastructure than others may suffer greater damage without a backup power source.
- Recreational areas and parks may be damaged or inaccessible due to downed trees or debris, causing temporary impacts to area businesses.

## SECTION 19: WIND

- Historical sites and properties, a total of 82 buildings, districts, and sites are listed on the National Register of Historic Places and are placed at a higher risk of impact.

The economic and financial impacts of damaging winds on the area will depend entirely on the scale of the event, what is damaged, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by the community, local businesses, and citizens will also contribute to the overall economic and financial conditions in the aftermath of any wind event.

## CLIMATE CHANGE CONSIDERATIONS

The impacts on the frequency and severity of severe wind events due to climate change are unclear. However, as ocean temperatures rise due to climate change, more moisture is evaporating into the atmosphere. The warm and moist air masses that fuel severe weather may become more unstable on average, which could favor the increased development of thunderstorms and wind related events. It is suspected that an increase in thunderstorms would mean an increase in damaging winds, but there is limited data available to understand the full scope of future climate change impacts.



**SARATOGA**  
**COUNTY** NEW YORK

**SECTION 20**  
**INVASIVE SPECIES**

## SECTION 20: INVASIVE SPECIES

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### HAZARD DESCRIPTION



Infestation occurs when an area sees the emergence of an excessive population of pest organisms which have the potential to carry diseases, destroy crops, or harm the environment. When the pest organisms are non-native to the environment they are infesting, they are considered an invasive species. These pest organisms may be insects, mammals, birds, parasites / pathogens, plants, or fungi that compete for natural resources and can transmit diseases to humans, crops, and livestock, thereby threatening the existing environment.

Invasive species are of particular concern to Saratoga County’s environment and population. The U.S. Department of Agriculture’s (USDA) National Invasive Species Information Center defines an invasive species as a species which is non-native (or alien) to an ecosystem, and whose introduction causes or is likely to cause economic or environmental harm or harm to human health.<sup>1</sup> The pathways by which invasive species are introduced to a new habitat may be natural or created by human activity. Natural pathways include changing winds or currents, whereas human-caused pathways may be intentional, like through the horticultural or pet trade, or unintentional, like through the inadvertent transport of organisms in shipments of goods. International trade has proliferated the rate at which invasive species from across the globe can enter and disrupt new habitats.

In the United States, few states have dealt with a greater number of invasive species than New York State. As a prominent hub for international travel and trade, there is ample opportunity for invasive species to be introduced to New York State year-round. Per the New York Natural Heritage Program (NYNHP), there are over 7,000 invasive species confirmed to be present in New York, with 497 species being actively tracked by NYNHP. Of those being tracked, 62 species are non-native forest pests, the most of any state in the country.<sup>2</sup>

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<sup>1</sup> Source: <https://www.invasivespeciesinfo.gov/what-are-invasive-species>

<sup>2</sup> Source: <https://www.arcgis.com/apps/MapJournal/index.html?appid=177bdd39e7d14be4b1ddce1bce925cad>

## SECTION 20: INVASIVE SPECIES

### LOCATION

The location of an infestation or invasive species is dependent on the preferred habitat of each species. Because of this, infestations and invasive species have the potential to occur across the entire Saratoga County planning area. Depending on the type of species and its effects on the surrounding environment, infestations can occur in, and harm the rural environment, waterways, or urban areas.

Saratoga County's large area of rural and forested land make the county especially susceptible to certain types of infestations. With over 73,000 acres of farmland<sup>3</sup>, large swathes of Saratoga County could be greatly impacted by agricultural pests which have the capability to destroy crops.

A multitude of large lakes and waterways are within the Saratoga County planning area, notably Saratoga Lake, Round Lake, portions of Great Sacandaga Lake, the Hudson River, and the Mohawk River. In total, approximately 34 square miles in the county are comprised of water. These bodies of water are important to the county's tourism and agriculture economies, may provide drinking water to the surrounding area, and crucial parts of the local ecosystem. Aquatic infestations from species like quagga and zebra mussels may reduce the quality and quantity of recreational opportunities, damage essential infrastructure, and clog water delivery systems.

Invasive species are primarily spread unintentionally by human activities, such as international trade. Insects and other pests can go undetected in shipments, hiding in shipping palettes and crates, and be quickly shipped and released into new environments. Due to this phenomenon, areas of Saratoga County where manufacturing and other industries which receive shipments of goods may serve as an entry point for invasive species into the planning area.

Other factors that may contribute to the proliferation of invasive species and infestations across the entire Saratoga County planning area include the intentional or accidental release of pets, ornamental plants escaping into the wild, and changes in climate bringing in previously foreign species. Figure 20-1 shows confirmed sightings of invasive species in the planning area submitted to iMapInvasives, New York State's official invasive species database.<sup>4</sup>

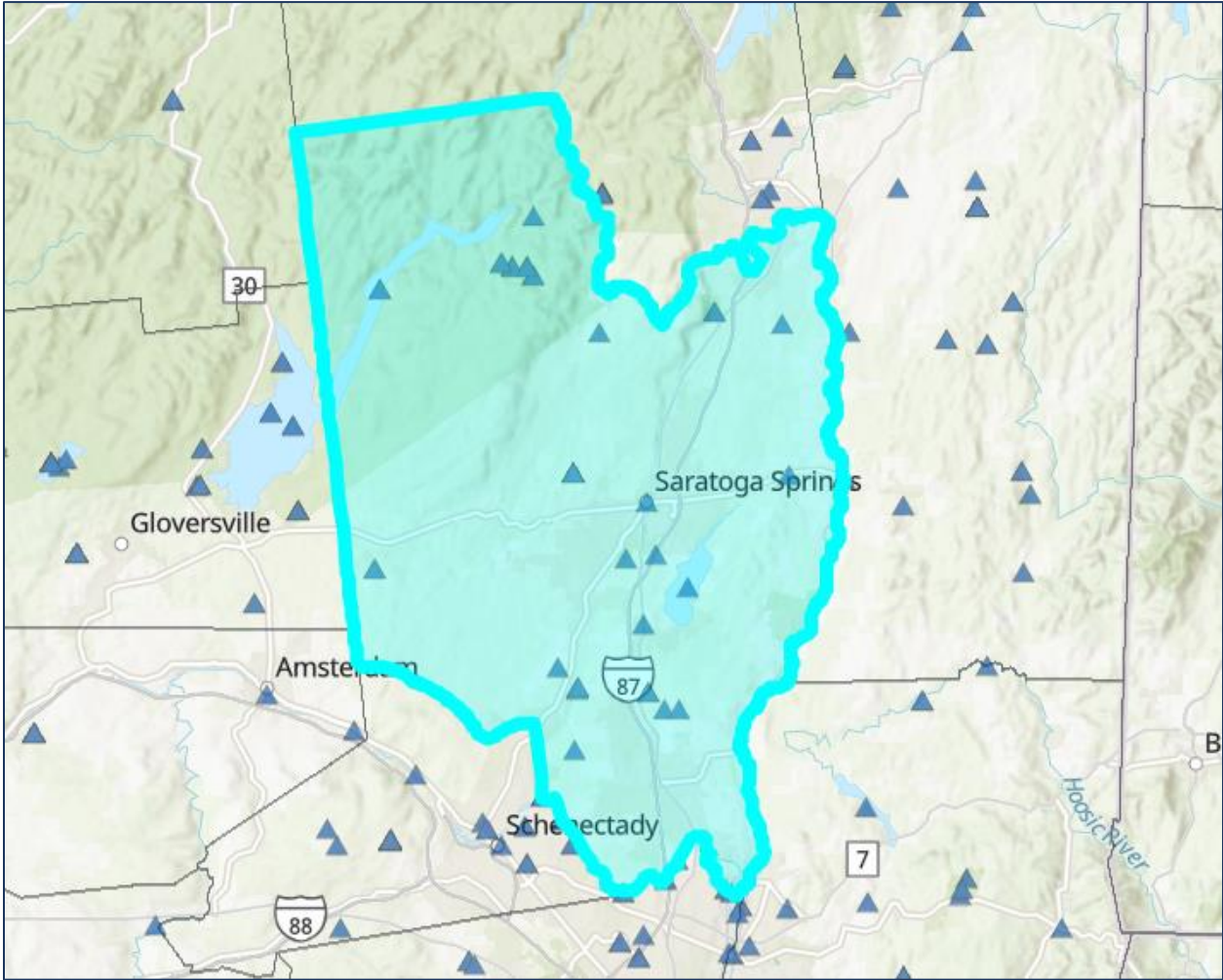
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<sup>3</sup> 2022 USDA Census of Agriculture

<sup>4</sup> Source: <https://www.nyimainvasives.org/data-and-maps>

SECTION 20: INVASIVE SPECIES

Figure 20-1. Confirmed Invasive Species Sightings in Saratoga County



**EXTENT**

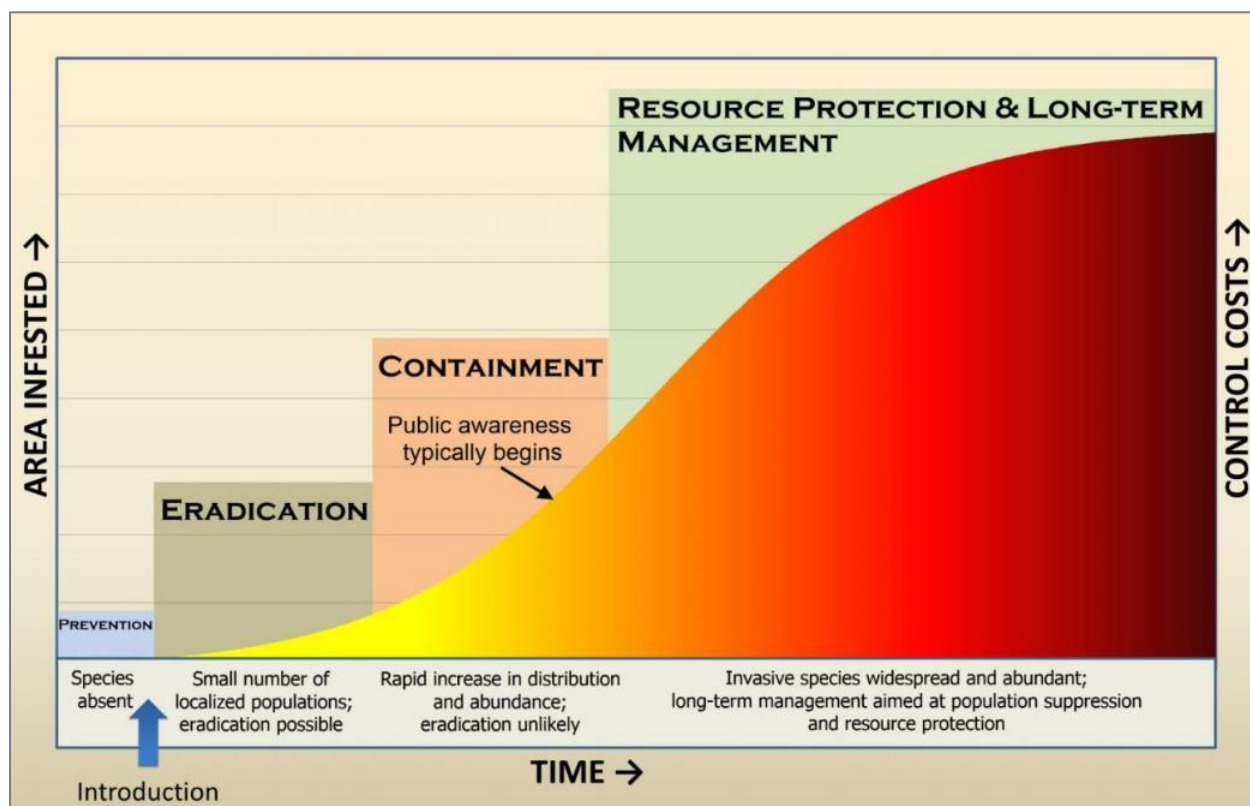
The extent of an invasive species will depend on each individual species and its ability to cause harm. Threat levels from infestations and invasive species range from nuisance to widespread and significant. Existing factors in the county may contribute to the degree of impact of an infestation event. For example, if an ecosystem is already stressed, such as during a drought, invasive species threats may intensify as they compete for limited resources. Many invasive species already have established populations in the Saratoga County planning area, and those with a high probability of causing harm to the environment or human population present a constant threat.

The New York State Department of Environmental Conservation and other groups have partnered to form eight Partnerships for Regional Invasive Species Management (PRISMs), which work to minimize, detect, prevent, and control invasive species in the state. The Capital Region PRISM, hosted by Cornell Cooperative Extension of Saratoga County, covers an 11-county area including portions of the Saratoga County planning area. PRISMs utilize the invasion curve (Figure 20-2), which measures time abundance, and management response for invasive species, to determine appropriate management strategies. The feasibility of invasion prevention, eradication, or

## SECTION 20: INVASIVE SPECIES

containment decreases as time goes on and species populations increase, resulting in costly resource protection and management measures against abundant invasive species.

**Figure 20-2. Invasion Curve**



In 2016, New York State’s PRISMs adopted a unifying framework for categorizing species on the invasion curve, called the Tiers, which determine threat levels and appropriate strategies for invasive species. PRISM tiers and data were implemented in assessing the risk of infestation in Saratoga County. Table 20-1 lists descriptions for each of these tiers.

**Table 20-1. PRISM Invasive Species Tiers**

TIER	POPULATION STATUS	DESCRIPTION	IMPACT (Current or Future)
Tier 1	None in PRISM	<b>Early Detection/Prevention:</b> Highest level of early detection survey efforts. Should conduct delineation surveys and assign to appropriate Tier if detected. a) Inside buffer, but not in PRISM b) Outside PRISM and Buffer, but close (eastern North America) c) Far outside PRISM and buffer (not in east NA), but introduction pathway exists	Very High or High
Tier 2	Low; eradication or full containment may be feasible	<b>Eradication:</b> Highest level of early detection response efforts. High impact species with low enough abundance and suitable treatment method available to make eradication feasible within the PRISM. Need delineation surveys to determine extent.	Very High or High



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TIER	POPULATION STATUS	DESCRIPTION	IMPACT (Current or Future)
Tier 3	Medium; strategic management to contain infestations and slow spread	<b>Containment:</b> Target strategic management to slow the spread, as likely too widespread for eradication, but many surrounding regions could be at risk if left unattended. For plants, use the IPMDAT. Possible eradication candidate only if adequate resources and effective control methods available.	Very High or High
Tier 4	High; established or widespread in PRISM	<b>Local Control:</b> Eradication from PRISM not feasible; focus on localized management over time to contain, exclude, or suppress to protect high-priority resources like rare species or recreation assets. Be strategic when deciding if / where to control.	Very High or High
Tier M	Unknown	<b>Monitor:</b> Species that need more research, mapping, and monitoring to understand their invasiveness. This includes naturalized species and cultivated-only species that are known to be invasive in other regions but are not yet invasive here. Invasiveness may change with environmental or genetic changes. Should monitor populations on a regular basis to see if they are starting to become invasive and assign to appropriate Tier if invasive infestations detected.	Unknown
Medium Impact (Unranked)	Varying/Unknown	<b>Evaluate:</b> Further evaluate impacts and PRISM resources to see if the species should be assigned to one of the other lists. If this species could feasibly become high impact with climatic or other environmental changes, consider moving to the appropriate High Impact row based on abundance. If too little is known, consider moving to "Monitor".	Medium

According to the tier designations for the Capital Region PRISM, which includes Saratoga County, the region contains many species in Tier 1 (89 species), Tier 2 (43), Tier 3 (29), Tier 4 (55), and Tier M (29).

Of the 89 Tier 1 species the Capital Region PRISM has identified in the region, 75 are graded as having “high” or “very high” invasiveness rankings. Additionally, 18 Tier 1 species are classified as having between “negative” and “very high negative” socio-economic impacts. Since these species are not currently known to be in the Saratoga County planning area, the introduction of these species may have novel, significant impacts on the environment and population.

Based on the increasing rate of invasive species infesting new habitats globally, and the extent of existing invasive species already present in the planning area, Saratoga County can expect significant impacts from invasive species on their ecosystems. However, due to the largely unpredictable ways that invasive species are introduced, as well as the variance in each species’ impact, the extent of an infestation may be difficult to anticipate.

## SECTION 20: INVASIVE SPECIES

### HISTORICAL OCCURRENCES

Infestations and invasive species have occurred in Saratoga County and New York State for over 100 years. Often instigated by human action, either intentional or accidental, many of these infestations have led to sustained populations of invasive species within Saratoga County. While a comprehensive database for invasive species incidents is not available for the planning area, the origins of several significant pest species that continue to impact the Saratoga County planning area today are detailed below.

**Zebra Mussel:** Transported to the United States in the ballast water of freighters from European ports, zebra mussels were first discovered in the Great Lakes in 1988 and have since spread throughout multiple regions of the country. These small shellfish can be incredibly harmful to ecosystems, utilities, and infrastructure. Zebra mussels propagate incredibly quickly, meaning infestations can quickly become unmanageable. For example, a water supply system serving 50,000 people in a Michigan city had to shut down due to pump failure caused by zebra mussels in its intake system. These mussels are known to be in and around the Saratoga County planning area, having been documented in the Hudson River since 1991. The risks of food web disruption, native mussel species decline, clogged water pipes, and damaged equipment remain as the invasive species population is still present.

**Emerald Ash Borer:** The emerald ash borer is an invasive beetle from Asia that kills North American ash trees; all varieties of ash trees native to New York are susceptible to this species. This beetle was first discovered in New York State in 2009 and has now been confirmed in all but three New York counties. Ash trees are very common in many New York communities, and typically die within two to four years of infestation. Dead ash trees pose significant public safety hazards and municipal liability issues. Additionally, ash trees are a valuable resource; ash seeds are a food source for wildlife and ash wood is a commercially valuable resource used in products like flooring and furniture. A quarantine is in place in the State of New York on ash wood as a result of the emerald ash borer, placing restrictions on the movement of ash wood.

**Water Chestnut:** Introduced in the United States in the mid-1800s as an ornamental plant, water chestnut was soon found growing in Collins Lake near Scotia, New York. An aquatic invasive plant, water chestnut colonizes areas of freshwater lakes, ponds, and slow-moving streams and rivers where it negatively impacts aquatic ecosystems and water recreation. Infestations of water chestnut leads to numerous impacts to the environment and nearby communities including: making travel by boat, kayak, or canoe difficult due to their dense mats of roots; their sharp spines can cause wounds when stepped on; their dense mats of vegetation can shade out native aquatic plants that provide food and shelter to native wildlife; and decomposition of these plants may reduce dissolved oxygen levels which may impact fish.

### PROBABILITY OF FUTURE EVENTS

Historical trends show increased incidents of infestation across New York and in the Saratoga County planning area, due to factors like changes in climate and increased movement of humans and products globally introducing invasive species to new environments. Due to New York State's prominence in global travel and trade, there is frequent opportunity for invasive species to be introduced to the state, and Saratoga County, year-round.

In addition to negative impacts on the natural environment, infestation events may cause secondary hazards for the county population and infrastructure. The degree to which an

## SECTION 20: INVASIVE SPECIES

Infestation or invasive species event affects Saratoga County is dependent on circumstances like the type of species, how quickly that species can spread its population, and the types of preemptive regulatory measures the County has in place to slow or stop the spread of invasive species.

Based on the historic records, trends, and team input, the frequency of occurrence for invasive species events is considered “Highly Likely” with events probable within the next year.

### VULNERABILITY AND IMPACT

Due to the varying nature of invasive species, the majority of Saratoga County is vulnerable to invasive species events, with the areas most impacted depending on the circumstances of a particular infestation.

The most severe and direct impacts from infestations occur in the natural environment. Invasive species cause or contribute to habitat degradation and loss; loss of native fish, wildlife, and tree species; and an overall decline in biodiversity and environmental health. Pest insects weaken or kill trees and other native plant life, rapid-growing invasive plants can outcompete native species for nutrients, and invasive animal life can result in the disruption of an ecosystem’s food chain. The Saratoga County planning area includes public parks and conservation areas whose ecosystems would be threatened by infestation events. Subsequently, the county’s tourism economy could suffer as natural and cultural resources become damaged, unsafe, or less appealing.

Certain types of invasive pests affect agriculture, capable of destroying crops and having a dramatic impact on the agricultural economy. With over 73,700 acres of farmland, Saratoga County is particularly vulnerable to this type of impact caused by infestations of agricultural pests.

The most notable agricultural pest is the spotted lanternfly, which has rapidly spread across New York State since July 2020, posing a great potential threat to Saratoga County. Spotted lanternflies feed on as many as 70 different plant species, including important agricultural products like grapes, apple trees, and hops. If left unchecked, a spotted lanternfly infestation could cost New York State hundreds of millions of dollars. According to the Capital Region PRISM, the spotted lanternfly is considered a Tier 3 invasive species in the planning area, meaning it is already present but not necessarily widespread.<sup>5</sup>

Public health impacts from infestations and invasive species may vary from a negligible or nuisance level to wide-spread and significant. Giant hogweed, an invasive plant species already detected in Saratoga County, produces dangerous sap that can cause severe skin irritation, blistering, and scarring; in rare cases, contact between the eyes and giant hogweed sap can cause blindness. Insect or rodent pests can introduce new diseases or serve as vectors for existing ones. Secondary impacts, such as trees falling due to infestation, create safety hazards for people and structures in the planning area. Pest infestations within homes and buildings can cause health concerns and worsen symptoms of the infirmed, particularly for vulnerable populations such as those with asthma and allergies.

The population over 65 and under the age of 5 in the Saratoga County planning area is estimated at 24 percent of the total population or an estimated total of 55,821 potentially vulnerable residents

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<sup>5</sup> Source: <https://lookerstudio.google.com/reporting/b0bae43d-c65f-4f88-bc9a-323f3189cd35/page/QUCKC>

## SECTION 20: INVASIVE SPECIES

in the planning area based on age. An estimated 7 percent of the planning area population live below the poverty level. These populations may experience greater impact from the infestation hazard or have less financial resources to recover from infestation-caused damages to their health, property, or business.

**Table 20-2. Populations at Greater Risk by Participating Entity<sup>6</sup>**

JURISDICTION	POPULATION				
	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Saratoga County	44,772	11,049	26,426	15,598	4,430
Town of Ballston	1,957	521	964	538	84
Village of Ballston Spa	670	158	357	338	262
Town of Charlton	1,137	245	470	191	26
Town of Clifton Park	6,988	2,095	3,220	762	953
Town of Corinth	1,369	443	910	641	107
Village of Corinth	476	181	424	373	58
Town of Day	281	0	179	123	2
Town of Edinburg	406	47	220	200	0
Town of Galway	859	234	497	319	0
Village of Galway	44	21	26	29	0
Town of Greenfield	1,704	429	1,202	867	15
Town of Hadley	492	114	303	197	7
Town of Halfmoon	4,509	1251	2,833	979	987
Town of Malta	3,666	579	2,035	1,287	305
City of Mechanicville	964	317	906	1,072	37
Town of Milton	3,010	460	2,142	941	298
Town of Moreau	3,017	902	2,392	1,752	312
Town of Northumberland	822	259	541	330	126
Town of Providence	262	77	223	259	5
Village of Round Lake	152	53	68	25	12
Town of Saratoga	928	277	651	321	36
City of Saratoga Springs	5,997	1,018	3,323	2,879	880
Village of Schuylerville	209	106	199	151	12

<sup>6</sup> U.S. Census Bureau, American Community Survey, 2022

# SECTION 20: INVASIVE SPECIES

JURISDICTION	POPULATION				
	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Village of South Glens Falls	687	204	506	387	23
Town of Stillwater	1,645	621	654	893	48
Village of Stillwater	211	56	164	225	0
Village of Victory	115	57	112	108	7
Town of Waterford	1,685	254	992	478	68
Village of Waterford	570	107	310	199	0
Town of Wilton	3,074	906	1769	539	134

The critical facilities identified by the Saratoga County Planning Team are vulnerable to a range of impacts caused by infestation. For example, the tree mortality caused by an infestation can exacerbate the impacts of natural hazards. Many of the impacts to critical facilities identified by the Saratoga County Planning Team are similar to the impacts listed in Sections 6 through Section 19. For a comprehensive list by participating jurisdiction see Appendix C.

Impacts of infestations and invasive species experienced in the Saratoga County planning area, including participating jurisdictions, have not resulted in reported injuries, fatalities, or major damages, supporting a “Limited” severity of impact. This means injuries and/or illnesses are treatable with first aid, shutdown of facilities and services for less than 24 hours, and less than 10 percent of structures destroyed or with major damage.

## ASSESSMENT OF IMPACTS

Infestations and invasive species have the potential to pose a significant risk to a community’s natural environment, built environment, and human population. Infestations and growing populations of invasive species can be associated with a variety of impacts, including:

- Human health can be negatively impacted due to invasive species carrying new diseases, serving as vectors for existing diseases, or causing wounds through bites, stings, allergens, or other toxins.
- Agricultural production and food security may decrease from pest-caused damage to crops.
- Aquatic invasive species, such as quagga and zebra mussels, reduce the quality and quantity of recreational opportunities, damage essential infrastructure, and clog water delivery systems.
- Local ecosystems may be disrupted as invasive species compete with native organisms for limited resources, altering habitats and reducing biodiversity.
- Native plants and animals face potential extinction as invasive species overwhelm their environment.
- Vulnerable populations, such as those with asthma and allergies, may experience worsened symptoms as infestations take hold in homes and buildings.
- Structural damage can occur in homes and buildings when infested with insect or rodent pests.

## SECTION 20: INVASIVE SPECIES

The economic and financial impacts of infestation or invasive species incidents on the area will depend entirely on the scale of the event, where the event occurs, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by the community, local businesses, and citizens will also contribute to the overall economic and financial conditions in the aftermath of any infestation incident.

### CLIMATE CHANGE CONSIDERATIONS

Climate change is expected to influence future pest infestation events. According to the Fourth National Climate Assessment, climate change is aiding in the spread of invasive species and often the changing climate favors the nonnative invading species over native ones. Warming temperatures will create habitats for invasive species includes allowing certain species to expand geographically and grow the population of the species, as was seen with the emerald ash borer across New York State.<sup>7</sup> Changes in the frequency of occurrence and severity of infestation events in the planning area should be reevaluated in the next planning cycle.

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<sup>7</sup> New York State Department of Environmental Conservation, *Climate Change Effects and Impacts*.  
<https://www.dec.ny.gov/environmental-protection/climate-change/effects-impacts#:~:text=Shifting%20seasons%20can%20also%20impact,borer%20and%20southern%20pine%20beetle.>



**SARATOGA**  
**COUNTY** NEW YORK



SECTION 21  
**MITIGATION**  
**STRATEGY**

## SECTION 21: MITIGATION STRATEGY

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### MITIGATION GOALS

Based on the results of the risk and capability assessments, the Planning Team developed and prioritized the mitigation strategy. This involved utilizing the results of both assessments and reviewing the goals and objectives that were included in the previous 2019 Plan. At the Mitigation Workshop in July 2024, Planning Team members reviewed the mitigation strategy from the previous Plan. The consensus among all members present was that the strategy developed for the 2019 Plan should have the addition of Goal 6 to ensure that all communities and populations are accounted for. The goals and objectives have all been organized to reflect the identified needs in the community.

#### GOAL 1

Protect life and property.

##### *OBJECTIVE 1.1*

Protect critical facilities and infrastructure.

##### *OBJECTIVE 1.2*

Maximize utilization of the latest technology and available studies to provide adequate warning, communication, and mitigation of hazard events.

##### *OBJECTIVE 1.3*

Develop, maintain, strengthen, and promote enforcement of policies, ordinances, regulations, plans and other mechanisms that facilitate hazard mitigation and benefit essential facilities, services, and infrastructure.

##### *OBJECTIVE 1.4*

Implement mitigation actions that enhance the County's capabilities to better profile and assess exposure of hazards, with a focus on decreasing repetitive and severe repetitive loss.

#### GOAL 2

Increase public awareness and preparedness of natural hazards and their risks.

##### *OBJECTIVE 2.1*

Advise the public about health and safety precautions to guard against injury and loss of life from hazards.

##### *OBJECTIVE 2.2*

Encourage property owners to take preventive and mitigative actions in areas that are especially vulnerable to hazards.



## SECTION 21: MITIGATION STRATEGY

### *OBJECTIVE 2.3*

Provide information to promote mitigation among homeowners, renters, and businesses through education on funding resources, partnership opportunities, and insurance coverage for natural hazards.

### **GOAL 3**

Promote a sustainable economy.

### *OBJECTIVE 3.1*

Use the most cost-effective approach to protect existing buildings and public infrastructure from hazards.

### *OBJECTIVE 3.2*

Enact and enforce regulatory measures to ensure that future development will not put people in harm's way or increase threats to existing properties.

### *OBJECTIVE 3.3*

Ensure continuity of governmental operations, emergency services, and essential facilities at the local level during and immediately after disaster and hazard events.

### **GOAL 4**

Protect open space, the environment, and natural resources.

### *OBJECTIVE 4.1*

Protect and preserve environmentally sensitive and critical areas.

### *OBJECTIVE 4.2*

Promote sustainable land development practices with incorporation of current and future hazard considerations into land-use planning and natural resource management.

### *OBJECTIVE 4.3*

Identify, protect, and restore natural land and features that mitigate losses from natural hazards (including wetlands, floodplains, stream corridors, hillsides, and ridge lines).

### **GOAL 5**

Promote cooperation and county wide partnerships.

### *OBJECTIVE 5.1*

Maintain and expand shared services in acquiring, maintaining, and providing emergency services and equipment.

### *OBJECTIVE 5.2*

Strengthen inter-jurisdiction and inter-agency communication, coordination, and partnerships to foster hazard mitigation actions and/or projects.

### *OBJECTIVE 5.3*

Identify and implement strategies to engage public agencies with individual citizens, non-profit organizations, business, and industry to promote hazard mitigation planning and implement mitigation actions more effectively

### **GOAL 6**

Promote equity and protect vulnerable populations and underserved communities through hazard mitigation activities.

## SECTION 21: MITIGATION STRATEGY

### *OBJECTIVE 6.1*

Allocate resources and funding to implement hazard mitigation activities that directly benefit vulnerable and underserved communities.

### *OBJECTIVE 6.2*

Build and support local partnerships to leverage resources and expertise in addressing hazard related equity concerns.

### *OBJECTIVE 6.3*

Establish internal decision-making processes that integrate equity into project selection.

### *OBJECTIVE 6.4*

Monitor and evaluate the effectiveness of mitigation activities to ensure equitable outcomes and protection of vulnerable populations.



**SARATOGA**  
**COUNTY** NEW  
YORK

SECTION 22

**PREVIOUS ACTIONS**

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## SECTION 22: PREVIOUS ACTIONS

### SUMMARY

This section includes analysis from the 2019 Saratoga Multi-Jurisdictional Hazard Mitigation Plan. Planning Team members were given copies of the previous mitigation actions submitted in the 2019 Saratoga County Plan at the mitigation workshop. Each participating jurisdiction reviewed the previous actions and provided an analysis as to whether the action had been completed, should be deferred as an ongoing activity, or be deleted from the Plan Update. The actions from the 2019 Plans are included in this section as they were written in 2019, except for the “2025 Analysis” section.

SECTION 22: PREVIOUS ACTIONS

SARATOGA COUNTY

SARATOGA COUNTY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
SC-1	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	County	Municipality or District the property is located; NYS DHSES; FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long Term	Defer to plan update. Ongoing.
SC-2	Where appropriate, support purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	County	Municipality or District the property is located; NYS DHSES; FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long Term	Defer to plan update. Ongoing.
SC-3	As appropriate, support participation in incentive-based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1-3, 1-6, 2-1, 2-2, 2-3, 2-4, 5-2	Municipality (likely through NFIP Floodplain Administrator)	County, NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Long Term	Defer to plan update. Ongoing.

## SECTION 22: PREVIOUS ACTIONS

SARATOGA COUNTY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
SC-4	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0.	New & Existing	All Hazards	All	All	Municipality (through mitigation planning point of contacts)	County (through Mitigation Planning Coordinator), NYS DHSES	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation Grant Funding for 5-year update	Long Term	Defer to plan update. Ongoing. The County is currently in the process of updating the entire plan. The OEM regularly receives plan updates and provides guidance to municipalities on the update process between update cycles.
SC-5	Strive to maintain compliance with, and good-standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1-2, 1-3, 1-8, 2-2, 2-3, 2-4, 4-1, 4-2, 4-3, 4-4	Municipality (likely through NFIP Floodplain Administrator)	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Long Term	Defer to plan update. Ongoing.
SC-6	Applies to New and/or Existing Structures* Hazard(s) Mitigated Goals Met Objectives Met Lead Support Estimated Cost Sources of Funding Timeline SC-6 C.	New & Existing	All Hazards	1, 3	1-1, 1-7, 3-2, 3-4, 3-5	Municipal Emergency Manager with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Long Term	Completed in 2023. Emergency plans are reviewed and updated on an annual basis.
SC-7	Implement proactive stream/drainage maintenance system to reduce flooding in hazard areas.	Existing	Flood, Severe Storm	1	1-2, 1-9	SWCD	Highway	Low -High	Various sources	Ongoing	Defer to plan update. Ongoing.
SC-8	Provide backup power at critical facilities where necessary.	Existing	All Hazards	1, 3	1-1, 3-4, 3-6	Emergency Services	Not Provided	Med	County, Homeland	Short Term	Defer to plan update. Ongoing. The OEM is in the process of replacing old generators at critical infrastructure sites as funding allows. Four sites have been completed to date.
SC-9	Enhance operations of Emergency Operations Center though	Existing	All Hazards	3	3-3, 3-4, 3-5	Emergency Services	Not Provided	Low - Medium	County, Homeland Security and	Short Term	Completed. The OEM opened a new EOC in 2021. The new EOC

## SECTION 22: PREVIOUS ACTIONS

SARATOGA COUNTY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	technological upgrades, including improved communications systems.								other sources		continues to be improved as needs are identified.
SC-10	Expand public education on ways to protect property before and during hazard events.	Existing	All Hazards	2	2-1, 2-2, 2-3, 2-4, 2-5	Emergency Services	Not Provided	Low	County and other available sources	Long Term	Defer to plan update. Ongoing. The OEM participates in a variety of public engagement events throughout the year and provides materials related to preparedness.
SC-11	Enhance emergency preparedness awareness by active participation in training exercises at both the county and local level.	Existing	All Hazards	All	All	Emergency Services	NYNYS DHSES, FEMA, Law Enforcement, Local Fire Districts, Health Department, RACES, Highway	Low	County, Homeland Security and other sources	Long Term	Defer to plan update. Ongoing.
SC-12	Continue to provide tree trimming along roadways.	Existing	Severe Storm, Severe Winter Storm	1	1-1, 1-3, 1-4	Highway	Emergency Services	Low	Local Funding	Long Term	Defer to plan update. Ongoing.
SC-13	Interagency cooperation with Public Health, DSS, Aging and other agencies to identify vulnerable populations (elderly, homebound, homeless).	Existing	All Hazards	1, 5	1-4, 5-2	Emergency Services	Public Health, DSS, Aging	Low	County, Homeland Security and other sources	Long Term	Defer to plan update. Ongoing. The OEM maintains the special needs registry which is supported by the Health Department and DSS.
SC-14	Develop a toolbox series on planning topics, model laws, and regulatory tools.	New & Existing	All Hazards	1, 2	1-6, 2-5	County EDT&P	NYS DOS, NYS DEC, NYS OPRHP, NYS DHCR, Greenway and other agencies	Low - High	NYS DOS, NYS DHCR and other NYS and Federal sources	Long Term	Defer to plan update. Ongoing.



## SECTION 22: PREVIOUS ACTIONS

SARATOGA COUNTY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
SC-15	Assist local municipalities with training opportunities for municipal planning and zoning officials utilizing updated FEMA floodplain maps.	New	All Hazards	5	5-2, 5-3	County EDT&P with support from NYS and other sources	NYS DOS, NYS DEC, NYPF and other agencies	Low - High	NYS and other sources	Long Term	Defer to plan update. Ongoing through training and regular meetings and event support with municipalities.
SC-16	Encourage the incorporation of conservation subdivision principals into subdivision review.	New	Flood, Ground Failure	1, 4	1-7, 1-8, 4-5	County EDT&P and county agency resources	NYS DOS, NYS DEC and other agencies; NYPF	Low	CWC Local Technical Assistance Grants, NYS DOS Planning Grants, Greenway and other NYS and Federal sources	Long Term	Defer to plan update.
SC-17	Assist local municipalities in developing and updating site plan, subdivision, and zoning laws with specific development standards and guidelines.	New	Flood, Ground Failure	4	4-4, 4-5	EDT&P can provide models and templates but it's up to the municipality to decide whether or not to adopt standards and guidelines	NYS DOS, NYS DEC and other agencies; NYPF	Low - Medium	Not provided	Long Term	Defer to plan update. Ongoing.
SC-18	Encourage municipalities to incorporate sound development principals when reviewing development proposals.	New	All Hazards	4	4-4, 4-5	EDT&P can provide templates but it's up to the municipality to decide whether or not to adopt standards and guidelines	NYS DOS, NYS DEC and other agencies; NYPF	Low	Not provided	Long Term	Defer to plan update. Ongoing.

## SECTION 22: PREVIOUS ACTIONS

SARATOGA COUNTY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
SC-19	Encourage towns and villages to adopt comprehensive plans and land use regulations to foster sound development principals.	New	All Hazards	4	4-1, 4-2, 4-3, 4-4, 4-5	EDP&T and county agency resources	NYS DOS, and other agencies	Low - High	TBD	Long Term	Defer to plan update. Ongoing. The OEM regularly consults with local municipalities in support of planning updates. The OEM encourages all municipalities to have a continuity of operations plan.
SC-20	Create and maintain a natural resources inventory for Saratoga County.	New & Existing	Flood, Ground Failure	1, 4	1-4, 4-4	TBD	NYS DOS, NYS DEC and other agencies	Low - High	TBD	Long Term	Defer to plan update.
SC-21	Authorize the Saratoga County Planning Board to review subdivisions under NYS GML239.	New	All Hazards	All	All	Not provided	Not provided	Not provided	Not provided	Long Term	Completed. The SCPB reviews many subdivisions that appear before municipalities under NYS GML 239. There are some subdivisions that do not require review under GML 239 that are only reviewed at the local level.
SC-22	Undertake a countywide comprehensive plan that would gather input from individual municipalities and take into consideration existing local comprehensive plans and regulatory tools to implement sound development principals.	New & Existing	All Hazards	All	All	Not provided	NYS DOS, NYS	Medium	NYS DHCR TA Grants, NYS DOS, Greenway and other sources	Long Term	Delete Action. Zoning and land use controls are developed and administered at a local level in Saratoga County. At this time, there is no interest at the County or municipal level in pursuing this.
SC-23	Work with existing agencies and organizations to develop open space strategies and conservation standards to be met by new	New	Flood, Ground Failure	4	4-1, 4-2, 4-3, 4-4, 4-5	county agency resources	NYS DOS, NYS DEC and other agencies	Low - High	TBD	Long Term	Completed. Saratoga County regularly works with local municipalities and land trusts on open

## SECTION 22: PREVIOUS ACTIONS

SARATOGA COUNTY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	development projects.										space/farmland conservation strategies. Currently, the Open Space and Farmland Protection program is funded at \$400,000 per year. To date approximately \$6 million in county funding allocated to this program has leveraged over \$30 million dollars in total project costs. Over 5,800 acres of farmland and open space has been permanently protected since the inception of the program.
SC-24	Conduct continued public and stakeholder outreach to promote awareness of this Plan and obtain ongoing public and stakeholder input. Specific activities shall include maintaining the public HMP website, media releases, maintaining copies of the plan in town halls, and may include public meetings.	Existing	All Hazards	1, 5	1-4, 5-3	SC Public Information Office; Local OEMs and stakeholders	Not provided	Low	County Operating budget	Not provided	Defer to plan update. Ongoing.
SC-25	Identify evacuation routes and how this information is accessible to the public. This should include pre-disaster actions required to make evacuation routes accessible. Additionally, this should include provisions available to assist those with access and functional needs.	N/A	All Hazards	1	2-1, 2-2	Not provided	Not provided	Not provided	County	Short Term	Defer to plan update. Ongoing.

## SECTION 22: PREVIOUS ACTIONS

SARATOGA COUNTY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
SC-26	Promote information technology protection by continuing best practice of network security, including redundant firewalls and education of county employees.	Existing	All Hazards	1, 3	1 -1, 3 - 6	County IT	Not provided	Low	County	Short Term	Completed. The best practice of network security is continually being implemented. Redundant firewalls have been deployed, endpoint protection and anti-virus is Next Gen. Vulnerability and pen tests are completed routinely throughout the year. Yearly education and intermittent training have been instituted for all County network users.
SC-27	Implement the Fonda Road culvert up -sizing to increase the capacity of the county culvert and Canal Corp culvert to handle demand.	Existing	Flood	1,3	1 -1, 1 -2, 3 - 6	Saratoga County	NYS Canal Corp	Medium	County, State, Federal	Short Term	Defer to plan update. Ongoing. In 2021, County DPW applied for competitive grant funding for this project but was not selected to receive an award.
SC-28	Conduct education and outreach before and after flood through outreach at fairs, public messaging, and educational material and talks.	N/A	Flood	2	2-1, 2-2, 2-3, 2-4, 2-5	Saratoga County Department of Public Health	Not Provided	Low	Grants/ Volunteer Programming	Short Term	Defer to plan update. Ongoing. The OEM and the Health Department participates in a variety of public engagement events throughout the year and provides materials related to preparedness.
SC-29	Utilize county social services to update Special Needs Registry. Develop a method to maintain and remove individuals from the list.	N/A	All Hazards	2	2-1, 2-2	Saratoga County Office of Emergency Management	County Social Services	Low	County	Short Term	Completed. The OEM maintains the special needs registry which is supported by the Health Department and DSS.

## SECTION 22: PREVIOUS ACTIONS

SARATOGA COUNTY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
SC-30	Determine depth of infrastructure and replace shallow low pressure lines.	Existing	Extreme Temperatures	1, 3	1-1, 3-6	Saratoga County Sewer District #1	Not Provided	High	User Rates; State Grants	Long Term	Delete action. The county sewer district has developed a comprehensive system to monitor the sewer system as a whole and help prevent problems from occurring.
SC-31	Conduct I & I reduction, including: raising manhole structures, creating/updating GIS database, access to infrastructure including floodplain areas, identify infrastructure in floodplain areas, and slip lining/replacement of lines and structures.	Existing	Flood	1, 3	1-1, 3-6	Saratoga County	NYS Canal Corp	Medium	County; NYS; Federal	Short Term	Defer to plan update. Ongoing. Saratoga County contracts a MS4 Stormwater management program manager through the Planning and Economic Development Department and maintains a comprehensive GIS database. Saratoga County Sewer District is currently undergoing a massive project to slip line the entire sewer trunk line.
SC-32	Conduct outreach to dairy producers and farmers to educate and familiarize them with extreme temperature and drought vulnerabilities and connect the producers with farm advisors and extension personnel who can assist with developing heat stress abatement practices and strategies for their specific situations.	N/A	Extreme Temperatures, Drought	2, 3	2-2, 2-5, 3-5	Saratoga County Office of Emergency Management	Not Provided	Low	Existing County Budget	Short Term	Delete action. This action is no longer a priority for the county.

# SECTION 22: PREVIOUS ACTIONS

## TOWN OF BALLSTON

TOWN OF BALLSTON PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TB-1	Where appropriate, support retrofitting, purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting or relocation is determined to be a viable option, consider implementation of that action based on available funding. The Sheriff's Department Civil Division is located in a special flood hazard area; its vulnerability to flood hazards is not fully known and over the life of this plan the town will assess this facility (e.g., document history of damage) to understand its vulnerabilities and mitigation.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	Municipal NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	DOF	Defer to plan update.
TB-2	Consider participation in incentive-based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1-3, 1-6, 2-1, 2-2, 2-3, 2-4, 5-2	Municipal NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Medium	Local Budget	DOF	Defer to plan update.
TB-3	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0.	New & Existing	All Hazards	All	All	Municipal mitigation planning point of contacts	County (through Mitigation Planning Coordinator), NYS DHSES	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation Grant Funding for 5-year update	DOF	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF BALLSTON PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TB-4	Continue to develop, enhance, and implement existing emergency plans. This may (TB-16) Continue to do yearly updates to the Town's Emergency Operations Plan, and work toward the completion of a Town Comprehensive Emergency Management plan that is NIMS Compliant and addresses all hazards. (i.e. Follows the National response Framework, and ESF's 1-20).	New & Existing	All Hazards	1, 3	1-1, 1-7, 3-2, 3-4, 3-5	Municipal Emergency Manager with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget, Shared County DHSES Grant Funding	DOF	Defer to plan update.
TB-5	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3, 5	3-4, 5-1, 5-3	Local Emergency Management, DPW and Roads	municipalities and County	Not provided	Local Budget, Shared County DHSES Grant Funding	DOF	Defer to plan update. In Progress.
TB-6	Continue to do yearly updates to the Town's Emergency Operations Plan, and work toward the completion of a Town Comprehensive Emergency Management plan that is NIMS Compliant and addresses all hazards. (i.e. Follows the National response Framework, and ESF's 1-20).	New & Existing	All Hazards	All	All	Municipality Emergency Management Department,	County and Regional agencies (as appropriate for initiative)	Low - High	Local Budget, Shared County DHSES Grant Funding	DOF	Delete action. This action is a duplicate of TB-4.
TB-7	Alleviate flooding along the Outlet Road which experiences frequent flooding: Outlet Road – Raise the grade of the road, 1-2', co-incident with the excavation for installation and construction of the Ballston Lake Sewer lines and infrastructure for the upcoming Ballston Lake Sewer District project expected to commence 2019-2020. 1) Prepare Pre Disaster Mitigation Grant	Existing	Flood	1, 3	1-1, 3-6	Municipality - Building / Planning Department.	SEMO, FEMA	High	FEMA HMA program with local budget for partial match	DOF	Completed. Outlet road has been raised.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF BALLSTON PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	Application, 2) Review environmental-historic impacts, 3) Perform water environmental impact statement, and 4) Perform a cost-benefit analysis.										
TB-8	Establish a Farmland and Open Space Protection Program to achieve meaningful open space conservation even while growth and development occurs. Per Comprehensive Plan.	New & Existing	Flood, Severe Storm	1, 2, 4	1-6, 1-8, 4-1, 4-2, 4-3, 4-4	Municipality - Farmland Preservation and Protection Committee	County Planning, Soil and Water Conservation, County MS4 Office, ToB LEMC, Water quality committee.	Low	Local Budget, County and State Open Space and Farmland Protection Grants for the Purchase of Development Rights. County, State DHSES for planning and training.	Short Term	Delete action. The Farmland Preservation and Protection Committee has dissolved.
TB-9	Encourage the protection of stream corridors throughout the community, and water quality in Ballston Lake (e.g., stream buffers on classified streams). Included as part of the Ballston Lake Overlay Plan.	N/A	Flood, Severe Storm	4	4-1,	Municipality - Building / Planning Department	County Planning, Soil and Water Conservation, County MS4 Office, ToB LEMC, Water quality committee, BLIA, and the Sewer Committee, D HSES, FEMA, EPA	Medium – High depending on the initiative	FEMA HMA program with local budget for match, and funding from Town's Water Quality Committee.	Ongoing	Defer to plan update.
TB-10	Town should continue to work closely with the DEC and Saratoga County to establish a Stormwater management program and ensure compliance with US EPA Stormwater Phase II regulations. Upgrade and increase the capacity	New & Existing	Flood, Severe Storm	1, 5	1-5, 1-6, 1-7, 5-2	Municipality Building Department	County Planning; County MS4 program, soil and water conservation district, NYS	Medium – High	Local	Ongoing	Defer to plan update.



## SECTION 22: PREVIOUS ACTIONS

TOWN OF BALLSTON PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	of the current Stormwater collection system such that there will be a net reduction in the flood risk caused by Stormwater impacts.						DEC; US EPA, Town Highway, Water and sewer departments (DPW).				
TB-11	Conduct a needs assessment for fire and emergency services jointly with the Town of Ballston Local Emergency Management Committee (ToB LEMC).	N/A	All Hazards	1, 3	3 1-1, 1-4, 3- 1, 3-2, 3-4	ToB LEMC	Building / Planning Department, Highway, Water, Neighboring municipalities; County OES; State, FEMA	Medium	Local	Ongoing	Defer to plan update.
TB-12	Continue to coordinate with neighboring municipalities of Milton, Charlton, Malta Galway, Saratoga County OES, the Saratoga Economic Development Corporation (SEDC), area school districts and emergency service providers, and regional entities such as the Capital District Transportation Committee (CDTC), the Capital District Transportation Authority (CDTA), and the Capital District Regional Planning Commission (CDRPC) in planning related activities. Work through County OES to coordinate with local State, and Federal offices for support.	New & Existing	All Hazards	3, 5	3-3, 3-4, 3-5, 5-1, 5-2	Municipality - ToB LEMC	Neighboring municipalities; County OES; SEDC, Local universities (SUNY Albany, Skidmore).	High	Local, County LEPC, FEMA HMA, HMPG, HMEP, LGRMIF, and whole community, including business community, Rotary, and local Chambers of Commerce.	Ongoing	Defer to plan update.
TB-13	Continue to do yearly updates to the Town's Emergency Operations Plan, and work toward the completion of a Town	Existing	Flood	1, 3	1-1, 1-6, 1-7, 3-1, 3-2,3-4	Municipality Emergency Management Department,	Watershed districts (if applicable); neighboring	Medium to Low	FEMA HMA	Long Term	Delete action. This action is a duplicate of TB-4.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF BALLSTON PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	Comprehensive Emergency Management plan that is NIMS Compliant and addresses all hazards. (i.e. Follows the National response Framework, and ESF's 1-20).						municipalities; County (if applicable); NYS				
TB-14	Assess unregulated rural water bodies and evaluate potential hazards for localized impacts due to failures.	Existing	All Hazards	1, 3, 5	1-1, 3-1, 3-3, 3-5, 3-6,5-1	Municipality NFIP Floodplain Administrator	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	Ongoing	Defer to plan update.
TB-15	Support improvement of Interoperable and Emergency Communication Systems (statewide core capability goal), like the Community Emergency Alert System (Code Red), and Reverse 911 system, Mass Notification system, and Special Needs Registry. Enhance the ability of public safety agencies, Town Officials, ToB LEMC and other community partners and stakeholder to communicate with one another on demand, in real time, when needed, and when authorized.	New & Existing	All Hazards	1, 3, 5	3, 5 1-1, 3-1, 3-3, 3-5, 3-6,5-1	Municipality - ToB LEMC	Local, County OES, NYS DHSES (Comms Unit)	Medium	State DHSES Interoperable Communications Grants, HMA, County OES	Ongoing	Defer to plan update.
TB-16	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1-9, 2-5, 3-1, 5-2	Town Board	County	Medium	Operating budget; PDM; HMGP; Critical infrastructure grants; EMPG; LGRMIF	DOF	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF BALLSTON PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TB-17	Strive to achieve the goals and objectives set forth in the ToB Conduct appropriate training and test the operational plans through tabletops, mutual aid drills and exercises that fit in with the local fire department and county fire training / drill schedules. Strive to coordinate an HSEEP compliant multi-agency Full Scale Exercise that addresses the Worst-Case Scenario of a Train derailment carrying Hazardous Materials along the CP Rail Line; Goal 2020.	Existing Critical Infrastructure, (Road Crossings, Whites Beach, Rt 146 A, Outlet Road) and Environmentally Sensitive areas around Ballston Lake, adjacent to the Rail Line / Bike Path.	All Hazards	1, 5	5 1-3, 5-2	Joint: ToB LEMC and County OES	CP Rail, County OEM, DHSES, EPA, US Coast Guard (Inland Water Way Regional Coordinator	High	FEMA - Region II, Office of Exercise Coord., DHSES, Local, County LEPC, HMEP, 109th Air national Guard, and whole community, including business community, Rotary, and local Chambers of Commerce.	DOF	Defer to plan update.
TB-18	The Town Ballston Water Department and LEMC recommends procurement of a mobile trailer generator and truck mounted generator that allows for mobile power to be provided during a disruption in power at critical facilities (Sewer, Water, Library) for use during mass outages like the Storm of 2008.	New & Existing	All Hazards	1	1-1, 1-4	ToB Water Department	Highway, Water, (New) Ballston Lake Sewer District, LEMC.	Medium	HMGP, Local Match, County, FEMA EMPG;	DOF	Defer to plan update.
TB-19	The Town Ballston LEMC recommends procurement of a fixed generator to be installed at the Town of Ballston Community Library for backup power to mitigate the effects of a power disruption for use for use during mass outages like the Storm of 2008. The library a designated Critical Facility in the Town's Emergency Operations Plan.	Existing	All Hazards	1	1-1, 1-4	ToB LEMC, Library	ToB LEMC, Library	Low	Local, FEMA HMA, PDA, HMGP, DHSES Critical Infrastructure grants	DOF	Completed.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF BALLSTON PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TB-20	Update flood insurance maps by conducting a detailed flood study, H-H, FIRM update for the entire Ballston Lake Watershed.	N/A	Flood	1	### <sup>1</sup>	LEMC	County; State; Federal	Medium	Water quality and protection grants; FEMA PDM	Short Term	Defer to plan update.
TB-21	To alleviate flooding along the Outlet Road, raise the grade of the road, 1-2', co-incident with the excavation for installation and construction of the Ballston Lake Sewer lines and infrastructure for the upcoming Ballston Lake Sewer District project expected to commence 2019-2020.	Not Provided	Flood	Not Provided	Not Provided	Town Highway Department	Not Provided	\$150,000	FEMA Pre-Disaster Mitigation Grant Program; Surface FHA Transportation Block Grant Program; US DOT Bridges Replacement and Rehabilitation; US Army Corps of Engineers Protection of Essential Highways, Highway Bridge Approaches, and Public Works General Budget	2020, co-incident with sewer construction	Completed.

<sup>1</sup> Note: Appropriate identification of objective being met was not outlined for this action in the 2019 Multi-jurisdictional Hazard Mitigation Plan.

SECTION 22: PREVIOUS ACTIONS

VILLAGE OF BALLSTON SPA

VILLAGE OF BALLSTON SPA PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
VBS-1a	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding. St. Mary's School is located in a special flood hazard area; its vulnerability to flood hazards is not fully known and over the life of this plan the village will conduct an assessment of this facility (e.g., document history of damage) to understand its vulnerabilities and mitigate.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long Term	Defer to plan update. Specifically, the Village will coordinate with St. Mary's School during the Plan Update.
VBS-1b	Where appropriate, support purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long Term	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF BALLSTON SPA PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	implementation of that action based on available funding. St. Mary's School is located in a special flood hazard area; its vulnerability to flood hazards is not fully known and over the life of this plan the village will conduct an assessment of this facility (e.g., document history of damage) to understand its vulnerabilities and mitigate.										
VBS-2	Consider participation in incentive-based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1-3, 1-6, 2-1, 2-2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Long Term	Defer to plan update.
VBS-3	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0.	New & Existing	All Hazards	All	All	NFIP Floodplain Administrator	County (through Mitigation Planning Coordinator), NYS DHSES	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation Grant Funding for 5-year update	Long Term	Defer to plan update.
VBS-4	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1-2, 1-3, 1-8, 2-2, 2-3, 2-4, 4-1, 4-2, 4-3, 4-4	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Long Term	Defer to plan update.
VBS-5	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1-7, 3-2, 3-4, 3-5	Emergency Management with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Existing programs and grant funding where applicable	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF BALLSTON SPA PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
VBS-6	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3, 5	3-4, 5-1, 5-3	Emergency Management, DPW and Roads	Surrounding municipalities and County	Low - Medium	Local Budget	Ongoing – Long-term depending on initiative	Defer to plan update.
VBS-7	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Appropriate Departments	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	Existing programs and grant funding where applicable	Defer to plan update.
VBS-8	Create/update the Emergency Action Plans for all dams located within the municipality.	Existing	Flood	1, 3	1-1, 1-6, 1-7, 3-1, 3-2, 3-4	NFIP Floodplain Administrator	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium to Low	FEMA HMA	Short Term	Defer to plan update.
VBS-9	Implement dam structure repairs as required by dam safety report/protocols.	Existing	Flood	3	3-1, 3-3, 3-6	NFIP Floodplain Administrator; Engineering Department	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	Ongoing	Defer to plan update.
VBS-10	Support the Installation/ Implementation of Community Emergency Alert System.	New & Existing	All Hazards	1, 3, 5	1-1, 3-1, 3-3, 3-5, 3-6, 5-1	LEMC	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	Ongoing	Defer to plan update.
VBS-11	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1-9, 2-5, 3-1, 5-2	Village Board	Not Provided	Medium	Operating budget	Ongoing	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF BALLSTON SPA PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.										
VBS-12	Investigate and implement mitigation actions that would protect the St. Mary's School from the flood hazard. The school is located within the flood hazard area.	Existing	Flood, Severe Storm	1, 3	1-1, 3-4, 3-6	NFIP Floodplain Administrator	School District	Low (Could be high once action is decided and implemented)	Local (FEMA HMA and local match for implementation of action)	Ongoing – Long-term depending on initiative	Delete Action. Village will coordinate with St. Mary's School throughout planning process to discuss alternatives.
VBS-13	Investigate and implement mitigation actions that would protect the Union Fire Department from flood hazards. The Fire Department is located in the flood hazard area.	Existing	Flood, Severe Storm	1, 3	1-1, 3-4, 3-6	NFIP Floodplain Administrator	Fire Department	Low (Could be high once action is decided and implemented)	Local (FEMA HMA and local match for implementation of action)	Ongoing	Defer to plan update.
VBS-14	Replace aging water mains to reduce water system vulnerability.	Existing	Flood, Earthquake, Extreme Temperature, Severe Winter Storm, Ground Failure	1, 3	1-1, 3-4, 3-6	NFIP Floodplain Administrator; Public Works	Not Provided	High	Multiple Sources; HMA Grants	Short Term	Defer to plan update.
VBS-15	Conduct a flood area study to develop a strategy to reduce flooding of low-lying areas including earth berms, increasing elevation of creek banks, and flood water retaining wall systems.	New	Flood, Severe Storm	1, 3	1-1, 3-4, 3-6	NFIP Floodplain Administrator	Not Provided	Low	Multiple Sources; HMA Grants	Short Term	Defer to plan update.



SECTION 22: PREVIOUS ACTIONS

TOWN OF CHARLTON

TOWN OF CHARLTON PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TCH-1	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Short Term	Delete action. This action is no longer deemed a priority by the town.
TCH-2	Where appropriate, support purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Short Term	Delete action. This action is no longer deemed a priority by the town.
TCH-3	Consider participation in incentive-based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1-3, 1-6, 2-1, 2-2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Short Term	Defer to plan update.
TCH-4	Continue to support the implementation, monitoring, maintenance, and updating of this	New & Existing	All Hazards	All	All	NFIP Floodplain Administrator	County (through Mitigation	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation Grant	Short Term	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF CHARLTON PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	Plan, as defined in Section 7.0.						Planning Coordinator), NYS DHSES		Funding for 5-year update		
TCH-5	Strive to maintain compliance with, and good-standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1-2, 1-3, 1-8, 2-2, 2-3, 2-4, 4-1, 4-2, 4-3, 4-4	NFIP Floodplain Administrator; Planning Board, Zoning Board of Appeals, Building Inspector	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Short Term	Defer to plan update.
TCH-6	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1-7, 3-2, 3-4, 3-5	Emergency Management with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Short Term	Defer to plan update.
TCH-7	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3, 5	3-4, 5-1, 5-3	Emergency Management, DPW and Roads	Surrounding municipalities and County	Low - Medium	Local Budget	Short Term	Defer to plan update.
TCH-8	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Appropriate Departments	County and Regional agencies (as appropriate)	Low - High	Existing programs and grant funding	Long Term	Defer to plan update.
TCH-9	Implement management in areas of power-lines to improve post-disaster debris management and prevent power failures during storms.	New & Existing	Severe Storm, Severe Winter Storm	1, 3	1-1, 3-4, 3-6	Engineering Department; Public Works	Regional and Private Sector coordination as appropriate	Medium	Local budget; FEMA HMA	Ongoing	Defer to plan update.
TCH-10	Develop and/or enhance the current stormwater management	Existing	Flood, Severe Storm	1, 4	1-1, 1-5, 1-9, 3-6	NFIP Floodplain	Regional and Private Sector	Costs have varied per	FEMA HMA (dependent on	Ongoing	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF CHARLTON PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	system to be in compliance with federal and state regulations such that there will be a net reduction in the flood risk caused by stormwater impacts.					Administrator	coordination as appropriate	project and are specific to geology and topography	initiative); Local budget		
TCH-11	Continue to engage in the in-house program that follows the MS4 Plan, along with culvert and ditch upgrading to enlarge the stormwater volume capacity and flow and decrease localized flooding in Town.	New & Existing	Flood, Severe Storm	1, 3	1-1, 1-5, 1-6, 1-9, 3-6	NFIP Floodplain Administrator	County	Medium	Local Budget	Ongoing	Defer to plan update.
TCH-12	Retrofit the Town water system tank and piping so that they are constructed to seismic standards.	Existing	Earthquake	1, 3	1-1, 3-4, 3-5, 3-6	NFIP Floodplain Administrator	Not Provided	High-Medium	Not provided	Short Term	Defer to plan update.
TCH-13	Assure storm water management programs comply with all local and NYS Department of Environmental Conservation (DEC) regulations.	New & Existing	Flood, Severe Storm	1, 3, 5	1-6, 3-2, 5-2	Planning Board, Zoning Board of Appeals, Building Inspector	County; NYS DEC	Low	Local Budget	Short Term	Defer to plan update. Combine in Plan Update with TCH-11.
TCH-14	Provide adequate training for town and other officials regarding stormwater and road management and use Best Management Practices.	New & Existing	Flood, Severe Storm	1, 3	1-1, 3-3, 3-4, 3-5	Town Board, Highway Department, Building Inspector	Not Provided	Medium	Local Budget	Long Term	Defer to plan update.
TCH-15	Create a detailed open space map using the existing GIS data so that the programs and policies of the Comprehensive Plan can be targeted to specific areas. This effort could also include the following steps: mapping of hazard areas to determine best places for	New & Existing	All Hazards	1, 4	1-4, 1-8, 4-1, 4-2, 4-3, 4-4	NFIP Floodplain Administrator; Office of Emergency Management	Not Provided	Medium	Local Budget	Short Term	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF CHARLTON PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	development or preservation of land/dedicated to open space; a threat-of-loss analysis (to identify those existing areas most at threat of being lost as open space); mapping of significant resource areas, potential open spaces, parks, and greenways to connect these areas; and developing a system to rank these areas relevant to their importance as open spaces.										
TCH-17	To address beaver dam issues in Town, monitor vulnerable areas and commission a study to investigate ways to avoid future damages.	Existing	Flood	1, 3	1-1, 1-6, 1-7, 3-1, 3-2, 3-4	NFIP Floodplain Administrator	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium to Low	FEMA HMA	Long Term	Defer to plan update.
TCH-18	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1-9, 2-5, 3-1, 5-2	Town Board	Not Provided	Medium	Operating Budget	Short Term	Defer to plan update.
TCH-19	Conduct an emergency preparedness and shelter needs survey to provide the town information needed to prioritize areas of greatest need and develop an appropriate strategy.	N/A	Severe Storm	1, 2	1-3, 1-4, 2-1	Office of Emergency Management	Independent Consultant	Medium	Budget re-allocation; Other sources	Short Term	Defer to plan update.
TCH-20	Upgrade 784 Charlton Road to be the local emergency operations and support center. An Emergency Operations & Support Center would establish a unified base of operations that would coordinate services within the town as well as facilitating shared services from	Existing	Severe Storm	1, 5	1-3, 1-4, 5-1, 5-3	Town Highway	Independent Consultant	High	Budget re-allocation; Other sources	Short Term	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF CHARLTON PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	outside sources. The Center would also house any physical assets acquired and maintained by the town (i.e., emergency water and food supply, blankets, first aid items, etc.) Additionally, the Center would be a community resource used for training, education and ongoing emergency planning programs. The Center would upgrade the existing structure at 784 Charlton Rd located within Historical District. Upgrades include, but not limited to: improved wiring and communications capabilities, installing generator back-up, minor kitchen renovations, exterior maintenance to preserve structure.										
TCH-21	Conduct a culvert survey and needs assessment to assess what actions should be taken to mitigate flooding issues along roadways.	Existing	Flood	1	1-1, 1-2, 1-3	NFIP Floodplain Administrator	Independent Consultant	Medium	Budget re-allocation; Other sources	Short Term	Defer to plan update.

SECTION 22: PREVIOUS ACTIONS

TOWN OF CLIFTON PARK

TOWN OF CLIFTON PARK PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TCP-1	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding. Identify specific properties, if any, this is applicable to.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	DOF	Defer to plan update.
TCP-2	Where appropriate, support purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding. Identify specific properties, if any, this is applicable to.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	DOF	Defer to plan update.
TCP-3	Consider participation in incentive-based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1-3, 1-6, 2-1, 2-2, 2-3, 2-4, 5-	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	DOF	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF CLIFTON PARK PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
					2						
TCP-4	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0.	New & Existing	All Hazards	All	All	NFIP Floodplain Administrator	County (through Mitigation Planning Coordinator), NYS DHSES	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation Grant Funding for 5-year update	DOF	Defer to plan update.
TCP-5	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1-2, 1-3, 1-8, 2-2, 2-3, 2-4, 4-1, 4-2, 4-3, 4-4	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Not provided	Defer to plan update.
TCP-6	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1-7, 3-2, 3-4, 3-5	Emergency Management with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Not provided	Defer to plan update.
TCP-7	Create/enhance/ maintain mutual aid agreements with neighboring communities as well as County and State organizations such as New York State Police and Saratoga County Sheriff's Department to improve police protection.	New & Existing	All Hazards	3, 5	3-4, 5-1, 5-3	Emergency Management, DPW and Roads	Surrounding municipalities and County	Low - Medium	Local Budget	DOF	Defer to plan update.
TCP-8	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Appropriate Departments	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	DOF	Defer to plan update.
TCP-9	Create/update the Emergency Action Plans for all dams located within the municipality. Budget for inspections as required by state law.	Existing	Flood	1,3	1-1, 1-6, 1-7, 3-1, 3-2, 3-4	NFIP Floodplain Administrator	Watershed districts (if applicable); neighboring municipalities ; County (if	Medium to Low	FEMA HMA	Not provided	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF CLIFTON PARK PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
							applicable); NYS				
TCP-10	Implement dam structure repairs as required by dam safety report/protocols.	Existing	Flood	3	3-1, 3-3, 3-6	NFIP Floodplain Administrator; Engineering Department	Watershed districts (if applicable); neighboring municipalities ; County (if applicable); NYS	Medium	FEMA HMA	Not provided	Defer to plan update.
TCP-11	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1-9, 2-5, 3-1, 5-2	Town Board	Not Provided	Medium	Operating Budget	Short	Defer to plan update.
TCP-12	Increase public education/public participation on hazards of concern.	N/A	All Hazards	2, 5	2-1, 2-2, 2-3, 2-4, 2-5, 5-3	Office of Emergency Management	FEMA	Dependent on initiative	FEMA HMA; Local match	Short	Defer to plan update.
TCP-13	To prevent stormwater handling capacity and water quality from being diminished by future development, implement sound construction practices to control erosion and sedimentation of waterways and maintain existing drainage features. As required by Town code 86-7 (2).	New & Existing	Flood, Severe Storm	1, 4	1-6, 1-7, 1-8, 4-1, 4-2	NFIP Floodplain Administrator	NYSDEC; Saratoga County Inter-Municipal Stormwater Management Program	Low	Local	Short	Defer to plan update.
TCP-14	Maintain and support all stormwater management goals through the County Stormwater Management Agreement and the Town of Clifton Park Stormwater Management Plan and as regulated by the New York State	New & Existing	Flood, Severe Storm	1, 3	1-1, 1-5, 1-6, 3-1, 3-6	NFIP Floodplain Administrator	NYSDEC; Saratoga County Inter-Municipal Stormwater Management Program	Low - Medium	Local	Short	Defer to plan update.



## SECTION 22: PREVIOUS ACTIONS

TOWN OF CLIFTON PARK PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	Department of Environmental Conservation.										
TCP-15	To protect wetlands and stream corridors for their benefits to wildlife habitat, flood and stormwater control, groundwater protection, erosion control and recreation by expanding wetland mitigation options as fostered by the Environmental Conservation Commission and Army Corps of Engineers. Utilize Land Conservation Districts in Town of Clifton Park Code 208-69.	New & Existing	Flood, Severe Storm	1, 4	1-6, 4-1, 4-2, 4-4	NFIP Floodplain Administrator	NYS DEC, USACE	Dependent on Initiative	Local	Short	Defer to plan update.
TCP-16	Supporting proper development practices within flood-prone areas as indicated in the Town's floodplain management regulations in order to protect wetlands and stream corridors for their benefits to wildlife habitat, flood and stormwater control, groundwater protection, erosion control and recreation.	New & Existing	Flood, Severe Storm	1, 4	1-3, 1-8, 4-1, 4-2, 4-3, 4-4, 4-5	NFIP Floodplain Administrator	Saratoga County Inter-Municipal Stormwater Management Program	Low	Local	Short	Defer to plan update.
TCP-17	Integrate more comprehensive oversight in the planning, construction and post- construction to ensure sound construction practices are used to control erosion and sedimentation of waterways and minimize drainage and flooding issues with future development. Require stormwater management tech, town designated engineer, and SMO review all new plans.	New & Existing	Flood, Severe Storm	1, 4	1-3, 1-8, 4-2	NFIP Floodplain Administrator; Engineering Department	Saratoga County Inter-Municipal Stormwater Management Program	Low	Local	Short	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF CLIFTON PARK PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TCP-18	The Town of Clifton Park sewer department has a trailer generator and truck mounted generator that allows for mobile power to be provided during a disruption in a facility without a generator. However, these efforts are difficult during mass outages like the Storm of 2008. The Town would like to purchase back-up generators for all stations by 2024. <ul style="list-style-type: none"> <li>•Riverview Landings / Old Nott Farm (WWTP)</li> <li>•Riverview Landing / Old Nott Farm (Pump Station)</li> <li>•Wildflower Way Ct. (Pump Station)</li> <li>•Broadleaf Dr. (Pump Station)</li> <li>•Green Meadow Dr. (Pump Station)</li> <li>•Knollwood Drive (Pump station)</li> <li>•Maple Ridge Lane (Pump Station)</li> <li>•Denkers Drive (Pump Station)</li> <li>•Gretel Terrace (Pump Station)</li> </ul>	Existing	All Hazards	1, 3	1-1, 3-3, 3-4, 3-5, 3-6	NFIP Floodplain Administrator Public Works	WWTP; Saratoga County Sewer District	Approx. \$35,000 each generator	FEMA EMPG; local match	Short	Completed.
TCP-19	Raise Riverview Road to prevent flooding events from impacting the road.	Existing	Flood	1, 3	1-1, 1-8, 3-6	NFIP Floodplain Administrator; Engineering Department	Not Provided	Medium	FEMA HMA; Local Funds	DOF	Defer to plan update.
TCP-20	Raise Bruno Road and Nicole Court above flood elevations.	Existing	Flood	1, 3	1-1, 1-8, 3-6	NFIP Floodplain Administrator; Engineering Department	Not Provided	Medium	FEMA HMA; Local Funds	DOF	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF CLIFTON PARK PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TCP-21	Mitigate flooding at the intersection of Wall Street and Clifton Country Road by redesigning the outlet structure, adding a new overflow culvert, and cleaning the pond to allow for maximum storage capacity of the basin. Downstream culvert systems have been evaluated to determine if the improvements will impact the downstream culvert's capacity.	Existing	Flood	1, 3	1-1, 1-8, 3-6	NFIP Floodplain Administrator	Not Provided	Medium	FEMA HMA; Local Funds	DOF	Completed in 2023.

SECTION 22: PREVIOUS ACTIONS

TOWN OF CORINTH

TOWN OF CORINTH PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TCR-1	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Ongoing	Defer to plan update.
TCR-2	Where appropriate, support purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long Term	Defer to plan update.
TCR-3	Consider participation in incentive-based programs such as CRS.	New & Existing	Flood	1, 2, 5	5 1-1, 1- 3, 1-6, 2-1, 2-2,2-3, 2-4, 5- 2	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Long Term	Defer to plan update.
TCR-4	Continue to support the implementation, monitoring, maintenance, and updating of this	New & Existing	All Hazards	All	All	NFIP Floodplain Administrator	County (through Mitigation	County (through Mitigation	Local Budget, possibly FEMA Mitigation Grant	Long Term	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF CORINTH PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	Plan, as defined in Section 7.0.						Planning Coordinator), NYS DHSES	Planning Coordinator), NYS DHSES	Funding for 5-year update		
TCR-5	Local Budget, possibly FEMA Mitigation Grant Funding for 5-year update.	New & Existing	Flood	1, 2, 4	1-1, 1- 2, 1-3, 1-8, 2-2, 2- 3, 2-4, 4-1, 4-2, 4- 3, 4-4	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Long Term	Defer to plan update. Incorporate into action TCR-14.
TCR-6	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1- 7, 3-2, 3-4, 3-5	Emergency Management with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Long Term	Defer to plan update.
TCR-7	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3, 5	3-4, 5- 1, 5-3	Emergency Mgmt., DPW and Roads	Surrounding municipalities and County	Low - Medium	Local Budget	Long Term	Defer to plan update.
TCR-8	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Appropriate Departments	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	Long Term	Defer to plan update.
TCR-9	Purchase back-up generator for schools (our shelters) to ensure continuity during emergencies.	Existing	All Hazards	1, 3, 5	1-1, 3- 4, 5-1	School Board	Schools	Low	FEMA EMPG	Long Term	Defer to plan update.
TCR-10	Purchase and install a siren warning system to alert citizens of dam breach situations and other during other hazardous times. In the event of a Breach of Conklinville Dam, Route 9N North would be flooded in 30 minutes. We would not have a way to notify the residents in time to prevent loss of life. Educate the	Existing	All Hazards	1, 2, 3	1-1, 2- 2, 3-3	NFIP Floodplain Administrator; Office of Emergency Management	Neighboring municipalities	Medium to Low	FEMA grant sources	Long Term	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF CORINTH PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	public on the presence and use of the system.										
TCR-11	Create/update the Emergency Action Plans for all dams located within the municipality.	Existing	Flood	1, 3	1-1, 1- 6, 1-7, 3-1, 3-2,3-4	NFIP Floodplain Administrator	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium to Low	FEMA, HMA	Short Term	Defer to plan update. Amend action to include the prioritization of Woodland Lake Dam.
TCR-12	Implement dam structure repairs as required by dam safety report/protocols.	Existing	Flood	3	3-1, 3- 3, 3-6	NFIP Floodplain Administrator; Engineering Department	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA, HMA	Long Term	Defer to plan update. Amend action to include the prioritization of Woodland Lake Dam.
TCR-13	Support the Installation/Implementation of Community Emergency Alert System.	New & Existing	All Hazards	1, 3, 5	1-1, 3- 1, 3-3, 3-5, 3-6,5-1	LEMC	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA, HMA	Short Term	Defer to plan update.
TCR-14	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1- 9, 2-5, 3-1, 5- 2	Town Board	N/A	Medium	Operating Budget	Long Term	Defer to plan update.
TCR-15	Upgrade and relocate Town Hall propane tank.	Existing	All Hazards	1, 3	1-1, 3-6	Fire Department	N/A	Medium	Multiple Sources; Grant	Short Term	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF CORINTH PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TCR-16	Upgrade and elevate Emergency Medical Squad generators that continuous power can be provided to the EMS building as a designated shelter in the provision of the vital functions it provides during a catastrophic event.	Existing	All Hazards	1, 4	1-1, 3-6	Fire Department/EMS services	N/A	Medium	Multiple Sources; Grant	Short Term	Defer to plan update.

SECTION 22: PREVIOUS ACTIONS

VILLAGE OF CORINTH

VILLAGE OF CORINTH PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
VCR-1a	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding. The Indeck Corinth Energy Center is located in a special flood hazard area; its vulnerability to flood hazards is not fully known and over the life of this plan the village will conduct an assessment of this facility (e.g., document history of damage) to understand its vulnerabilities and mitigate.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	DOF	Defer to plan update.
VCR-1b	Where appropriate, support purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider	New & Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long term DOF	Defer to plan update.



## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF CORINTH PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	implementation of that action based on available funding. The Indeck Corinth Energy Center is located in a special flood hazard area; its vulnerability to flood hazards is not fully known and over the life of this plan the village will conduct an assessment of this facility (e.g., document history of damage) to understand its vulnerabilities and mitigate.										
VCR-2	Consider participation in incentive-based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1-3, 1-6, 2-1, 2-2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	DOF	Defer to plan update.
VCR-3	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0.	New & Existing	All Hazards	All	All	NFIP Floodplain Administrator	County (through Mitigation Planning Coordinator), NYS DHSES	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation Grant Funding for 5-year update	DOF	Defer to plan update.
VCR-4	Strive to maintain compliance with, and good-standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1-2, 1-3, 1-8, 2-2, 2-3, 2-4, 4-1, 4-2, 4-3, 4-4	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	DOF	Defer to plan update.
VCR-5	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1-7, 3-2, 3-4, 3-5	Emergency Management with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	DOF	Defer to plan update.
VCR-6	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3, 5	5 3-4, 5-1, 5-3	Emergency Management, DPW and Roads	Surrounding municipalities and	Low - Medium	Local Budget	Ongoing	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF CORINTH PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
							County				
VCR-7	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Appropriate Departments	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	DOF	Defer to plan update.
VCR-8	Create/update the Emergency Action Plans for all dams located within the municipality.	Existing	Flood	1, 3	1-1, 1-6, 1-7, 3-1, 3-2, 3-4	NFIP Floodplain Administrator	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium to low	FEMA HMA	DOF	Delete Action. Jurisdiction is not profiling dam failure in Plan Update.
VCR-9	Implement dam structure repairs as required by dam safety report/protocols.	Existing	Flood	3	3-1, 3-3, 3-6	NFIP Floodplain Administrator; Engineering Department	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	DOF	Delete Action. Jurisdiction is not profiling dam failure in Plan Update.
VCR-10	Support the Installation/Implementation of Community Emergency Alert System which will not only alert residents of a dam breach but of other hazard events as well.	New & Existing	All Hazards	1, 3, 5	1-1, 3-1, 3-3, 3-5, 3-6, 5-1	LEMC	Watershed districts (if applicable); neighboring municipalities; County	Medium	FEMA HMA	Ongoing	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF CORINTH PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
							(if applicable); NYS				
VCR-11	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1-9, 2-5, 3-1, 5-2	Village Board	Not Provided	Medium	Operating Budget	Ongoing	Defer to plan update.
VCR-12	Purchase back-up generator for schools (our shelters) to ensure continuity during emergencies.	Existing	All Hazards	1, 3, 5	1-1, 3-4, 5-1	School Board	Schools	Low	FEMA EMPG	Ongoing – Long term depending on initiative	Defer to plan update.
VCR-13	Evaluate sheltering needs.	Existing	All Hazards	3	3-3, 3-4, 3-6	Office of Emergency Management	Not Provided	Low	Local	Short	Defer to plan update.

# SECTION 22: PREVIOUS ACTIONS

## TOWN OF DAY

TOWN OF DAY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TD-1	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Ongoing	Defer to plan update. Ongoing.
TD-2	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Ongoing	Defer to plan update. Ongoing.
TD-3	Consider participation in incentive-based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1-3, 1-6, 2-1, 2-2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Short Term	Defer to plan update. Ongoing.
TD-4	Continue to support the implementation, monitoring, maintenance, and updating of this	New & Existing	All Hazards	All	All	NFIP Floodplain Administrator	County (through Mitigation)	Low – High (for 5- year update)	Local Budget, possibly FEMA Mitigation Grant	Short Term	Defer to plan update. Ongoing.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF DAY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	Plan, as defined in Section 7.0.						Planning Coordinator), NYS DHSES		Funding for 5- year update		
TD-5	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1-2, 1-3, 1-8, 2-2, 2-3, 2-4, 4-1, 4-2, 4-3, 4-4	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Ongoing	Defer to plan update. Ongoing.
TD-6	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1-7, 3-2, 3-4, 3-5	Emergency Management with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Ongoing	Completed in 2023. Emergency plans are reviewed and updated on an annual basis.
TD-7	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3, 5	3-4, 5-1, 5-3	Emergency Management, DPW and Roads	Surrounding municipalities and County	Low - Medium	Local Budget	Short Term	Defer to plan update. Ongoing.
TD-8	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Appropriate Departments	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	Short Term	Defer to plan update. Ongoing.
TD-9	Create/update the Emergency Action Plans for all dams located within the municipality.	Existing	Flood	1, 3	1-1, 1-6, 1-7, 3-1, 3-2, 3-4	NFIP Floodplain Administrator	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium to Low	FEMA HMA	Ongoing	Completed. The OEM opened a new EOC in 2021.
TD-10	Implement dam structure repairs as required by dam safety report/protocols.	Existing	Flood	3	3-1, 3-3, 3-6	NFIP Floodplain Administrator; Engineering Department	Watershed districts (if applicable); neighboring municipalities; County (if applicable);	Medium	FEMA HMA	Short Term	Defer to Plan Update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF DAY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
							NYS				
TD-11	Support the Installation/ Implementation of Community Emergency Alert System.	New & Existing	All Hazards	1, 3, 5	1-1, 3-1, 3-3, 3-5, 3-6, 5-1	LEMC	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	Ongoing	Defer to plan update. Ongoing.
TD-12	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1-9, 2-5, 3-1, 5-2	Town Board	Not Provided	Medium	Operating Budget	Short Term	Defer to plan update. Ongoing.
TD-13	Mitigate annual washout of Shipple Road by replacing culverts and purchasing easements for draining.	Existing	Flood	1, 3	1-1, 3-6	NFIP Floodplain Administrator	Not Provided	Medium	Multiple sources; Grant	Short Term	Defer to plan update. The driveway and crossover culverts will be replaced in the summer of 2024. Funding is needed for purchasing easement for drainage.
TD-14	Mitigate annual washout of Turner Road by replacing culvert.	Existing	Flood	1, 3	1-1, 3-6	NFIP Floodplain Administrator	Not Provided	Medium	Multiple sources; Grant	Short Term	Defer to plan update. Ongoing. Amend action to say, "based on codes and regulations, consider adding a bridge." Amend to increase estimated cost.
TD-15	Mitigate annual washout of Sand Lake Road by replacing culvert.	Existing	Flood	1, 3	1-1, 3-6	NFIP Floodplain Administrator	Not Provided	Medium	Multiple sources; Grant	Short Term	Defer to plan update. In progress. The

## SECTION 22: PREVIOUS ACTIONS

TOWN OF DAY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
											project is going out for bid in March of 2024 (FEMA-4472-DR Project #133088). Amend to increase cost.
TD-16	Mitigate washout of Kroetch Road by replacing culvert.	Existing	Flood	1, 3	1-1, 3-6	NFIP Floodplain Administrator	Not Provided	Medium	Multiple sources; Grant	Short Term	Defer to plan update. Ongoing. Amend action to say, "based on codes and regulations, consider adding a bridge." Amend to increase cost.
TD-17	Mitigate washout of Walter Maxfield Road by replacing culvert.	Existing	Flood	1, 3	1-1, 3-6	NFIP Floodplain Administrator	Not Provided	Medium	Multiple sources; Grant	Short Term	Defer to plan update. Ongoing. Amend action to say, "based on codes and regulations, consider adding a bridge." Amend to increase cost.
TD-18	Mitigate washout of Yates Hill Road by replacing culvert.	Existing	Flood	1, 3	1-1, 3-6	NFIP Floodplain Administrator	Not Provided	Medium	Multiple sources; Grant	Short Term	Defer to plan update. Ongoing. Amend action to say, "based on codes and regulations, consider adding a bridge." Amend to increase cost.
TD-19	Mitigate washout of Hadley Hill Road by replacing culvert.	Existing	Flood	1, 3	1-1, 3-6	NFIP Floodplain Administrator	Not Provided	Medium	Multiple sources; Grant	Short Term	Defer to plan update. Ongoing. The culvert still needs to be replaced with a 48-inch culvert.

SECTION 22: PREVIOUS ACTIONS

TOWN OF EDINBURG

TOWN OF EDINBURG PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TE-1a	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long Term	Defer to plan update.
TE-1b	Where appropriate, support purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long Term	Defer to plan update.
TE-2	Consider participation in incentive based programs such as CRS (see TE-4).	New & Existing	Flood	1, 2, 5	5 1-1, 1-3, 1-6, 2-1, 2-2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Short Term	Defer to plan update.
TE-3	Continue to support the implementation, monitoring, maintenance, and updating of this	New & Existing	All Hazards	All	All	NFIP Floodplain Administrator	County (through Mitigation)	Low – High (for 5- year update)	Local Budget, possibly FEMA Mitigation Grant	Short Term	Defer to plan update.



## SECTION 22: PREVIOUS ACTIONS

TOWN OF EDINBURG PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	Plan, as defined in Section 7.0.						Planning Coordinator), NYS DHSES		Funding for 5-year update		
TE-4	Evaluate the benefits of participating in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1-2, 1-3, 1-8, 2-2, 2-3, 2-4, 4-1, 4-2, 4-3, 4-4	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Long Term	Defer to plan update.
TE-5	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1-7, 3-2, 3-4, 3-5	Emergency Management with support from County OEM and NYS DHSES	Support from County OEM and NYS DHSES County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Long Term	Defer to plan update.
TE-6	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3, 5	3-4, 5-1, 5-3	Emergency Management, DPW and Roads	Surrounding municipalities and County	Low - Medium	Local Budget	Long Term	Defer to plan update.
TE-7	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Appropriate Departments	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	Long Term	Defer to plan update.
TE-8	Create/update the Emergency Action Plans for all dams located within the municipality.	Existing	Flood	1, 3	1-1, 1-6, 1-7, 3-1, 3-2, 3-4	NFIP Floodplain Administrator	Watershed districts (if applicable); neighboring municipalities ; County (if applicable); NYS	Medium to Low	FEMA HMA	Long Term	Delete Action. Jurisdiction is not profiling dam failure in Plan Update.
TE-9	Implement dam structure repairs as required by dam safety report/protocols.	Existing	Flood	3	3-1, 3-3, 3-6	NFIP Floodplain Administrator; Engineering Department	Watershed districts (if applicable); neighboring municipalities	Medium	FEMA HMA	Long Term	Delete Action. Jurisdiction is not profiling dam failure in Plan Update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF EDINBURG PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
							; County (if applicable); NYS				
TE-10	Support the Installation/Implementation of Community Emergency Alert System.	New & Existing	All Hazards	1, 3, 5	1-1, 3-1, 3-3, 3-5, 3-6, 5-1	LEMC	Watershed districts (if applicable); neighboring municipalities ; County (if applicable); NYS	Medium	FEMA HMA	Short Term	Defer to plan update.
TE-11	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1-9, 2-5, 3-1, 5-2	Town Board	Not Provided	Medium	Operating Budget	Short Term	Defer to plan update.
TE-12	With rainfall current T1 line consistently fails causing radio interruption. Replace antiquated T1 circuit with Fiber Optic technology that will carry 9-1-1 800 MHz radio traffic between radio sites.	Existing	All Hazards	1, 3, 4	1-1, 3-3, 3-4, 3-5, 4-1	Town and County Emergency Management Personnel	Engineers, Public Works, Town Government, County Emergency Services, Private Service Providers	Medium	Grant Programs, Local Match	Short Term	Defer to plan update.
TE-13	Construct a storage building with enhanced capacity that will lessen the impact of delivery delays for the Highway Department. The Town will construct a salt storage facility capable of storing approximately 4000 tons of salt and/or sand. This could be shared with neighboring jurisdictions.	New	Severe Winter Storm	1, 3	3 1-1, 3-6	Town of Edinburg Highway Department	N/A	Medium	Grant Programs, Local Match	Short Term	Defer to plan update.

# SECTION 22: PREVIOUS ACTIONS

## TOWN OF GALWAY

TOWN OF GALWAY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TP-1	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	Municipality (likely through NFIP Floodplain Administrator)	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Ongoing	Defer to plan update. Ongoing.
TP-2	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	Municipality (likely through NFIP Floodplain Administrator)	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Ongoing	Defer to plan update. Ongoing.
TP-2	Consider participation in incentive-based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1-3, 1-6, 2-1, 2-2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Long Term	Defer to plan update. Ongoing.
TP-3	Continue to support the implementation, monitoring, maintenance, and updating of this	New & Existing	All Hazards	All	All	Municipal Emergency Manager with	County (through Mitigation	Low – High (for 5- year update)	Local Budget, possibly FEMA Mitigation Grant	Long Term	Defer to plan update. Ongoing.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF GALWAY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	Plan, as defined in Section 7.0.					support from County OEM and NYS DHSES	Planning Coordinator), NYS DHSES		Funding for 5-year update		
TP-4	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1-2, 1-3, 1-8, 2-2, 2-3, 2-4, 4-1, 4-2, 4-3, 4-4	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Long Term	Defer to plan update. Ongoing.
TP-5	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1-7, 3-2, 3-4, 3-5	Municipal Emergency Manager with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Short Term	Defer to plan update. Ongoing.
TP-6	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3,5	3-4, 5-1, 5-3	Local Emergency Management, DPW and Roads	Surrounding municipalities and County	Low - Medium	Local Budget	Short Term	Defer to plan update. Ongoing.
TP-7	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Local departments (as applicable for specific initiative)	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	Ongoing	Defer to plan update. Ongoing.
TP-8	Create/update the Emergency Action Plans for all dams located within the municipality.	Existing	Flood	1, 3	1-1, 1-6, 1-7, 3-1, 3-2, 3-4	NFIP Floodplain Administrator	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium to Low	FEMA HMA	Short Term	Defer to plan update. Ongoing. Galway Lake Association conducted recent revision of EAP for Galway Lake Dam.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF GALWAY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TP-9	Implement dam structure repairs as required by dam safety report/protocols.	Existing	Flood	3	3-1, 3-3, 3-6	Building / Planning Department	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	Ongoing	Defer to plan update. Review EAP for Galway Lake Dam and implement recommendations outlined in report.
TP-10	Installation/Implementation of Community Emergency Alert System.	New & Existing	All Hazards	1, 3, 5	5 1-1, 3-1, 3-3, 3-5, 3-6, 5-1	LEMC	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	Long Term	Completed. The Town works with the County for emergency alerts.
TP-11	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1-9, 2-5, 3-1, 5-2	Town Board	Not Provided	Medium	Operating Budget	Long Term	Defer to plan update. Ongoing.
TP-12	Investigate and prioritize the shoulders, ditches and bridges that have washed out in the past and determine appropriate mitigation actions.	New & Existing	Flood	1, 3	1-1, 3-3, 3-6	Highway Department	Municipalities, County	Low - High	Budget dependent on initiatives	Long Term	Defer to plan update. Ongoing.
TP-13	Initiate a public education program to ensure that 911 numbers are posted at the road mailbox and on the structure of each dwelling to improve emergency response capabilities.	New & Existing	All Hazards	1, 2, 3	1-1, 2-5, 3-6	Fire House, Ambulance	Emergency Services, County	Medium	Budget	Long Term	Defer to plan update. Ongoing.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF GALWAY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TP-14	Review housing and land use trends in Galway and update the comprehensive plan every five years accordingly.	New & Existing	All Hazards	1, 4	1-3, 1-6, 1-7, 1-8, 4-4	NFIP Flood Plain Administer; Housing Department	Not Provided	Low	Local Budget	Long Term	Defer to plan update. Ongoing. The Comprehensive Plan is being updated in 2024.
TP-15	Consider creating a stream buffer between the stream bank and new development that can protect water quality, prevent erosion, provide for wildlife habitats, protect this important greenspace, and mitigate future flooding. This should be considered for all new development.	New	Flood, Severe Storm	1, 4	1-1, 1-8, 3-1, 4-1, 4-2, 4-4	NFIP Flood Plain Administer	Not Provided	Low	Local Budget	Short Term	Defer to plan update. Ongoing.
TP-16	Appoint a Conservation Advisory Council (CAC) to advise in the development, management, and protection of the community's natural resources and to prepare an inventory and map of important open spaces in Galway.	N/A	All Hazards	1, 3	1 -1, 1 -8, 4 -1, 4 -2, 4 -4	Town Board	Not Provided	Low to Medium	Local Budget	Long Term	Defer to plan update. Ongoing.
TP-17	Improve snow removal – based on results of survey and participants in planning workshops as noted in the Comprehensive Plan.	N/A	Severe Winter Storm	1, 2	1 -1, 3 -4, 3 -5, 3 -6	Roads and Bridge Department	Not Provided	Medium	Local Budget	Long Term	Defer to plan update. In Progress. The Town is constructing a new salt shed at the Town Complex in 2024.
TP-18	According to the Comprehensive Plan, deterioration of local roads in certain locations can have serious negative impacts on the ability of emergency vehicles to respond to medical, fire or safety emergencies. Prioritize the locations most in need and investigate action alternatives.	New & Existing	All Hazards	1, 3	1 -1, 3 -4, 3 -5	NFIP Flood Plain Administrator; Road and Bridge Department	Not Provided	Medium to High	FEMA HMA	Long Term	Defer to plan update. Ongoing.
TP - 19	Implement a public education program to communicate with both	Existing	All Hazards	1, 2	1 -1, 2 -1, 2 -2, 2 -4, 2 -	Office of Emergency	Not Provided	Medium	Local Budget	Long Term	Defer to plan update. Ongoing.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF GALWAY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	year -round and seasonal residents regarding access to homes. Maintenance of private roads within the district throughout the winter is crucial in order to provide emergency services.				5	Management; Roads and Bridge Department					
TP-20	Initiate a program to fund maintenance to provide full access to established or new water points or dry- hydrants. The Fire Company does not always have clear access to water points and dry-hydrant systems in the Lake District. Mechanisms need to be in place to ensure that water supplies can be reached in the event of a fire.	New & Existing	All Hazards	1, 3, 5	1-1, 3-1, 3-2, 3-3, 3-4, 3-5, 3-6, 5-1	Fire Department; Water District	Not Provided	Low to Medium	Local Budget	Long Term	Defer to plan update. Ongoing.
TP-21	Increase communication between the Town and residents using local newspapers or establishing a fully-functional Town website (based on result of survey and participants of planning workshops) to increase public awareness of local hazards.	N/A	All Hazards	2, 5	2-1, 2-2, 2-3, 2-4, 2-5, 5-3	Office of Emergency Management	Not Provided	Medium	FEMA HMA	Long Term	Defer to plan update. Ongoing. The Town utilizes Facebook and a quarterly newsletter.
TP-22	Increase Town's GIS capabilities. Tools are described in the Comp Plan Addendum describing overlays for land use/zoning/preserving agricultural resources.	New & Existing	All Hazards	1, 3, 4	1-4, 3-5, 4-1, 4-2, 4-3, 4-4	Office of Emergency Management; Engineering Department	Not Provided	Medium	Local Budget	Long Term	Delete Action. This action is no longer a priority for the Town.
TP-23	Hire a consultant to conduct a study of the flooding caused by rainfall and snowmelt at Hermance Road at the split with Ridge Road. The town will work with the consultant and find the best possible solution to mitigate	Existing	Flooding	1,3	1-1, 1-2, 3-5	NFIP Floodplain Administrator; Engineering Department	Highway Department	Medium	Grant, Municipal Match	Short Term	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF GALWAY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	against the flooding hazard.										
TP-24	Hire a consultant to conduct a study of the flooding caused by rainfall and snowmelt at Hermance Road and Lake Road. The town will work with the consultant and find the best possible solution to mitigate against the flooding hazard.	Existing	Flooding	1,3	1-1, 1-2, 3-5	NFIP Floodplain Administrator; Engineering Department	Highway Department	Medium	Grant, Municipal Match	Short Term	Defer to plan update.



# SECTION 22: PREVIOUS ACTIONS

## VILLAGE OF GALWAY

VILLAGE OF GALWAY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
VG-1a	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1,2,3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long Term	Defer to plan update.
VG-1b	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1,2,3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Ongoing	Defer to plan update.
VG-2	Consider participation in incentive-based programs such as CRS (see VG-4).	New & Existing	Flood	1, 2, 5	1-1, 1- 3, 1-6, 2-1, 2- 2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Long Term	Defer to plan update.
VG-3	Continue to support the implementation, monitoring, maintenance, and updating of this	New & Existing	All Hazards	All	All	NFIP Floodplain Administrator	County (through Mitigation)	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation Grant	Ongoing	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF GALWAY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	Plan, as defined in Section 7.0.						Planning Coordinator), NYS DHSES		Funding for 5-year update		
VG-4	Evaluate the benefits of participating in the National Flood Insurance Rate program.	New & Existing	Flood	1,2,4	1-1, 1- 2, 1-3, 1-8, 2- 2, 2-3, 2-4, 4-1, 4-2, 4-3, 4- 4	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Ongoing – Long-term depending on initiative	Defer to plan update.
VG-5	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1- 7, 3-2, 3-4, 3- 5	Emergency Management with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Ongoing as monies made available	Defer to plan update. Ongoing.
VG-6	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3, 5	3-4, 5- 1, 5-3	Emergency Management, DPW and Roads	Surrounding municipalities and County	Low - Medium	Local Budget	Long Term	Defer to plan update. Ongoing.
VG-7	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Appropriate Departments	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	Long Term	Defer to plan update. Ongoing.
VG-8	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1- 9, 2-5, 3-1, 5- 2	Village Board	Not Provided	Medium	Operating Budget	Long Term	Delete action. This action is no longer a priority for the village.
VG-9	Support the Installation/Implementation of Community Emergency Alert	New & Existing	All Hazards	1, 3, 5	1-1, 3- 1, 3-3, 3-5, 3- 6, 5-1	LEMC	Watershed districts (if applicable);	Medium	FEMA HMA	Ongoing	Defer to plan update. Ongoing.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF GALWAY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	System.						neighboring municipalities; County (if applicable); NYS				
VG-10	Investigate ways to manage tree-limbs/debris throughout the village. Consider developing a debris management plan and trimming program.	New & Existing	Severe Storm, Severe Winter Storm	1, 3	1-1, 3- 1, 3-2, 3-4, 3- 6	Engineering Department; Public Works	Not Provided	Medium	FEMA HMA (dependent on initiative)	Long Term	Completed. This work will be ongoing through the Town's Highway Department, the County Department of Public Works, and the state Department of Transportation.
VG-11	Initiate a public education program to ensure that 911 numbers are posted at the road mailbox and on the structure of each dwelling to improve emergency response capabilities.	New & Existing	All Hazards	1, 2, 3	3 1-1, 2- 5, 3- 6	Fire House, Ambulance	Emergency Services, County	Medium	Budget	Long Term	Defer to plan update. Ongoing.
VG-12	Review housing and land use trends in Galway and update the comprehensive plan every five years accordingly.	New & Existing	All Hazards	1, 4	1-3, 1- 6, 1-7, 1-8, 4- 4	Tax Assessor; NFIP Floodplain Administrator; Community Services Department	Not Provided	Low	Local Budget	Long Term	Defer to plan update. In Progress. The Town's Comprehensive Plan will be completed by the Fall of 2024. The Village is included in this plan.
VG-13	Consider creating a stream buffer between the stream bank and new development that can protect water quality, prevent erosion, provide for wildlife habitats, protect this important greenspace, and mitigate future flooding. This should be	New & Existing	Flood, Severe Storm	1, 4	1 -1, 1 - 8, 3 - 1, 4 -1, 4 - 2, 4 - 4	NFIP Floodplain Administrator	Not Provided	Low	Local Budget	Ongoing	Delete action. This action is no longer a priority for the village.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF GALWAY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	considered for all new development.										
VG-14	Appoint a Conservation Advisory Council (CAC) to advise in the development, management, and protection of the community's natural resources and to prepare an inventory and map of important open spaces in Galway.	N/A	All Hazards	1, 4	1 -1, 1 - 8, 4 - 1, 4 - 2,	NFIP Floodplain Administrator	Not Provided	Low to Medium	Local Budget	Ongoing	Delete action. This action is no longer a priority for the village.
VG-15	Improve snow removal – based on results of survey and participants in planning workshops as noted in the Comprehensive Plan.	N/A	Severe Winter Storm	1, 3	1 -1, 3 - 4, 3 - 5, 3 - 6	Public Works	Not Provided	Medium	Local Budget	Ongoing – Long - term depending on initiative	Completed.
VG-16	According to the Comprehensive Plan, deterioration of local roads in certain locations can have serious negative impacts on the ability of emergency vehicles to respond to medical, fire or safety emergencies. Prioritize the locations most in need and investigate action alternatives.	New & Existing	All Hazards	1m 3	1 -1, 3 - 4, 3 - 5	Roads and Bridges	Not Provided	Medium to High	FMA HMA	Long Term	Completed. The county public works repaved Co. Rt. 45 in 2022, and state route 147 was repaved through the village in 2020.
VG-17	Implement a public education program to communicate with both year-round and seasonal residents regarding access to homes. Maintenance of private roads within the district throughout the winter is crucial in order to provide emergency services.	Existing	All Hazards	1, 2	1-1, 2- 1, 2- 2, 2-4, 2- 5	Roads and Bridges; Office of Emergency Management	Not Provided	Medium	Local	Long Term	Delete action. All roads are maintained and accessible within the village limits.
VG-18	Initiate a program to fund maintenance to provide full access to established or new water points or dry- hydrants. The Fire Company does not always have clear access to water points and	New & Existing	All Hazards	1, 3, 5	1-1, 3- 1, 3- 2, 3-3, 3- 4, 3-5, 3-6, 5- 1	Village Board; Fire Department	Not Provided	Low to Medium	Local	Long Term	Delete action. The Lake District is outside of the village limits and is more of a concern for the Town of Galway.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF GALWAY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	dry-hydrant systems in the Lake District. Mechanisms need to be in place to ensure that water supplies can be reached in the event of a fire.										
VG-19	Increase communication between the Town and residents using local newspapers or establishing a fully-functional Town website (based on result of survey and participants of planning workshops) to increase public awareness of local hazards.	N/A	All Hazards	2, 5	2-1, 2- 2, 2-3, 2-4, 2- 5, 5-3	Office of Emergency Management	Not Provided	Medium	FEMA HMA	Long Term	Defer to plan update. Ongoing. The Village has an updated website (2022) and Facebook page (2023), and a fully visible sign in the Village Park which announces current news.
VG-20	Increase Town's GIS capabilities. Tools are described in the Comp Plan Addendum describing overlays for land use/zoning/preserving agricultural resources.	New & Existing	All Hazards	1, 3, 4	4 1-4, 3- 5, 4-1, 4-2, 4-3, 4-4	Engineering Department	Not Provided	Medium	Not provided	Ongoing	Delete action. This action is no longer a priority for the village.

SECTION 22: PREVIOUS ACTIONS

TOWN OF GREENFIELD

TOWN OF GREENFIELD PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TGR-1	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Ongoing	Defer to plan update.
TGR-2	Where appropriate, support purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Ongoing	Defer to plan update.
TGR-3	Consider participation in incentive-based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1- 3, 1-6, 2-1, 2- 2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Ongoing	Defer to plan update.
TGR-4	Continue to support the implementation, monitoring, maintenance, and updating of this	New & Existing	All Hazards	All	All	Office of Emergency Management;	County (through Mitigation	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation Grant	Ongoing	Defer to plan update. In progress.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF GREENFIELD PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	Plan, as defined in Section 7.0.					NFIP Floodplain Administrator	Planning Coordinator), NYS DHSES		Funding for 5-year update		
TGR-5	Strive to maintain compliance with, and good-standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1- 2, 1-3, 1-8, 2- 2, 2-3, 2-4, 4-1, 4-2, 4-3, 4-4	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Ongoing	Defer to plan update.
TGR-6	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1- 7, 3-2, 3-4, 3-5	Office of Emergency Management with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Ongoing	Defer to plan update. In progress.
TGR-7	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3, 5	3-4, 5- 1, 5-3	Office of Emergency Management, DPW and Roads	Surrounding municipalities and County	Low - Medium	Local Budget	Ongoing	Defer to plan update. Ongoing.
TGR-8	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Applicable Departments	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	Ongoing	Defer to plan update. Ongoing as needed.
TGR-9	Create/update the Emergency Action Plans for all dams located within the municipality.	Existing	Flood	1, 3	1-1, 1- 6, 1-7, 3-1, 3- 2, 3-4	NFIP Flood Plain Administrator; Engineering Dept.	Watershed districts (if applicable); neighboring municipalities ; County (if applicable); NYS	Medium to Low	FEMA HMA	Long Term	Defer to Plan Update.
TGR-10	Implement dam structure repairs as required by dam safety report/protocols.	Existing	Flood	3	3-1, 3- 3, 3-6	NFIP Flood Plain Administrator; Engineering Dept.	Watershed districts (if applicable); neighboring municipalities	Medium	FEMA HMA	Ongoing	Defer to Plan Update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF GREENFIELD PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
							; County (if applicable); NYS				
TGR-11	Support the Installation/Implementation of Community Emergency Alert System.	New & Existing	All Hazards	1, 3, 5	1-1, 3- 1, 3-3, 3-5, 3- 6, 5-1	LEMC	Watershed districts (if applicable); neighboring municipalities ; County (if applicable); NYS	Medium	FEMA HMA	Ongoing	Defer to plan update. This is facilitated by the county.
TGR-12	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1- 9, 2-5, 3-1, 5-2	Town Board	Not Provided	Medium	Operating Budget	Ongoing	Defer to plan update.
TGR-13	The Town should develop/continue to develop/update as needed a plan for ongoing maintenance of drainage culverts and bridges.	New & Existing	Flood, Severe Storm	1, 3	1-1, 1- 3, 1-6, 1-7, 3- 2, 3-6	Highway Department, Town Board, NYS DEC	Not Provided	Low	Town Board, NYS DEC, NYS DOT	Short Term	Defer to plan update. Ongoing.
TGR-14	Kayaderosseras Ridge should be protected from visual, drainage and erosion impacts. Investigate the appropriate mitigation action alternatives.	Existing	Flood, Severe Storm	1, 3	1-5, 3-1	Town Board, Planning Board, Greenfield Concerned Citizens	Not Provided	Medium - High	Private, NYS OPRHP	Ongoing	Defer to plan update.
TGR-15	The Town Board should support the extension of cable TV and internet web services to the more rural parts of Town to increase lines of communication to the rural parts of Town as a way to educate and send messages regarding hazard events.	New & Existing	All Hazards	1, 2, 3	1-4, 1- 9, 2-2, 2-5, 3- 4, 3-6	Town Board, Time Warner, Adelphia	Not Provided	Medium - High	Private, Municipality	Ongoing	Defer to plan update. In progress. Improving steadily due to Charter's plans. Town has meetings with Charter to better understand service needs.



## SECTION 22: PREVIOUS ACTIONS

TOWN OF GREENFIELD PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TGR-16	Revise the mobile home replacement regulations to encourage replacement of older mobile homes with newer manufactured housing. This would protect against wind and flood damage.	New & Existing	Flood, Severe Storm	1, 3	1-1, 1- 6, 1-7, 1-8, 3-2	Planning Board, Town Board	Not Provided	Low	Local	Ongoing	Defer to plan update. In progress. Currently working with Rebuilding Together Saratoga for a federal grant that would help with mobile home replacements.
TGR-17	Prepare for severe winter weather by expanding mutual aid agreements, purchasing stockpile emergency supplies (e.g. road salt and fuel), and expand inventory of snow removal equipment and tracked vehicles.	N/A	Severe Winter Storm	1, 3, 5	1-1, 1- 4, 3-6, 5-1, 5-2	Office of Emergency Management	Not Provided	Medium	Multiple Sources; Grants	Short Term	Defer to plan update. Ongoing.
TGR-18	Mitigate flooding of town roads by consulting with engineers and the NYS DEC to determine solutions (e.g. big box culverts).	New & Existing	Flood	1, 5	1-1, 5-2	NFIP Floodplain Administrator	Independent Consultants; NYS DEC	Medium	Multiple Sources; Grants	Short Term	Defer to plan update. Ongoing.

SECTION 22: PREVIOUS ACTIONS

TOWN OF HADLEY

TOWN OF HADLEY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TH-1	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long Term	Defer to plan update.
TH-2	Where appropriate, support purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long Term	Defer to plan update.
TH-3	Consider participation in incentive based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1- 3, 1-6, 2-1, 2- 2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Long Term	Defer to plan update.
TH-4	Continue to support the implementation, monitoring, maintenance, and updating of this	New & Existing	All Hazards	All	All	NFIP Floodplain Administrator	County (through Mitigation Planning	Low – High (for 5-year	Local Budget, possibly FEMA Mitigation Grant	Long Term	Defer to plan update. Ongoing.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF HADLEY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	Plan, as defined in Section 7.0.						Coordinator), NYS DHSES	update)	Funding for 5-year update		
TH-5	Strive to maintain compliance with, and good-standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1- 2, 1-3, 1-8, 2- 2, 2-3, 2-4, 4-1, 4-2, 4-3, 4- 4	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Long Term	Defer to plan update. Ongoing.
TH-6	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1- 7, 3-2, 3-4, 3- 5	Office of Emergency Management with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Ongoing	Defer to plan update. Ongoing.
TH-7	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3, 5	3-4, 5- 1, 5-3	Office of Emergency Management, DPW and Roads	Surrounding municipalities and County	Low - Medium	Local Budget	Short Term	Defer to plan update. Ongoing.
TH-8	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Applicable Departments	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	Ongoing	Defer to plan update. Ongoing.
TH-9	Create/update the Emergency Action Plans for all dams located within the municipality.	Existing	Flood	1, 3	3 1-1, 1- 6, 1-7, 3-1, 3-2, 3-4	NFIP Floodplain Administrator	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium to Low	FEMA HMA	Short Term	Completed. Plans are updated periodically.
TH-10	Implement dam structure repairs as required by dam safety report/protocols.	Existing	Flood	3	3-1, 3- 3, 3-6	NFIP Floodplain Administrator; Engineering Department	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	Ongoing	Defer to plan update. New York State has plans for maintenance of the Conklingville Dam in the near future.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF HADLEY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TH-11	Support the Installation/Implementation of Community Emergency Alert System.	New & Existing	All Hazards	1, 3, 5	1-1, 3- 1, 3-3, 3-5, 3- 6, 5-1	LEMC	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	Short Term	Completed. A reverse 911 system is in place, along with a dam failure warning system.
TH-12	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1- 9, 2-5, 3-1, 5- 2	Town Board	Not Provided	Medium	Operating Budget	Long Term	Defer to plan update.
TH-13	Protection of sewer beds by building a 4' wall around the sewer beds.	Existing	Flood	1	1-1, 1-8	Utility District	Not Provided	Low	Multiple sources (grants)	Short Term	Defer to plan update.
TH-14	Replace and expand catch basins and culverts in the area of First Avenue and Varney Street.	Existing	Flood	2	1-1, 1- 2, 1-8	Engineering Department; Roads and Bridge Department	Not Provided	Low	Multiple sources (grants)	Short Term	Defer to plan update. In progress.

SECTION 22: PREVIOUS ACTIONS

TOWN OF HALFMOON

TOWN OF HALFMOON PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
THM-1	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Ongoing	Defer to plan update. Ongoing.
THM-2	Where appropriate, support purchase, or relocation of structures located in hazard- prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Ongoing	Defer to plan update. Ongoing.
THM-3	Consider participation in incentive based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1- 3, 1-6, 2-1, 2- 2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Ongoing	Defer to plan update. Ongoing.
THM-4	Continue to support the implementation, monitoring, maintenance, and updating of this	New & Existing	All Hazards	All	All	NFIP Floodplain Administrator	County (through Mitigation Planning	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation Grant	Ongoing	Defer to plan update. Ongoing.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF HALFMOON PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	Plan, as defined in Section 7.0.						Coordinator), NYS DHSES		Funding for 5-year update		
THM-5	Strive to maintain compliance with, and good- standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1- 2, 1-3, 1-8, 2- 2, 2-3, 2-4, 4-1, 4-2, 4-3, 4-4	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Short Term	Defer to plan update. Ongoing.
THM-6	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1- 7, 3-2, 3-4, 3-5	Office of Emergency Management with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Short Term/ Ongoing	Defer to plan update. Ongoing and updated annually. The Local Emergency Plan was adopted in January of 2024
THM-7	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3, 5	3-4, 5- 1, 5-3	Office of Emergency Management, DPW and Roads	Surrounding municipalities and County	Low - Medium	Local Budget	Short Term	Defer to plan update. Ongoing and updated annually.
THM-8	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Applicable Departments	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	Short Term	Defer to plan update. Ongoing.
THM-9	Support the Installation/Implementation of Community Emergency Alert System.	New & Existing	All Hazards	1, 3, 5	1-1, 3- 1, 3-3, 3-5, 3- 6, 5-1	LEMC	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	Ongoing	Defer to plan update. Ongoing.
THM-10	Provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost- sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1- 9, 2-5, 3-1, 5-2	Town Board	Not Provided	Medium	Operating Budget	Short Term	Defer to plan update. Ongoing.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF HALFMOON PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
THM-11	Evaluate the Town's zoning code and subdivision regulations to properly incorporate the changes/recommendations in the Comprehensive Plan.	Existing	N/A	1, 4	1-6, 1- 8, 4-1, 4-2, 4-4	Engineering Department	Not Provided	Low	Local Budget	Short Term	Defer to plan update. In progress. Expected adoption of Comprehensive Plan by the end of 2024.
THM-12	River-front access/acquisition along the Erie Canal and Old Champlain Canal trail corridor.	New & Existing	N/A - open space, public access	4	4-2, 4- 3, 4-4, 4-5	NFIP Floodplain Administrator	Neighboring Municipalities	Medium to High	FEMA HMA Grant sources dependent on purpose of acquisition	Ongoing – Long term depending on initiative	Completed. Erie Canal: Added extra parking, Handicap fishing access, car top boat launch at Terminal Road, full length trail to connect with Clifton Park. Old Champlain: Lighthouse Park on the Hudson River with fishing access.
THM-13	Continue to require stormwater management plans as part of site plan review procedures and might consider adopting the recommendations of the North Halfmoon GEIS.	Existing	Flood, Severe Storm, Severe Winter Storm	1, 3	1-5, 1- 6, 1-7, 3-1	NFIP Floodplain Administrator	NYSDEC	Medium	Local Budget	Ongoing	Defer to plan update. Ongoing.
THM-14	Conduct periodic review of stormwater management and erosion control regulations to ensure that they are providing the maximum protection to soil and water resources.	Existing	Flood, Severe Storm, Severe Winter Storm	1, 3	1-5, 1- 6, 3-1	NFIP Floodplain Administrator	NYSDEC	Low	Local Budget	Ongoing	Defer to plan update. Ongoing.
THM-15	Bridge and culvert replacement at the following locations: Betts Lane & Riverview Road.	Existing/completed	Flood	1, 3	1-1, 1- 5, 3-6	Engineering Department	Not Provided	Medium	FEMA HMA; Local Budget	Ongoing	Defer to plan update (for Riverview Road).

## SECTION 22: PREVIOUS ACTIONS

TOWN OF HALFMOON PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
											Belts Lane has been replaced and Riverview Road is ongoing.
THM-16	Mitigate Canal Road Flooding in area of Crescent Boat Club.	Existing	Flood	1, 3	1-1, 1- 8, 3-6	NFIP Floodplain Administrator	Not Provided	Medium	FEMA HMA Grant Sources; Local Budget	Short Term	Defer to plan update. Ongoing.
THM-17	Mitigate Riverview and Bovack Road Flooding.	Existing	Flood	1, 4	1-1, 1- 8, 3-7	NFIP Floodplain Administrator	Not Provided	Medium	FEMA HMA Grant Sources; Local Budget	Short Term	Defer to plan update. Ongoing.



SECTION 22: PREVIOUS ACTIONS

TOWN OF MALTA

TOWN OF MALTA PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TMA-1	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Ongoing	Defer to plan update.
TMA-2	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1,2,3,5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Ongoing	Defer to plan update. Ongoing.
TMA-3	Consider participation in incentive-based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1- 3, 1-6, 2-1, 2- 2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Long Term	Defer to plan update.
TMA-4	Continue to support the implementation, monitoring, maintenance, and updating of this	New & Existing	All Hazards	All	All	NFIP Floodplain Administrator	County (through Mitigation)	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation Grant	Ongoing	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF MALTA PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	Plan, as defined in Section 7.0.						Planning Coordinator), NYS DHSES		Funding for 5-year update		
TMA-5	Strive to maintain compliance with, and good-standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1- 2, 1-3, 1-8, 2- 2, 2-3, 2-4, 4-1, 4-2, 4-3, 4-4	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Ongoing	Defer to plan update.
TMA-6	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1- 7, 3-2, 3-4, 3-5	Office of Emergency Management	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Ongoing	Defer to plan update.
TMA-7	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3, 5	3-4, 5- 1, 5-3	Office of Emergency Management	Surrounding municipalities and County	Low - Medium	Local Budget	Ongoing	Defer to plan update.
TMA-8	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Appropriate agencies	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	Ongoing	Defer to plan update.
TMA-9	Require all utilities for future development to be underground.	New & Existing	All Hazards	1, 3	1-1, 1- 3, 1-6, 1-8, 3- 4, 3-6	Town Board and Planning	Developers, Utility Companies	Medium	Developers	Ongoing – Long-term depending on initiative	Defer to plan update. Ongoing.
TMA-10	Continue siren installations throughout the Town and provide NOAA weather radios to vulnerable populations.	New & Existing	All Hazards	2, 3, 5	2-5, 3- 4, 3-5, 3-6, 5-1	Town Board, Planning Board, Local Emergency Management	New Developers	\$25,000 Per Siren Weather Radios (Medium)	Developers, FEMA mitigation Grant Programs and local budget	Long-term depending on funding	Defer to plan update. Ongoing, three sirens have been installed to date.
TMA-11	Continue to proactively prune trees along roadways.	New & Existing	Severe Storm	1, 3	1-1, 3- 4, 3-6	Highway Department and Utility Companies	Utility Companies	Medium	HMA, Local Budget	Ongoing	Defer to plan update. Ongoing.
TMA-12	Perform tabletop exercise and modify/enhance severe winter storms policies and procedures.	New & Existing	Severe Storm	3, 5	3-3, 3- 4, 3-5, 5-1, 5-2	Highway Department and Emergency Management	County Emergency Management, NYS DHSES	Low	Local Budget	Ongoing	Defer to plan update. Ongoing.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF MALTA PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TMA-13	Continue outreach to residents to promote 72-hour self-sufficiency.	New & Existing	All Hazards	2	2-1, 2- 2, 2-3, 2-4, 2-5	Emergency Management	County Emergency Management, NYS DHSES	Low	FEMA Mitigation Grant Programs	Ongoing	Defer to plan update. Ongoing.
TMA-14	Mitigate flooding along Saratoga Lake (Silver Beach). Conduct a flood-control design study to minimize flooding through the residential area along Silver Beach. Flooding impacts the roadway and in colder weather, creates icy conditions. Work with County to conduct a study to determine how to alleviate severe flooding and drainage problems in Silver Beach area.	New & Existing	Flood	1	1-1, 1- 5, 4-1	Town Board and Planning Board	County, NYS DHSES, ISO, FEMA	Low - High	Drainage District, FEMA Mitigation Grant	Ongoing	Defer to plan update.
TMA-17	Support the Installation/ Implementation of Community Emergency Alert System.	New & Existing	All Hazards	1, 3, 5	5 1-1, 3- 1, 3- 3, 3-5, 3-6, 5-1	LEMC	Watershed districts (if applicable); neighboring municipalities ; County (if applicable); NYS	Medium	FEMA HMA	Short Term	Defer to plan update.
TMA-18	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1- 9, 2-5, 3-1, 5-2	Town Board	Not Provided	Medium	Operating Budget	Long Term	Defer to plan update.
TMA-19	Construct an additional salt storage facility.	New	Severe Winter Storm	1, 3	1-1, 3-6	Highway Department	N/A	Medium	Town/State/ Federal	Short Term	Defer to plan update.
TMA-20	Allocate additional funding for chemical and mechanical treatment of invasive species and algal	N/A	Invasive Species	4	*4-1	Saratoga Lake Protection and Improvement	N/A	Medium	State/Federal	Short Term	Defer to plan update. Ongoing.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF MALTA PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	blooms.					District					

SECTION 22: PREVIOUS ACTIONS

CITY OF MECHANICVILLE

CITY OF MECHANICVILLE PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
CM-0	Schedule visits by FEMA to provide information to the community with special attention to RL properties on Route 4. This outreach will be supported by the Saratoga County Office of Emergency Services and implemented by the City to support future applications for mitigation funding for RL properties.	New & Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	Engineering in coordination with the NFIP Floodplain Administrator	NYNYS DHSES Saratoga County Office of Emergency Services	Low	Municipal Budget	Short Term	Defer to plan update.
CM-1a	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long Term	Defer to plan update.
CM-1b	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long Term	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

CITY OF MECHANICVILLE PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	implementation of that action based on available funding.										
CM-2	Consider participation in incentive-based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1- 3, 1-6, 2-1, 2- 2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Long Term	Defer to plan update.
CM-3	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0.	New & Existing	All Hazards	All	All	NFIP Floodplain Administrator	County (through Mitigation Planning Coordinator), NYS DHSES	Low – High (for 5- year update)	Local Budget, possibly FEMA Mitigation Grant Funding for 5- year update	Short Term	Defer to plan update.
CM-4	Strive to maintain compliance with, and good-standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1- 2, 1-3, 1-8, 2- 2, 2-3, 2-4, 4-1, 4-2, 4-3, 4- 4	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Long Term	Defer to plan update.
CM-5	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1- 7, 3-2, 3-4, 3- 5	Emergency Management with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Short Term	Defer to plan update.
CM-6	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3, 5	3-4, 5- 1, 5-3	Emergency Management, DPW and Roads	Surrounding municipalities and County	Low - Medium	Local Budget	Short Term	Defer to plan update.
CM-7	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Appropriate Departments	County and Regional agencies (as appropriate for initiative	Low - High	Existing programs and grant funding where applicable	Short Term	Defer to plan update.
CM-8	Support the Installation/Implementation of Community Emergency Alert System.	New & Existing	All Hazards	1, 3, 5	1-1, 3- 1, 3-3, 3-5, 3- 6, 5-1	LEMC	Watershed districts (if applicable); neighboring municipalities; County (if	Medium	FEMA HMA	Short Term	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

CITY OF MECHANICVILLE PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
							applicable); NYS				
CM-9	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1- 9, 2-5, 3-1, 5- 2	City Council	Not Provided	Medium	Operating Budget	Long Term	Defer to plan update.
CM-10	Investigate and implement mitigation actions that would protect the Mechanicville Central Fire Station from the flood hazard. Based on estimated flood modeling results for this Plan, the Fire Station may experience damages as a result of a 100- and/or 500-year flood event.	Existing	Flood, Severe Storm	1, 3	1-1, 3- 4, 3-6	NFIP Floodplain Administrator	Fire Dept/ District	Low (Could be high once action is decided and implemented)	Local (FEMA HMA and local match for implementation of action)	Short Term	Defer to plan update.
CM-11	Investigate and implement mitigation actions that would protect the Mechanicville Police Station from the flood hazard. Based on estimated flood modeling results for this Plan, the Police Station may experience damages as a result of a 100- and/or 500-year flood event.	Existing	Flood, Severe Storm	1, 3	1-1, 3- 4, 3-6	NFIP Floodplain Administrator	Police Dept/ District	Low (Could be high once action is decided and implemented)	Local (FEMA HMA and local match for implementation of action)	Short Term	Defer to plan update.
CM-12	Investigate and implement mitigation actions that would protect the Mechanicville CSO (wastewater facility) from the flood hazard. Based on estimated flood modeling results for this Plan, the facility may experience damages as a result of a 100- and/or 500-year flood event.	Existing	Flood, Severe Storm	1, 3	1-1, 3- 4, 3-6	NFIP Floodplain Administrator	WWTF	Low (Could be high once action is decided and implemented)	Local (FEMA HMA and local match for implementation of action)	Short Term	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

CITY OF MECHANICVILLE PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
CM-13	Investigate and implement mitigation actions that would prevent flooding of the Main Street/Railroad overpass.	Existing	Flood	1, 3	1-1, 1-2, 3-5	NFIP Floodplain Administrator; Engineering Department	Highway Dept.	Medium	Grant, Municipal Match	Short Term	Defer to plan update.
CM-14	Topographical challenges prevent the current 800MHz radio system from covering parts of the City of Mechanicville. Installation of fiber optic lines would provide an economic solution to the issue. Other necessary equipment is already on hand.	Existing	All Hazards	1, 3, 4	1-1, 3-3, 3-4, 3-5, 4-1	Town and County Emergency Management Personnel	Engineers, Public Works, Town Government, County Emergency Services, Private Service Providers	Medium	Grant Programs, Local Match	Short Term	Defer to plan update.



SECTION 22: PREVIOUS ACTIONS

TOWN OF MILTON

TOWN OF MILTON PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TMI-1	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding. The Milton Eagles Volunteer Fire Department is located in a special flood hazard area; its vulnerability to flood hazards is not fully known and over the life of this plan the town will conduct an assessment of this facility (e.g., document history of damage) to understand its vulnerabilities and mitigate.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long Term	Defer to plan update. Amend station name to "The Rock City Falls Vol. Fire Department."
TMI-2	Where appropriate, support purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long Term	Defer to plan update. Amend station name to "The Rock City Falls Vol. Fire Department."

## SECTION 22: PREVIOUS ACTIONS

TOWN OF MILTON PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	implementation of that action based on available funding. The Milton Eagles Volunteer Fire Department is located in a special flood hazard area; its vulnerability to flood hazards is not fully known and over the life of this plan the town will conduct an assessment of this facility (e.g., document history of damage) to understand its vulnerabilities and mitigate.										
TMI-3	Consider participation in incentive-based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1- 3, 1-6, 2-1, 2- 2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Ongoing	Defer to plan update. Amen to include "and educate Town on benefits of participating in programs."
TMI-4	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0.	New & Existing	All Hazards	All	All	NFIP Floodplain Administrator	County (through Mitigation Planning Coordinator) , NYS DHSES	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation Grant Funding for 5-year update	Ongoing	Delete action. This will be an ongoing process for the Town.
TMI-5	Strive to maintain compliance with, and good-standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1- 2, 1-3, 1-8, 2- 2, 2-3, 2-4, 4-1, 4-2, 4-3, 4- 4	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Ongoing – Long term depending on initiative	Defer to plan update.
TMI-6	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1- 7, 3-2, 3-4, 3- 5	Municipal Emergency Manager with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Ongoing	Defer to plan update. The Town will work to integrate the HMAP and Emergency Plan.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF MILTON PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TMI-7	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3, 5	3-4, 5- 1, 5-3	Emergency Management, DPW and Roads	Surrounding municipalities and County	Low - Medium	Local Budget	Ongoing	Defer to plan update. In progress. The Town is in the process of obtaining MOUs for stormwater system management and data sharing.
TMI-8	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Appropriate Departments	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	Long Term	Delete action. The town no longer deems this action a priority.
TMI-9	Create/update the Emergency Action Plans for all dams located within the municipality.	Existing	Flood	1, 3	1-1, 1- 6, 1-7, 3-1, 3- 2, 3-4	NFIP Floodplain Administrator	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium to Low	FEMA HMA	Short Term	Defer to plan update. Ongoing. Plans needs to be updated.
TMI-10	Implement dam structure repairs as required by dam safety report/protocols.	Existing	Flood	3	3-1, 3- 3, 3-6	NFIP Floodplain Administrator with the Engineering Department	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	Short Term	Defer to plan update.
TMI-11	Support the Installation/Implementation of Community Emergency Alert System.	New & Existing	All Hazards	1, 3, 5	5 1-1, 3- 1, 3-3, 3-5, 3-6, 5-1	LEMC	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	Ongoing	Defer to plan update. Town will assess alert needs and possible coordination of systems with County.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF MILTON PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TMI-12	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1- 9, 2-5, 3-1, 5- 2	Town Board	Not Provided	Medium	Operating Budget	Ongoing	Delete action. The town no longer deems this action a priority.
TMI-13	Investigate and implement mitigation actions to mitigate flooding at Rock City Falls Fire Dept. Station #1 which is estimated to experience damages from flooding per the Vulnerability Assessment conducted for this Plan.	Existing	Flood, Severe Storm	1, 3	1-1, 3- 4, 3-6	NFIP Floodplain Administrator	Fire Dept/ District	Low (Could be high once action is decided and implemented)	Local (FEMA HMA and local match for implementation of action)	Ongoing	Delete action. The town no longer deems this action a priority as it is captured in TMI-1 and 2.
TMI-14	Investigate and implement mitigation actions to mitigate flooding Sherriff's Dept – Civil Div which is located in the flood hazard area.	Existing	Flood, Severe Storm	1, 3	1-1, 3- 4, 3-6	NFIP Floodplain Administrator	Sherriff Dept.	Low (Could be high once action is decided and implemented)	Local (FEMA HMA and local match for implementation of action)	Ongoing	Defer to plan update. Amend action to say, "Investigate and implement mitigation actions to mitigate flooding, and all other hazards, at the Sherriff's Department which is located in the flood hazard area" and include all hazards.
TMI-15	Rehabilitate Town Hall, inclusive of a full HVAC system renovation and roof reconstruction. Due to the extensive nature of this work, additional rehabilitation/renovation work would occur including ADA code compliance upgrade, Fire Code improvements and arrangement of the usable space to provide improved efficiency in	Existing	All Hazards	1, 3	1-1, 3- 6	Town of Milton Town Board	N/A	High	Municipal Bonding and/or budget reserves	Short Term	Defer to plan update. Ongoing. Town Hall is undergoing renovations and will be used as a command center. With renovations, Town will still need to expand fiber optics and

## SECTION 22: PREVIOUS ACTIONS

TOWN OF MILTON PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	Town Hall operations.										networking to act as command center.
TMI-16	Remove and replace Town Highway Department Complex buildings in their entirety at the same or similar location within the Town's municipal complex to ensure success of operations.	Existing	All Hazards	1, 3	3 1-1, 1-4, 3-6	Town of Milton Town Board	N/A	High	Municipal Bonding and/or budget reserves	Short Term	Defer to plan update. Ongoing.

# SECTION 22: PREVIOUS ACTIONS

## TOWN OF MOREAU

TOWN OF MOREAU PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TMO-1a	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	SEMO, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long Term	Defer to plan update.
TMO-1b	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	SEMO, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Short Term	Defer to plan update.
TMO-2	Consider participation in incentive-based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1-3, 1-6, 2-1, 2-2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	SEMO, ISO, FEMA	Low - Medium	Local Budget	Short Term	Defer to plan update.
TMO-3	Continue to support the implementation, monitoring, maintenance, and updating of this	New & Existing	All Hazards	1 through 5	All	NFIP Floodplain Administrator	County (through Mitigation Planning)	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation Grant	Long Term	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF MOREAU PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	Plan, as defined in Section 7.0.						Coordinator), SEMO		Funding for 5-year update		
TMO-4	Strive to maintain compliance with, and good-standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1-2, 1-3, 1-8, 2-2, 2-3, 2-4, 4-1, 4-2, 4-3, 4-4	NFIP Floodplain Administrator	SEMO, ISO, FEMA	Low - Medium	Local Budget	Short Term	Defer to plan update.
TMO-5	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1-7, 3-2, 3-4, 3-5	Office of Emergency Management with support from County OEM and SEMO	County Emergency Management, SEMO	Low - Medium	Local Budget	Short Term	Defer to plan update.
TMO-6	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3, 5	3-4, 5-1, 5-3	Emergency Management, Highway Superintendent	Surrounding municipalities and County	Low - Medium	Local Budget	Ongoing	Defer to plan update.
TMO-7	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	1 through 5	All	Local departments (as applicable for specific initiative)	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	Ongoing	Defer to plan update.
TMO-8	Determine the appropriate action and address flood damage along Old Bend Road and West River Road.	New & Existing	Flood, Severe Storm	1, 3	1-1, 1-5, 3-1, 3-4	Emergency Manager and Highway Superintendent	Municipality and County	Medium	Existing programs and grant funding where applicable	Ongoing – Long-term depending on initiative	Defer to plan update.
TMO-9	Strengthen or continue to strengthen provisions in the Zoning Law for the management of stormwater, erosion and the protection of open space. Per the Comprehensive Land Use Plan.	New & Existing	Flood, Severe Storm	1, 4	1-1, 1-7, 4-1, 4-2, 4-3, 4-4	NFIP Floodplain Administrator	Municipality and County	Low	Budget	Short Term	Defer to plan update.
TMO-10	Review/revise the Town Zoning Law and Subdivision Regulations to reflect recommendations in the Comprehensive Plan (e.g.,	New & Existing	All Hazards	1, 4	1-1, 1-7, 4-1, 4-2, 4-3, 4-4	Zoning and Planning	Municipality and County	Low	Budget	Ongoing	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF MOREAU PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	preserve open space, prohibit new mining as a use of land, carefully plan new development, etc.). Per the Comprehensive Land Use Plan.										
TMO-11	Participate in the Champlain Canal Heritage Area Program that is proposing to establish a Greenway Corridor along the Hudson River. Per the Comprehensive Land Use Plan.	New & Existing	All Hazards	4	4-2, 4-3	NFIP Floodplain Administrator	Municipality and County	Medium	Budget	Ongoing	Delete from plan update. Town no longer finds project a priority at this time.
TMO-12	Review the Comprehensive Land Use Plan every five years to make sure it remains consistent with the changing goals of the community. Per the Comprehensive Land Use Plan.	New & Existing	All Hazards	1, 3, 4	1-6, 1-8, 3-2, 4-4	NFIP Floodplain Administrator	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Low	Budget	Ongoing – Long-term depending on	Delete from plan update. Town no longer finds project a priority at this time.
TMO-13	Create/update the Emergency Action Plans for all dams located within the municipality.	Existing	Flood	1, 3	1-1, 1-6, 1-7, 3-1, 3-2, 3-4	NFIP Floodplain Administrator	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium to Low	FEMA HMA	Short Term	Delete Action. Jurisdiction is not profiling dam failure in Plan Update.
TMO-14	Implement dam structure repairs as required by dam safety report/protocols.	Existing	Flood	3	3-1, 3-3, 3-6	NFIP Floodplain Administrator; Engineering Department	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	Short Term	Delete Action. Jurisdiction is not profiling dam failure in Plan Update.
TMO-15	Support the Installation/Implementation of Community Emergency Alert System.	New & Existing	All Hazards	1, 3, 5	1-1, 3-1, 3-3, 3-5, 3-6, 5-1	LEMC	Watershed districts (if applicable); neighboring	Medium	FEMA HMA	Ongoing	Defer to plan update.



## SECTION 22: PREVIOUS ACTIONS

TOWN OF MOREAU PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
							municipalities; County (if applicable); NYS				
TMO-16	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1-9, 2-5, 3-1, 5-2	Town Board	Not Provided	Medium	Operating Budget	Long Term	Defer to plan update.
TMO-17	Gather more information on the elevated groundwater occurring in Town and investigate possible actions to mitigate it.	N/A	All Hazards	1, 5	1-4, 5-2	NFIP Floodplain Administrator	Potentially the Town of Wilton	Low	Local Budget	Ongoing	Defer to plan update.

SECTION 22: PREVIOUS ACTIONS

TOWN OF NORTHUMBERLAND

TOWN OF NORTHUMBERLAND PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TN-1	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long Term	Defer to plan update.
TN-2	Where appropriate, support purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Short Term	Defer to plan update.
TN-3	Consider participation in incentive-based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1-3, 1-6, 2-1, 2-2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Short Term	Defer to plan update.
TN-4	Continue to support the implementation, monitoring, maintenance, and updating of this	New & Existing	All Hazards	All	All	NFIP Floodplain Administrator	County (through Mitigation Planning	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation Grant	Long Term	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF NORTHUMBERLAND PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	Plan, as defined in Section 7.0.						Coordinator), NYS DHSES		Funding for 5-year update		
TN-5	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1-2, 1-3, 1-8, 2-2, 2-3, 2-4, 4-1, 4-2, 4-3, 4-4	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Ongoing	Defer to plan update.
TN-6	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1-7, 3-2, 3-4, 3-5	Emergency Management with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Ongoing	Defer to plan update.
TN-7	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3, 5	3-4, 5-1, 5-3	Emergency Management, DPW and Roads	Surrounding municipalities and County	Low - Medium	Local Budget	Ongoing	Defer to plan update.
TN-8	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Local departments (as applicable for specific initiative)	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	Ongoing	Defer to plan update.
TN-9	Create/update the Emergency Action Plans for all dams located within the municipality.	Existing	Flood, Severe Storm	1, 3	1-1, 1-6, 1-7, 3-1, 3-2, 3-4	NFIP Floodplain Administrator	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA	Ongoing – Long-term depending on initiative	Delete Action. Jurisdiction is not profiling dam failure in Plan Update.
TN-10	Implement dam structure repairs as required by dam safety report/protocols.	Existing	Flood	3	3-1, 3-3, 3-6	NFIP Floodplain Administrator; Engineering Department	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	Long Term	Delete Action. Jurisdiction is not profiling dam failure in Plan Update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF NORTHUMBERLAND PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TN-11	Support the Installation/Implementation of Community Emergency Alert System.	New & Existing	All Hazards	1, 3, 5	1-1, 3-1, 3-3, 3-5, 3-6, 5-1	LEMC	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	Ongoing- to be completed in 2010	Defer to plan update.
TN-12	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1-9, 2-5, 3-1, 5-2	Town Board	Not Provided	Medium	Operating Budget	Short Term	Defer to plan update.
TN-13	Mitigate Brownville Road Flooding by installing new 8' by 40' culvert and increasing sub-base material to a depth of 18"-24" above existing grad & repave.	New	Flood	1	1-1, 1-8	Town of Northumberland Highway Department	Not Provided	Low	Local Budget	Short Term	Defer to plan update. In progress. Awaiting approval from DEC.
TN-14	Mitigate flooding of Wells Lane by increasing the sub-base material by two-feet compacted and installing two more 15" by 40' culverts two allow disbursement.	New & Existing	Flood	1	1-1, 1-8	Town of Northumberland Highway Department	Not Provided	Low	Local Budget	Short Term	Completed.

SECTION 22: PREVIOUS ACTIONS

TOWN OF PROVIDENCE

TOWN OF PROVIDENCE PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TP-1	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Ongoing	Delete action. The town no longer deems this action a priority.
TP-2	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Ongoing	Delete action. The town no longer deems this action a priority.
TP-3	Consider participation in incentive-based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1- 3, 1-6, 2-1, 2- 2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Ongoing	Delete action. The town no longer deems this action a priority.
TP-4	Continue to support the implementation, monitoring, maintenance, and updating of this	New & Existing	All Hazards	All	All	NFIP Floodplain Administrator	County (through Mitigation Planning	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation Grant	Ongoing	Defer to plan update. In progress.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF PROVIDENCE PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	Plan, as defined in Section 7.0.						Coordinator), NYS DHSES		Funding for 5- year update		
TP-5	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1- 2, 1-3, 1-8, 2- 2, 2-3, 2-4, 4-1, 4-2, 4-3, 4- 4	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Ongoing – Long-term depending on initiative	Delete action. The town no longer deems this action a priority.
TP-6	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1- 7, 3-2, 3-4, 3- 5	Emergency Management with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Ongoing	Defer to plan update. Ongoing.
TP-7	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3, 5	3-4, 5- 1, 5-3	Emergency Management, DPW and Roads	Surrounding municipalities and County	Low - Medium	Local Budget	Ongoing	Defer to plan update. In progress. Currently works closely with Towns of Edinburg, Day, Hadley, Northampton, Galway, Charleton, Saratoga, Northumberland, Corinth, as well as Saratoga County.
TP-8	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Local departments (as applicable for specific initiative)	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	Ongoing	Delete action. The town no longer deems this action a priority.
TP-9	Create/update the Emergency Action Plans for all dams located within the municipality.	Existing	Flood	1, 3	1-1, 1- 6, 1-7, 3-1, 3- 2, 3-4	NFIP Floodplain Administrator	Watershed districts (if applicable); neighboring municipalities;	Medium to low	FEMA HMA	Completed	Delete action. The town no longer deems this action a priority. Jurisdiction will not

## SECTION 22: PREVIOUS ACTIONS

TOWN OF PROVIDENCE PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
							County (if applicable); NYS				be profiling dam failure in Plan Update.
TP-10	Implement dam structure repairs as required by dam safety report/protocols.	Existing	Flood	3	3-1, 3- 3, 3-6	NFIP Floodplain Administrator; Engineering Department	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	Short Term	Delete Action. Jurisdiction will not be profiling dam failure in Plan Update.
TP-11	Support the Installation/Implementation of Community Emergency Alert System.	New & Existing	All Hazards	1, 3, 5	1-1, 3- 1, 3-3, 3-5, 3- 6, 5-1	LEMC	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	Ongoing	Delete action. The town no longer deems this action a priority.
TP-12	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1- 9, 2-5, 3-1, 5- 2	Town Board	Not Provided	Medium	Operating Budget	Ongoing	Delete action. The town no longer deems this action a priority.
TP-13	Replace Sleezer Road Culvert with a wider box culvert style culvert, allowing wide ice chunks to pass through it.	Existing	Flood	1, 3	1-1, 1- 2, 3-6	NFIP Floodplain Administrator	Not Provided	Medium	Multiple Sources; Grant	Short Term	Delete action. The town no longer deems this action a priority.
TP-14	Mitigate Hans Creek Road landslide area by employing an engineering firm to do a feasibility study to explore & decide the best course of action to stabilize the hillside.	New	Ground Failure	1, 4	1-1, 1- 2, 3-7	NFIP Floodplain Administrator	Not Provided	Medium	Multiple Sources; Grant	Short Term	Completed. A set concrete jersey barrier was added along the base of the hillside to prevent debris

## SECTION 22: PREVIOUS ACTIONS

TOWN OF PROVIDENCE PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
											from entering the roadway.



SECTION 22: PREVIOUS ACTIONS

VILLAGE OF ROUND LAKE

VILLAGE OF ROUND LAKE PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
VRL-1	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Ongoing – Long-term depending on initiative	Defer to plan update.
VRL-2	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long Term	Defer to plan update.
VRL-2	Consider participation in incentive-based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1- 3, 1-6, 2-1, 2- 2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Long Term	Defer to plan update.
VRL-3	Continue to support the implementation, monitoring, maintenance, and updating of this	New & Existing	All Hazards	All	All	NFIP Floodplain Administrator	County (through Mitigation	Low – High (for 5- year	Local Budget, possibly FEMA Mitigation Grant	Long Term	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF ROUND LAKE PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	Plan, as defined in Section 7.0.						Planning Coordinator), NYS DHSES	update)	Funding for 5-year update		
VRL-4	Strive to maintain compliance with, and good-standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1- 2, 1-3, 1-8, 2- 2, 2-3, 2-4, 4-1, 4-2, 4-3, 4- 4	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Ongoing as monies made available	Defer to plan update. Ongoing. The Village routinely inspects risk areas after heavy rains to make recommendations.
VRL-5	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1- 7, 3-2, 3-4, 3- 5	Emergency Management with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Ongoing	Defer to plan update.
VRL-6	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3, 5	3-4, 5- 1, 5-3	Emergency Management, DPW and Roads	Surrounding municipalities and County	Low - Medium	Local Budget	Ongoing	Defer to plan update. Ongoing. The Village maintains a very good relationship with Town of Malta Highway Department.
VRL-7	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Local departments (as applicable for specific initiative)	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	Ongoing	Defer to plan update. The Village is allocating some of the budget to procure a grant writer in 2024 to seek additional grant funding.
VRL-8	Support the Installation/ Implementation of Community Emergency Alert System.	New & Existing	All Hazards	1, 3, 5	5 1-1, 3- 1, 3-3, 3-5, 3-6, 5-1	NFIP Floodplain Administrator	Watershed districts (if applicable); neighboring municipalities ; County (if applicable); NYS	Medium	FEMA HMA	Ongoing	Completed.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF ROUND LAKE PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
VRL-9	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1- 9, 2-5, 3-1, 5- 2	Village Board	Not Provided	Medium	Operating Budget	Ongoing – Long-term depending on initiative	Defer to plan update. Ongoing. The Village sets aside funding to maintain and improve drainage structures and projects.

SECTION 22: PREVIOUS ACTIONS

TOWN OF SARATOGA

TOWN OF SARATOGA PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TS-1a	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Ongoing – Long-term depending on initiative	Defer to plan update.
TS-1b	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Ongoing – Long-term depending on initiative	Defer to plan update.
TS-2	Consider participation in incentive-based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1- 3, 1-6, 2-1, 2- 2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Short Term	Defer to plan update.
TS-3	Continue to support the implementation, monitoring, maintenance, and updating of this	New & Existing	All Hazards	All	All	NFIP Floodplain Administrator	County (through Mitigation)	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation Grant	Short Term	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF SARATOGA PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	Plan, as defined in Section 7.0.						Planning Coordinator), NYS DHSES		Funding for 5-year update		
TS-4	Strive to maintain compliance with, and good-standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1- 2, 1-3, 1-8, 2- 2, 2-3, 2-4, 4-1, 4-2, 4-3, 4- 4	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Short Term	Defer to plan update.
TS-5	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1- 7, 3-2, 3-4, 3- 5	Emergency Management with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Long Term	Defer to plan update.
TS-6	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3, 5	3-4, 5- 1, 5-3	Emergency Management, DPW and Roads	Surrounding municipalities and County	Low - Medium	Local Budget	Ongoing	Defer to plan update.
TS-7	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Local departments (as applicable for specific initiative)	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	Ongoing	Defer to plan update.
TS-8	Create/update the Emergency Action Plans for all dams located within the municipality.	Existing	Flood	1, 3	1-1, 1- 6, 1-7, 3-1, 3- 2, 3-4	NFIP Floodplain Administrator	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium to Low	FEMA HMA	Ongoing – Long-term depending on initiative	Delete Action. Jurisdiction will not be profiling dam failure in Plan Update.
TS-9	Implement dam structure repairs as required by dam safety report/protocols.	Existing	Flood	3	3-1, 3- 3, 3-6	NFIP Floodplain Administrator; Engineering Department	Watershed districts (if applicable); neighboring municipalities; County (if applicable);	Medium	FEMA HMA	Long Term	Delete Action. Jurisdiction will not be profiling dam failure in Plan Update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF SARATOGA PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
							NYS				
TS-10	Support the Installation/Implementation of Community Emergency Alert System.	New & Existing	All Hazards	1, 3, 5	1-1, 3- 1, 3-3, 3-5, 3- 6, 5-1	LEMC	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	Ongoing	Defer to plan update.
TS-11	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1- 9, 2-5, 3-1, 5- 2	Town Board	Not Provided	Medium	Operating Budget	Ongoing	Defer to plan update.
TS-12	Restructure/rebuilding culvert system on Neilson Road to allow the water to flow under the roads.	Existing	Flood	1, 3	1-1, 1-2, 3-6	NFIP Floodplain Administrator; Engineering Department	Highway Department	Medium	Grant, Municipal Match	Short Term	Defer to plan update.
TS-13	Restructure/rebuilding culvert system on Fitch Road to allow the water to flow under the roads.	Existing	Flood	1, 3	1-1, 1-2, 3-6	NFIP Floodplain Administrator; Engineering Department	Highway Department	Medium	Grant, Municipal Match	Short Term	Defer to plan update.

SECTION 22: PREVIOUS ACTIONS

CITY OF SARATOGA SPRINGS

CITY OF SARATOGA SPRINGS PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
CSS-3 <sup>2</sup>	Consider participation in incentive-based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1- 3, 1-6, 2-1, 2- 2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	SEMO, ISO, FEMA	Low to Medium	Local Budget	Long Term	Defer to plan update. Ongoing.
CSS-4	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0.	New & Existing	All Hazards	1 to 5	All	NFIP Floodplain Administrator	Mitigation Planning Coordinator), SEMO	Low – High (for 5- year update)	Local Budget, possibly FEMA Mitigation Grant Funding for 5- year update	Long Term	Defer to plan update. Ongoing.
CSS-5	Strive to maintain compliance with, and good-standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1- 2, 1-3, 1-8, 2- 2, 2-3, 2-4, 4-1, 4-2, 4-3,4-4	NFIP Floodplain Administrator	SEMO, ISO, FEMA	Low - Medium	Local Budget	Long Term	Defer to plan update. Ongoing.
CSS-6	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1- 7, 3-2, 3-4, 3-5	Office of Risk and Safety and Department	County Emergency Management, SEMO	Low - Medium	Local Budget	Long Term	Defer to plan update. Ongoing.
CSS-7	Create/enhance/ maintain mutual aid agreements with neighboring communities for continuity of operations.	New & Existing	All Hazards	3, 5	3-4, 5- 1, 5-3	Department of Public Safety	Surrounding municipalities and County	Low - Medium	Local Budget	Long Term	Defer to plan update. Ongoing.
CSS-8	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	1 to 5	All	Appropriate Agencies	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	Long Term	Defer to plan update. Ongoing.
CSS-9	Upgrade and increase the capacity of the current Stormwater collection	Existing	Flood	1, 3	1-1, 1- 5, 1-9, 3-6	City Engineer	Regional agencies as	Varies per project -	Local Capital Budget	Short Term	Defer to plan update. Ongoing.

<sup>2</sup> Note City of Saratoga Springs actions began with CCS-3 in 2019 Saratoga County Multi-Jurisdictional Hazard Mitigation Plan.

## SECTION 22: PREVIOUS ACTIONS

CITY OF SARATOGA SPRINGS PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	system such that there will be a net reduction in the flood risk caused by Stormwater impacts.						appropriate	project specific			
CSS-10	Move power, telephone and cable utility wiring underground for critical City infrastructure.	New & Existing	All Hazards	1, 3	1-1, 1- 3, 1-6, 1-8, 3- 4, 3-6	Department of Public Works	National Grid	Varies per project - project specific	Local Capital Budget	Long Term	Defer to plan update. Ongoing.
CSS-11	Enhance interoperability communications between fire, police, EMS, DPW and emergency management.	New & Existing	All Hazards	1, 3, 5	1-1, 1- 6, 3-3, 3-4, 3- 5, 5-1, 5-2	Department of Public Safety	Federal, State and Regional Agency Coordination	Currently being examined for cost	Federal, State, Regional and Local monies as available	Short Term	Defer to plan update. Ongoing.
CSS-12	MIS Hazardous Waste Mitigation Program per state and federal guidelines Ongoing per federal and state regulatory agency mandates.	New & Existing	Hazardous Waste	1, 3-6	1-1, 3-6	NYS DEC	Regional Coordination as appropriate	Costs pending	Municipality	Long Term	Delete action. Hazardous Waste is not being profiled in Plan update.
CSS-13	Rehabilitation needs and areas for new storm system development including culvert replacements and enhanced drainage systems. City has identified area surrounding: Gilbert Road, 5th Ave, Lincoln Ave, Vanderbilt Ave, Walnut St, Saratoga Harness and Flat Tracks and area of North Broadway as High-Risk Storm Water Disaster Areas due to topography and geology of these sites within City.	New & Existing	Flood	1, 3	1-1, 1- 5, 1-9, 3-6	Department of Public Works	Regional and Private Sector coordination as appropriate	Costs have varied per project and are specific to geology and topography	Municipality	Short Term	Defer to plan update. Ongoing.
CSS-14	Participate in the County's ongoing GIS initiative. Currently, the city is examining and mapping all new and existing electrical, sanitary sewer, water and traffic conduits with GPS Coordinate Systems.	New & Existing	All Hazards	1, 3, 5	1-4, 1- 6, 3-2, 3-4, 5-2	Department of Public Works and Administrator of POSH	Regional and Private Sector coordination as appropriate	Project specific. Existing resources utilized budget	Municipality; Grants	Long Term	Defer to plan update. Ongoing.



## SECTION 22: PREVIOUS ACTIONS

CITY OF SARATOGA SPRINGS PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
CSS-15	Support/enhance Building and/or Flood code enforcement programs at the local level public education and awareness of current codes. City has developed and is in the process of expanding public awareness programs via written and electronic means.	New & Existing	Flood	2, 5	2-2, 2- 4, 2-5, 5-3	NFIP Floodplain Administrator	Federal, state and regional and private sector coordination as needed	Project Specific	Federal, State, Regional & Municipal Authorities; Grants	Long Term	Defer to plan update. Ongoing.
CSS-16	Vegetation Management: Trim trees and vegetation in the city rights-of-way to mitigate potential power loss in storm management.	New & Existing	Severe Storm	1, 3	1-1, 3- 4, 3-6	Department of Public Works	Regional and Private Sector coordination as needed	Project Specific	Federal, State, Regional & Municipal Authorities; Grants	Short Term	Defer to plan update. Ongoing.
CSS-17	Implement dam structure repairs as required by dam safety report/protocols. Budget for inspections as required by state law.	Existing	Flood	3	3-1, 3- 3, 3-6	Department of Public Works	Watershed districts (if applicable); neighboring municipalities ; County (if applicable); NYS	High	FEMA HMA	Short Term	Defer to plan update. Ongoing.
CSS-18	Support the Installation/Implementation of Community Emergency Alert System.	New & Existing	All Hazards	1, 3, 5	1-1, 3- 1, 3-3, 3-5, 3- 6, 5-1	Police Department	Watershed districts (if applicable); neighboring municipalities ; County (if applicable); NYS	Medium	FEMA HMA	Short Term	Defer to plan update. Ongoing.
CSS-20	Continue to implement Loughberry Lake dam management by working with engineers, NYS DEC, and NYS DOT to facilitate improvements to the dam embankments, creating a new spillway and addition water diversion mechanisms to safeguard	New & Existing	Flood	1, 3	1-1, 3-6	Department of Public Works	NYS DEC; NYS DOT	High	City Capital Bonding	Short Term	Defer to plan update. Ongoing. Amend action to include engineering study completed.

## SECTION 22: PREVIOUS ACTIONS

CITY OF SARATOGA SPRINGS PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	life and property.										
CSS-21	Promote windstorm mitigation by promoting public and private tree management, providing links for emergency management notifications via Nixle, Code Red, 511NY, and National Grid weblinks, and promoting protection of public and private infrastructure through enforcement of building codes.	N/A	Severe Storm	1, 2, 3	1-1, 2- 1, 2-4, 3-6	Department of Public Works and Police Department	County, State, Private Property Owners	Low	Federal and State	Ongoing	Defer to plan update. Ongoing.

# SECTION 22: PREVIOUS ACTIONS

## VILLAGE OF SCHUYLERVILLE

VILLAGE OF SCHUYLERVILLE PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
VSC-1	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding. The Village of Schuylerville Wastewater Treatment Plan is located in a special flood hazard area; its vulnerability to flood hazards is not fully known and over the life of this plan the village will conduct an assessment of this facility (e.g., document history of damage) to understand its vulnerabilities and mitigate.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Ongoing	Defer to plan update.
VSC-2	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to	New & Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Short Term	Delete Action. Similar updates were completed in 2012 and the Village no longer deems this action a priority.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF SCHUYLERVILLE PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	be a viable option, consider implementation of that action based on available funding. The Village of Schuylerville Wastewater Treatment Plan is located in a special flood hazard area; its vulnerability to flood hazards is not fully known and over the life of this plan the village will conduct an assessment of this facility (e.g., document history of damage) to understand its vulnerabilities and mitigate.										
VSC-3	Consider participation in incentive-based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1-3, 1-6, 2-1, 2-2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Ongoing	Defer to plan update.
VSC-4	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0.	New & Existing	All Hazards	All	All	NFIP Floodplain Administrator	County (through Mitigation Planning Coordinator), NYS DHSES	Low – High (for 5- year update)	Local Budget, possibly FEMA Mitigation Grant Funding for 5- year update	Short Term	Delete Action. The Village no longer deems this action a priority.
VSC-5	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1-2, 1-3, 1-8, 2-2, 2-3, 2-4, 4-1, 4-2, 4-3, 4-4	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Short Term	Defer to plan update. Ongoing.
VSC-6	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1-7, 3-2, 3-4, 3-5	Emergency Management with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Ongoing	Defer to plan update. In progress.
VSC-7	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3, 5	3-4, 5-1, 5-3	Emergency Management, DPW and Roads	Surrounding municipalities and County	Low - Medium	Local Budget	Ongoing	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF SCHUYLerville PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
VSC-8	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Appropriate Departments	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	Ongoing	Defer to plan update.
VSC-9	Create/update the Emergency Action Plans for all dams located within the municipality.	Existing	Flood	1, 3	1-1, 1-6, 1-7, 3-1, 3-2, 3-4	NFIP Floodplain Administrator	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium to low	FEMA HMA	Ongoing – Long-term depending on initiative	Delete action. Jurisdiction is not profiling dam failure in Plan update.
VSC-10	Implement dam structure repairs as required by dam safety report/protocols.	Existing	Flood	3	3-1, 3-3, 3-6	NFIP Floodplain Administrator; Engineering Department	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	Short Term	Delete action. Jurisdiction is not profiling dam failure in Plan Update.
VSC-11	Support the Installation/ Implementation of Community Emergency Alert System.	New & Existing	All Hazards	1, 3, 5	1-1, 3-1, 3-3, 3-5, 3-6, 5-1	LEMC	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	Short Term	Completed. The Village implemented CodeRed.
VSC-12	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1-9, 2-5, 3-1, 5-2	Village Board	Not Provided	Medium	Operating Budget	Short Term	Completed.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF SCHUYLERVILLE PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
VSC-13	Investigate mitigation actions to protect the Schuylerville WWTP's from the flood hazard. Both facilities are located within the flood hazard area.	Existing	Flood	1, 3	1-1, 3-4, 3-6	NFIP Floodplain Administrator	WWTF	Low Once action is decided, cost could be high	Local Once action is decided, source of funding may be FEMA HMA	Short Term	Defer to plan update. Ongoing.
VSC-14	Restructure/rebuilding Canal culvert system to allow the water to flow under the roads.	Existing	Flood	1, 3	1-1, 1-2, 3-6	NFIP Floodplain Administrator; Engineering Department	Not Provided	Medium	Multiple sources; Grant	Short Term	Defer to plan update. Project should be completed in 2-3 years as part of the New York Forward Grant.
VSC-15	Construct an additional water tower to aid to improve water pressure and increase firefighting capacity.	New & Existing	Wildfire	1, 3	1-1, 1-4, 3-6	Schuylerville/ Victory Board of Water Management	Not Provided	High	Multiple sources; Grant	Short Term	Delete Action. Village is unable to implement due to national momentum that is causing restriction to implement action.

SECTION 22: PREVIOUS ACTIONS

VILLAGE OF SOUTH GLENS FALLS

VILLAGE OF SOUTH GLENS FALLS PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
VSGF-1	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Short Term	Defer to plan update.
VSGF-2	Where appropriate, support purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Short Term	Defer to plan update.
VSGF-3	Consider participation in incentive-based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1-3, 1-6, 2-1, 2-2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Long Term	Defer to plan update.
VSGF-4	Continue to support the implementation, monitoring, maintenance, and updating of this	New & Existing	Severe Storm	All	All	NFIP Floodplain Administrator	County (through Mitigation)	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation Grant	Long Term	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF SOUTH GLENS FALLS PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	Plan, as defined in Section 7.0.						Planning Coordinator), NYS DHSES		Funding for 5-year update		
VSGF-5	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1-2, 1-3, 1-8, 2-2, 2-3, 2-4, 4-1, 4-2, 4-3, 4-4	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Ongoing	Defer to plan update.
VSGF-6	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1-7, 3-2, 3-4, 3-5	Emergency Management with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Ongoing	Defer to plan update.
VSGF-7	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3, 5	3-4, 5-1, 5-3	Emergency Management, DPW and Roads	Surrounding municipalities and County	Low - Medium	Local Budget	Ongoing – Long-term depending on initiative	Defer to plan update.
VSGF-8	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Appropriate Departments	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	Long Term	Defer to plan update.
VSGF-9	Create/update the Emergency Action Plans for all dams.	Existing	Flood	1, 3	1-1, 1-6, 1-7, 3-1, 3-2, 3-4	NFIP Floodplain Administrator	Watershed districts (if applicable); neighboring municipalities ; County (if applicable); NYS	Medium to Low	FEMA HMA	Long Term	Delete action. Jurisdiction is not profiling dam failure in Plan Update.
VSGF-10	Implement dam structure repairs as required by dam safety report/protocols.	Existing	Flood	3	3-1, 3-3, 3-6	NFIP Floodplain Administrator; Engineering Departments	Watershed districts (if applicable); neighboring municipalities ; County (if	Medium	FEMA HMA	Long Term	Delete action. Jurisdiction is not profiling dam failure in Plan Update.



## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF SOUTH GLENS FALLS PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
							applicable); NYS				
VSGF-11	Support the Installation/ Implementation of Community Emergency Alert System.	New & Existing	All Hazards	1, 3, 5	1-1, 3-1, 3-3, 3-5, 3-6, 5-1	LEMCO	Watershed districts (if applicable); neighboring municipalities ; County (if applicable); NYS	Medium	FEMA HMA	Ongoing	Defer to plan update.
VSGF-12	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1-9, 2-5, 3-1, 5-2	NFIP Floodplain Administrator	Not Provided	Medium	Operating Budget	Short Term	Defer to plan update.
VSGF-13	Replace water mains on Haviland Ave and Baker Ave. Replace antiquated six-inch water main with new DOH and engineer approved eight-inch water main. Also replace all service lines to adjacent homes and new fire hydrants. Removal of road and earth in the affected area would be performed by a qualified contractor or said municipality.	New & Existing	Flood	1, 3	1-1, 3-6	NFIP Floodplain Administrator; Engineering Department; Public Works	Not Provided	Medium	Water fund reserves; Grants	Short Term	Defer to plan update.
VSGF-14	Analyze risk to the water plant on Beach Road and determine a long-term plan to protect Village's investment.	Existing	Flood	1, 4	1-1, 3-7	NFIP Floodplain Administrator	Not Provided	Low	Water fund reserves; Grants	Short Term	Defer to plan update.

SECTION 22: PREVIOUS ACTIONS

TOWN OF STILLWATER

TOWN OF STILLWATER PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TST-1	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long Term	Defer to plan update.
TST-1b	Where appropriate, support purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Ongoing	Defer to plan update.
TST-2	Consider participation in incentive based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1- 3, 1-6, 2-1, 2- 2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Ongoing	Defer to plan update.
TST-3	Continue to support the implementation, monitoring, maintenance, and updating of this	New & Existing	All Hazards	All	All	NFIP Floodplain Administrator	County (through Mitigation)	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation Grant	Ongoing	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF STILLWATER PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	Plan, as defined in Section 7.0.						Planning Coordinator), NYS DHSES		Funding for 5-year update		
TST-4	Strive to maintain compliance with, and good-standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1- 2, 1-3, 1-8, 2- 2, 2-3, 2-4, 4-1, 4-2, 4-3, 4-4	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Short Term	Defer to plan update.
TST-5	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1- 7, 3-2, 3-4, 3-5	Emergency Management with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Ongoing	Defer to plan update.
TST-6	Create/enhance/ maintain mutual aid agreements with neighboring communities. Possible options listed in the Comprehensive Plan include the following: Conduct an Intermunicipal Cooperation Roundtable to promote intermunicipal coordination and communication, and expand joint operations with the Sheriff's Office, State Police and Mechanicville Police to maximize results.	New & Existing	All Hazards	3, 5	3-4, 5- 1, 5-3	Emergency Management, DPW and Roads	Surrounding municipalities and County	Low - Medium	Local Budget	Short Term	Defer to plan update.
TST-7	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Appropriate Departments	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	Long Term	Defer to plan update.
TST-8	Create/update the Emergency Action Plans for all dams located within the municipality.	Existing	Flood	1, 3	1-1, 1- 6, 1-7, 3-1, 3- 2, 3-4	NFIP Floodplain Administrator	Watershed districts (if applicable); neighboring municipalities; County (if	Medium to Low	FEMA HMA	Long Term	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF STILLWATER PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TST-9	Implement dam structure repairs as required by dam safety report/protocols.	Existing	Flood	3	3-1, 3- 3, 3-6	NFIP Floodplain Administrator; Engineering Department	applicable); NYS Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	Short Term	Defer to Plan Update.
TST-10	Support the Installation/ Implementation of Community Emergency Alert System.	New & Existing	All Hazards	1, 3, 5	1-1, 3- 1, 3-3, 3-5, 3- 6, 5-1	LEMC	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	Ongoing	Completed.
TST-11	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1- 9, 2-5, 3-1, 5-2	Town Board	Not Provided	Medium	Operating Budget	Ongoing	Defer to plan update.
TST-12	Develop a multi-year Capital Improvement Plan (CIP) to provide a long- term plan for infrastructure improvements.	New & Existing	All Hazards	1, 3	1-1, 1- 6, 3-3, 3-6	NFIP Floodplain Administrator	Not Provided	Low	Local Budget	Ongoing	Defer to plan update. Ongoing. The CIP is updated on a monthly basis.
TST-13	Perform a comprehensive review and evaluation of Stillwater's planning and zoning regulations. (Per the Comprehensive Plan)	Existing	All Hazards	1	1-4, 1- 6, 1-7	NFIP Floodplain Administrator; Engineering Department	Not Provided	Low	Local Budget	Short Term	Defer to plan update. Ongoing.
TST-14	Conduct Needs Assessment for each of the community service providers to ensure adequate	Existing	All Hazards	1, 3	1-1, 1- 4, 1-6, 3-4, 3- 5, 3-6	Office of Emergency Management;	Not Provided	Low to Medium	Local Budget	Short Term	Defer to plan update. Ongoing process through

## SECTION 22: PREVIOUS ACTIONS

TOWN OF STILLWATER PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	facilities and services for residents (for example, emergency services, shelters). (Per the Comprehensive Plan)					Community Services Department					monthly planning meetings.
TST-15	Use the Town's web site to better inform the public regarding the Fire/Police/EMS services. (Per the Comprehensive Plan)	N/A	All Hazards	1, 2,	1-6, 2- 2, 2-5	Information Technology	Not Provided	Low to Medium	Local Budget	Short Term	Defer to plan update. Ongoing.
TST-16	Work with the State, County, and local service providers to expand the delivery of fire safety/prevention programs. (Per the Comprehensive Plan)	N/A	All Hazards	1, 2	1-6, 2- 2, 2-5	Fire Department	County, NYS	Low to Medium	Local Budget	Ongoing	Defer to plan update. Ongoing.
TST-17	Prepare/Update the Town stormwater management plan and focus on sub- basins where there is chronic flooding. (Per FMA).	New & Existing	Flood, Severe Storm	1	1-4, 1- 5, 1-6, 1-7	NFIP Floodplain Administrator	Not Provided	Low to Medium	Local Budget	Short Term	Defer to plan update. Ongoing. New state regulations are being implemented as required.
TST-18	Explore potential passive recreational uses of the Old Champlain Canal and towpath via a trail system or linear park. This proposed use would serve to provide additional open space and recreational amenities locally and would minimize impervious surfaces and promote infiltration. Further, allowing land along the Old Champlain Canal to remain undeveloped would permit periodic access to the canal for routine maintenance activities to ensure that stormwater is being effectively and safely conveyed. (Per FMA)	Existing	Flood, Severe Storm	1, 4	4 1-5, 4- 3, 4- 4, 4-5	NFIP Floodplain Administrator	Not Provided	Low to Medium	Dependent on Initiatives	Short Term	Defer to plan update. In progress. Two projects are underway to complete the Town Trail System including developing the multi-use train to Mechanicville and Stratton Lane to the Saratoga Battlefield.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF STILLWATER PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TST-19	Form a committee and study the chronic flooding problem of ice jams on the Hudson River in the vicinity of the lower dam (lock C-3) and make recommendations on how to alleviate this problem. This Committee should involve the Town and Village of Stillwater, the City of Mechanicville, the New York State Canal Corporation, New York State Electric and Gas, Stillwater Power, the Saratoga County Emergency Management Office and any other agencies and organizations with a stake in this issue. (Per FMA)	New & Existing	Flood	1, 5	1-4, 1- 6, 5-3	NFIP Floodplain Administrator	Village of Stillwater, the City of Mechanicville, the New York State Canal Corporation, New York State Electric and Gas, Stillwater Power, the Saratoga County Emergency Management Office	Low	Not provided	Short Term	Delete action. The Town no longer deems this a significant problem or risk, and therefore this action is no longer a priority.
TST-20	Increase public education on flooding. Town and Village can hold a joint workshop on the causes of flooding, the availability of flood insurance and specific techniques for flood proofing property. This workshop could also focus on the value and function of wetlands as a whole, and specifically, their role in mitigating flooding. Further, the Town may wish to consider developing an educational brochure on flooding and its mitigation. Alternatively, such a topic could be incorporated within a Town newsletter. (Per FMA)	N/A	Flood	1, 2	1-4, 1- 6, 2-1, 2-2, 2- 3, 2-4, 2-5	Office of Emergency Management; NFIP Floodplain Administrator	Village of Stillwater	Low to Medium Dependent on initiative	FEMA HMA; local budget	Ongoing – Long-term depending on initiative	Defer to plan update. Ongoing. The Town is actively engaged with the local flood area residents.
TST-21	Amend the Town zoning ordinance and Village site development law to: a) require stormwater analysis	New & Existing	Flood, Severe Storm	1, 4	1-6, 1- 8, 4-2, 4-4	NFIP Floodplain Administrator	Not Provided	Low	Local Budget	Short Term	Completed. The Town Codes are up to date.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF STILLWATER PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	and mitigation for development and land clearing of a certain size, and b) to require erosion and sediment control. The latter has already been proposed in the draft update to the Town's zoning ordinance. (Per FMA)										
TST-22	Undertake a feasibility study to examine the possibility of establishing a trail or linear park along the Old Champlain Canal. (Per FMA)	N/A	N/A	4	4-2, 4-3	Engineering Department	Not Provided	Low	Local Budget	Short Term	Delete action. The town no longer deems this action a priority.
TST-23	Incorporate engineering and maintenance items related to flood prevention and mitigation in capital improvements and budget planning. (Per FMA)	Existing	Flood	1	1-1, 1- 6, 1-7	Engineering Department	Not Provided	Low	Local Budget	Short Term	Defer to plan update. Ongoing.
TST-24	Charge the Stillwater Grants Committee with the task of securing funding to implement the recommendations of the FMA. (Per FMA)	Existing	Flood	1	1-7, 1-9	Town Board	Not Provided	Low	Local Budget	Short Term	Defer to plan update. Ongoing.
TST-25	Pursue riverbank stabilization and erosion and sedimentation control projects at problem locations within the Hudson Riverfront Area. (Per FMA)	Existing	Flood	1, 4	1-1, 4-2	NFIP Floodplain Administrator	NYS (if applicable)	Medium - High Dependent on initiative	FMA HMA	Short Term	Defer to plan update.
TST-26	Provide tributary stream channel and bank improvement projects at problem locations within the Hudson Riverfront Area. (Per FMA)	Existing	Flood	1, 4	1-1, 4-2	NFIP Floodplain Administrator	NYS (if applicable)	Medium-High Dependent on initiative	FMA HMA	Completed	Delete action. The town no longer deems this action a priority.
TST-27	Conduct long-term inspection and maintenance programs within the Hudson Riverfront Area. (Per FMA)	Existing	Flood	1, 4	1-1, 1- 4, 4-2	NFIP Floodplain Administrator	NYS (if applicable)	Medium Dependent on initiative	FMA HMA	Short Term	Defer to plan update. Ongoing.
TST-28	Provide channel and embankment improvement projects for the Old	Existing	Flood	1, 4	1-1, 4-2	NFIP Floodplain Administrator	NYS (if applicable)7/1/	Medium-High	FMA HMA	Short Term	Delete action. The town no longer

## SECTION 22: PREVIOUS ACTIONS

TOWN OF STILLWATER PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	Champlain Canal and Schuyler Creek to develop adequate and stable channel cross-sections to convey storm flows. Projects should include construction of access ways, clearing of overgrowth, removal of accumulated sediment and debris from channel, establish channel lines and grades, bank stabilization, sediment and erosion control measures and reinforcement of banks to prevent overtopping and breaching. (Per FMA)						2024	Dependent on initiative			deems this action a priority.
TST-29	Improve/upgrade and increase capacity of the storm sewer infrastructure on Lake Street and Park Avenue to convey floodwaters to Schuyler Creek. (Per FMA)	Existing	Flood	1,3	1-1, 3-6	NFIP Floodplain Administrator	Not Provided	Medium-High Dependent on initiative	FMA HMA	Ongoing	Defer to plan update.
TST-30	Evaluate the effect of the existing private wooden bridge on channel capacity and flooding. Remove or replace bridge to provide a greater channel cross-section if indicated by evaluation (NYS RT 67, Meadow Lane, Anthony Kill Area). (Per FMA)	Existing	Flood	1	1-1, 1-4, 1-5	NFIP Floodplain Administrator; Engineering Department	Not Provided	Medium-High Dependent on initiative	Not provided	Ongoing – Long-term depending on initiative	Defer to plan update.
TST-31	Provide stream channel improvement projects along the Anthony Kill in the Town of Stillwater. Projects should include construction of access ways, removal of accumulated sediment and debris from channel, establish channel lines and grades, bank stabilization and sediment and	Existing	Flood	1, 4	1-1, 4-2	NFIP Floodplain Administrator	NYS (if applicable)	Medium-High Dependent on initiative	FEMA HMA	Short Term	Defer to plan update.



## SECTION 22: PREVIOUS ACTIONS

TOWN OF STILLWATER PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	erosion control measures. (Per FMA)										
TST-32	Maintain and improve (increase conveyance) channel for the existing drainage ditch along its 2,500-foot length from Stratton Lane north to its confluence with the Hudson River, possibly in partnership with NYSDOT for capacity improvements to culvert crossing under NYS RTS 4 & 32. (Per FMA)	Existing	Flood	1, 3	1-1, 3-6	NFIP Floodplain Administrator	NYSDOT	Medium-High Dependent on initiative	FEMA HMA	Short Term	Defer to plan update.
TST-33	Provide channel maintenance and improvement projects for the Old Champlain Canal along its 5,200-foot length from Stratton Lane north to where it passes under RTS 4 & 32 through two large concrete box culvert Projects should include construction of access ways, clearing of overgrowth, removal of accumulated sediment and debris from channel, establish channel lines and grades, bank stabilization, sediment and erosion control measures, reinforcement of banks to prevent overtopping and breaching. Planning for these drainage projects should be coordinated with plans for future recreational development of the Old Champlain Canal and parallel towpath, and wetlands preservation considerations. (Per FMA)	New & Existing	Flood	1, 4	1-1, 4-2	NFIP Floodplain Administrator; Department of Engineering	Not Provided	Medium-High Dependent on initiative	FEMA HMA	Short Term	Defer to plan update.
TST-34	Provide lakeshore stabilization and erosion and sedimentation control	Existing	Flood	1, 4	1-1, 4- 1, 4-2	NFIP Floodplain Administrator	Not Provided	Medium-High	FEMA HMA	Short Term	Defer to plan update. Ongoing.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF STILLWATER PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	projects at problem locations on Saratoga Lake. (Per FMA)							Dependent on initiative			The engineering study was completed in June of 2023, but funding is needed to implement suggested solutions.
TST-35	Provide tributary stream channel and bank improvement projects at problem locations in the Saratoga Lake area. (Per FMA)	Existing	Flood	1, 4	1-1, 4- 1, 4- 2	NFIP Floodplain Administrator	Not Provided	Medium-High Dependent on initiative	FEMA HMA	Short Term	Defer to plan update. Ongoing.
TST-36	Provide channel improvements along the Old Champlain Canal drainage way just north of the railroad embankment in the Riverside area to control ice formation by eliminating standing water. (Per FMA)	Existing	Flood	1, 4	1-1, 4- 1, 4- 2	NFIP Floodplain Administrator	Not Provided	Medium-High Dependent on initiative	FEMA HMA	Short Term	Defer to plan update.
TST-37	Provide channel improvement projects for the Old Champlain Canal along its 5,800 feet from Halfway House Road south to its confluence with the Hudson River. Projects should include construction of access ways, clearing of overgrowth, removal of accumulated sediment and debris from channel, establish channel lines and grades, bank stabilization, sediment and erosion control measures and reinforcement of banks to prevent overtopping and breaching. (Per FMA)	Existing	Flood	1, 4	1-1, 4- 1, 4- 2	NFIP Floodplain Administrator	Not Provided	Medium-High Dependent on initiative	FEMA HMA	Short Term	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF STILLWATER PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TST-38	Evaluate installation of a culvert crossing River Road (NYS RTS 4 & 32) to convey overflow from the Old Champlain Canal to the Hudson River just north of the railroad embankment at the Iron Bridge. (Per FMA)	Existing	Flood	1, 3	1-1, 3-6	NFIP Floodplain Administrator	Not Provided	Medium-High Dependent on initiative	FEMA HMA	Ongoing – Long-term depending on initiative	Defer to plan update.
TST-39	Evaluate installation of a culvert crossing under Burns Bridge Road, Towpath Road and Hudson Avenue (NYS RTS 4 & 32) directly to the Hudson River. The proposed culvert would convey stormwater flow from the southern end of the Gurba Subdivision drainage-way east to the river. A culvert in this location would also serve to relieve downstream flooding on Halfway House Road, Mitchell Road and in the Riverside Area. (Per FMA)	Existing	Flood	1, 3	1-1, 3-6	Municipality	Not Provided	Medium-High Dependent on initiative	FEMA HMA	Ongoing	Defer to plan update.
TST-40	Hire a consultant to conduct a study of the flooding caused by rainfall and snowmelt on Lohnes Road. The town will work with the consultant and find the best possible solution to mitigate against the flooding hazard.	Existing	Flood	1, 3	1-1, 1-2, 1-5, 3-5	NFIP Floodplain Administrator; Engineering Department	Highway Department	\$15,000	Grant, Municipal Match	Short Term	Defer to plan update.
TST-41	Hire a consultant to conduct a study of the flooding caused by rainfall and snowmelt at 1940 State Route 4. The town will work with the consultant and find the best possible solution to mitigate against the flooding hazard.	Existing	Flood	1, 3	3 1-1, 1-2, 1-5, 3-5, 4-1	NFIP Floodplain Administrator; Engineering Department	Highway Department	15000	Grant, Municipal Match	Short Term	Defer to plan update.

SECTION 22: PREVIOUS ACTIONS

VILLAGE OF STILLWATER

VILLAGE OF STILLWATER PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
VSW-1a	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding. The Stillwater Elementary, Middle, and High Schools complex is located in a special flood hazard area; its vulnerability to flood hazards is not fully known and over the life of this plan the village will conduct an assessment of this facility (e.g., document history of damage) to understand its vulnerabilities and mitigate.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Short Term	Defer to plan update.
VSW-1b	Where appropriate, support purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	PDM, Ongoing	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF STILLWATER PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	be a viable option, consider implementation of that action based on available funding. The Stillwater Elementary, Middle, and High Schools complex is located in a special flood hazard area; its vulnerability to flood hazards is not fully known and over the life of this plan the village will conduct an assessment of this facility (e.g., document history of damage) to understand its vulnerabilities and mitigate.										
VSW-2	Consider participation in incentive-based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1- 3, 1-6, 2-1, 2- 2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Ongoing – Long-term depending on initiative	Defer to plan update.
VSW-3	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0.	New & Existing	All Hazards	All	All	NFIP Floodplain Administrator	County (through Mitigation Planning Coordinator), NYS DHSES	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation Grant Funding for 5-year update	Long Term	Defer to plan update.
VSW-4	Strive to maintain compliance with, and good-standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1- 2, 1-3, 1-8, 2- 2, 2-3, 2-4, 4-1, 4-2, 4-3, 4-4	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Ongoing	Defer to plan update.
VSW-5	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1- 7, 3-2, 3-4, 3-5	Emergency Management with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Long Term	Defer to plan update.
VSW-6	Create/enhance/ maintain mutual aid agreements with neighboring	New & Existing	All Hazards	3, 5	3-4, 5- 1, 5-3	Emergency Management,	Surrounding municipalitie	Low - Medium	Local Budget	Ongoing	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF STILLWATER PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	communities. Possible options listed in the Comprehensive Plan include the following: Conduct an Intermunicipal Cooperation Roundtable to promote intermunicipal coordination and Communication. Expand joint operations with the Sheriff's Office, State Police and Mechanicville Police to maximize results.					DPW and Roads	s and County				
VSW-7	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Appropriate Departments	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	Ongoing	Defer to plan update.
VSW-8	Create/update the Emergency Action Plans for all dams located within the municipality.	Existing	Flood	1, 3	1-1, 1- 6, 1-7, 3-1, 3- 2, 3-4	NFIP Floodplain Administrator	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium to Low	FEMA HMA	Ongoing – Long-term depending on initiative	Delete Action. Jurisdiction is not profiling dam failure in Plan Update.
VSW-9	Implement dam structure repairs as required by dam safety report/protocols.	Existing	Flood	3	3-1, 3- 3, 3-6	NFIP Floodplain Administrator; Engineering Department	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	Long Term	Delete Action. Jurisdiction is not profiling dam failure in Plan Update.
VSW-10	Support the Installation/Implementation of Community Emergency Alert System.	New & Existing	All Hazards	1, 3, 5	1-1, 3- 1, 3-3, 3-5, 3- 6, 5-1	LEMC	Watershed districts (if applicable); neighboring municipalities; County (if	Medium	FEMA HMA	Short Term	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF STILLWATER PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
							applicable); NYS				
VSW-11	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1- 9, 2-5, 3-1, 5-2	Village Board	Not Provided	Medium	Operating Budget	Long Term	Defer to plan update.
VSW-12	Develop a multi-year Capital Improvement Plan (CIP) to provide a long- term plan for infrastructure improvements.	New & Existing	All Hazards	1, 3	1-1, 1- 6, 3-3, 3-6	NFIP Floodplain Administrator	Not Provided	Low	Local Budget	Long Term	Defer to plan update.
VSW-13	Perform a comprehensive review and evaluation of Stillwater’s planning and zoning regulations. (Per the Comprehensive Plan)	Existing	All Hazards	1	1-4, 1- 6, 1-7	NFIP Floodplain Administrator	Not Provided	Low	Local Budget	Long Term	Defer to plan update.
VSW-14	Conduct Needs Assessment for each of the community service providers to ensure adequate facilities and services for residents (for example, emergency services, shelters). (Per the Comprehensive Plan)	Existing	All Hazards	1, 3	1-1, 1- 4, 1-6, 3-4, 3- 5, 3-6	Office of Emergency Management; Community Services Department	Not Provided	Low to Medium	Local Budget	N/A	Defer to plan update.
VSW-15	Use the Town’s web site to better inform the public regarding the Fire/Police/EMS services. (Per the Comprehensive Plan)	N/A	All Hazards	1, 2	1-6, 2- 2, 2-5	Information Technology	Not Provided	Low to Medium	Local Budget	Short Term	Defer to plan update.
VSW-16	Work with the State, County, and local service providers to expand the delivery of fire safety/prevention programs. (Per the Comprehensive Plan)	N/A	All Hazards	1, 2	1-6, 2- 2, 2-5	Fire Department	County, NYS	Low to Medium	Local	Short Term	Defer to plan update.
VSW-17	Prepare/Update the Town stormwater management plan and focus on sub- basins where there is	New & Existing	Flood, Severe Storm	1	1-4, 1- 5, 1-6, 1-7	NFIP Floodplain Administrator	Not Provided	Low to Medium	Local Budget	Ongoing	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF STILLWATER PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	chronic flooding. (Per FMA)										
VSW-18	Explore potential passive recreational uses of the Old Champlain Canal and towpath via a trail system or linear park. This proposed use would serve to provide additional open space and recreational amenities locally and would minimize impervious surfaces and promote infiltration. Further, allowing land along the Old Champlain Canal to remain undeveloped would permit periodic access to the canal for routine maintenance activities to ensure that stormwater is being effectively and safely conveyed. (Per FMA)	Existing	Flood, Severe Storm	1, 4	1-5, 4- 3, 4-4, 4-5	NFIP Floodplain Administrator	Not Provided	Low to Medium	Not provided	PDM, Ongoing	Defer to plan update.
VSW-19	Form a committee and study the chronic flooding problem of ice jams on the Hudson River in the vicinity of the lower dam (lock C3) and make recommendations on how to alleviate this problem. This Committee should involve the Town and Village of Stillwater, the City of Mechanicville, the New York State Canal Corporation, New York State Electric and Gas, Stillwater Power, the Saratoga County Emergency Management Office and any other agencies and organizations with a stake in this issue. (Per FMA)	New & Existing	Flood	1, 5	1-4, 1- 6, 5-3	NFIP Floodplain Administrator	Village of Stillwater, the City of Mechanicville, the New York State Canal Corporation, New York State Electric and Gas, Stillwater Power, the Saratoga County Emergency Management	Low	Not provided	Ongoing	Defer to plan update.



## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF STILLWATER PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
							t Office				
VSW-20	Increase public education on flooding. Town and Village can hold a joint workshop on the causes of flooding, the availability of flood insurance and specific techniques for flood proofing property. This workshop could also focus on the value and function of wetlands as a whole, and specifically, their role in mitigating flooding. Further, the Town may wish to consider developing an educational brochure on flooding and its mitigation. Alternatively, such a topic could be incorporated within a Town newsletter. (Per FMA)	N/A	Flood	1, 2	1-4, 1- 6, 2-1, 2-2, 2- 3, 2-4, 2-5	Office of Emergency Management; NFIP Floodplain Administrator	Village of Stillwater	Low to Medium Dependent on initiative	FEMA HMA; local budget	Long Term	Defer to plan update.
VSW-21	Undertake a feasibility study to examine the possibility of establishing a trail or linear park along the Old Champlain Canal. (Per FMA)	N/A	N/A	4	4-2, 4-3	NFIP Floodplain Administrator	Not Provided	Low	Local Budget	Ongoing	Defer to plan update.
VSW-22	Amend the Town zoning ordinance and Village site development law to: a) require stormwater analysis and mitigation for development and land clearing of a certain size, and b) to require erosion and sediment control. The latter has already been proposed in the draft update to the Town's zoning ordinance. (Per FMA)	New & Existing	Flood, Severe Storm	1, 4	1-6, 1- 8, 4-2, 4-4	NFIP Floodplain Administrator	Not Provided	Low	Local Budget	Short Term	Defer to plan update. Update to reflect Village project.
VSW-23	Incorporate engineering and maintenance items related to flood	Existing	Flood	1	1-1, 1- 6, 1-7	NFIP Floodplain Administrator;	Not Provided	Low	Local Budget	Short Term	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF STILLWATER PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	prevention and mitigation in capital improvements and budget planning. (Per FMA)					Engineering Department					
VSW-24	Charge the Stillwater Grants Committee with the task of securing funding to implement the recommendations of the FMA. (Per FMA)	Existing	Flood	1	1-7, 1-9	Village Board	Not Provided	Low	Local Budget	Short Term	Defer to plan update.
VSW-25	Pursue riverbank stabilization and erosion and sedimentation control projects at problem.	Existing	Flood	1, 4	1-1, 4-2	NFIP Floodplain Administrator	NYS (if applicable)	Medium-High Dependent on initiative	FEMA HMA	Ongoing	Defer to plan update.
VSW-26	Provide tributary stream channel and bank improvement projects at problem locations within the Hudson Riverfront Area. (Per FMA)	Existing	Flood	1, 4	1-1, 4-2	NFIP Floodplain Administrator	NYS (if applicable)	Medium-High Dependent on initiative	FEMA HMA	Ongoing	Defer to plan update.
VSW-27	Conduct long-term inspection and maintenance programs within the Hudson Riverfront Area. (Per FMA)	Existing	Flood	1, 4	1-1, 1- 4, 4-2	NFIP Floodplain Administrator	NYS (if applicable)	Medium Dependent on initiative	FEMA HMA	Ongoing – Long-term depending on initiative	Defer to plan update.
VSW-28	Provide channel and embankment improvement projects for the Old Champlain Canal and Schuyler Creek to develop adequate and stable channel cross-sections to convey storm flows. Projects should include construction of access ways, clearing of overgrowth, removal of accumulated sediment and debris from channel, establish channel lines and grades, bank stabilization, sediment and erosion control measures and reinforcement of banks to prevent overtopping and breaching. (Per	Existing	Flood	1, 4	1-1, 4-2	NFIP Floodplain Administrator	NYS (if applicable)	Medium-High Dependent on initiative	FEMA HMA	Long Term	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF STILLWATER PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	FMA)										
VSW-29	Improve/upgrade and increase capacity of the storm sewer infrastructure on Lake Street and Park Avenue to convey floodwaters to Schuylar Creek. (Per FMA)	Existing	Flood	1, 3	1-1, 3-6	NFIP Floodplain Administrator; Engineering Department	Not Provided	Medium-High Dependent on initiative	FEMA HMA	Short Term	Defer to plan update.
VSW-30	Evaluate the effect of the existing private wooden bridge on channel capacity and flooding. Remove or replace bridge to provide a greater channel cross- section if indicated by evaluation (NYS RT 67, Meadow Lane, Anthony Kill Area). (Per FMA)	Existing	Flood	1	1-1, 1- 4, 1-5	NFIP Floodplain Administrator	Not Provided	Medium-High Dependent on initiative	Not provided	Ongoing	Defer to plan update.
VSW-31	Provide stream channel improvement projects along the Anthony Kill in the Town of Stillwater. Projects should include construction of access ways, removal of accumulated sediment and debris from channel, establish channel lines and grades, bank stabilization and sediment and erosion control measures. (Per FMA)	Existing	Flood	1, 4	1-1, 4-2	NFIP Floodplain Administrator	NYS (if applicable)	Medium-High Dependent on initiative	FEMA HMA	Ongoing	Defer to plan update.
VSW-32	Maintain and improve (increase conveyance) channel for the existing drainage ditch along its 2,500-foot length from Stratton Lane north to its confluence with the Hudson River, possibly in partnership with NYSDOT for capacity improvements to culvert crossing under NYS RTS 4 & 32. (Per FMA)	Existing	Flood	1, 3	1-1, 3-6	NFIP Floodplain Administrator	NYSDOT	Medium-High Dependent on initiative	FEMA HMA	Ongoing	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF STILLWATER PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
VSW-33	Provide channel maintenance and improvement projects for the Old Champlain Canal along its 5,200-foot length from Stratton Lane north to where it passes under RTS 4 & 32 through two large concrete box culvert Projects should include construction of access ways, clearing of overgrowth, removal of accumulated sediment and debris from channel, establish channel lines and grades, bank stabilization, sediment and erosion control measures, reinforcement of banks to prevent overtopping and breaching. Planning for these drainage projects should be coordinated with plans for future recreational development of the Old Champlain Canal and parallel towpath, and wetlands preservation considerations. (Per FMA)	New & Existing	Flood	1, 4	1-1, 4-2	NFIP Floodplain Administrator; Engineering Department	Not Provided	Medium-High Dependent on initiative	FEMA HMA	Ongoing	Defer to plan update.
VSW-34	Provide lakeshore stabilization and erosion and sedimentation control projects at problem locations on Saratoga Lake. (Per FMA)	Existing	Flood	1, 4	1-1, 4- 1, 4-2	NFIP Floodplain Administrator	Not Provided	Medium-High Dependent	FEMA HMA	Ongoing	Defer to plan update.
VSW-35	Provide tributary stream channel and bank improvement projects at problem locations in the Saratoga Lake area. (Per FMA)	Existing	Flood	1, 4	1-1, 4- 1, 4-2	NFIP Floodplain Administrator	Not Provided	Medium-High Dependent on initiative	FEMA HMA	Ongoing	Defer to plan update.
VSW-36	Provide channel improvements along the Old Champlain Canal drainage way just north of the railroad embankment in the Riverside area to control ice formation by eliminating standing water. (Per FMA)	Existing	Flood	1, 4	1-1, 4- 1, 4-2	NFIP Floodplain Administrator	Not Provided	Medium-High Dependent on initiative	FEMA HMA	Ongoing – Long-term depending on initiative	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF STILLWATER PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
VSW-37	Provide channel improvement projects for the Old Champlain Canal along its 5,800 feet from Halfway House Road south to its confluence with the Hudson River. Projects should include construction of access ways, clearing of overgrowth, removal of accumulated sediment and debris from channel, establish channel lines and grades, bank stabilization, sediment and erosion control measures and reinforcement of banks to prevent overtopping and breaching. (Per FMA)	Existing	Flood	1, 4	1-1, 4- 1, 4- 2	NFIP Floodplain Administrator	Not Provided	Medium-High Dependent on initiative	FEMA HMA	Ongoing	Defer to plan update.
VSW-38	Evaluate installation of a culvert crossing River Road (NYS RTS 4 & 32) to convey overflow from the Old Champlain Canal to the Hudson River just north of the railroad embankment at the Iron Bridge. (Per FMA)	Existing	Flood	1, 3	1-1, 3-6	NFIP Floodplain Administrator	Not Provided	Medium-High Dependent on initiative	FEMA HMA	Ongoing	Defer to plan update.
VSW-39	Evaluate installation of a culvert crossing under Burns Bridge Road, Towpath Road and Hudson Avenue (NYS RTS 4 & 32) directly to the Hudson River. The proposed culvert would convey stormwater flow from the southern end of the Gurba Subdivision drainage-way east to the river. A culvert in this location would also serve to relieve downstream flooding on Halfway House Road, Mitchell Road and in the Riverside Area. (Per FMA)	Existing	Flood	1, 3	1-1, 3-6	NFIP Floodplain Administrator	Not Provided	Medium-High Dependent on initiative	FEMA HMA	Ongoing	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF STILLWATER PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
VSW-40	Hire an engineering consultant to conduct a study of the area to develop comprehensive solution to divert floodwaters from the area of Ferry Lane.	New & Existing	Flood	1, 3	1-1, 1-2, 3-5	Village of Stillwater Board	Not Provided	Low	Grant, Municipal Match	Short Term	Defer to plan update.
VSW-41	Hire an engineering consultant to conduct a study of the area to develop comprehensive solution to divert floodwaters from the area of Bunce Lane and the Pump Station.	New & Existing	Flood	1, 3	1-1, 1-2, 3-5	Village of Stillwater Board	Not Provided	Low	Grant, Municipal Match	Short Term	Defer to plan update.

SECTION 22: PREVIOUS ACTIONS

VILLAGE OF VICTORY

VILLAGE OF VICTORY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
VV-1a	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long Term	Defer to plan update.
VV-1b	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long Term	Defer to plan update.
VV-2	Consider participation in incentive-based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1- 3, 1-6, 2-1, 2- 2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Long Term	Defer to plan update.
VV-3	Continue to support the implementation, monitoring, maintenance, and updating of this	New & Existing	All Hazards	All	All	NFIP Floodplain Administrator	County (through Mitigation)	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation Grant	Ongoing	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF VICTORY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	Plan, as defined in Section 7.0.						Planning Coordinator), NYS DHSES		Funding for 5-year update		
VV-4	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1- 2, 1-3, 1-8, 2- 2, 2-3, 2-4, 4-1, 4-2, 4-3, 4- 4	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Ongoing	Defer to plan update.
VV-5	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1. 3	1-1, 1- 7, 3-2, 3-4, 3- 5	Emergency Management with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Ongoing – Long-term depending on initiative	Defer to plan update.
VV-6	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3, 5	3-4, 5- 1, 5-3	Emergency Management, DPW and Roads	Surrounding municipalities and County	Low - Medium	Local Budget	Long Term	Defer to plan update.
VV-7	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Appropriate Departments	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	Long Term	Defer to plan update.
VV-8	Create/update the Emergency Action Plans for all dams located within the municipality.	Existing	Flood	1, 3	1-1, 1- 6, 1-7, 3-1, 3- 2, 3-4	Office of Emergency Management	Watershed districts (if applicable); neighboring municipalities ; County (if applicable); NYS	Medium to Low	FEMA HMA	Long Term	Delete Action. Jurisdiction is not profiling dam failure.
VV-9	Implement dam structure repairs as required by dam safety report/protocols.	Existing	Flood	3	3-1, 3- 3, 3-6	NFIP Floodplain Administrator	Watershed districts (if applicable); neighboring municipalities ; County (if applicable);	Medium	FEMA HMA	Ongoing	Delete Action. Jurisdiction is not profiling dam failure.



## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF VICTORY PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
							NYS				
VV-10	Support the Installation/Implementation of Community Emergency Alert System.	New & Existing	All Hazards	1, 3, 5	1-1, 3- 1, 3-3, 3-5, 3- 6, 5-1	LEMC	Watershed districts (if applicable); neighboring municipalities ; County (if applicable); NYS	Medium	FEMA HMA	Short Term	Completed. Village has a siren at Village Hall and a reverse 911 system in place.
VV-11	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1- 9, 2-5, 3-1, 5- 2	Village Board	Not Provided	Medium	Operating Budget	Short Term	Defer to plan update.

SECTION 22: PREVIOUS ACTIONS

TOWN OF WATERFORD

TOWN OF WATERFORD PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TWF-1a	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1,	Municipality (likely through NFIP Floodplain Administrator)	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long Term	Defer to plan update.
TWF-1b	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1- 2, 1-3, 2-2, 2- 3, 2-4, 3-1, 3-5	Municipality (likely through NFIP Floodplain Administrator)	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long Term	Defer to plan update.
TWF-2	Consider participation in incentive-based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1- 3, 1-6, 2-1, 2- 2, 2-3, 2-4, 5-2	Municipality (likely through NFIP Floodplain Administrator)	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Long Term	Defer to plan update.
TWF-3	Continue to support the implementation, monitoring, maintenance, and updating of this	New & Existing	All Hazards	All	All	Municipality (through mitigation planning point of	County (through Mitigation	Low – High (for 5-year	Local Budget, possibly FEMA Mitigation Grant	Ongoing	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF WATERFORD PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	Plan, as defined in Section 7.0..					contacts)	Planning Coordinator), NYS DHSES	update)	Funding for 5-year update		
TWF-4	Strive to maintain compliance with, and good standing in the National Flood Insurance program	New & Existing	Flood	1, 2, 4	1-1, 1- 2, 1-3, 1-8, 2- 2, 2-3, 2-4, 4-1, 4-2, 4-3, 4- 4	Municipality (likely through NFIP Floodplain Administrator)	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Ongoing	Defer to plan update.
TWF-5	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1. 3	1-1, 1- 7, 3-2, 3-4, 3- 5	Municipal Emergency Manager with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Ongoing	Defer to plan update.
TWF-6	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3, 5	3-4, 5- 1, 5-3	Local Emergency Management, DPW and Roads	Surrounding municipalities and County	Low - Medium	Local Budget	Ongoing – Long-term depending on initiative	Defer to plan update.
TWF-7	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Local departments (as applicable for specific initiative)	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	Short Term	Defer to plan update.
TWF-8	Amend the Zoning Ordinances of the Town and Village to correct existing ambiguities and problems and incorporate zoning tools to implement recommendations in the Comprehensive Plan and the Local Waterfront Revitalization Plan. (Per the Comprehensive Plan)	New & Existing	All Hazards	1, 3, 4	1-7, 1- 8, 3-1, 4-4	Town Board	County and Regional agencies (as appropriate)	Low	Local Budget	Short Term	Defer to plan update.
TWF-9	Create/update the Emergency Action Plans for all dams located within the municipality.	Existing	Flood	1, 3	1-1, 1- 6, 1-7, 3-1, 3- 2, 3-4	Municipality	Watershed districts (if applicable); neighboring municipalities;	Medium to Low	FEMA HMA	Short Term	Defer to plan update.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF WATERFORD PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
							County (if applicable); NYS				
TWF-10	Implement dam structure repairs as required by dam safety report/protocols.	Existing	Flood	3	3-1, 3- 3, 3-6	Municipality	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium to Low	FEMA HMA	Ongoing – Long-term depending on initiative	Defer to plan update.
TWF-11	Support the Installation/ Implementation of Community Emergency Alert System.	New & Existing	All Hazards	1, 3, 5	1-1, 3- 1, 3-3, 3-5, 3- 6, 5-1	Municipality	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	Short Term	Defer to plan update.
TWF-12	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1- 9, 2-5, 3-1, 5- 2	Municipality	Not Provided	Medium	Operating Budget	Long Term	Defer to plan update.

SECTION 22: PREVIOUS ACTIONS

VILLAGE OF WATERFORD

VILLAGE OF WATERFORD PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
VWF-1a	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding. The Waterford Fire and Police Departments are located in the special flood hazards area and will be evaluated for mitigation.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long Term	Defer to plan update. In progress.
VWF-1b	Where appropriate, support purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding. The Waterford Fire and Police Departments are located in the special flood hazards area and will	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1-3, 2-2, 2-3, 2-4, 3-1, 3-5	NFIP Floodplain Administrator	NYS DHSES, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share	Long Term	Defer to plan update. In progress. The Fire Department has been relocated and the Police Department is being considered based on risk.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF WATERFORD PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	be evaluated for mitigation.										
VWF-2	Consider participation in incentive based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1-3, 1-6, 2-1, 2-2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Ongoing per SPDES GP-0-08-002	Completed.
VWF-3	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0.	New & Existing	All Hazards	All	All	NFIP Floodplain Administrator	County (through Mitigation Planning Coordinator), NYS DHSES	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation Grant Funding for 5-year update	Short Term	Completed.
VWF-4	Strive to maintain compliance with, and good-standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1-2, 1-3, 1-8, 2-2, 2-3, 2-4, 4-1, 4-2, 4-3, 4-4	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Ongoing	Defer to plan update. Ongoing.
VWF-5	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1-7, 3-2, 3-4, 3-5	Emergency Management with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Ongoing	Defer to plan update. Ongoing.
VWF-6	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3, 5	3-4, 5-1, 5-3	Emergency Management, DPW and Roads	Surrounding municipalities and County	Low - Medium	Local Budget	Ongoing – Long-term depending on initiative	Defer to plan update. Ongoing. Mutual aid agreement between Saratoga County and neighboring counties to assist in emergency response such as FD, PD, and EMS; can also include DPW.
VWF-7	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Appropriate Departments	County and Regional agencies (as appropriate for	Low - High	Existing programs and grant funding where applicable	Ongoing per SPDES GP-0-08-002	Defer to plan update. Ongoing.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF WATERFORD PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
							initiative)				
VWF-8	Support the Installation/Implementation of Community Emergency Alert System.	New & Existing	All Hazards	1, 3, 5	1-1, 3-1, 3-3, 3-5, 3-6, 5-1	LEMC	Watershed districts (if applicable); neighboring municipalities;	Medium	FEMA HMA	Ongoing	Defer to plan update. Ongoing. The Village uses Code Red but would like to install warning sirens. Amend action to say, "Support the Installation/Implementation of a Community Emergency Alert System and warning sirens."
VWF-9	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1-9, 2-5, 3-1, 5-2	Village Board	Not Provided	Medium	Operating Budget	Long Term	Defer to plan update.
VWF-10	Amend the Zoning Ordinances of the Town and Village to correct existing ambiguities and problems and incorporate zoning tools to implement recommendations in the Comprehensive Plan and the Local Waterfront Revitalization Plan. (Per the Comprehensive Plan)	N/A	N/A	1, 3	1-3, 1-7, 3-1	NFIP Floodplain Administrator	Not Provided	Low	Operating Budget	Long Term	Defer to plan update. Ongoing.
VWF-11	Investigate and implement mitigation actions to mitigate flooding at Waterford Volunteer Fire CO and Kavanaugh Hook & Ladder CO which are located in the flood hazard areas.	Existing	Flood, Severe Storm	1, 3	1-1, 3-4, 3-6	NFIP Floodplain Administrator	Fire Dept/ District	Low (Could be high once action is decided and implement	Local (FEMA HMA and local match for implementation of action)	Long Term	Completed. Both facilities have been relocated to Central Fire House outside of the 500-year floodplain.

## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF WATERFORD PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
								ed)			
VWF-12	Investigate and implement mitigation actions to mitigate flooding at Waterford Police Dept. which is located in the flood hazard area.	Existing	Flood, Severe Storm	1, 3	1-1, 3-4, 3-6	NFIP Floodplain Administrator	Police Dept	Low (Could be high once action is decided and implemented)	Local (FEMA HMA and local match for implementation of action)	Long Term	Defer to plan update. Ongoing.
VWF-13	Investigate and implement mitigation actions to mitigate flooding at the wastewater treatment plant which is located in the flood hazard area.	Existing	Flood, Severe Storm	1, 3	1-1, 3-4, 3-6	NFIP Floodplain Administrator	WWTF	Low (Could be high once action is decided and implemented)	Local (FEMA HMA and local match for implementation of action)	Long Term	Delete action. This action is not applicable to the Village of Waterford and is no longer a priority.
VWF-14	Conduct a study of flood risks and response tactics to identify information needed to prioritize areas of greatest need and develop an appropriate evacuation strategy. Some items to study include the transportation needs of people with access and functional needs as well as the elderly, identification of a facility that that can be used as a shelter and has a generator in the event of a power outage, and a consolidated phone list of support personal and resources.	Existing	Flood	1, 3	1-1, 3-3, 3-4, 3-5	Assistant to Public Safety Commissioner	Town & Village Code/Building Enforcement, Town & Village Engineer, Independent Consultant	Medium	Budget reallocation	Short Term	Defer to plan update. Ongoing.
VWF-15	Conduct a study to find out the total capacity for each shelter in the town and village and what items are needed (i.e., blankets,	Existing	Ice Storm	1, 3	1-1, 3-3, 3-4, 3-5	Waterford Emergency Management	Independent Contractor	Medium	Budget reallocation	Short Term	Completed.



## SECTION 22: PREVIOUS ACTIONS

VILLAGE OF WATERFORD PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	bedding). Also, as part of this study, determine the needed resources for transportation.										

# SECTION 22: PREVIOUS ACTIONS

## TOWN OF WILTON

TOWN OF WILTON PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TW-2 <sup>3</sup>	Consider participation in incentive-based programs such as CRS.	New & Existing	Flood	1, 2, 5	5 1-1, 1-3, 1-6, 2-1, 2-2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	ISO, FEMA Low - Medium	Local Budget	Short Term	Defer to plan update. Ongoing.
TW-3	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 7.0.	New & Existing	All Hazards	All	All	NFIP Floodplain Administrator	County (through Mitigation Planning Coordinator), NYS DHSES	Low – High (for 5-year update)	Local Budget, possibly FEMA Mitigation Grant Funding for 5-year update	Ongoing	Defer to plan update. Ongoing.
TW-4	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1-2, 1-3, 1-8, 2-2, 2-3, 2-4, 4-1, 4-2, 4-3, 4-4	NFIP Floodplain Administrator	NYS DHSES, ISO, FEMA	Low - Medium	Local Budget	Ongoing	Defer to plan update. Ongoing.
TW-5	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1-7, 3-2, 3-4, 3-5	Emergency Management with support from County OEM and NYS DHSES	County Emergency Management, NYS DHSES	Low - Medium	Local Budget	Ongoing	Defer to plan update. Ongoing.
TW-6	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3, 5	3-4, 5-1, 5-3	Emergency Management, DPW and Roads	Surrounding municipalities and County	Low - Medium	Local Budget	Ongoing	Completed. MOU's are in place through the Town Board actions.
TW-7	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	All	All	Appropriate Departments	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	Ongoing – Long-term depending on initiative	Defer to plan update. Ongoing.

<sup>3</sup> Note Town of Wilton actions began with CCS-3 in 2019 Saratoga County Multi-Jurisdictional Hazard Mitigation Plan.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF WILTON PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TW-8	Construct an inventory of community resources.	Existing	All Hazards	1, 3	1-3, 1- 4, 3-3	Office of Emergency Management; Community Services Department	Not Provided	Medium	Local Budget	Short Term	Defer to plan update. Ongoing.
TW-9	Provide ICS training for key Town employees.	N/A	All Hazards	1, 3	1-4, 1- 6, 3-3, 3-4, 3-5	Office of Emergency Management	County	Medium	FEMA EMPG	Ongoing as monies made available	Completed. Key personnel have taken the required courses through the FEMA online training program.
TW-10	Establish the Town of Wilton GIS system to map natural and manmade hazard locations.	New & Existing	All Hazards	1, 3	1-1, 1- 3, 1-4, 3-1, 3- 3, 3-4	NFIP Floodplain Administrator	County	Medium	Local Budget	Short Term	Defer to plan update. Ongoing. Continuing to add new hazards through the GIS system.
TW-14	Identify community shelters and purchase supplies of cots and blankets.	Existing	All Hazards	1, 3	1-4, 3- 3, 3-4	Office of Emergency Management	County	Medium	Local	Short Term – dependent on funding	Defer to plan update. Ongoing. Amend action to include “Update agreements with American Red Cross to augment shelters along with the Office of Emergency Management.”
TW-15	Maintain and update the Town’s Emergency Response Plan.	N/A	All Hazards	1, 3	1-6, 3- 2, 3-4	Office of Emergency Management	Not Provided	Low	Local	Long Term	Defer to plan update. Ongoing.
TW-16	Develop a post-disaster action plan for natural hazard events that will address the continuity of local government operations.	N/A	All Hazards	1, 3	1-6, 3- 2, 3-4, 3-5	Office of Emergency Management	County	Medium	FEMA; Local	Short Term	Defer to plan update. Ongoing.
TW-21	Increase local coordination with agencies responsible for the protection of natural resources, including the NYS Department of Environmental Conservation, the	N/A	All Hazards	1, 4, 5	1-5, 1- 7, 4-1, 4-2, 4- 3, 5-2	Office of Emergency Management	NYS DEP, USACE, USF&W	Low	Local Sources	Long Term	Defer to plan update. Ongoing.

## SECTION 22: PREVIOUS ACTIONS

TOWN OF WILTON PREVIOUS ACTIONS											
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	U.S. Army Corps of Engineers, and the U.S. Fish and Wildlife Service.										
TW-27	Develop an ongoing PR campaign to educate residents and business owners to ensure all cellular phones are registered with the CodeRed database maintained by Saratoga County.	N/A	All Hazards	2	2-1, 2-2	Office of Emergency Management; Information Technology	Not Provided	Low	Local Budget	Short Term	Defer to plan update. Ongoing.
TW-28	Continue to increase local coordination with DEC and adjoining townships to identify and maintain situation awareness of risk areas related to beaver dams, including but not limited to the use of UAV.	N/A	Flood	1, 3	1-1, 1-2, 3-6	Town Emergency Response Committee	Not Provided	Low	Regional Sources	Short Term	Defer to plan update. Ongoing. Amend action to include Engineering Department and Highway Department to Lead Agency.



**SARATOGA**  
**COUNTY** NEW YORK

SECTION 23  
**MITIGATION**  
**ACTIONS**

## SECTION 23: MITIGATION ACTIONS

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## SECTION 23: MITIGATION ACTIONS

### SUMMARY

As discussed in Section 2, at the Mitigation Workshop the Planning Team and Stakeholders met to develop mitigation actions for each of the natural hazards included in the Plan Update. Each of the actions in this section were prioritized based on FEMA's Social, Technical, Administrative, Political, Legal, Economic, and Environmental (STAPLEE) criteria necessary for the implementation of each action.

As part of the economic evaluation of the STAPLEE analysis, participating jurisdictions analyzed each action in terms of the overall costs, measuring whether the potential benefit to be gained from the action outweighed costs associated with it. As a result of this exercise, priority was assigned to each mitigation action by marking them as High (H), Moderate (M), or Low (L). An action that is ranked as "High" indicates that the action will be implemented as soon as funding is received. A "Moderate" action is one that may not be implemented right away depending on the cost and number of citizens served by the action. Actions ranked as "Low" indicate that they will not be implemented without first seeking grant funding and after "High" and "Moderate" actions have been completed.

Within each mitigation action table, the Planning Team considered all potential funding sources that could be utilized to implement the proposed project. To ensure all potential funding resources are considered and are not limited to those sources identified within the action tables in the jurisdictional annexes, please see Appendix G for a list of all available State and Federal grant programs as of December 2023. The Planning Team will continue to seek out other available funding sources during the 5-year cycle as notices of funding opportunity (NOFO) are released.

All mitigation actions created by Planning Team members are presented in this section in the form of Proposed Project Tables. More than one hazard is sometimes listed for an action, if appropriate. Actions presented in this section represent a comprehensive range of mitigation actions per current State and FEMA Guidelines, including two or more actions for each participating jurisdiction.

# SECTION 23: MITIGATION ACTIONS

**Table 23-1. Saratoga County Mitigation Action Matrix for Natural Hazards**

TYPE OF ACTION	
Action #1 – Plans/Regulations (Blue)	Action #4 – Structural (Orange)
Action #2 – Education/Awareness (Red)	Action #5 – Preparedness/Response (Black)
Action #3 – Natural Systems Protections (Green)	

Jurisdiction	Dam Failure	Drought	Earthquake	Extreme Cold	Extreme Heat	Flood	Hail	Hurricane/ Tropical Storm	Ice Storm	Landslide	Lightning	Snowstorm	Tornado	Wildfire	Wind	Invasive Species
Saratoga County	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Town of Ballston	N/A	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Village of Ballston Spa	●●●	●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●	●●●●●	●●●●●
Town of Charlton	N/A	●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Town of Clifton Park	●●●●●	●●●	●●●	●●●	●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●	●●●●●	●●●●●	●●●●●	●●●	●●●●●	●●●●●
Town of Corinth	●●●●●	●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Village of Corinth	N/A	●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Town of Day	●●●●●	●●●	●●●	●●●	●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●	●●●●●	●●●●●	●●●●●	●●●	●●●●●	●●●●●
Town of Edinburg	N/A	●●●	●●●	●●●	●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●	●●●●●	●●●●●	●●●●●	●●●	●●●●●	●●●●●
Town of Galway	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Village of Galway	N/A	●●●	●●●	●●●	●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●	●●●●●	●●●●●	●●●●●	●●●	●●●●●	●●●●●
Town of Greenfield	●●●●●	●●●	●●●	●●●	●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●	●●●●●	●●●●●	●●●●●	●●●	●●●●●	●●●●●
Town of Hadley	●●●	●●	●●	●●	●●	●●●	●●●	●●●	●●●	●●	●●●	●●●	●●●	●●	●●●	●●
Town of Halfmoon	●●●	●●●	●●●	●●●	●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●	●●●●●	●●●●●	●●●●●	●●●	●●●●●	●●●●●



# SECTION 23: MITIGATION ACTIONS

Jurisdiction	Dam Failure	Drought	Earthquake	Extreme Cold	Extreme Heat	Flood	Hail	Hurricane/ Tropical Storm	Ice Storm	Landslide	Lightning	Snowstorm	Tornado	Wildfire	Wind	Invasive Species
Town of Malta	●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
City of Mechanicville	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Town of Milton	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Town of Moreau	N/A	●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Town of Northumberland	N/A	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●●	●●●●●	●●●●●	●●●●	●●●●	●●●●●	●●●●●	●●●●	●●●●●	●●●●●
Town of Providence	N/A	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●
Village of Round Lake	N/A	●●●●	●●●●	●●●●	●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●	●●●●●	●●●●●	●●●●●	●●●●	●●●●●	●●●●●
Town of Saratoga	N/A	●●●●	●●●●	●●●●	●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●	●●●●●	●●●●●	●●●●●	●●●●	●●●●●	●●●●●
City of Saratoga Springs	●●●●●	●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Village of Schuylerville	N/A	●●●●	●●●●	●●●●	●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●	●●●●●	●●●●●	●●●●●	●●●●	●●●●●	●●●●●
Village of South Glens Falls	N/A	●●●●	●●●●	●●●●	●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●	●●●●●	●●●●●	●●●●●	●●●●	●●●●●	●●●●●
Town of Stillwater	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●●●	●●●●●	●●●●●	●●●●●	●●●●	●●●●●	●●●●●	●●●●●	●●●●	●●●●●	●●●●●
Village of Stillwater	N/A	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Village of Victory	N/A	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Town of Waterford	●●●●●	●●●●	●●●●	●●●●	●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●	●●●●●	●●●●●	●●●●●	●●●●	●●●●●	●●●●●
Village of Waterford	●●●●	●●●●	●●●●	●●●●	●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●	●●●●●	●●●●●	●●●●●	●●●●	●●●●●	●●●●●
Village of Wilton	●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●

# SECTION 23: MITIGATION ACTIONS

## SARATOGA COUNTY

### SARATOGA COUNTY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.1 1.3 3.2	Flood	Assessment of pump stations to verify electrical and control infrastructure. Implement necessary mitigation measures to reduce flood risk and ensure continuity of operations. Pump stations to be assessed: Saratoga Lake Pump Stations #1 through #8, Vista/Waters Edge, Mechanicville, Crescent Estates, and Steeplechase.	Completion of assessment will determine mitigation strategy for identified pump stations to ensure that they are able to maintain continuity of operations and comply with floodplain regulations.	Yes	Further review required	24-36 Months	Saratoga County Sewer District	\$100,000	Reduce the risk of damage and loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
2	1.1 3.2	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Tornado, Wind	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a	Yes	Further review required	60 Months	County Emergency Management	\$1,000,000	Reduce the risk of damage and loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## SARATOGA COUNTY MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
				viable option, consider implementation of that action based on available funding.										
3	1.1 3.2	Flood	Relocate Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Yes	Further review required	60 Months	County Emergency Management	\$1,000,000	Reduce the risk of damage and loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure Natural Systems Protection
4	1.4 2.3	Flood	Community Rating System: By exploring the CRS program, the County would potentially receive insurance premium rates that are discounted to	As appropriate, look to participate in incentive-based programs such as CRS.	Yes	N/A	36 Months	Municipality (likely through NFIP Floodplain Administrator)	\$10,000	Reduce flood insurance premiums for local residents. Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## SARATOGA COUNTY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			reflect the reduced flood risk resulting from the community's efforts to reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.											
5	1.3	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire,	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety.	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60 Months	County (through Mitigation Planning Coordinator), NYS DHSES	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations

## SECTION 23: MITIGATION ACTIONS

### SARATOGA COUNTY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Wind, Invasive Species												
6	1.4	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of program benefits, increased flood risk, and financial burdens for residents. There is a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance options. This project promotes public safety.	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	Yes	N/A	60 Months	Municipality (likely through NFIP Floodplain Administrator)	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations
7	1.4	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm, Tornado, Wind	Drainage and stream maintenance: Inadequate drainage systems cause flooding, damage to roadways, and create hazardous driving conditions for motorists. This project protects the community and reduces risk of flooding.	Implement proactive stream/drainage maintenance system to reduce flooding in hazard areas.	No	Further review required	Ongoing	SWCD	\$100,000	Reduce flood risk through improved drainage capacity; Reduce risk of damages and injuries; Reduce emergency response demands.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Water Systems	Structure and Infrastructure
8	1.1 3.3	Dam Failure, Earthquake, Extreme	Generators for critical facilities: Generators at EOC's, Utility Departments, and other	Assessment of critical facilities that are in need of back-up power sources. Acquire and	Yes	Further review required	24 months	Emergency Services	\$500,000	Provide power for critical facilities during power outages and ensure	Local Department Budget; HMGP,	M	Energy (Power/Fuel)	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## SARATOGA COUNTY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	critical government facilities typically serve as a community information center, emergency operations center, shelter for first responders, emergency response coordination site, as well as a list of other functions both during and immediately after a disaster. Power outages severely impact the ability of these critical facilities to operate as intended. Generators at water/wastewater treatment facilities, lift stations and pump stations prevent loss of potable water service, sewage infiltration, may leave affected facilities without fire protection and leave occupants (first responders, hospital staff) without proper sanitation facilities (toilets, handwashing, and cleaning). This project helps ensure critical facilities continue to	install generators with hard wired quick connections at identified critical facilities.						continuity of critical services.	BRIC, CDBG, PA 406 (when applicable) local bonds			

## SECTION 23: MITIGATION ACTIONS

### SARATOGA COUNTY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			provide services during a power outage caused by unforeseen events.											
9	2.1 2.2 2.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	Public Education Program: The public may not be aware of the risk of natural hazards as it is related to the County. This action promotes public safety.	Expand public education on ways to protect property before and during hazard events.	No	N/A	12 months	Emergency Services	\$10,000	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	H	Safety/Security Communication	Education and Awareness
10	2.3 5.2 5.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme	Training and Exercises Program: Training and exercises reveal gaps in local capabilities and identifying and addressing these gaps promotes public safety. In addition,	Enhance emergency preparedness awareness by active participation in training exercises at both the county and local level.	No	N/A	12 months	Emergency Services	\$10,000	Enhance communication, education, and awareness among local jurisdictions; Improve and develop mitigation	Local Budget	L	Safety/Security	Preparedness

## SECTION 23: MITIGATION ACTIONS

### SARATOGA COUNTY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	ensuring local responders are capable of handling emergencies, minimizing the risk to people, property, and the environment. This action promotes public safety.							strategies; Reduce risk of damages, injuries, and fatalities.				
11	1.1 3.1	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm, Tornado, Wind	Tree Trimming Program: Downed trees and branches have impacted rights-of-way and stormwater drainage and a proper maintenance program to reduce the risk of debris should be developed. This action protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Continue and expand our routine tree trimming program that clears tree limbs near power lines and/or hanging in right-of-way,	No	N/A	12 months	Highway	\$100,000	Reduce damages to infrastructure; Ensure continuity of services during and after event; Reduce damages associated with power outages; Reduce risk of injuries or fatalities to vulnerable populations.	Local Department Budget, Staff time	M	Safety/Security Energy (Power/Fuel)	Local Plans and Regulations Structure and Infrastructure



# SECTION 23: MITIGATION ACTIONS

## SARATOGA COUNTY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
12	2.1 2.2 6.1 6.2	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Vulnerable Populations: Without collaboration among local agencies vulnerable populations and underserved communities have an increased risk during disasters and less access to critical resources. There is a need for a coordinated approach to ensure that all vulnerable individuals are recognized and provided with the necessary support and services to enhance their safety. This action promotes public safety.	Interagency cooperation with Public Health, DSS, Aging and other agencies to identify vulnerable populations (elderly, homebound, homeless). Discuss protocol and assessment needs for agencies that work with or house vulnerable populations during natural hazard events.	No	N/A	12 months	Emergency Services	\$5,000	Promote equity; Enhance communication, education, and awareness among local jurisdictions; Improve and develop mitigation strategies; Reduce risk of injuries or fatalities to vulnerable populations.	Local Department Budget, Staff time	M	Safety/Security	Education and Awareness
13	1.3 5.2	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/	Toolbox Series: The absence of accessible resources on planning topics, model laws, and regulatory tools can hinder effective policy-making and implementation of mitigation projects at the local level. Planners and	Develop a toolbox series on planning topics, model laws, and regulatory tools.	No	N/A	36 months	County EDT&P	\$5,000	Promote informed decision making at the local policy level; Enhance regulatory frameworks to address current and future risks and vulnerabilities.	Local Department Budget, Staff time	M	Safety/Security	Preparedness

## SECTION 23: MITIGATION ACTIONS

### SARATOGA COUNTY MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	regulators often lack the necessary guidance to develop and enforce regulations that promote sustainable and organized community growth. This action promotes public safety.											
14	1.3 5.2 5.3	Dam Failure, Earthquake Flood, Hail, Hurricane/ Tropical Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	Zoning Education Program: Without proper training, officials may lack the necessary skills and knowledge to implement and enforce floodplain regulations, potentially leading to increased flood risk. This action promotes public safety.	Assist local municipalities with training opportunities for municipal planning and zoning officials utilizing updated FEMA floodplain maps.	Yes	N/A	36 months	County EDT&P with support from NYS and other sources	\$5,000	Prevent and reduce development in high hazard areas; Reduce overall flood risk; Reduce damages, injuries, and fatalities.	Local Department Budget, Staff time	M	Safety/Security	Education and Awareness
15	4.1 4.2 4.3	Flood, Landslide	Sustainable Development Program: There is a need to promote conservation in to ensure environmentally responsible development, preserve the natural	Encourage the incorporation of conservation subdivision principals into subdivision review.	Yes	N/A	48 months	County EDT&P and county agency resources	\$5,000	Promote nature based solutions; Protect and preserve the natural environment; Reduces potential for future damages	Local Department Budget, Staff time	M	Safety/Security	Natural Systems Protection Education and Awareness

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### SARATOGA COUNTY MITIGATION ACTIONS

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			environment, and reduce natural hazard risk. Improve community resiliency through implementing Smart Growth protects water quality by reducing paved surfaces, allowing natural lands to filter rainwater, ensuring cleaner drinking water. This action protects infrastructure, reduces cost of reparation, and prevents injury to residents.							in high risk areas while providing the community with benefits such as reducing heat-island effects in densely developed areas.				
16	1.3	Flood, Landslide	Updating Local Regulations: Current regulations need to be reviewed and updated to ensure effectiveness. Enhancing local regulations are proven mitigation but enforcement is key component to ensure compliance. Jurisdictions need to evaluate and (where necessary) update local regulations. This action protects infrastructure, reduces	Assist local municipalities in developing and updating site plan, subdivision, and zoning laws with specific development standards and guidelines.	No	N/A	12 months	EDT&P can provide models and templates but it's up to the municipality to decide whether or not to adopt standards and guidelines	\$10,000	Reduce flood damages through development restrictions and improved construction requirements in flood-prone areas.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## SARATOGA COUNTY MITIGATION ACTIONS

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			cost of reparation, and prevents injury to residents.											
17	1.2 1.4 5.2	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	Development Proposals: Without clear guidelines and incentives, there is a risk of approving projects that do not align with long-term risk reduction goals. With the increase in development growth there is a need to restrict development in known high-risk flood hazard areas throughout town. Adoption of development restrictions protects infrastructure, reduces cost of reparation, and prevents injury to residents. This action protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Encourage municipalities to incorporate sound development principals when reviewing development proposals.	No	N/A	12 months	EDT&P can provide models and templates but it's up to the municipality to decide whether to adopt standards and guidelines	\$10,000	Reduce structural damages through development restrictions and improved construction requirements in hazard-prone areas.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
18	4.1 4.2 4.3	Dam Failure, Drought, Earthquake, Extreme Cold,	Local Development Program: Without clear guidelines, there is a risk that jurisdictions may fail to address environmental, economic, and social	Encourage towns and villages to adopt comprehensive plans and land use regulations to foster	No	N/A	24 months	EDP&T and county agency resources	\$10,000	Ensure development enhances community resilience; Reduce	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations

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		Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	considerations as needed to reduce hazard risk. This action protects infrastructure, reduces cost of reparation, and prevents injury to residents.	sound development principals.						risk to natural hazards.				
19	4.1 4.2 4.3	Flood, Landslide	Natural Resources Inventory: The County lacks a comprehensive and updated natural resources inventory, preventing effective conservation and sustainable development efforts that reduce hazard risk. This action promotes public safety.	Create and maintain a natural resources inventory for Saratoga County.	No	N/A	48 months	County Emergency Management	\$10,000	Ensure development enhances community resilience; Reduce risk to natural hazards.	Local Department Budget, Staff time	H	Safety/Security	Preparedness Natural Systems Protection
20	2.1 6.1	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme	Public and Stakeholder Input: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This	Conduct continued public and stakeholder outreach to promote awareness of this Plan and obtain ongoing public and stakeholder input. Specific activities	No	N/A	12-60 Months	SC Public Information Office; Local OEMs and stakeholders	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure stakeholders and public remain educated about the	Local Department Budget, Staff time	H	Safety/Security	Education and Awareness

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## SARATOGA COUNTY MITIGATION ACTIONS

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		Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	project promotes public safety.	shall include maintaining the public HMP website, media releases, maintaining copies of the plan in town halls, and may include public meetings.						Plans goals and risk reduction activities.				
21	1.2 2.3	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado,	Evacuation Routes: Limited evacuation routes for residents during extreme hazard events. A lack of public education and consideration for vulnerable population increased disaster impacts. This project promotes public safety.	Identify evacuation routes and how this information is accessible to the public. This should include pre-disaster actions required to make evacuation routes accessible. Additionally, this should include provisions available to assist those with access and functional needs.	No	Further review required	36-60 months	County Emergency Management	\$500,000	Reduce risk to residents through improved evacuation alternatives and education/awareness efforts.	Local Department Budget		Safety/Security Communication	Education and Awareness

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### SARATOGA COUNTY MITIGATION ACTIONS

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		Wildfire, Wind, Invasive Species												
22	1.4 3.1	Flood	Culvert and drainage upgrades: Throughout the County culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Implement the Fonda Road culvert up-sizing to increase the capacity of the county culvert and Canal Corp culvert to handle demand.	No	Further review required	60 months	Saratoga County	\$1,000,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
23	1.4 2.1 2.2 2.3	Flood	Flood Awareness Program: The general public may not have a full understanding of the risk associated with floods impacting the planning area. Education programs can provide life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Conduct education and outreach before and after flood through outreach at fairs, public messaging, and educational material and talks.	No	N/A	12 months	Saratoga County Department of Public Health	\$10,000	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Safety/Security	Education and Awareness

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### SARATOGA COUNTY MITIGATION ACTIONS

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			This action promotes public safety.											
24	1.4 3.1 3.2	Flood	Conduct I & I reduction: There is a need to better understand risk in floodplain and reduce infrastructure loss. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Conduct I & I reduction, including raising manhole structures, creating/updating GIS database, access to infrastructure including floodplain areas, identify infrastructure in floodplain areas, and slip lining/replacement of lines and structures.	Yes	Further review required	60 months	Saratoga County	\$1,000,000	Reduce risk of flood water contamination; Improve access to flood related data; Reduce risk of surface water infiltration and sewage backup; Ensure continuity of critical services.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems	Structure and Infrastructure



# SECTION 23: MITIGATION ACTIONS

## TOWN OF BALLSTON

### TOWN OF BALLSTON MITGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.1 3.2	Flood, Hail, Hurricane/ Tropical Storm, Ice Storm, Lightning, Tornado, Wind	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces the cost of reparation, and prevents injury to residents.	Where appropriate, support retrofitting, purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting or relocation is determined to be a viable option, consider implementation of that action based on available funding. The Sheriff's Department Civil Division is in a special flood hazard area; its vulnerability to flood hazards is not fully known and over the life of this plan the town will assess this facility (e.g., document history of damage) to understand its vulnerabilities and mitigate.	Yes	Further review required	60 Months	Municipal NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
2	1.4 2.3	Flood	Community Rating System: By exploring the CRS program, the County would	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	Municipal NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk	Local Department	M	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## TOWN OF BALLSTON MITGATION ACTIONS

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			potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the community's efforts to reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.							and build resiliency.	Budget, Staff time			
3	1.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado,	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety.	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60 Months	Municipal mitigation planning point of contacts	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## TOWN OF BALLSTON MITGATION ACTIONS

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		Wildfire, Wind, Invasive Species												
4	1.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Develop, enhance, and implement: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.	Continue to develop, enhance, and implement existing emergency plans. Continue to do yearly updates to the Town's Emergency Operations Plan, and work toward the completion of a Town Comprehensive Emergency Management plan that is NIMS Compliant and addresses all hazards. (i.e. Follows the National response Framework, and ESF's 1-20).	No	N/A	12-60 Months	Municipal Emergency Manager with support from County OEM and NYS DHSES	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
5	5.1 5.2	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely manner. This	Create/enhance/ maintain mutual aid agreements with neighboring communities.	No	N/A	36-48 Months	Local Emergency Management, DPW and Roads	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Local Department Budget, Staff time	H	Safety/Security	Preparedness

# SECTION 23: MITIGATION ACTIONS

## TOWN OF BALLSTON MITGATION ACTIONS

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		Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	project promotes public safety.											
6	1.4 3.1	Flood, Hail, Hurricane/ Tropical Storm, Ice Storm, Lightning, Snowstorm, Tornado, Wind	Drainage and stream maintenance: Inadequate drainage systems cause flooding, damage to roadways, and create hazardous driving conditions for motorists. This project protects the community and reduces the risk of flooding. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Ensure the protection of stream corridors throughout the community, and water quality in Ballston Lake (e.g., stream buffers on classified streams). Included as part of the Ballston Lake Overlay Plan.	No	Further review required	60 Months	Municipality - Building / Planning Department	\$100,000	Reduce flood risk through improved drainage capacity; Reduce risk of damages and injuries; Reduce emergency response demands.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems	Structure and Infrastructure
7	1.4 3.1	Flood, Hail, Hurricane/ Tropical Storm, Ice Storm, Lightning, Snowstorm, Tornado, Wind	Drainage and stream maintenance: Inadequate drainage systems cause flooding, damage to roadways, and create hazardous driving conditions for motorists. This project protects the	Town will continue to work closely with the DEC and Saratoga County to establish a Stormwater management program and ensure compliance with US EPA Stormwater Phase II regulations. Upgrade and increase the capacity of the current Stormwater collection	No	Further review required	60 Months	Municipality Building Department	\$100,000	Reduce flood risk through improved drainage capacity; Reduce risk of damages and injuries; Reduce emergency response demands.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems	Structure and Infrastructure

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			community and reduces the risk of flooding. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	system such that there will be a net reduction in the flood risk caused by Stormwater impacts.										
8	1.1 1.2 1.4 5.1	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	Feasibility Study: Assess local services and the joint response they provide to ensure that communities have ample emergency response. This project protects infrastructure, reduces the cost of reparation, and prevents injury to residents.	Conduct a needs assessment for fire and emergency services jointly with the Town of Ballston Local Emergency Management Committee (ToB LEMC). Implement findings within assessment to ensure continuity of emergency services.	Yes	N/A	36 Months	ToB LEPC	\$25,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	H	Safety/Security	Education and Awareness Structure and Infrastructure
9	5.1 5.3 5.2	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice	Create, enhance, and maintain communication among neighboring municipalities and assisting agencies during emergency situations to protect all community members to include school	Continue to coordinate with neighboring municipalities of Milton, Charlton, Malta Galway, Saratoga County OES, the Saratoga Economic Development Corporation (SEDC), area school districts and emergency service providers, and regional	No	N/A	36 Months	Municipality - ToB LEMC	\$25,000	Improved coordination and communication between agencies to reduce the risk of damage and loss of life.	Local Department Budget, Staff time	M	Communication	Local Plans and Regulations

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## TOWN OF BALLSTON MITGATION ACTIONS

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		Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind	districts. This project promotes public safety.	entities such as the Capital District Transportation Committee (CDTC), the Capital District Transportation Authority (CDTA), and the Capital District Regional Planning Commission (CDRPC) in planning related activities. Work through County OES to coordinate with local State, and Federal offices for support. As needed, form necessary partnerships and MOUs to further enhance community resilience to natural hazards.										
10	1.1 1.2 1.4 3.1	Flood	Feasibility Study: Assess unregulated water bodies for potential hazards. This project protects infrastructure, reduces the cost of reparation, and prevents injury to residents.	Assess unregulated rural water bodies and evaluate potential hazards for localized impacts due to failures. Implement necessary improvements based on assessment findings.	No	Further review required	60 Months	Municipality NFIP Floodplain Administrator	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Water Systems	Natural Systems Protection Structure and Infrastructure
11	5.1 5.2	Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail,	EMS Radio Interoperability: Better coordination is needed between the three fire departments that serve the town,	Support improvement of Interoperable and Emergency Communication Systems (statewide core capability goal), like the Community Emergency Alert System (Code Red), and	No	N/A	24 Months	Municipality - ToB LEMC	\$100,000	Reduce risk to residents through improved communications and early warning. Enhances	Local Department Budget; HMGP, BRIC, CDBG, PA	M	Communication Safety/Security	Education and Awareness

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### TOWN OF BALLSTON MITGATION ACTIONS

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		Hurricane/ Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind	as well as EMS coverage. This project promotes public safety. Using reverse 911 systems ensures that the general public is aware of emergency situations in real time. This project promotes public safety.	Reverse 911 system, Mass Notification system, and Special Needs Registry. Enhance the ability of public safety agencies, Town Officials, ToB LEMC and other community partners and stakeholder to communicate with one another on demand, in real time, when needed, and when authorized.						emergency communications among responders.	406 (when applicable) local bonds			
12	5.3 6.1	Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/ Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	Public Awareness Program: The general public may not be aware of the risk of hazards that could impact the County. Creating a support fund could encourage community members to support mitigation projects and costs associated with them. This project promotes public safety.	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	No	N/A	60 Months	Town Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	M	Safety/Security Communication	Education and Awareness Preparedness

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## TOWN OF BALLSTON MITGATION ACTIONS

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13	1.3 5.1 5.2	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Training and Exercises Program: Training and exercises reveal gaps in local capabilities and identifying and addressing these gaps promotes public safety. In addition, ensuring local responders are capable of handling emergencies, minimizing the risk to people, property, and the environment. This action promotes public safety.	Strive to achieve the goals and objectives set forth in the ToB Conduct appropriate training and test the operational plans through tabletops, mutual aid drills and exercises that fit in with the local fire department and county fire training / drill schedules. Strive to coordinate an HSEEP compliant multi-agency Full Scale Exercise that addresses the Worst-Case Scenario of a Train derailment carrying Hazardous Materials along the CP Rail Line; Goal 2020.	No	N/A	12 Months	Joint: ToB LEMC and County OES	\$10,000	Enhance communication, education, and awareness among local jurisdictions; Improve and develop mitigation strategies; Reduce risk of damages, injuries, and fatalities.	Local Department Budget, Staff time	L	Safety/Security	Education and Awareness
14	1.1 3.3	Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado,	Generators for critical facilities: Mobile trailer generators at EOC's, Utility Departments, and other critical government facilities typically serve as a community information center, emergency operations center, shelter for first responders, emergency response coordination site, as	The Town Ballston Water Department and LEMC recommends procurement of a mobile trailer generator and truck mounted generator that allows for mobile power to be provided during a disruption in power at critical facilities (Sewer, Water, Library) for use during mass outages like the Storm of 2008.	Yes	N/A	24 Months	ToB Water Department	\$500,000	Provide power for critical facilities during power outages and ensure continuity of critical services	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Energy (Power/Fuel)	Preparedness



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		Wildfire, Wind	well as a list of other functions both during and immediately after a disaster. Power outages severely impact the ability of these critical facilities to operate as intended. Generators at water/wastewater treatment facilities, lift stations and pump stations prevent loss of potable water service, sewage infiltration, may leave affected facilities without fire protection and leave occupants (first responders, hospital staff) without proper sanitation facilities (toilets, handwashing, and cleaning). This project helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.											

## SECTION 23: MITIGATION ACTIONS

### TOWN OF BALLSTON MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
15	1.1 1.2 1.4	Flood	Feasibility Study: Updating flood prone areas will ensure that effective mitigation projects can be completed for the impacted area. This project protects infrastructure, reduces the cost of reparation, and prevents injury to residents.	Update flood insurance maps by conducting a detailed flood study, H-H, FIRM update for the entire Ballston Lake Watershed.	Yes	Further review required	60 Months	LEMC	\$500,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Water Systems Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF BALLSTON SPA

### VILLAGE OF BALLSTON SPA MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal/ Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.2 6.1	Dam Failure, Flood, Hurricane/Tropical Storm, Landslide, Tornado, Wildfire	Emergency Evacuation Routes: There is a need for evacuation routes in some identified areas of the village. There are no routes designated to be used for emergency evacuation from the Police Department and St. Mary's School that are located in the flood zone. This project promotes public safety.	Develop an Emergency Evacuation Plan by designating routes to be used for emergency evacuation from the Village of Ballston Spa Police Station and St. Mary's School. This action is needed to ensure county wide emergency evacuation in flood risk area is safe and efficient.	Yes	Further review required	60 Months	Police Department, St. Mary's School	\$50,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
2	1.1 1.4 3.2	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm, Tornado, Wind	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Over the life of the plan, the village, where appropriate, will support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost- effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF BALLSTON SPA MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
				implementation of that action based on available funding.										
3	1.1 1.4 3.2	Flood	Relocate Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Over the life of plan, the village, where appropriate, will support purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
4	1.4 2.3	Flood	Community Rating System: By exploring the CRS program the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the community's efforts to reduce and avoid flood damage to insurable property, strengthen and	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF BALLSTON SPA MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.											
5	1.3	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety.	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
6	1.4	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	Yes	N/A	60 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and	Local Department	M	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF BALLSTON SPA MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			program benefits, increased flood risk, and financial burdens for residents. There is a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance options. This project promotes public safety.							build resiliency.	Budget, Staff time			
7	1.3	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind,	Develop, enhance, and implement: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.	Continue to develop, enhance, and implement existing emergency plans.	No	N/A	12-60 Months	Emergency Management with support from County OEM and NYS DHSES	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities. Ensure local hazard mitigation plan remains updated and effective.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF BALLSTON SPA MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Invasive Species												
8	5.1 5.2	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely manner. This project promotes public safety.	Create/enhance/ maintain mutual aid agreements with neighboring communities.	No	N/A	36-48 Months	Emergency Management, DPW and Roads	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Local Department Budget, Staff time	H	Safety/Security	Preparedness
9	1.2 2.1	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat,	Emergency Notification System: The general public may not have the means to access educational material or notification alerts. By establishing an	Support the Installation/Implementation of Community Emergency Alert System.	No	N/A	24-36 Months	LEMC	\$100,000	Reduce risk to residents through improved communication and early warning.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when	H	Communication Safety/Security	Education and Awareness

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF BALLSTON SPA MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	area wide notification system ensures community members are aware of risk and able to prepare for the impact. This project promotes public safety.								applicable) local bonds			
10	5.3	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind,	Public Awareness Program: The general public may not be aware of the risk of hazards that could impact the County. Creating a support fund could encourage community members to support mitigation projects and costs associated with them. This project promotes public safety.	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	No	N/A	60 Months	Village Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	M	Safety/Security	Preparedness



# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF BALLSTON SPA MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Invasive Species												
11	1.1 1.4 3.2	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm, Tornado, Wind	Retrofit Union Fire Department: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Investigate and implement mitigation actions that would protect the Union Fire Department from flood hazards.	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
12	1.2 1.4 3.1 3.2	Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind,	Water infrastructure improvements: Inadequate and undersized drainage systems cause flooding, damage to roadways, and create hazardous driving conditions for motorists. This project would protect the community and reduce flooding or damage due to other hazards.	Upgrade necessary water mains to reduce water system vulnerability.	No	Further review required	48-60 Months	Village of Ballston Spa	\$750,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to residents; Reduce burden on emergency services during and after a flood event.	Local Department Budget, Staff time	M	Water Systems Safety/Security	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF BALLSTON SPA MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
13	1.1 1.2 1.4	Flood	Feasibility Study: Updating flood prone areas will ensure that effective mitigation projects can be completed for the impacted area. This project protects infrastructure, reduces the cost of reparation, and prevents injury to residents.	Conduct a flood area study to develop a strategy to reduce flooding of low-lying areas including earth berms, increasing elevation of creek banks, and flood water retaining wall systems.	Yes	Further review required	60 Months	Village of Ballston Spa, Engineers/Public Works, Government Officials	\$500,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Water Systems Safety/Security	Structure and Infrastructure
14	1.2 1.3 3.1 3.2	Dam Failure	Develop, enhance, and implement: There is a need to ensure that all dams are identified and risks are assessed. An emergency action plan should include inundation maps, responsibilities, dam information, and procedures to follow in an emergency situation.	Create/update the Emergency Action Plans for all dams located within the municipality. Budget for inspections as required by state law.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure Emergency Action Plans are in place for each identified dam. Ensure the plan is aligned with other plans' goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
15	1.2 1.3 3.1	Dam Failure	Implementation, Monitoring, and Maintenance: Since	Implement dam structure repairs as required by dam safety report/protocols.	No	N/A	24-60 Months	NFIP Floodplain Administrator	\$10,000	Ensuring dams are not compromised and repaired will reduce	Local Department	H	Safety/Security	Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### VILLAGE OF BALLSTON SPA MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
3.2			dams were initially built there has been settling of the dam. Dam safety protocols with dam repair recommendations will keep dams from being compromised.					; Engineering Department		the risk of breach and failure, while keeping communities safe and saving lives.	Budget, Staff time			

# SECTION 23: MITIGATION ACTIONS

## TOWN OF CHARLTON

### TOWN OF CHARLTON MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.4 2.3	Flood	Community Rating System: By exploring the CRS program, the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the community's efforts to reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations
2	1.3	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated,	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations

## SECTION 23: MITIGATION ACTIONS

### TOWN OF CHARLTON MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	effective, and aligned with its goals. This project promotes public safety.							reduction activities.				
3	1.4	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of program benefits, increased flood risk, and financial burdens for residents. There is a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance options. This project promotes public safety.	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	Yes	N/A	60 Months	NFIP Floodplain Administrator; Planning Board, Zoning Board of Appeals, Building Inspector	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations
4	5.1 5.2	Drought, Earthquake	Create, enhance, and maintain: Mutual aid	Create/enhance/ maintain mutual aid agreements with	No	N/A	36-48 Months	Local Emergency	\$10,000	Ensure mutual aid agreements remain	Local Department	H	Safety/Security	Preparedness

## SECTION 23: MITIGATION ACTIONS

### TOWN OF CHARLTON MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind	agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely manner. This project promotes public safety.	neighboring communities.				Management, DPW and Roads		updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Budget, Staff time			
5	3.1	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm Tornado, Wind	Tree Trimming Program: Downed trees and branches have impacted rights-of-way and stormwater drainage and a proper maintenance program to reduce the risk of debris should be developed. Creation of debris management plan allows the governing body to know the legal restrictions for debris management and follow the proper	Implement management in areas of powerlines to improve post-disaster debris management and prevent power failures during storms.	No	N/A	12 months	Engineering Department; Public Works	\$100,000	Reduce damages to infrastructure; Ensure continuity of services during and after event; Reduce damages associated with power outages; Reduce risk of injuries or fatalities to vulnerable populations.	Local Department Budget, Staff time	M	Safety/Security Energy (Power/Fuel)	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## TOWN OF CHARLTON MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			protocols during emergency or disaster situations. This action protects infrastructure, reduces cost of reparation, and prevents injury to residents.											
6	1.2 1.4 3.1 3.2	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Tornado, Wind	Develop, enhance, and implement: There is a need to ensure that the current stormwater management system has been assessed for risks and gaps. An analysis should include maps, responsibilities, system information, and procedures to follow in an emergency situation. This project promotes public safety.	Develop and/or enhance the current stormwater management system to be in compliance with federal and state regulations such that there will be a net reduction in the flood risk caused by stormwater impacts.	No	Further review required	48-60 Months	NFIP Floodplain Administrator	\$100,000	Reduce risk of flood damages through improved stormwater management; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems	Structure and Infrastructure
7	1.4 3.1 3.2	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm Tornado, Wind	Culvert and drainage upgrades: Throughout the County culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This	Continue to engage in the in-house program that follows the MS4 Plan, along with culvert and ditch upgrading to enlarge the stormwater volume capacity and flow and decrease localized flooding in Town.	No	Further review required	60 months	NFIP Floodplain Administrator	\$1,000,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems	Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### TOWN OF CHARLTON MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			project protects the community and reduces the risk of flooding.											
8	1.1 3.3	Earthquake	Harden Critical Facilities and Systems: Assessment of current facilities and systems will determine whether they need upgrades and ensure the continuity of critical services.	Retrofit the Town water system tank and piping so that they are constructed to seismic standards.	No	Further review required	36-48 Months	NFIP Floodplain Administrator	\$500,000	Reduce damages at critical facilities; Ensure continuity of critical services during and after event; Reduce risk of injury to emergency and critical personnel.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems	Structure and Infrastructure
9	1.2 1.4 3.1 3.2	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm Tornado, Wind	Culvert and drainage upgrades: Throughout the County culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Town should continue to work closely with the DEC and Saratoga County to establish a stormwater management program (MS4) and ensure compliance with US EPA Stormwater Phase II regulations. Upgrade and increase the capacity of the current stormwater collection system such that there will be a net reduction in the flood risk caused by stormwater impacts.	No	Further review required	60 months	Planning Board, Zoning Board of Appeals, Building Inspector	\$1,000,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems	Structure and Infrastructure
10	5.1 5.3	Flood, Hail, Hurricane/Tropical Storm,	Training and Exercises Program: Training and exercises reveal gaps	Provide adequate training for town and other officials regarding stormwater and road management and use	No	N/A	12 months	Town Board, Highway Department, Building	\$10,000	Enhance communication, education, and awareness among	Local Budget	L	Safety/Security	Education and Awareness



# SECTION 23: MITIGATION ACTIONS

## TOWN OF CHARLTON MITIGATION ACTIONS

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		Ice Storm, Lightning, Tornado, Wind	in local capabilities and identifying and addressing these gaps promotes public safety. In addition, ensuring local responders are capable of handling emergencies, minimizing the risk to people, property, and the environment. This action promotes public safety.	Best Management Practices.				Inspector		local jurisdictions; Improve and develop mitigation strategies; Reduce risk of damages, injuries, and fatalities.				
11	4.1 4.2 4.3	Flood	Smart Growth Initiatives: Improve community resiliency through implementing Smart Growth principles such as incentivizing development in low-risk areas and preserving open space in higher risk areas such as floodplains. Smart Growth protects water quality by reducing paved surfaces, allowing natural lands to filter rainwater, ensuring cleaner	Create a detailed open space map using the existing GIS data so that the programs and policies of the Comprehensive Plan can be targeted to specific areas. This effort could also include the following steps: mapping of hazard areas to determine best places for development or preservation of land/dedicated to open space; a threat-of-loss analysis (to identify those existing areas most at threat of being lost as open space); mapping of significant resource areas,	No	N/A	36-60 Months	NFIP Floodplain Administrator; Office of Emergency Management	\$100,000	Reduce risk in high hazard areas by promoting and incentivizing development in low-risk areas; Build resiliency within the community; Reduces potential for future damages in high risk areas while providing the community with benefits such as reducing heat-island effects in densely developed areas.	Local Department Budget, Staff time	L	Safety/Security	Natural System Protection Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## TOWN OF CHARLTON MITIGATION ACTIONS

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			drinking water. This action protects infrastructure, reduces cost of reparation, and prevents injury to residents. This reduces potential for future damages in high risk areas while providing the community with benefits such as reducing heat-island effects in densely developed areas. Smart Growth protects water quality by reducing paved surfaces, allowing natural lands to filter rainwater, ensuring cleaner drinking water. This project protects the community and reduces risk of flooding.	potential open spaces, parks, and greenways to connect these areas; and developing a system to rank these areas relevant to their importance as open spaces.										
12	1.1 1.2 1.4 4.2 4.3	Flood	Feasibility Study: Since dams may be built in the natural environment, all dams should be monitored	To address beaver dam issues in Town, monitor vulnerable areas and commission a study to investigate ways to avoid	No	N/A	24-60 Months	NFIP Floodplain Administrator	\$100,000	Ensuring dams are not compromised and repaired will reduce the risk of breach and failure, while keeping	Local Department Budget, Staff time	H	Safety/Security Water Systems	Education and Awareness

# SECTION 23: MITIGATION ACTIONS

## TOWN OF CHARLTON MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			for local wildlife damage and studies should be conducted to determine impact to dam, what repairs, and mitigation can be done to the dam in the event of beaver damage. Dam safety protocols with dam repair recommendations will keep dams from being compromised.	future damages. Implement findings within study.						communities safe and saving lives.				
13	5.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Public Awareness Program: The general public may not be aware of the risk of hazards that could impact the County. Creating a support fund could encourage community members to support mitigation projects and costs associated with them. This project promotes public safety.	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality	No	N/A	60 Months	Town Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	M	Safety/Security	Preparedness

# SECTION 23: MITIGATION ACTIONS

## TOWN OF CHARLTON MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
14	1.2 1.4 2.1	Extreme Cold, Extreme Heat, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Snowstorm, Tornado, Wildfire, Wind	Community Shelter: The community has no designated shelter for residents to evacuate. Considering potential site locations or construction, a community shelter will be needed to help reduce injuries or fatalities to at risk and vulnerable residents.	Conduct an emergency preparedness and shelter needs survey to provide the town information needed to prioritize areas of greatest need and develop an appropriate strategy. Implement appropriate measures to enhance capabilities.	No	Further Review Required	48-60 Months	Office of Emergency Management	\$100,000	Reduce risk to citizens by providing shelter during extreme weather events. Reduce risk of injuries and fatalities.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Food/Hydration/Shelter	Education and Awareness Structure and Infrastructure
15	1.1 1.2 3.2 3.3	Extreme Cold, Extreme Heat, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Snowstorm, Tornado, Wildfire, Wind	Upgrades to 784 Charlton Road: During hazard events the location will serve as the Emergency Operations Center (EOC) and resource storage. Assessment of operational capacity and necessary improvements required. This project helps ensure critical facilities continue to provide services during unforeseen events.	Upgrade 784 Charlton Road to be the local emergency operations and support center. An Emergency Operations & Support Center would establish a unified base of operations that would coordinate services within the town as well as facilitating shared services from outside sources. The Center would also house any physical assets acquired and maintained by the town (i.e., emergency water and food supply, blankets, first aid items, etc.) Additionally, the Center would be a community resource used	Yes	Further Review	36-48 Months	Town Highway	\$1,500,000	Reduce the risk of injury and fatalities to residents. Ensure continuity of critical services and emergency response.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### TOWN OF CHARLTON MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
				for training, education and ongoing emergency planning programs. The Center would upgrade existing structure at 784 Charlton Rd located within Historical District. Upgrades include, but not limited to: improved wiring and communications capabilities, installing generator back-up, minor kitchen renovations, exterior maintenance to preserve structure.										
16	1.1 1.2 1.4 3.1 3.2	Flood	Feasibility Study: Lack of proper drainage on the roadways should be assessed to address the issue with mitigation projects. This project protects the community and reduces the risk of flooding.	Conduct a culvert survey and needs assessment to assess what actions should be taken to mitigate flooding issues along roadways. Implement findings from needs assessment.	No	Further review required	24-36 Months	NFIP Floodplain Administrator	\$100,000	Reduce flood risk; reduce damages and risk of injuries or fatalities; reduce loss of function; reduce emergency response required during flood events.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Water Systems	Structure and Infrastructure
17	1.3	Drought, Earthquake, Extreme Cold, Extreme Heat,	Develop, enhance, and implement: There is a need to ensure a structured approach to guarantee that the Plan remains updated,	Continue to develop, enhance, and implement existing emergency plans.	No	N/A	12-60 Months	Emergency Management with support from County	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local jurisdictions remain aligned with the Plans	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations

## SECTION 23: MITIGATION ACTIONS

### TOWN OF CHARLTON MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species.	effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.					OEM and NYS DHSES		goals and risk reduction activities.				

# SECTION 23: MITIGATION ACTIONS

## TOWN OF CLIFTON PARK

### TOWN OF CLIFTON PARK MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal/ Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.1 1.4 3.2	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm Tornado, Wind	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding. Identify specific properties, if any, this is applicable to. Assessment required to Grissom Drive Pump Station which has been determined to be located in a high-flood risk area.	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
2	1.1 1.4 3.2	Flood	Relocate Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and	Where appropriate, support purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when	H	Safety/Security	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## TOWN OF CLIFTON PARK MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			prevents injury to residents.	priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding. Identify specific properties, if any, this is applicable to. Assessment required to Grissom Drive Pump Station which has been determined to be located in a high-flood risk area.							applicable) local bonds			
3	1.4 2.3	Flood	Community Rating System: By exploring the CRS program the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the community's efforts to reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations



# SECTION 23: MITIGATION ACTIONS

## TOWN OF CLIFTON PARK MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			and foster comprehensive floodplain management. This project promotes public safety.											
4	1.3	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. . This project promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24. . Continue to develop, enhance, and implement existing emergency plans.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities. Ensure all plans are updated and aligned with one another.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
5	1.4	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of program benefits, increased flood risk, and financial burdens for residents. There is	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	Yes	N/A	60 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## TOWN OF CLIFTON PARK MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance options. This project promotes public safety.											
6	5.1 5.2	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely manner. This project promotes public safety.	Create/enhance/ maintain mutual aid agreements with neighboring communities as well as County and State organizations such as New York State Police and Saratoga County Sheriff's Department to improve police protection.	No	N/A	36-48 Months	Emergency Management, DPW and Roads	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Local Department Budget, Staff time	H	Safety/Security	Preparedness
7	1.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated,	Support County-wide initiatives identified in the County Annex.	No	N/A	12-60 Months	Appropriate Departments	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations

## SECTION 23: MITIGATION ACTIONS

### TOWN OF CLIFTON PARK MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	effective, and aligned with its goals. This project promotes public safety.							Plans goals and risk reduction activities.				
8	1.2 1.3 3.1 3.2	Dam Failure	Develop, enhance, and implement: There is a need to ensure that all dams are identified and risks are assessed. An emergency action plan should include inundation maps, responsibilities, dam information, and procedures to follow in an emergency situation.	Create/update the Emergency Action Plans for all dams located within the municipality. Budget for inspections as required by state law.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure Emergency Action Plans are in place for each identified dam. Ensure the plan is aligned with other plans, goals, and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
9	1.2 1.3 3.1 3.2	Dam Failure	Implementation, Monitoring, and Maintenance: Since dams were initially built there has been settling of the dam. Dam safety protocols	Implement dam structure repairs as required by dam safety report/protocols.	No	N/A	24-60 Months	NFIP Floodplain Administrator; Engineering Department	\$10,000	Ensuring dams are not compromised and repaired will reduce the risk of breach and failure, while keeping communities safe	Local Department Budget, Staff time	H	Safety/Security	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## TOWN OF CLIFTON PARK MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			with dam repair recommendations will keep dams from being compromised.							and saving lives.				
10	5.3 6.1	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	Public Awareness Program: The general public may not be aware of the risk of hazards that could impact the County. Creating a support fund could encourage community members to support mitigation projects and costs associated with them. This project promotes public safety.	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	No	N/A	60 Months	Town Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	M	Safety/Security Communication	Preparedness
11	1.4 2.1 2.2 2.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/	Public Awareness Program: The general public may not have a full understanding of the risk associated with hazards impacting the planning area. Education programs can provide	Increase public education/public participation on hazards of concern and ways to mitigate risk.	No	N/A	24-36 Months	Office of Emergency Management	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	M	Safety/Security Communication	Education and Awareness

# SECTION 23: MITIGATION ACTIONS

## TOWN OF CLIFTON PARK MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property. This project promotes public safety.											
12	1.2 1.3 1.4 3.2 4.2 4.3	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm, Tornado, Wind	Stormwater/Flood Management: Flooding and severe storms has caused concerns and risk. Loose branches, brush and vegetation mix with drainage water and cause damming and plugged culverts. When this occurs, flood water escapes the existing drainage network, causing significant damage to public and private property. Recovery efforts are time consuming and labor intensive. This project protects the community and reduces the risk of flooding.	To prevent stormwater handling capacity and water quality from being diminished by future development, implement sound construction practices to control erosion and sedimentation of waterways and maintain existing drainage features. As required by Town code 86-7 (2).	No	Further Review Required	12 – 60 months	NFIP Floodplain Administrator	\$500,000	Reduce flood risk; reduce damages and risk of injuries or fatalities; reduce loss of function; reduce emergency response required during flood events.	Local Department Budget; local bonds	H	Water System Safety/Security	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## TOWN OF CLIFTON PARK MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
13	1.2 1.3 1.4 3.2 4.2 4.3	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm Tornado, Wind	Stormwater/Flood Management: Flooding and severe storms has caused concerns and risk. Loose branches, brush and vegetation mix with drainage water and cause damming and plugged culverts. When this occurs, flood water escapes the existing drainage network, causing significant damage to public and private property. Recovery efforts are time consuming and labor intensive. This project protects the community and reduces the risk of flooding.	Maintain and prioritize/implement stormwater management goals through the County Stormwater Management Agreement and the Town of Clifton Park Stormwater Management Plan and as regulated by the New York State Department of Environmental Conservation.	No	Further Review Required	12 – 60 months	NFIP Floodplain Administrator	\$500,000	Reduce flood risk; reduce damages and risk of injuries or fatalities; reduce loss of function; reduce emergency response required during flood events.	Local Department Budget; local bonds	H	Water Systems Safety/Security	Structure and Infrastructure
14	1.2 1.3 1.4 3.2 4.2 4.3	Flood	Green Infrastructure Program: Explore alternative ways to promote mitigation and preserve the land within the town due to the impact of climate	To protect wetlands and stream corridors for their benefits to wildlife habitat, flood and stormwater control, groundwater protection, erosion control and recreation by expanding wetland	No	N/A	36-60 Months	NFIP Floodplain Administrator	\$25,000	Reduce impacts of flood through expanded greenspace and restoration of floodplains and wetlands; Reduce	Local Department Budget, Staff time	L	Safety/Security	Natural System Protection

# SECTION 23: MITIGATION ACTIONS

## TOWN OF CLIFTON PARK MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			change. Nature-based solutions protects water quality by reducing paved surfaces, allowing natural lands to filter rainwater, ensuring cleaner drinking water. This action protects infrastructure, reduces cost of reparation, and prevents injury to residents. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	mitigation options as fostered by the Environmental Conservation Commission and Army Corps of Engineers. Utilize Land Conservation Districts in Town of Clifton Park Code 208-69.						impacts of drought through green infrastructure that works to replenish groundwater reserves; Reduce impacts of Urban Island Heat effect in densely populated areas through tree planting.				
15	1.2 1.3 1.4 3.2 4.2 4.3	Dam Failure, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Tornado, Wind	Development Restriction: There are locally identified areas of high risk. Prohibit development in known high risk areas to reduce damages, injuries, and fatalities.	Supporting proper development practices within flood-prone areas as indicated in the Town's floodplain management regulations in order to protect wetlands and stream corridors for their benefits to wildlife habitat, flood and stormwater control, groundwater protection, erosion control and recreation.	No	N/A	36-60 Months	NFIP Floodplain Administrator	\$10,000	Reduce risk of flooding and repetitive loss through improved development practices and building requirements/restrictions.	Local Department Budget, Staff time	L	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## TOWN OF CLIFTON PARK MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
16	1.2 1.3 1.4 3.2 4.1 4.2 4.3	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Tornado, Wind	Development Restriction: There are locally identified areas of high risk. Prohibit development in known high risk areas. With the increase in development growth there is a need to restrict development in known high-risk flood hazard areas throughout town. Adoption of development restrictions protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Integrate more comprehensive oversight in the planning, construction and post- construction to ensure sound construction practices are used to control erosion and sedimentation of waterways and minimize drainage and flooding issues with future development. Require stormwater management tech, town designated engineer, and SMO review all new plans.	No	N/A	36-60 Months	NFIP Floodplain Administrator; Engineering Department	\$10,000	Reduce risk of flooding and repetitive loss through improved development practices and building requirements/restrict ions.	Local Department Budget, Staff time	L	Safety/Security	Local Plans and Regulations
17	1.2 1.4 2.1 3.2 5.1	Flood	Flood Mitigation at Riverview Road: Evaluate Flood Mitigation measures at Riverview Road to maintain accessibility during emergency situations due to frequency in flooding. This project protects infrastructure, reduces cost of reparation, and	Raise Riverview Road to prevent flooding events from impacting the road.	Yes	Further review required	24-36 Months	NFIP Floodplain Administrator; Engineering Department	\$250,000	Reduce risk of damages or injuries through flood mitigation at high-risk structures; Reduce the need for emergency response in high-risk areas; Reduce repetitive flood losses/claims; Reduce community	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems Transportation	Structure and Infrastructure



# SECTION 23: MITIGATION ACTIONS

## TOWN OF CLIFTON PARK MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			prevents injury to residents.							recovery efforts and costs.				
18	1.2 1.4 2.1 3.2 5.1	Flood	Flood Mitigation at Bruno Road and Nicole Court: Evaluate Flood Mitigation measures at Riverview Road to maintain accessibility during emergency situations due to frequency in flooding. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Raise Bruno Road and Nicole Court above flood elevations.	Yes	Further review required	24-36 Months	NFIP Floodplain Administrator; Engineering Department	\$250,000	Reduce risk of damages or injuries through flood mitigation at high-risk structures; Reduce the need for emergency response in high-risk areas; Reduce repetitive flood losses/claims; Reduce community recovery efforts and costs.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems Transportation	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## TOWN OF CORINTH

TOWN OF CORINTH MITIGATION ACTIONS														
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.1 1.4 3.2	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Tornado, Snowstorm Wind	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost- effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding. Priority assessment for Jessup's Landing ALS Agency and Wastewater Treatment Plant.	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
2	1.1 1.4 3.2	Flood	Relocate Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This	Where appropriate, support purchase, or relocation of structures located in hazard-prone areas to protect	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and loss of life.	Local Department Budget; HMGP, BRIC,	H	Safety/Security	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

TOWN OF CORINTH MITIGATION ACTIONS														
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost- effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding. Priority assessment for Jessup's Landing ALS Agency and Wastewater Treatment Plant.							CDBG, PA 406 (when applicable) local bonds			
3	1.4 2.3	Flood	Community Rating System: By exploring the CRS program the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the community's efforts to reduce and avoid flood damage to insurable property, strengthen and support the insurance	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## TOWN OF CORINTH MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.											
4	1.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety.	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60 Months	County (through Mitigation Planning Coordinator), NYS DHSES	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
5	1.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat,	Develop, enhance, and implement: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project	Continue to develop, enhance, and implement existing emergency plans.	No	N/A	12-60 Months	County Emergency Management, NYS DHSES	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## TOWN OF CORINTH MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.											
6	1.1 3.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind	Generator for critical facilities: During power outages, critical facilities would be without lights, communications, and maintenance equipment/machinery. The operations are basically brought to a halt. This project helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.	Purchase back-up generator for schools (our shelters) to ensure continuity during emergencies	Yes	Further Review Required	24 Months	School Board	\$500,000	Provide power for critical facilities during power outages and ensure continuity of critical services.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Energy (Power/Fuel) Safety/Security	Structure and Infrastructure
7	1.2 2.1	Dam Failure, Drought,	Emergency Notification System: The general public may not have	Purchase and install a siren warning system to alert citizens of dam	No	N/A	24-36 Months	NFIP Floodplain Administrator;	\$200,000	Reduce risk to residents through improved	Local Department Budget;	H	Communication Safety/Security	Education and Awareness

# SECTION 23: MITIGATION ACTIONS

## TOWN OF CORINTH MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	technology to receive an electronic warning using reverse 911 systems, a siren warning system would allow residents and tourists to retreat to safety quickly. By establishing an area wide siren system ensures community members are aware of risk and able to prepare for the impact. This project promotes public safety.	breach situations and other during other hazardous times. In the event of a Breach of Conklinville Dam, Route 9N North would be flooded in 30 minutes. We would not have a way to notify the residents in time to prevent loss of life. Educate the public on the presence and use of the system.				Office of Emergency Management		communication and early warning.	HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds			
8	1.2 1.3 3.1 3.2	Dam Failure	Develop, enhance, and implement: There is a need to ensure that all dams are identified and risks are assessed, of particular importance is Woodland Lake Dam. An emergency action plan should include inundation maps, responsibilities, dam information, and procedures to follow in an emergency situation.	Create/update the Emergency Action Plans for all dams located within the municipality with priority to Woodland Lake Dam.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure Emergency Action Plans are in place for each identified dam. Ensure the plan is aligned with other plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
9	1.2 1.3 3.1 3.2	Dam Failure	Implementation, Monitoring, and Maintenance: Since dams were initially built there has been settling of the	Implement dam structure repairs as required by dam safety report/protocols. Woodland Lake Dam	No	N/A	24-60 Months	NFIP Floodplain Administrator; Engineering Department	\$10,000	Ensuring dams are not compromised and repaired will reduce the risk of breach and failure,	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## TOWN OF CORINTH MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			dam. Dam safety protocols with dam repair recommendations will keep dams from being compromised. After Emergency Action Plan is completed for Woodland Lake Dam, rehab should be prioritized.	should be prioritized for any rehab after the Emergency Action Plan is completed.						while keeping communities safe and saving lives.				
10	1.2 2.1	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	Emergency Notification System: The general public may not have the means to access educational material or notification alerts. By establishing an area wide notification system ensures community members are aware of risk and able to prepare for the impact. This project promotes public safety.	Installation/Implementation of Community Emergency Alert System	No	N/A	24-36 Months	LEMC	\$100,000	Reduce risk to residents through improved communication and early warning.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Communication Safety/Security	Education and Awareness
11	5.3 6.1	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme	Public Awareness Program: The general public may not be aware of the risk of hazards that could impact the County. Creating a support fund could encourage	Create a mitigation local support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund	No	N/A	60 Months	Town Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	M	Safety/Security Communication	Preparedness

# SECTION 23: MITIGATION ACTIONS

## TOWN OF CORINTH MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	community members to support mitigation projects and costs associated with them. This project promotes public safety.	cost-sharing portions of projects and be replenished during the annual budget cycle										
12	1.2 3.1 3.2 3.3	Flood	Relocation of at-risk facilities: There is a known flood risk within the area. Assessment of those properties that are at risk and determine if relocation is a cost-effective option. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Upgrade and relocate Town Hall propane tank.	Yes	Further review required	12 Months	Fire Department	\$100,000	Reduce risk of damages to structures; Ensure continuity of critical services; Reduce risk of injuries to critical service employees.	Local Department Budget	M	Safety/Security	Structure and Infrastructure
13	1.1 3.3	Flood	Flood Mitigation: Evaluate Flood Mitigation measures at the Emergency Medical Squad to elevate generators to maintain	Upgrade and elevate Emergency Medical Squad generators so that continuous power can be provided to the	Yes	Further review required	24 Months	Fire Department/ EMS	\$500,000	Reduce risk of damages or injuries through flood mitigation at high-risk structures;	Local Department Budget; HMGP, BRIC,	H	Safety/Security Energy (Power/Fuel)	Structure and Infrastructure



# SECTION 23: MITIGATION ACTIONS

## TOWN OF CORINTH MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			continuity of operations during and after a hazard event due to frequency in flooding. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	EMS building as a designated shelter in the provision of the vital functions it provides during a catastrophic event.						Reduce the need for emergency response in high-risk areas; Reduce repetitive flood losses/claims; Reduce community recovery efforts and costs.	CDBG, PA 406 (when applicable) local bonds			
14	5.1 5.2	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely manner. This project promotes public safety.	Create/enhance/maintain mutual aid agreements with neighboring communities.	No	N/A	36-48 Months	Surrounding municipalities and County	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Local Department Budget, Staff time	H	Safety/Security	Preparedness

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF CORINTH

### VILLAGE OF CORINTH MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.1 1.4 3.2	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm, Tornado, Wind	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost- effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding. The Indeck Corinth Energy Center is located in a special flood hazard area; its vulnerability to flood hazards is not fully known and over the life of this plan the village will conduct an assessment of this	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF CORINTH MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
				facility (e.g., document history of damage) to understand its vulnerabilities and mitigate.										
2	1.1 1.4 3.2	Flood	Relocate Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding. The Indeck Corinth Energy Center is located in a special flood hazard area; its vulnerability to flood hazards is not fully known and over the life	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF CORINTH MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
				of this plan the village will conduct an assessment of this facility (e.g., document history of damage) to understand its vulnerabilities and mitigate.										
3	1.4 2.3	Flood	Community Rating System: By exploring the CRS program, the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the community's efforts to reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations
4	1.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF CORINTH MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	its goals. This project promotes public safety.							reduction activities.				
5	1.4	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of program benefits, increased flood risk, and financial burdens for residents. There is a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance options. This project promotes public safety.	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	Yes	N/A	60 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations
6	1.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm,	Develop, enhance, and implement: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant	Continue to develop, enhance, and implement existing emergency plans.	No	N/A	12-60 Months	Emergency Management with support from County OEM and NYS DHSES	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF CORINTH MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	while working with the Emergency Operations Plan.											
7	5.1 5.2	Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely manner. This project promotes public safety.	Create/enhance/maintain mutual aid agreements with neighboring communities.	No	N/A	36-48 Months	Emergency Management, DPW and Roads	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Local Department Budget, Staff time	H	Safety/Security	Preparedness
8	1.2 2.1	Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/	Emergency Notification System: The general public may not have the means to access educational material or notification alerts. By establishing an area wide notification system	Support the Installation/Implementation of Community Emergency Alert System which will not only alert residents of a	No	N/A	24-36 Months	LEMC	\$100,000	Reduce risk to residents through improved communication and early warning.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when	H	Communication Safety/Security	Education and Awareness

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF CORINTH MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	ensures community members are aware of risk and able to prepare for the impact. This project promotes public safety.	dam breach but of other hazard events as well.							applicable) local bonds			
9	5.3 6.1	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Public Awareness Program: The general public may not be aware of the risk of hazards that could impact the County. Creating a support fund could encourage community members to support mitigation projects and costs associated with them. This project promotes public safety.	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost sharing portions of projects and be replenished during the annual budget cycle.	No	N/A	60 Months	Village Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	M	Safety/Security	Preparedness
10	1.1 3.3	Earthquake, Extreme Cold, Extreme	Generator for critical facilities: During power outages, critical facilities would be without lights,	Purchase back-up generator for schools (our shelters) to ensure	Yes	Further review required	24 Months	School Board	\$500,000	Provide power for critical facilities during power outages and ensure	Local Department Budget; HMGP,	M	Safety/Security Energy (Power/Fuel)	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF CORINTH MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	communications, and maintenance equipment/machinery. The operations are basically brought to a halt. This project helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.	continuity during emergencies.						continuity of critical services.	BRIC, CDBG, PA 406 (when applicable) local bonds			
11	1.2 2.1 3.1 6.1	Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	Community Shelter: The community has no designated shelter for residents to evacuate. Considering potential site locations or construction, a community shelter will be needed to help reduce injuries or fatalities to at risk and vulnerable residents. This project promotes public safety.	Evaluate sheltering needs. Upon completing assessment, make necessary upgrades to retrofit current facilities.	No	Further review required	48-60 Months	Office of Emergency Management	\$100,000	Reduce risk to residents by providing shelter during extreme weather events.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Food/Hydratio n/Shelter	Structure and Infrastructure



# SECTION 23: MITIGATION ACTIONS

## TOWN OF DAY

### TOWN OF DAY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.1 1.4 3.2	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm, Tornado, Wind	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost-effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
2	1.1 1.4 3.2	Dam Failure, Flood	Relocate Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to	Where appropriate, support purchase, or relocation of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when	H	Safety/Security	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## TOWN OF DAY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			residents.	repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.							applicable) local bonds			
3	1.4 2.3	Flood	Community Rating System: By exploring the CRS program the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the community's efforts to reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

## SECTION 23: MITIGATION ACTIONS

### TOWN OF DAY MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
4	1.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety.	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
5	1.4	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of program benefits, increased flood risk, and financial burdens for residents. There is a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance options. This project promotes public safety.	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	Yes	N/A	60 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

## SECTION 23: MITIGATION ACTIONS

### TOWN OF DAY MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
6	1.3	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Develop, enhance, and implement: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.	Continue to develop, enhance, and implement existing emergency plans.	No	N/A	12-60 Months	Emergency Management with support from County OEM and NYS DHSES	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
7	5.1 5.2	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado,	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely manner. This project promotes public safety.	Create/enhance/maintain mutual aid agreements with neighboring communities.	No	N/A	36-48 Months	Emergency Management, DPW and Roads	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Local Department Budget, Staff time	H	Safety/Security	Preparedness

# SECTION 23: MITIGATION ACTIONS

## TOWN OF DAY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Wildfire, Wind												
8	1.2 2.1	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	Emergency Notification System: The general public may not have the means to access educational material or notification alerts. By establishing an area wide notification system ensures community members are aware of risk and able to prepare for the impact. This project promotes public safety.	Support the Installation/ Implementation of Community Emergency Alert System.	No	N/A	24-36 Months	LEMC	\$100,000	Reduce risk to residents through improved communication and early warning.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Communication	Education and Awareness
9	5.3 6.1	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/	Public Awareness Program: The general public may not be aware of the risk of hazards that could impact the County. Creating a support fund could encourage community members to support mitigation projects	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be	No	N/A	60 Months	Town Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	M	Safety/Security Communication	Preparedness

# SECTION 23: MITIGATION ACTIONS

## TOWN OF DAY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	and costs associated with them. This project promotes public safety.	replenished during the annual budget cycle.										
10	1.2 1.3 1.4 3.2	Dam Failure, Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Mitigate annual washout of Shipple Road by replacing culverts and purchasing easements for draining.	No	Further review required	60 months	NFIP Floodplain Administrator	\$500,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems Transportation	Structure and Infrastructure
11	1.2 1.3 1.4 3.2	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community	Mitigate annual washout of Turner Road by replacing culvert. Based on assessment and with consideration to local codes and regulations, consider inclusion of a bridge.	No	Further review required	60 months	NFIP Floodplain Administrator	\$500,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems Transportation	Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### TOWN OF DAY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			and reduces the risk of flooding.											
12	1.2 1.3 1.4 3.2	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Mitigate annual washout of Sand Lake Road by replacing culvert.	No	Further review required	60 months	NFIP Floodplain Administrator	\$500,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; FEMA-4472-DR Project #133088	H	Safety/Security Water Systems Transportation	Structure and Infrastructure
13	1.2 1.3 1.4 3.2	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Mitigate washout of Kroetch Road by replacing culvert. Based on assessment and with consideration to local codes and regulations, consider inclusion of a bridge.	No	Further review required	60 months	NFIP Floodplain Administrator	\$500,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems Transportation	Structure and Infrastructure
14	1.2 1.3 1.4 3.2	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this	Mitigate washout of Walter Maxfield Road by replacing culvert. Based on assessment and with consideration to local codes and	No	Further review required	60 months	NFIP Floodplain Administrator	\$500,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce	Local Department Budget; HMGP, BRIC, CDBG, PA	H	Safety/Security Water Systems Transportation	Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### TOWN OF DAY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	regulations, consider inclusion of a bridge.						burden on emergency services during and after a flood event.	406 (when applicable) local bonds			
15	1.2 1.3 1.4 3.2	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Mitigate washout of Yates Hill Road by replacing culvert. Based on assessment and with consideration to local codes and regulations, consider inclusion of a bridge.	No	Further review required	60 months	NFIP Floodplain Administrator	\$500,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems Transportation	Structure and Infrastructure
16	1.2 1.3 1.4 3.2	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Mitigate washout of Hadley Hill Road by replacing culvert with a 48-inch culvert.	No	Further review required	60 months	NFIP Floodplain Administrator	\$500,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems Transportation	Structure and Infrastructure
17	3.1	Flood, Hail, Hurricane/Tropical	Tree Trimming Program: Downed trees and branches have impacted	Implement management in areas of powerlines to improve post-disaster	No	N/A	12 Months	Town Engineer,	\$100,000	Reduce damage to infrastructure; Ensure continuity of	Local Department Budget;	M	Safety/Security	Structure and Infrastructure



## SECTION 23: MITIGATION ACTIONS

### TOWN OF DAY MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Storm, Ice Storm, Lightning, Snowstorm, Tornado, Wind	right-of-ways and stormwater drainage and a proper maintenance program to reduce the risk of debris should be developed. Creation of debris management plan allows the governing body to know the legal restrictions for debris management and follow the proper protocols during emergency or disaster situations. This action protects infrastructure, reduces cost of reparation, and prevents injury to residents.	debris management and prevent power failures during storms.				Highway Dept.		services during and after event; Reduce damages associated with power outages; Reduce risk of injuries or fatalities to vulnerable populations.	HMGP, BRIC, CDBG, PA 406 (when applicable) local bond		Energy (Power/Fuel)	Local Plans and Regulations
18	1.3, 5.1, 5.2	Ice Storm, Snowstorm	Salt Storage: Flood susceptibility and salt access for road clearing should be assessed. It should be built in a location that is the least flood prone to avoid contamination and loss of salt.	Highway Department: the Town will construct a salt storage facility capable of storing approximately 4,000 tons of salt and/or sand. This could be shared with neighboring jurisdictions.	No	Further review required	24-36 Months	Town of Day Highway Dept.	\$100,000	Reduce risk of damage and ensure continuity of services during and after event; Reduce risk of injuries or loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bond	M	Safety/Security Transportation	Structure and Infrastructure Preparedness
19	1.2, 1.3, 3.1, 3.2	Dam Failure	Implementation, Monitoring, and Maintenance: Since dams were initially built there	Implement dam structure repairs as	No	N/A	24-60 Months	NFIP Floodplain Administrator;	\$10,000	Ensuring dams are not compromised and repaired will reduce the risk of	Local Department	H	Safety/Security	Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### TOWN OF DAY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			has been settling of the dam. Dam safety protocols with dam repair recommendations will keep dams from being compromised.	required by dam safety report/protocols.				Engineering Department		breach and failure, while keeping communities safe and saving lives.	Budget, Staff time			

# SECTION 23: MITIGATION ACTIONS

## TOWN OF EDINBURG

### TOWN OF EDINBURG MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.1 1.4 3.2	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm, Tornado, Wind	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost- effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Yes	Further review required	60 Months	Town Council	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
2	1.1 1.4 3.2	Flood	Relocate Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe	Yes	Further review required	60 Months	Town Council	\$1,000,000	Reduce the risk of damage and loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when	H	Safety/Security	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## TOWN OF EDINBURG MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			residents.	repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.							applicable) local bonds			
3	1.4 2.3	Flood	Community Rating System: By exploring the CRS program the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the community's efforts to reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	Town Council	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

## SECTION 23: MITIGATION ACTIONS

### TOWN OF EDINBURG MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
4	1.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety.	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60 Months	Town Council	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
5	1.4	Flood	NFIP Participation: Failure to join the NFIP excludes local home owners from purchasing flood insurance. NFIP participation ensures new development to be constructed with flood protection measures to limit future losses. This project promotes public safety.	Evaluate the benefits of participating in the National Flood Insurance program.	No	N/A	60 Months	Town Council	\$2,000	Allows purchase of subsidized flood insurance under NFIP for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations
6	1.3	Drought, Earthquake, Extreme Cold,	Develop, enhance, and implement: There is a need to ensure a structured approach to	Continue to develop, enhance, and	No	N/A	12-60 Months	Emergency Management with support from County	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local	Local Department	H	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## TOWN OF EDINBURG MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.	implement existing emergency plans.				OEM and NYS DHSES		jurisdictions remain aligned with the Plans goals and risk reduction activities.	Budget, Staff time			
7	5.2 5.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely manner. This project promotes public safety.	Create/enhance/maintain mutual aid agreements with neighboring communities.	No	N/A	36-48 Months	Emergency Management, DPW and Roads	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Local Department Budget, Staff time	H	Safety/Security	Preparedness
8	1.2 2.1	Drought, Earthquake, Extreme	Emergency Notification System: The general public may not have the	Support the Installation/ Implementation of	No	N/A	24-36 Months	LEMC	\$100,000	Reduce risk to residents through improved	Local Department Budget;	H	Communication	Education and Awareness

## SECTION 23: MITIGATION ACTIONS

### TOWN OF EDINBURG MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	means to access educational material or notification alerts. By establishing an area wide notification system ensures community members are aware of risk and able to prepare for the impact. This project promotes public safety.	Community Emergency Alert System.						communication and early warning.	HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds		Safety/Security	
9	5.3 6.1	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind,	Public Awareness Program: The general public may not be aware of the risk of hazards that could impact the County. Creating a support fund could encourage community members to support mitigation projects and costs associated with them. This project promotes public safety.	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	No	N/A	60 Months	Town Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	M	Safety/Security Communication	Preparedness

## SECTION 23: MITIGATION ACTIONS

### TOWN OF EDINBURG MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Invasive Species												
10	5.1 5.2	Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind	EMS Radio Interoperability: Upgraded radio technology is needed between the departments that serve the town and provide emergency services. This project promotes public safety.	With rainfall current T1 line consistently fails causing radio interruption. Replace antiquated T1 circuit with Fiber Optic technology that will carry 9-1-1 800 MHz radio traffic between radio sites.	Yes	Further Review Required	24-36 Months	Town and County Emergency Management Personnel	\$100,000	Reduce risk to residents through improved communications and early warning. Enhances emergency response.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Communication	Education and Awareness
11	1.3 5.1 5.2	Ice Storm, Snowstorm	Salt Storage: Flood susceptibility and salt access for road clearing should be assessed. It should be built in a location that is the least flood prone to avoid contamination and loss of salt.	Construct/Upgrade storage building with enhanced capacity that will lessen the impact of delivery delays for the Highway Department. The Town will construct a salt storage facility capable of storing approximately 4000 tons of salt and/or sand. This could be shared with neighboring jurisdictions.	No	Further Review Required	24-36 Months	Town of Edinburg Highway Department	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Transportation	Structure and Infrastructure Preparedness



# SECTION 23: MITIGATION ACTIONS

## TOWN OF GALWAY

TOWN OF GALWAY MITIGATION ACTIONS														
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.1 1.4 3.2	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm Tornado, Wind	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost- effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
2	1.1 1.4 3.2	Flood	Relocate Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when	H	Safety/Security	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## TOWN OF GALWAY MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			residents.	repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.							applicable) local bonds			
3	1.4 2.3	Flood	Community Rating System: By exploring the CRS program the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the community's efforts to reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulation

# SECTION 23: MITIGATION ACTIONS

## TOWN OF GALWAY MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
4	1.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety.	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulation
5	1.4	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of program benefits, increased flood risk, and financial burdens for residents. There is a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance options. This project promotes public safety.	Evaluate the benefits of participating in the National Flood Insurance program.	Yes	N/A	60 Months	Office of Emergency Management	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## TOWN OF GALWAY MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
6	1.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	Develop, enhance, and implement: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.	Continue to develop, enhance, and implement existing emergency plans.	No	N/A	12-60 Months	Emergency Management with support from County OEM and NYS DHSES	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulation
7	5.1 5.2	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning,	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely manner. This project promotes public safety.	Create/enhance/maintain mutual aid agreements with neighboring communities.	No	N/A	36-48 Months	Emergency Management, DPW and Roads	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Local Department Budget, Staff time	H	Safety/Security	Preparedness

# SECTION 23: MITIGATION ACTIONS

## TOWN OF GALWAY MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Snowstorm Tornado, Wildfire, Wind												
8	1.2 1.3 3.1	Dam Failure	Develop, enhance, and implement: There is a need to ensure that all dams are identified and risks are assessed. An emergency action plan should include inundation maps, responsibilities, dam information, and procedures to follow in an emergency situation.	Create/update the Emergency Action Plans for all dams located within the municipality. Review and assess Galway Lake Association revised of EAP for Galway Lake Dam.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure Emergency Action Plans are in place for each identified dam. Ensure the plan is aligned with other plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulation
9	1.2 1.3 3.1	Dam Failure	Implementation, Monitoring, and Maintenance: Since dams were initially built there has been settling of the dam. Dam safety protocols with dam repair recommendations will keep dams from being compromised.	Implement dam structure repairs as required by dam safety report/protocols. Implement findings outlined in revised EAP for Galway Lake Dam.	No	N/A	24-60 Months	NFIP Floodplain Administrator; Engineering Department	\$10,000	Ensuring dams are not compromised and repaired will reduce the risk of breach and failure, while keeping communities safe and saving lives.	Local Department Budget, Staff time	H	Safety/Security	Structure and Infrastructure
10	1.2 2.1	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat,	Emergency Notification System: The general public may not have the means to access educational material or notification alerts. By establishing an area wide notification system	Installation/ Implementation of Community Emergency Alert System.	No	N/A	24-36 Months	LEMC	\$100,000	Reduce risk to residents through improved communication and early warning.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when	H	Communication Safety/Security	Education and Awareness

# SECTION 23: MITIGATION ACTIONS

## TOWN OF GALWAY MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	ensures community members are aware of risk and able to prepare for the impact. This project promotes public safety.								applicable) local bonds			
11	1.2 2.1	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Public Awareness Program: The general public may not be aware of the risk of hazards that could impact the County. Creating a support fund could encourage community members to support mitigation projects and costs associated with them. This project promotes public safety.	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle	No	N/A	60 Months	Town Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	M	Safety/Security Communication	Preparedness

## SECTION 23: MITIGATION ACTIONS

### TOWN OF GALWAY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
12	1.2 1.3 3.2	Flood	Water and Drainage System Assessment: Inadequate drainage systems cause flooding, damage to roadways, and create hazardous driving conditions for motorists. When shoulders, ditches, and bridges are washed out or impacted they are impassable for residents and emergency personnel. Assessing the system will allow for prioritization of the most impactful areas and determine the best projects that will mitigate the issues.	Investigate and prioritize the shoulders, ditches and bridges that have washed out in the past and determine appropriate mitigation actions.	No	Further review required	48 Months	Highway Department	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Water Systems	Structure and Infrastructure
13	2.1 2.2 6.1	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/ Tropical	Public Awareness Program: The effects of poorly marked dwelling can cause delays in emergency response. Private citizens may be unaware of this, communication of the importance of marked dwellings can decrease risks and improve	Initiate a public education program to ensure that 911 numbers are posted at the road mailbox and on the structure of each dwelling to improve emergency response capabilities.	No	N/A	24 Months	Fire House, Ambulance	\$10,000	Reduce risk to residents through improved communication and having all dwellings clearly labeled to ensure timely response from emergency personnel.	Local Department Budget	M	Safety/Security Communication	Education and Awareness

# SECTION 23: MITIGATION ACTIONS

## TOWN OF GALWAY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	communication. This project promotes public safety.											
14	1.2 1.3 3.2	Flood	Feasibility Study: A feasibility study should be done to ensure that housing and land use trends in the town are not causing further hazard impacts to the community and the residents. If there are impacts, the study can provide mitigation actions to take to lessen the impacts and improve resiliency. This project protects infrastructure, reduces the cost of reparation, and prevents injury to residents.	Review housing and land use trends in Galway and update the comprehensive plan every five years accordingly.	No	Further review required	48 Months	NFIP Flood Plain Administrator; Housing Department	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security	Local Plans and Regulations
15	1.2 4.1 4.2 4.3	Flood	Feasibility Study: A feasibility study should be completed to determine the best mitigation efforts for the environmental concerns to protect greenspace and prevent	Consider creating a stream buffer between the stream bank and new development that can protect water quality, prevent erosion, provide for wildlife	No	Further review required	48 Months	NFIP Flood Plain Administrator	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when	M	Safety/Security	Natural Systems Protection



## SECTION 23: MITIGATION ACTIONS

TOWN OF GALWAY MITIGATION ACTIONS														
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			flooding or erosion related issues. This project would improve flood mitigation on bodies of water and protect life and safety while decreasing the environmental impact. This project protects the community and reduces risk of flooding.	habitats, protect this important greenspace, and mitigate future flooding. This should be considered for all new development.							applicable) local bonds			
16	1.2 4.1 4.2 4.3	Flood	Smart Growth Initiatives: Improve community resiliency through implementing Smart Growth principles such as incentivizing development in low-risk areas and preserving open space in higher risk areas such as floodplains. This reduces potential for future damages in high risk areas while providing the community with benefits such as reducing heat-island effects in densely developed areas. Smart Growth protects water quality by reducing paved surfaces, allowing natural lands to filter rainwater, ensuring cleaner drinking water. This action protects	Appoint a Conservation Advisory Council (CAC) to advise in the development, management, and protection of the community's natural resources and to prepare an inventory and map of important open spaces in Galway.	No	N/A	36-60 Months	Town Board	\$100,000	Reduce risk in high hazard areas by promoting and incentivizing development in low-risk areas; Build resiliency within the community; Reduces potential for future damages in high risk areas while providing the community with benefits such as reducing heat-island effects in densely developed areas	Local Department Budget, Staff time	L	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## TOWN OF GALWAY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			infrastructure, reduces cost of reparation, and prevents injury to residents.											
17	1.1 1.2 1.4 2.1 3.2 5.1	Ice Storm, Snowstorm	Snow Removal Program: Implement a proper snow removal program to reduce the risk of excessive snow and debris on the community roads and bridges. Loose branches, brush and vegetation mix with snow, causing drainage systems to become impacted during freezing and melting cycles of the snow, causing significant damage to public and private property. Snow also impedes entry into communities and impacts emergency responders. This action protects infrastructure, reduces flood risks and cost of reparation, and prevents injury to residents. Without proper snow removal public infrastructure systems cannot function properly.	Improve snow removal – based on results of survey and participants in planning workshops as noted in the Comprehensive Plan.	Yes	Further review required	24 Months	Roads and Bridge Department	\$10,000	Reduce damages to infrastructure; Maintain capacity of system; Reduce damages associated with snow; Reduce risk of injuries or fatalities.	Local Department Budget; local bonds	M	Safety/Security Transportation	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## TOWN OF GALWAY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
18	1.1 1.2 1.4 2.1 4.2	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind	Roads and Bridges Assessment: Inadequate transportation systems cause delays in assistance to stranded motorists and impacted residents. When roads are washed out or impacted, they are impassable for residents and emergency personnel. Assessing the roads and transportation system will allow for prioritization of the most impactful areas and determine the best projects that will mitigate the issues.	According to the Comprehensive Plan, deterioration of local roads in certain locations can have serious negative impacts on the ability of emergency vehicles to respond to medical, fire or safety emergencies. Prioritize the locations most in need and investigate action alternatives.	No	Further review required	48 Months	NFIP Flood Plain Administrator; Road and Bridge Department	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Transportation	Structure and Infrastructure
19	2.1 2.2 6.1	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide,	Public Awareness Program: The effects of poor maintenance to homes and roads can cause hazards to be more impactful. By doing an education and awareness program to all residents, the community is potentially lowering the impacts of the hazards on homes and private roads while making the community more resilient	Implement a public education program to communicate with both year -round and seasonal residents regarding access to homes. Maintenance of private roads within the district throughout the winter is crucial in order to provide emergency services.	No	N/A	24 Months	Office of Emergency Management; Roads and Bridge Department	\$10,000	Reduce risk to residents through improved communication. Reduction to life and safety by having all dwellings and roads maintained and accessible to emergency personnel.	Local Department Budget	M	Safety/Security Communication	Education and Awareness

## SECTION 23: MITIGATION ACTIONS

### TOWN OF GALWAY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	and allowing clear access for emergency personnel. This project promotes public safety.											
20	1.2 1.3 3.2	Wildfire	Dry-Hydrant Maintenance Program: he Fire Company does not always have clear access to water points and dry-hydrant systems in the Lake District. Mechanisms need to be in place to ensure that water supplies can be reached in the event of a fire.	Initiate a program to fund maintenance to provide full access to established or new water points or dry-hydrants.	No	N/A	On-going	Fire Department; Water District	\$25,000	Reduce risk and spread of wildfires through routine maintenance of fire hydrants; Reduce risk of injury or damages.	Local Department Budget	L	Safety/Security	Structure and Infrastructure
21	2.1 2.2 6.1	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning,	Public Education and Awareness: By educating citizens of hazards that can threaten the area and mitigation measures will help reduce injuries, fatalities, and property damages. This project promotes public safety.	Increase communication between the Town and residents using local newspapers or establishing a fully-functional Town website (based on result of survey and participants of planning workshops) to increase public awareness of local hazards.	No	N/A	On-going	Office of Emergency Management	Staff Time	Reduce risk to residents through improved communication. Reduction to life and safety by having all dwellings and roads maintained and accessible to emergency personnel.	Local Department Budget	M	Communication	Education and Awareness

## SECTION 23: MITIGATION ACTIONS

### TOWN OF GALWAY MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Snowstorm Tornado, Wildfire, Wind, Invasive Species												
22	2.1 2.2 6.1	Flood	Hermance Road Study: This area is at high risk for continual flooding. An appropriate study of the area to enhance drainage capacity will help reduce continue risk to the area. This project protects the community and reduces the risk of flooding.	Hire a consultant to conduct a study of the flooding caused by rainfall and snowmelt at Hermance Road at the split with Ridge Road and Hermance Road and Lake Road. The town will work with the consultant and find the best possible solution to mitigate against the flooding hazard.	No	Further review required	24 months	Highway Department	\$1,000,000	Reduce risk of erosion or scour due to flooding; Reduce damages to infrastructure including roadways, sidewalks, bridges, and culverts; Reduce demands on emergency response during high water events.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Transportation	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF GALWAY

### VILLAGE OF GALWAY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.1 1.4 3.2	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm, Tornado, Wind	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost- effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Yes	Further review required	60 Months	Office of Emergency Management	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
2	1.1 1.4 3.2	Flood	Relocate Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe	Yes	Further review required	60 Months	Office of Emergency Management	\$1,000,000	Reduce the risk of damage and loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when	H	Safety/Security	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF GALWAY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			residents.	repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.							applicable) local bonds			
3	1.4 2.3	Flood	Community Rating System: By exploring the CRS program the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the community's efforts to reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	Office of Emergency Management	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

## SECTION 23: MITIGATION ACTIONS

### VILLAGE OF GALWAY MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
4	1.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety.	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60 Months	Office of Emergency Management	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
5	1.4	Flood	NFIP Participation: Failure to join the NFIP excludes local home owners from purchasing flood insurance. NFIP participation ensures new development to be constructed with flood protection measures to limit future losses. This project promotes public safety.	Evaluate the benefits of participating in the National Flood Insurance program.	No	N/A	60 Months	Town Council	\$2,000	Allows purchase of subsidized flood insurance under NFIP for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations
6	1.3	Drought, Earthquake, Extreme Cold,	Develop, enhance, and implement: There is a need to ensure a structured approach to	Continue to develop, enhance, and	No	N/A	12-60 Months	Emergency Management with support from County	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local	Local Department	H	Safety/Security	Local Plans and Regulations



# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF GALWAY MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.	implement existing emergency plans.				OEM and NYS DHSES		jurisdictions remain aligned with the Plans goals and risk reduction activities.	Budget, Staff time			
7	5.1 5.2	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely manner. This project promotes public safety.	Create/enhance/maintain mutual aid agreements with neighboring communities.	No	N/A	36-48 Months	Emergency Management, DPW and Roads	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Local Department Budget, Staff time	H	Safety/Security	Preparedness
8	1.2 2.1	Drought, Earthquake, Extreme	Emergency Notification System: The general public may not have the	Support the Installation/ Implementation of	No	N/A	24-36 Months	LEMC	\$100,000	Reduce risk to residents through improved	Local Department Budget;	H	Communication	Education and Awareness

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF GALWAY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	means to access educational material or notification alerts. By establishing an area wide notification system ensures community members are aware of risk and able to prepare for the impact. This project promotes public safety.	Community Emergency Alert System.						communication and early warning.	HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds		Safety/Security	
9	2.1 2.2 6.1	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	Public Awareness Program: The effects of poorly marked dwelling can cause delays in emergency response. Private citizens may be unaware of this, communication of the importance of marked dwellings can decrease risks and improve communication. This project promotes public safety.	Initiate a public education program to ensure that 911 numbers are posted at the road mailbox and on the structure of each dwelling to improve emergency response capabilities.	No	N/A	On-going	Fire House, Ambulance	\$10,000	Reduce risk to residents through improved communication and having all dwellings clearly labeled to ensure timely response from emergency personnel.	Local Department Budget	M	Safety/Security Communication	Education and Awareness

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF GALWAY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
10	1.2 1.3 3.2	Flood	Feasibility Study: A feasibility study should be done to ensure that housing and land use trends in the town are not causing further hazard impacts to the community and the residents. If there are impacts, the study can provide mitigation actions to take to lessen the impacts and improve resiliency. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Review housing and land use trends in Galway and update the comprehensive plan every five years accordingly	No	Further Review Required	48 Months	Tax Assessor; Community Services Department	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security	Local Plans and Regulations
11	1.4 2.1 2.2 2.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado,	Public Awareness Program: The general public may not be aware of the risk of hazards that could impact the community. Creating a functional website can encourage community members to support mitigation actions in their home, business and in the community thus increasing safety among the community. It can also promote preparedness	Continue to increase communication between the Village and residents using local newspapers or Village website, Facebook page, and signage with current announcements and news to increase public awareness of local hazards.	No	N/A	24 Months	Office of Emergency Management	\$50,000	Enhance communication, education, and awareness among community members; Improve and develop mitigation communication; Reduce risk of damages, injuries, and fatalities.	Local Department Budget, Staff time	L	Safety/Security Communication	Education and Awareness

## SECTION 23: MITIGATION ACTIONS

### VILLAGE OF GALWAY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Wildfire, Wind, Invasive Species	and provide a communication method during emergencies. This project promotes public safety.											

# SECTION 23: MITIGATION ACTIONS

## TOWN OF GREENFIELD

### TOWN OF GREENFIELD MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.1 1.4 3.2	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm, Tornado, Wind	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost- effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
2	1.1 1.4 3.2	Dam Failure, Flood	Relocate Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when	H	Safety/Security	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## TOWN OF GREENFIELD MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			residents.	repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.							applicable) local bonds			
3	1.4 2.3	Flood	Community Rating System: By exploring the CRS program the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the community's efforts to reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## TOWN OF GREENFIELD MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
4	1.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety.	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
5	1.4	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of program benefits, increased flood risk, and financial burdens for residents. There is a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance options. This project promotes public safety.	Strive to maintain compliance with and in good standing in the National Flood Insurance program.	Yes	N/A	60 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations
6	1.3	Dam Failure, Drought,	Develop, enhance, and implement: There is a need to ensure a	Continue to develop, enhance, and	No	N/A	12-60 Months	Emergency Management with support	\$10,000	Ensure all plans are updated and aligned with one another;	Local Department	H	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## TOWN OF GREENFIELD MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/ Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.	implement existing emergency plans.				from County OEM and NYS DHSES		Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Budget, Staff time			
7	5.1 5.2	Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/ Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely manner. This project promotes public safety.	Create/enhance/maintain mutual aid agreements with neighboring communities.	No	N/A	36-48 Months	Emergency Management, DPW and Roads	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Local Department Budget, Staff time	H	Safety/Security	Preparedness



# SECTION 23: MITIGATION ACTIONS

## TOWN OF GREENFIELD MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
8	1.2 2.1	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	Emergency Notification System: The general public may not have the means to access educational material or notification alerts. By establishing an area wide notification system ensures community members are aware of risk and able to prepare for the impact. This project promotes public safety.	Support the Installation/ Implementation of Community Emergency Alert System.	No	N/A	24-36 Months	LEMC	\$100,000	Reduce risk to residents through improved communication and early warning.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Communication Safety/Security	Education and Awareness
9	5.3 6.1	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice	Public Awareness Program: The general public may not be aware of the risk of hazards that could impact the County. Creating a support fund could encourage community members to support mitigation projects and costs associated with	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	No	N/A	60 Months	Town Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	M	Safety/Security	Preparedness

# SECTION 23: MITIGATION ACTIONS

## TOWN OF GREENFIELD MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	them. This project promotes public safety.											
10	1.2 1.3 1.4 3.2 4.2	Dam Failure, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Tornado, Wind	Culvert and Bridges Maintenance Program: Extreme rainfall events result in high stormwater flow rates, which result in the destabilization of water system channels. The erosion and damage to culverts and bridges jeopardize adjacent buildings, roadways, utilities, and other infrastructure. This project protects the community and reduces the risk of flooding.	The Town should develop/continue to develop/update as needed a plan for ongoing maintenance of drainage culverts and bridges.	Yes	Further review required	24-36 Months	Highway Department, Town Board, NYS DEC	\$50,000	Reduce damage caused by flooding by maintaining drainage and bridge systems.	Local Department Budget, Staff time	M	Safety/Security Water Systems Transportation	Structure and Infrastructure
11	1.2 3.1 4.1 4.2 4.3	Dam Failure, Flood	Community-wide erosion control program: Loose vegetation mix with drainage water and cause damming and plugged culverts. When this occurs, flood water	Kayaderoseras Ridge should be protected from visual, drainage and erosion impacts. Investigate the	No	Further review required	24-48 Months	Town Board, Planning Board, Greenfield Concerned Citizens	\$50,000	Reduce risk of flood damages through improved drainage capacity/stormwater diversion; Reduce risk of injuries to citizens; Reduce	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when	M	Safety/Security Water Systems	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## TOWN OF GREENFIELD MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			escapes the existing drainage network, causing significant damage to public and private property. Recovery efforts are time consuming and labor intensive. This project protects the community and reduces the risk of flooding.	appropriate mitigation action alternatives.						burden on emergency services during and after a flood event.	applicable) local bonds			
12	2.1 3.1 6.1	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	Communication Interoperability: The town and local services provider should look for an avenue to ensure that all community members can be reached during urgent situations. This project promotes public safety.	The Town Board continues to support the extension of fiber optics (such as cable TV and internet web services) to the more rural parts of Town to increase lines of communication to the rural parts of Town as a way to educate and send messages regarding hazard events.	No	N/A	24-36 Months	Town Board, Time Warner, Adelpia	\$10,000	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget; Staff Time	L	Safety/Security Communication	Preparedness
13	1.3 1.4 2.1 2.2	Flood, Tornado, Wind	Development Restriction: There are locally identified areas of high risk. Prohibit development in known	Revise the mobile home replacement regulations to encourage replacement of older	No	N/A	36-60 Months	Planning Board, Town Board	\$10,000	Reduce risk of flooding and repetitive loss through improved	Local Department Budget, Staff time,	L	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## TOWN OF GREENFIELD MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
	3.2 5.2 5.3		high risk areas and discuss replacement of mobile homes to protect against known hazards. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	mobile homes with newer manufactured housing. This would protect against wind and flood damage.						development practices and building requirements/restrictions.	Rebuilding Together Saratoga			
14	5.1 5.2	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Create a stockpile and tracking process to ensure stockpile items are in working order. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely manner. This project promotes public safety.	Prepare for severe winter weather by expanding mutual aid agreements, purchasing stockpile emergency supplies (e.g. road salt and fuel), and expand inventory of snow removal equipment and tracked vehicles.	No	N/A	36-48 Months	Office of Emergency Management	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Local Department Budget, Staff time	H	Safety/Security	Preparedness
15	1.1 1.2 1.4 3.1	Flood	Flood Study: A flood study should be done to determine the extent of flooding on community roadways. The study	Mitigate flooding of town roads by consulting with engineers and the NYS DEC to determine	No	Further Review Required	36 Months	NFIP Floodplain Administrator	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC,	M	Safety/Security Transportation	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## TOWN OF GREENFIELD MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
	3.2 5.2		should show the causes, extent, the water pathway, the areas of concern due to flooding, and mitigation projects that can be done to improve resiliency and decrease impact from the flooding events. This project protects the community and reduces the risk of flooding.	solutions (e.g. big box culverts).							CDBG, PA 406 (when applicable) local bonds			
16	1.2 1.3 3.1 3.2	Dam Failure	Develop, enhance, and implement: There is a need to ensure that all dams are identified and risks are assessed. An emergency action plan should include inundation maps, responsibilities, dam information, and procedures to follow in an emergency situation.	Create/update the Emergency Action Plans for all dams located within the municipality.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure Emergency Action Plans are in place for each identified dam. Ensure the plan is aligned with other plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
17	1.2 1.3 3.1 3.2	Dam Failure	Implementation, Monitoring, and Maintenance: Since dams were initially built there has been settling of the dam. Dam safety protocols with dam repair recommendations will keep dams from being compromised.	Implement dam structure repairs as required by dam safety report/protocols.	No	Further review required	24-60 Months	NFIP Floodplain Administrator; Engineering Department	\$10,000	Ensuring dams are not compromised and repaired will reduce the risk of breach and failure, while keeping communities safe and saving lives.	Local Department Budget, Staff time	H	Safety/Security	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## TOWN OF HADLEY

### TOWN OF HADLEY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.1 1.4 3.2	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm, Tornado, Wind	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost- effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
2	1.1 1.4 3.2	Flood	Relocate Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable)	H	Safety/Security	Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### TOWN OF HADLEY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
				as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.							applicable) local bonds			
3	1.4 2.3	Flood	Community Rating System: By exploring the CRS program the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the community's efforts to reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## TOWN OF HADLEY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
4	1.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety.	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
5	1.4	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of program benefits, increased flood risk, and financial burdens for residents. There is a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance options. This project promotes public safety.	Strive to maintain compliance with and in good standing in the National Flood Insurance program.	Yes	N/A	60 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations



# SECTION 23: MITIGATION ACTIONS

## TOWN OF HADLEY MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
6	1.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	Develop, enhance, and implement: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.	Continue to develop, enhance, and implement existing emergency plans.	No	N/A	12-60 Months	Emergency Management with support from County OEM and NYS DHS&ES	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
7	5.1 5.2	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning,	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely manner. This project promotes public safety.	Create/enhance/maintain mutual aid agreements with neighboring communities.	No	N/A	36-48 Months	Emergency Management, DPW and Roads	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Local Department Budget, Staff time	H	Safety/Security	Preparedness

# SECTION 23: MITIGATION ACTIONS

## TOWN OF HADLEY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Snowstorm Tornado, Wildfire, Wind												
8	1.2 1.3 3.1 3.2	Dam Failure	Implementation, Monitoring, and Maintenance: Since dams were initially built there has been settling of the dam. Dam safety protocols with dam repair recommendations will keep dams from being compromised.	Implement dam structure repairs as required by dam safety report/protocols. NYS has plans for the maintenance of Conkingville Dam in which the Town will review and implement as needed.	No	Further review required	24-60 Months	NFIP Floodplain Administrator; Engineering Department	\$10,000	Ensuring dams are not compromised and repaired will reduce the risk of breach and failure, while keeping communities safe and saving lives.	Local Department Budget, Staff time	H	Safety/Security	Structure and Infrastructure
9	5.3 6.1	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire,	Public Awareness Program: The general public may not be aware of the risk of hazards that could impact the County. Creating a support fund could encourage community members to support mitigation projects and costs associated with them. This project promotes public safety.	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	No	N/A	60 Months	Town Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	M	Safety/Security Communication	Preparedness

## SECTION 23: MITIGATION ACTIONS

### TOWN OF HADLEY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Wind, Invasive Species												
10	1.2 1.3 1.4 3.2	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Protection of sewer beds by building a 4' wall around the sewer beds.	No	Further review required	60 months	Utility District	\$250,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems	Structure and Infrastructure
11	1.2 1.3 1.4 3.2	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Replace and expand catch basins and culverts in the area of First Avenue and Varney Street.	No	Further review required	60 months	Engineering Department; Roads and Bridge Department	\$500,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems Transportation	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## TOWN OF HALFMOON

### TOWN OF HALFMOON MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.2 1.3 3.1	Dam Failure	Develop, enhance, and implement: There is a need to ensure that the Lock C-1 Dam and Lock C-2 have risks assessed. An emergency action plan should include inundation maps, responsibilities, dam information, and procedures to follow in an emergency situation.	Create the Emergency Action Plans for the Lock C-1 Dam and Lock C-2 Dam implement dam structure repairs as required by dam safety report/protocols.	No	Further review required	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure Emergency Action Plans are in place for each identified dam. Ensure the plan is aligned with other plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations Structure and Infrastructure
2	1.1 1.4 3.2	Flood, Hail, Hurricane/ Tropical Storm, Ice Storm, Lightning, Snowstorm Tornado, Wind	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost- effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## TOWN OF HALFMOON MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
				action based on available funding.										
3	1.1 1.4 3.2	Flood	Relocate Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
4	1.4 2.3	Flood	Community Rating System: By exploring the CRS program the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the community's efforts to	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

## SECTION 23: MITIGATION ACTIONS

### TOWN OF HALFMOON MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.											
5	1.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety.	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
6	1.4	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of program benefits,	Strive to maintain compliance with, and good standing in the	Yes	N/A	60 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk	Local Department	M	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## TOWN OF HALFMOON MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			increased flood risk, and financial burdens for residents. There is a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance options. This project promotes public safety.	National Flood Insurance program.						and build resiliency.	Budget, Staff time			
7	1.3	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Develop, enhance, and implement: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.	Continue to develop, enhance, and implement existing emergency plans.	No	N/A	12-60 Months	Emergency Management with support from County OEM and NYS DHSES	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
8	5.1 5.2	Dam Failure, Drought, Earthquake, Extreme	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that	Create/enhance/maintain mutual aid agreements with	No	N/A	36-48 Months	Emergency Management, DPW and Roads	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions	Local Department Budget, Staff time	H	Safety/Security	Preparedness

## SECTION 23: MITIGATION ACTIONS

### TOWN OF HALFMOON MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely manner. This project promotes public safety.	neighboring communities.						remain aligned with one another and ready to assist when needed.				
9	1.2 2.1	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind,	Emergency Notification System: The general public may not have the means to access educational material or notification alerts. By establishing an area wide notification system ensures community members are aware of risk and able to prepare for the impact. This project promotes public safety.	Support the Installation/ Implementation of Community Emergency Alert System.	No	N/A	24-36 Months	LEMC	\$100,000	Reduce risk to residents through improved communication and early warning.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Communication Safety/Security	Education and Awareness



# SECTION 23: MITIGATION ACTIONS

## TOWN OF HALFMOON MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Invasive Species												
10	5.3 6.1	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Public Awareness Program: The general public may not be aware of the risk of hazards that could impact the County. Creating a support fund could encourage community members to support mitigation projects and costs associated with them. This project promotes public safety.	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	No	N/A	60 Months	Town Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	M	Safety/Security	Preparedness
11	1.2 1.3 1.4 3.2 4.2 4.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/	Development Restriction: There are locally identified areas of high risk. With the increase in development growth there is a need to restrict development in known high-risk flood hazard areas throughout town.	Evaluate the Town's zoning code and subdivision regulations to properly incorporate the changes/recommendations in the Comprehensive Plan.	No	N/A	36-60 Months	Engineering Department	\$10,000	Reduce risk of hazard impacts and repetitive loss through improved development practices and building requirements/restrictions.	Local Department Budget, Staff time	L	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## TOWN OF HALFMOON MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	Adoption of development restrictions protects infrastructure, reduces cost of reparation, and prevents injury to residents. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.											
12	1.2 1.3 1.4 3.2 4.2	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Snowstorm, Lightning, Tornado, Wind	Stormwater/Flood Management: Flooding and severe storms has caused concerns and risk. Loose branches, brush and vegetation mix with drainage water and cause damming and plugged culverts. When this occurs, flood water escapes the existing drainage network, causing significant damage to public and private property. Recovery efforts are time consuming and labor intensive. This project protects the community and reduces risk of flooding.	Continue to require stormwater management plans as part of site plan review procedures and might consider adopting the recommendations of the North Halfmoon GEIS.	No	Further review required	12 – 60 months	NFIP Floodplain Administrator	\$500,000	Reduce flood risk; reduce damages and risk of injuries or fatalities; reduce loss of function; reduce emergency response required during flood events.	Local Department Budget; local bonds	H	Water Systems Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## TOWN OF HALFMOON MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
13	1.2 1.3 1.4 3.2 4.2	Flood	Stormwater/Flood Management: Flooding and severe storms has caused concerns and risk. Loose branches, brush and vegetation mix with drainage water and cause damming and plugged culverts. When this occurs, flood water escapes the existing drainage network, causing significant damage to public and private property. Recovery efforts are time consuming and labor intensive. This project protects the community and reduces risk of flooding.	Conduct periodic review of stormwater management and erosion control regulations to ensure that they are providing the maximum protection to soil and water resources.	No	Further review required	12 – 60 months	NFIP Floodplain Administrator	\$500,000	Reduce flood risk; reduce damages and risk of injuries or fatalities; reduce loss of function; reduce emergency response required during flood events.	Local Department Budget; local bonds	H	Water Systems Safety/Security	Local Plans and Regulations Natural Systems Protection
14	1.2 1.3 1.4 3.2	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. Replacing the bridge and culvert will allow for less flooding and allow emergency services and residents to pass in	Bridge and culvert replacement at Riverview Road. Continue to assess other site locations and make necessary improvements based on assessment.	No	Further review required	60 months	Engineering Department	\$2,000,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Transportation	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## TOWN OF HALFMOON MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			the event of an emergency. This project protects the community and reduces the risk of flooding.											
15	1.2 1.4 2.1 3.2 5.1	Flood	Flood Mitigation at Canal Road: Evaluate Flood Mitigation measures at Canal Road to maintain accessibility during emergency situations due to frequency in flooding. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Mitigate Canal Road Flooding in area of Crescent Boat Club.	Yes	Further review required	24-36 Months	NFIP Floodplain Administrator	\$250,000	Reduce risk of damages or injuries through flood mitigation at high-risk structures; Reduce the need for emergency response in high-risk areas; Reduce repetitive flood losses/claims; Reduce community recovery efforts and costs.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems Transportation	Structure and Infrastructure
16	1.2 1.4 2.1 3.2 5.1	Flood	Flood Mitigation at Riverview Road: Evaluate Flood Mitigation measures at Riverview and Bovack Road to maintain accessibility during emergency situations due to frequency in flooding. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Mitigate Riverview and Bovack Road Flooding.	Yes	Further review required	24-36 Months	NFIP Floodplain Administrator	\$250,000	Reduce risk of damages or injuries through flood mitigation at high-risk structures; Reduce the need for emergency response in high-risk areas; Reduce repetitive flood losses/claims; Reduce community recovery efforts and costs.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems Transportation	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## TOWN OF MALTA

### TOWN OF MALTA MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.1	Dam Failure, Flood	Drainage and Stormwater Retention Improvements: Inadequate drainage systems cause flooding, damage to roadways, and create hazardous driving conditions for motorists. This project protects the community and reduces the risk of flooding.	Increase drainage capacity; add stormwater detention and/or retention basins as deemed necessary to reduce flood risk. Areas in need of improvement include Thimbleberry, Travers Meadows/Damascus, and all of Luther's Forest.	No	Further review required	48 months	NFIP Floodplain Administrator, Town Board, Planning Board, Local Emergency Management, DPW	\$1,000,000	Reduce flood risk through improved drainage capacity; Reduce risk of damages and injuries; Reduce emergency response demands.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems	Structure and Infrastructure
2	1.1	Dam Failure, Flood	Culvert Improvements: Inadequate drainage systems cause flooding, damage to roadways, and create hazardous driving conditions for motorists. This action protects the community and reduces the risk of flooding.	Upgrade undersized stormwater drains and culverts with focus on local road and new development. Areas of concern include Raylinsky Road, Tamian Pass, Miller Road, Cramer Road, and the Chango area.	No	Further review required	48 months	NFIP Floodplain Administrator, Town Board, Planning Board, Local Emergency Management, DPW	\$1,000,000	By identifying vulnerable high infrastructures and making necessary improvements to expand drainage capability reduces flood risk and risk of damages and injuries. In addition, this would also reduce emergency response demands.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems Transportation	Structure and Infrastructure
3	1.1	Flood, Hail, Hurricane/Tropical Storm,	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC,	H	Safety/Security	Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### TOWN OF MALTA MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Ice Storm, Lightning, Snowstorm, Tornado, Wind	project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost- effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.							CDBG, PA 406 (when applicable) local bonds			
4	1.1	Dam Failure, Flood	Relocate Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## TOWN OF MALTA MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
				viable option, consider implementation of that action based on available funding.										
5	1.3	Flood	Community Rating System: By exploring the CRS program the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the community's efforts to reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations
6	1.3	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety.	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## TOWN OF MALTA MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species												
7	1.3	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of program benefits, increased flood risk, and financial burdens for residents. There is a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance options. This project promotes public safety.	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	Yes	N/A	60 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations
8	1.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/ Tropical Storm, Ice	Develop, enhance, and implement: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant while working with the	Continue to develop, enhance, and implement existing emergency plans.	No	N/A	12-60 Months	Emergency Management with support from County OEM and NYS DHSES	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations



# SECTION 23: MITIGATION ACTIONS

## TOWN OF MALTA MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Emergency Operations Plan.											
9	5.2	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely manner. This project promotes public safety.	Create/enhance/maintain mutual aid agreements with neighboring communities.	No	N/A	36-48 Months	Emergency Management, DPW and Roads	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Local Department Budget, Staff time	H	Safety/Security	Preparedness
10	2.1	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail,	Emergency Notification System: The general public may not have the means to access educational material or notification alerts. By establishing an area wide notification system ensures community	Support the Installation/ Implementation of Community Emergency Alert System.	No	N/A	24-36 Months	LEMC	\$100,000	Reduce risk to residents through improved communication and early warning.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when	H	Communication Safety/Security	Education and Awareness

## SECTION 23: MITIGATION ACTIONS

TOWN OF MALTA MITIGATION ACTIONS														
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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Hurricane/ Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	members are aware of risk and able to prepare for the impact. This project promotes public safety.								applicable) local bonds			
11	3.1	Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/ Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	Public Awareness Program: The general public may not be aware of the risk of hazards that could impact the County. Creating a support fund could encourage community members to support mitigation projects and costs associated with them. This project promotes public safety.	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	No	N/A	60 Months	Town Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	M	Safety/Security	Preparedness

## SECTION 23: MITIGATION ACTIONS

### TOWN OF MALTA MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
12	3.3	Ice Storm, Snowstorm	Salt Storage: Roadways are subject to dangerous ice accumulation during severe winter storm events. Flood susceptibility and salt access for road clearing should be assessed. It should be built in a location that is the least flood prone to avoid contamination and loss of salt.	Construct an additional salt storage facility.	No	Further review required	24-36 Months	Highway Department	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Transportation	Structure and Infrastructure Preparedness
13	3.1	Invasive Species	Invasive Species: The Town of Malta is a risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Allocate additional funding for chemical and mechanical treatment of invasive species and algal blooms.	No	Further review required	24-36 Months	Saratoga Lake Protection and Improvement District	\$10,000	Reduce risk to citizens by reducing the impact from invasive species during hazards and disasters.	Local Department Budget, Staff time	L	Safety/Security	Preparedness
14	1.1, 3.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical	Standard for burial of utility lines: Due to the experience of utility failure, would need to explore alternative ways to protect power lines and utility service infrastructure. This project helps ensure critical facilities continue to provide services during a	Require all utilities for future development to be underground.	No	Further review required	24 Months	Town Board and Planning	\$500,000	Reduce damages to infrastructure; Ensure continuity of critical services during and after event; Reduce damages associated with power outages; Reduce risk of injuries or fatalities	Local Department Budget	H	Safety/Security Energy (Power/Fuel)	Local Plans and Regulations Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### TOWN OF MALTA MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Storm, Ice Storm, Landslide, Lighting, Snowstorm Tornado, Wildfire, Wind	power outage caused by unforeseen events.							to vulnerable populations.				
15	2.1	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind	NOAA Radios and Warning Siren Installation: There are some rural and remote areas within the town-limits that do not have access to technology. A weather radio and siren system would allow residents without access to have improved communication and early warning of impending disasters. This project promotes public safety.	Continue siren installations throughout the Town and provide NOAA weather radios to vulnerable populations.	No	Further Review Required	24-36 months	Town Board, Planning Board, Local Emergency Management	\$100,000	Reduce risk to residents through improved communication and early warning.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	L	Safety/Security	Education and Awareness
16	1.1	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning,	Tree Trimming Program: Downed trees and branches have impacted right-of-ways and stormwater drainage and a proper maintenance	Continue to proactively prune trees along roadways.	No	N/A	12 months	Highway Department and Utility Companies	\$100,000	Reduce damages to infrastructure; Ensure continuity of services during and after event; Reduce damages associated	Local Department Budget, Staff time	M	Safety/Security	Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### TOWN OF MALTA MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Snowstorm Tornado, Wind	program to reduce the risk of debris should be developed. This action protects infrastructure, reduces cost of reparation, and prevents injury to residents.							with power outages; Reduce risk of injuries or fatalities to vulnerable populations.				
17	5.1, 5.2, 5.3	Flood, Hail, Hurricane/ Tropical Storm, Ice Storm, Lightning, Snowstorm Tornado, Wind	Training and Exercises Program: Training and exercises reveal gaps in local capabilities and identifying and addressing these gaps promotes public safety. In addition, ensuring local responders are capable of handling emergencies, minimizing the risk to people, property, and the environment.	Perform tabletop exercise and modify/enhance severe winter storms policies and procedures.	No	N/A	12 Months	Highway Department and Emergency Management	\$10,000	Enhance communication, education, and awareness among local jurisdictions; Improve and develop mitigation strategies based on identified gaps in capabilities; Reduce risk of damages, injuries, and fatalities by promoting public safety.	Local Department Budget, Staff time	M	Safety/Security	Education and Awareness  Preparedness
18	2.1	Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/ Tropical Storm, Ice Storm,	Public Awareness Program: The effects of preparedness among citizens reduce risks. By doing an education and awareness program to all residents about preparedness during the first 72 hours, the community is potentially lowering the impacts of	Continue outreach to residents to promote 72-hour self-sufficiency of hazards that are anticipated to impact the area and necessary measures the community may need to take to reduce risk.	No	N/A	24 Months	Emergency Management	\$10,000	Reduce risk to residents through improved communication. Reduction to life and safety by having residents prepared for the first 72 hours after a disaster	Local Department Budget	M	Safety/Security  Communication	Education and Awareness

## SECTION 23: MITIGATION ACTIONS

### TOWN OF MALTA MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	the hazards on residents while making the community more resilient. This project promotes public safety.							when they are most vulnerable.				
19	1.1	Flood	Flood Study: A flood study should be done to determine the extent of flooding along the Saratoga Lake. The study should show the causes, extent, the water pathway, the areas of concern due to flooding, and mitigation projects that can be done to improve resiliency and decrease impact from the flooding events. This project protects the community and reduces the risk of flooding.	Mitigate flooding along Saratoga Lake (Silver Beach). Conduct a flood-control design study to minimize flooding through the residential area along Silver Beach. Flooding impacts the roadway and in colder weather, creates icy conditions. Work with County to conduct a study to determine how to alleviate severe flooding and drainage problems in Silver Beach area. Implement findings within the study as necessary.	No	Further review required	36 Months	Town Board and Planning Board	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Water Systems	Education and Awareness Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## CITY OF MECHANICVILLE

CITY OF MECHANICVILLE MITIGATION ACTIONS														
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.4	Flood	Implement Solutions from Drainage Study: The City has experienced significant localized flooding along its roadways, resulting in damage to critical transportation routes and buildings along flood-prone streets. Specifically, 1st Avenue and the area directly underneath the existing railroad bridge across South Central Avenue are especially vulnerable to heavy rain events. The stormwater drainage infrastructure in the City is in poor condition, with evidence of repairs and patching, corrosion and rusting, and cracking.	Implement drainage solutions identified in the City of Mechanicville 2024 Drainage Study. This includes, but is not limited to, upgrading undersized drainage infrastructure along 1 <sup>st</sup> Avenue and South Central Avenue, developing a maintenance schedule to clear debris, adding additional drainage to Tallmadge Park, and constructing detention basins and drainage infrastructure to manage stormwater runoff in the additional identified areas.	Yes	Further review required	60 months	Emergency Management, Engineering, Public Works, NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and loss of life; Reduce damages at critical facilities; Ensure continuity of critical services during and after event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems	Structure and Infrastructure
2	1.1	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail,	Harden Critical Facilities and Water Infrastructure: Assessment of current facilities and whether they need upgrades as some facilities within City may need necessary updates due to date and/or condition of structure. This	Harden/retrofit critical facilities to hazard-resistant levels. Water supply infrastructure is of particular concern priority consideration to pump houses. Will make upgrades on a priority level based on	Yes	Further review required	48 months	Emergency Management, Public Works, Municipal Water Systems Department	\$1,000,000	Reduce damages at critical facilities; Ensure continuity of critical services during and after event; Reduce risk of injury to emergency and critical personnel.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## CITY OF MECHANICVILLE MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Hurricane/ Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind	project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	internal assessment. Priority improvements are for the Raw Water Supply System to cover the City's lower reservoir pump, and the finished water system.										
3	1.4	Flood	Public Awareness Program: Private citizens may be unaware of what repetitive loss is. By bringing in subject matter experts the community can benefit from their knowledge and suggestions. The citizens may be able to implement preparedness and mitigation actions in their home such as flood proofing and elevation. This action can decrease risks and improve communication of the importance of flood loss.	Schedule information dissemination to provide information to the community with special attention to RL properties on Route 4. This outreach will be supported by the Saratoga County Office of Emergency Services and implemented by the City to support future applications for mitigation funding for RL properties.	No	N/A	24-36 Months	Engineering in coordination with the NFIP Floodplain Administrator	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget	M	Safety/Security Communication	Education and Awareness
4	1.4	Flood, Hail, Hurricane/ Tropical Storm, Ice Storm,	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when	H	Safety/Security	Structure and Infrastructure



# SECTION 23: MITIGATION ACTIONS

## CITY OF MECHANICVILLE MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Lightning, Snowstorm, Tornado, Wind	cost of reparation, and prevents injury to residents.	severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost- effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.							applicable) local bonds			
5	1.4	Flood	Relocate Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## CITY OF MECHANICVILLE MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
				of that action based on available funding.										
6	1.3	Flood	Community Rating System: By exploring the CRS program the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the community's efforts to reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations
7	1.3	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide,	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety.	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## CITY OF MECHANICVILLE MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species												
8	1.3	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of program benefits, increased flood risk, and financial burdens for residents. There is a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance options. This project promotes public safety.	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	Yes	N/A	60 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations
9	1.3	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning,	Develop, enhance, and implement: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.	Continue to develop, enhance, and implement existing emergency plans.	No	N/A	12-60 Months	Emergency Management with support from County OEM and NYS DHSES	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## CITY OF MECHANICVILLE MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Snowstorm Tornado, Wildfire, Wind, Invasive Species												
10	5.1, 5.2, 5.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/ Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely manner. This project promotes public safety.	Create/enhance/ maintain mutual aid agreements with neighboring communities.	No	N/A	36-48 Months	Emergency Management, DPW and Roads	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Local Department Budget, Staff time	H	Safety/Security	Preparedness
11	2.1	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/	Emergency Notification System: The general public may not have the means to access educational material or notification alerts. By establishing an area wide notification system ensures community members are aware of	Support the Installation/ Implementation of Community Emergency Alert System.	No	N/A	24-36 Months	LEMC	\$100,000	Reduce risk to residents through improved communication and early warning.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Communication Safety/Security	Education and Awareness

## SECTION 23: MITIGATION ACTIONS

### CITY OF MECHANICVILLE MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	risk and able to prepare for the impact. This project promotes public safety.											
12	3.1	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Public Awareness Program: The general public may not be aware of the risk of hazards that could impact the County. Creating a support fund could encourage community members to support mitigation projects and costs associated with them. This project promotes public safety.	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	No	N/A	60 Months	Town Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	M	Safety/Security	Preparedness

## SECTION 23: MITIGATION ACTIONS

### CITY OF MECHANICVILLE MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
13	1.1	Flood	Feasibility Study: A feasibility study should be done to determine the extent of the flooding and what mitigation actions can be taken to reduce the impact and improve resiliency. This project protects infrastructure, reduces the cost of reparation, and prevents injury to residents.	Investigate and implement mitigation actions that would protect the Mechanicville Central Fire Station from a flood hazard event. Based on estimated flood modeling results for this Plan, the Fire Station may experience damages as a result of a 100- and/or 500-year flood event.	Yes	Further review required	36-48 Months	NFIP Floodplain Administrator	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security	Structure and Infrastructure
14	1.1	Flood	Feasibility Study: A feasibility study should be done to determine the extent of the flooding and what mitigation actions can be taken to reduce the impact and improve resiliency. This project protects infrastructure, reduces the cost of reparation, and prevents injury to residents.	Investigate and implement mitigation actions that would protect the Mechanicville Police Station from a flood hazard event. Based on estimated flood modeling results for this Plan, the Police Station may experience damages as a result of a 100- and/or 500- year flood event.	Yes	Further review required	36-48 Months	NFIP Floodplain Administrator	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security	Structure and Infrastructure
15	1.1	Flood	Feasibility Study: A feasibility study should be done to determine the extent of the flooding and	Investigate and implement mitigation actions that would protect the	Yes	Further review required	36-48 Months	NFIP Floodplain Administrator	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP,	M	Safety/Security	Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### CITY OF MECHANICVILLE MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			what mitigation actions can be taken to reduce the impact and improve resiliency. This project protects infrastructure, reduces the cost of reparation, and prevents injury.	Mechanicville CSO (wastewater facility) from a flood hazard event. Based on estimated flood modeling results for this Plan, the facility may experience damages as a result of a 100- and/or 500- year flood event.							BRIC, CDBG, PA 406 (when applicable) local bonds			
16	1.1	Flood	Feasibility Study: A feasibility study should be done to determine the extent of the flooding and what mitigation actions can be taken to reduce the impact and improve resiliency. This project protects infrastructure, reduces the cost of reparation, and prevents injury to residents.	Investigate and implement mitigation actions that would prevent flooding of the Main Street/ Railroad overpass.	No	Further review required	36-48 Months	NFIP Floodplain Administrator; Engineering Department	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security	Structure and Infrastructure
17	3.3	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/	EMS Radio Interoperability: Upgraded radio technology is needed between the departments that serve the town and provide emergency services. This project promotes public safety.	Topographical challenges prevent the current 800MHz radio system from covering parts of the City of Mechanicville. Installation of fiber optic lines would provide an economic solution to the issue. Other necessary	Yes	Further review required	24-36 Months	Town and County Emergency Management Personnel	\$100,000	Reduce risk to residents through improved communications and early warning. Enhances emergency response.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Communication	Education and Awareness

# SECTION 23: MITIGATION ACTIONS

## CITY OF MECHANICVILLE MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind		equipment is already on hand.										



# SECTION 23: MITIGATION ACTIONS

## TOWN OF MILTON

### TOWN OF MILTON MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	2.1, 2.2, 2.3	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Public Education Program: The general public may not have a full understanding of the risk associated with hazards impacting the planning area. Education programs can provide life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Implement an education and awareness program utilizing media, social media, bulletins, flyers, etc. to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. Include links to weather alerts and departmental phone listings with contact personnel for residents.	No	N/A	12 months	Emergency Management	\$10,000	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	H	Communication	Education and Awareness
2	1.2, 1.3, 3.2	Flood	Water and Drainage System Assessment: Inadequate drainage systems cause flooding, damage to roadways, and create hazardous driving conditions for motorists. When shoulders, ditches, and bridges are washed out or	Investigate and prioritize the culvert, shoulders, ditches and bridges that have been impacted in the past and determine appropriate mitigation actions.	No	Further review required	48 Months	Highway Department	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Water Systems Transportation	Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### TOWN OF MILTON MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			impacted they are impassable for residents and emergency personnel. Assessing the system will allow for prioritization of the most impactful areas and determine the best projects that will mitigate the issues. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.											
3	1.2 1.3 3.1 3.2	Dam Failure	Create and implement: For the Ballston Spa Middle Reservoir Dam in the Woodshollow Nature Preserve needs to be assessed for upgrades, repairs, HHPD eligibility, and any emergency action plans/inundation map needs.	Implement review process for the Ballston Spa Middle Reservoir Dam to determine any eligibility for HHPD, current safety and emergency action plan status, and any upgrades or repairs that need to be performed.	No	Further review required	24-60 Months	Engineering Department	\$100,000		Local Department Budget, Staff time	M	Safety/Security	Structure and Infrastructure
4	1.1 1.4 3.2	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm Tornado,	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority.	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when	H	Safety/Security	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## TOWN OF MILTON MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Wind	residents.	Identify facilities that are viable candidates for retrofitting based on cost- effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding. Priority assessment includes Rock City Falls VFD.							applicable) local bonds			
5	1.1 1.4 3.2	Flood	Relocate Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of repairation, and prevents injury to residents.	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## TOWN OF MILTON MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
				implementation of that action based on available funding. Priority assessment includes Rock City Falls VFD.										
6	1.4 2.3	Flood	Community Rating System: By exploring the CRS program the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the community's efforts to reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations
7	1.3	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of program benefits, increased flood risk, and financial burdens for residents. There is a need to ensure compliance with NFIP standards to protect	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	Yes	N/A	60 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

## SECTION 23: MITIGATION ACTIONS

### TOWN OF MILTON MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			the community and secure affordable flood insurance options. This project promotes public safety.											
8	1.3	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Develop, enhance, and implement: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.	Continue to develop, enhance, and implement existing emergency plans.	No	N/A	12-60 Months	Emergency Management with support from County OEM and NYS DHSES	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
9	1.3	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely	Create/enhance/maintain mutual aid agreements with neighboring communities.	No	N/A	36-48 Months	Emergency Management, DPW and Roads	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Local Department Budget, Staff time	H	Safety/Security	Preparedness

# SECTION 23: MITIGATION ACTIONS

## TOWN OF MILTON MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	manner. This project promotes public safety.											
10	1.2 1.3 3.1 3.2	Dam Failure	Develop, enhance, and implement: There is a need to ensure that all dams are identified and risks are assessed. An emergency action plan should include inundation maps, responsibilities, dam information, and procedures to follow in an emergency situation.	Create/update the Emergency Action Plans for all dams located within the municipality.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure Emergency Action Plans are in place for each identified dam. Ensure the plan is aligned with other plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
11	1.2 1.3 3.1 3.2	Dam Failure	Implementation, Monitoring, and Maintenance: Since dams were initially built there has been settling of the dam. Dam safety protocols with dam repair recommendations will keep dams from being compromised.	Implement dam structure repairs as required by dam safety report/protocols.	No	Further review required	24-60 Months	NFIP Floodplain Administrator; Engineering Department	\$10,000	Ensuring dams are not compromised and repaired will reduce the risk of breach and failure, while keeping communities safe and saving lives.	Local Department Budget, Staff time	H	Safety/Security	Structure and Infrastructure
12	1.2 2.1	Dam Failure, Drought, Earthquake	Emergency Notification System: The general public may not have the means to access	Support the Installation/ Implementation of Community Emergency Alert System	No	N/A	24-36 Months	LEMC, as needed coordination	\$100,000	Reduce risk to residents through improved	Local Department Budget; HMGP,	H	Communication Safety/Security	Education and Awareness

## SECTION 23: MITIGATION ACTIONS

### TOWN OF MILTON MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	educational material or notification alerts. By establishing an area wide notification system ensures community members are aware of risk and able to prepare for the impact. This project promotes public safety.					of systems with County		communication and early warning.	BRIC, CDBG, PA 406 (when applicable) local bonds			
13	1.1 1.2 1.4 5.1	Flood	Feasibility Study: A feasibility study should be done to determine the extent of the flooding and what mitigation actions can be taken to reduce the impact and improve resiliency. This project protects infrastructure, reduces the cost of reparation, and prevents injury to residents.	Investigate and implement mitigation actions to mitigate flooding at Rock City Falls Fire Dept. Station #1 which is estimated to experience damages from flooding per the Vulnerability Assessment conducted for this Plan.	Yes	Further review required	36-48 Months	NFIP Floodplain Administrator	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security	Structure and Infrastructure
14	1.1 3.3	Dam Failure, Drought, Earthquake	Upgrades to Town Hall: Assessment of operational capacity and necessary improvements	Continue with on-going upgrades to Town Hall including enhancing fiber options to improve	Yes	Further review required	36-48 Months	Town of Milton Town Board	\$500,000	Reduce the risk of injury and fatalities to residents. Ensure continuity of critical	Local Department Budget; HMGP,	H	Safety/Security	Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

TOWN OF MILTON MITIGATION ACTIONS														
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind	required. This project helps ensure critical facilities continue to provide services during unforeseen events while being upgraded to serve all community members and have been hardened against hazards.	efficiency in Town Hall to act as EOC/Command Center during disaster events.						services and emergency response.	BRIC, CDBG, PA 406 (when applicable) local bonds			
15	1.2 3.1 3.2 3.3	Flood	Relocation of at-risk facilities: If there is a known flood risk within the area. Assessment of those properties that are at risk and determine if relocation is a cost-effective option. This project protects infrastructure, reduces the cost of reparation, and prevents injury to residents.	Remove and replace Town Highway Department Complex buildings in their entirety at the same or similar location within the Town's municipal complex to ensure success of operations.	Yes	Further review required	12 Months	Town of Milton Town Board	\$500,000	Reduce risk of damages to structures; Ensure continuity of critical services; Reduce risk of injuries to critical service employees.	Local Department Budget	M	Safety/Security	Structure and Infrastructure



# SECTION 23: MITIGATION ACTIONS

## TOWN OF MOREAU

TOWN OF MOREAU MITIGATION ACTIONS														
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.4 3.1	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Implement the #50 Clark Road drainage and culvert upgrades by adding an additional culvert to increase the capacity handle demand.	No	Further review required	60 months	Highway Department	\$1,000,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
2	1.4 3.1	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Implement the Clark and Burt Road culvert up-sizing/upgrades to increase the capacity of the culvert and to handle demand as the current culverts have lifted out and destroyed the road.	No	Further review required	60 months	Highway Department	\$1,000,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
3	1.4 3.1	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted	Implement the #581 Clark Road drainage and culvert upgrades by adding an additional culvert to increase the capacity handle demand due to road being destroyed four times in	No	Further review required	60 months	Highway Department	\$1,000,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable)	H	Safety/Security	Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### TOWN OF MOREAU MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			standards. This project protects the community and reduces the risk of flooding.	this area.						during and after a flood event.	local bonds			
4	1.4 3.1	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Implement the Birch Road right-of-way to maintain/upgrade culvert.	No	Further review required	60 months	Highway Department, Town Board	\$1,000,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
5	1.2 1.3 3.2	Flood	Water and Drainage System Assessment: Inadequate drainage systems cause flooding, damage to roadways, and create hazardous driving conditions for motorists. When shoulders, ditches, and bridges are washed out or impacted they are impassable for residents and emergency personnel. Assessing the system will allow for prioritization of the most impactful areas and determine the best	Investigate and prioritize the shoulders, ditches and bridges that have washed out in the past and determine appropriate mitigation actions on Speakman Street.	No	Further review required	60 months	Highway Department	\$100,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			projects that will mitigate the issues. This project protects the community and reduces the risk of flooding.											
6	1.4 3.1	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Implement the Speakman Street culvert and drainage upgrades in portion for the roadway that has been lost.	No	Further review required	60 months	Highway Department	\$1,000,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
7	1.1 3.3	Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/ Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind	Generator for critical facilities: During power outages, critical facilities would be without lights, communications, and maintenance equipment/machinery. The operations are basically brought to a halt. This project helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.	Purchase and install hardwired generators for critical facilities to ensure continuity during emergencies.	Yes	Further review required	24 Months	Town Board	\$500,000	Provide power for critical facilities during power outages and ensure continuity of critical services.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Energy (Power/Fuel) Safety/Security	Structure and Infrastructure

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
8	1.1, 3.3	Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/ Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind	Standard for burial of utility lines: Due to the experience of utility failure, would need to explore alternative ways to protect power lines and utility service infrastructure. This project helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.	Require all utilities for future development to be underground.	No	Further review required	24 Months	Town Board	\$500,000	Reduce damages to infrastructure; Ensure continuity of critical services during and after event; Reduce damages associated with power outages; Reduce risk of injuries or fatalities to vulnerable populations.	Local Department Budget	H	Safety/Security Energy (Power/Fuel)	Local Plans and Regulations Structure and Infrastructure
9	1.1 1.4 3.2	Flood, Hail, Hurricane/ Tropical Storm, Ice Storm, Lightning, Snowstorm Tornado, Wind	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of repair, and prevents injury to residents.	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost- effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure

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				action based on available funding.										
10	1.1 1.4 3.2	Flood	Relocate Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
11	1.4 2.3	Flood	Community Rating System: By exploring the CRS program the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the community's efforts to	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

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## TOWN OF MOREAU MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.											
12	1.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety.	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
13	1.3	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of program benefits, increased flood risk, and financial burdens for	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	Yes	N/A	60 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

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## TOWN OF MOREAU MITIGATION ACTIONS

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			residents. There is a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance options. This project promotes public safety.											
14	1.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Develop, enhance, and implement: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.	Continue to develop, enhance, and implement existing emergency plans.	No	N/A	12-60 Months	Emergency Management with support from County OEM and NYS DHSES	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
15	1.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one	Create/enhance/maintain mutual aid agreements with neighboring communities.	No	N/A	36-48 Months	Emergency Management, DPW and Roads	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Local Department Budget, Staff time	H	Safety/Security	Preparedness

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	another in a timely manner. This project promotes public safety.											
16	1.2 2.1	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Emergency Notification System: The general public may not have the means to access educational material or notification alerts. By establishing an area wide notification system ensures community members are aware of risk and able to prepare for the impact. This project promotes public safety.	Support the Installation/ Implementation of Community Emergency Alert System.	No	N/A	24-36 Months	LEMC	\$100,000	Reduce risk to residents through improved communication and early warning.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Communication Safety/Security	Education and Awareness
17	5.3 6.1	Drought, Earthquake, Extreme Cold, Extreme Heat,	Public Awareness Program: The general public may not be aware of the risk of hazards that could impact the County. Creating a support fund	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation	No	N/A	60 Months	Town Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	M	Safety/Security	Preparedness



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		Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	could encourage community members to support mitigation projects and costs associated with them. This project promotes public safety.	projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.										
18	1.1 3.3	Flood	Groundwater Study: A study should be done to determine the extent of groundwater impact. The study should show the causes, extent, the areas of concern, and mitigation projects that can be done to improve resiliency and decrease impact from the flooding events. This project protects the community and reduces the risk of groundwater related issues such as erosion or flood.	Gather more information on the elevated groundwater occurring in Town and investigate possible actions to mitigate risk. Prioritize and implement findings within study.	No	Further review required	36 Months	NFIP Floodplain Administrator	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security	Education and Awareness Structure and Infrastructure
19	1.1 3.3	Flood	Flood Study: A flood study should be done to determine the extent of flooding on Old Bend	Determine the appropriate action and address flood damage	No	Further review required	36 Months	Emergency Manager and Highway	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP,	M	Safety/Security Water Systems	Structure and Infrastructure

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			Road and West River Road. The study should show the causes, extent, the water pathway, the areas of concern due to flooding, and mitigation projects that can be done to improve resiliency and decrease impact from the flooding events. This project protects the community and reduces the risk of flooding.	along Old Bend Road and West River Road.				Superintendent			BRIC, CDBG, PA 406 (when applicable) local bonds		Transportation	
20	1.1 3.3	Flood	Development Restrictions: With the increase in development growth there is a need to restrict development in known high-risk hazard areas throughout town. Adoption of development restrictions protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Strengthen or continue to strengthen provisions in the Zoning Law for the management of stormwater, erosion and the protection of open space. Per the Comprehensive Land Use Plan.	No	N/A	12 months	NFIP Floodplain Administrator	\$10,000	Reduce risk of damages to new structures and infrastructure through building restrictions in high-risk areas.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security	Local Plans and Regulations
21	1.1 3.3	Flood	Updating Local Regulations: Current regulations need to be reviewed and updated to ensure effectiveness. Enhancing local	Review/revise the Town Zoning Law and Subdivision Regulations to reflect recommendations in the Comprehensive Plan	No	N/A	12 months	Zoning and Panning	\$10,000	Reduce risk of damages to new structures and infrastructure through building	Local Department Budget; HMGP, BRIC, CDBG, PA	M	Safety/Security	Local Plans and Regulations

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			regulations are proven mitigation but enforcement is key component to ensure compliance. Jurisdictions need to evaluate and (where necessary) update local regulations. This action protects infrastructure, reduces cost of reparation, and prevents injury to residents.	(e.g., preserve open space, prohibit new mining as a use of land, carefully plan new development, etc.). Per the Comprehensive Land Use Plan.						restrictions in high-risk areas.	406 (when applicable) local bonds			

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## TOWN OF NORTHUMBERLAND

TOWN OF NORTHUMBERLAND MITIGATION ACTIONS														
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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.4 3.1	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Assess the current drainage issue at Colebrook Road. Based on assessment development necessary mitigation improvement to allow disbursement of stormwater and reducing flood risk.	No	Further review required	60 months	Town of Northumberland Highway Department	\$200,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems Transportation	Structure and Infrastructure
2	1.1 1.4 3.2	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm Tornado, Wind	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost- effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure

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				implementation of that action based on available funding.										
3	1.1 1.4 3.2	Flood	Relocate Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
4	1.4 2.3	Flood	Community Rating System: By exploring the CRS program the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

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			community's efforts to reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.											
5	1.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety.	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
6	1.3	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of program benefits, increased flood risk, and	Strive to maintain compliance with, and good standing in the	Yes	N/A	60 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

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			financial burdens for residents. There is a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance options. This project promotes public safety.	National Flood Insurance program.										
7	1.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Develop, enhance, and implement: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.	Continue to develop, enhance, and implement existing emergency plans.	No	N/A	12-60 Months	Emergency Management with support from County OEM and NYS DHSES	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
8	5.1 5.2 5.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring	Create/enhance/maintain mutual aid agreements with neighboring communities.	No	N/A	36-48 Months	Emergency Management, DPW and Roads	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when	Local Department Budget, Staff time	H	Safety/Security	Preparedness

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		Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	communities can help one another in a timely manner. This project promotes public safety.							needed.				
9	2.1	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Emergency Notification System: The general public may not have the means to access educational material or notification alerts. By establishing an area wide notification system ensures community members are aware of risk and able to prepare for the impact. This project promotes public safety.	Support the Installation/ Implementation of Community Emergency Alert System.	No	N/A	24-36 Months	LEMC	\$100,000	Reduce risk to residents through improved communication and early warning.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Communication Safety/Security	Education and Awareness
10	3.1	Drought, Earthquake, Extreme Cold, Extreme	Public Awareness Program: The general public may not be aware of the risk of hazards that could impact the County.	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and	No	N/A	60 Months	Town Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	M	Safety/Security	Preparedness



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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Creating a support fund could encourage community members to support mitigation projects and costs associated with them. This project promotes public safety.	residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.										
11	1.1	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Mitigate Brownville Road Flooding by installing new 8' by 40' culvert and increasing sub-base material to a depth of 18"-24" above existing grad & repave.	No	Further review required	60 months	Town of Northumberland Highway Department	\$500,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems Transportation	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## TOWN OF PROVIDENCE

TOWN OF PROVIDENCE MITIGATION ACTIONS														
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.3	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of program benefits, increased flood risk, and financial burdens for residents. There is a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance options. This project promotes public safety.	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	Yes	N/A	60 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations
2	2.1, 2.2, 2.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Public Education Program: The general public may not have a full understanding of the risk associated with hazards impacting the planning area. Education programs can provide life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Implement an education and awareness program utilizing media, social media, bulletins, flyers, etc. to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. Include links to weather alerts and departmental phone listings with contact personnel for residents.	No	N/A	12 months	Emergency Management	\$10,000	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	H	Communication	Education and Awareness

# SECTION 23: MITIGATION ACTIONS

## TOWN OF PROVIDENCE MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
3	1.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety.	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
4	1.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind,	Develop, enhance, and implement: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.	Continue to develop, enhance, and implement existing emergency plans.	No	N/A	12-60 Months	Emergency Management with support from County OEM and NYS DHSES	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations

## SECTION 23: MITIGATION ACTIONS

### TOWN OF PROVIDENCE MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Invasive Species												
5	5.1 5.2 5.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely manner. This project promotes public safety.	Continue to maintain mutual aid agreements with neighboring communities such as Towns of Edinburg, Day, Hadley, Northampton, Galway, Charleton, Saratoga, Northumberland, Corinth, as well as Saratoga County. Create additional agreements as needed.	No	N/A	36-48 Months	Emergency Management, DPW and Roads	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Local Department Budget, Staff time	H	Safety/Security	Preparedness

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF ROUND LAKE

### VILLAGE OF ROUND LAKE MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.1	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm, Tornado, Wind	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost- effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
2	1.4	Flood	Relocate Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when	H	Safety/Security	Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### VILLAGE OF ROUND LAKE MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
				as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.							applicable) local bonds			
3	1.4	Flood	Community Rating System: By exploring the CRS program the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the community's efforts to reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

## SECTION 23: MITIGATION ACTIONS

### VILLAGE OF ROUND LAKE MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
4	1.4	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety.	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
5	1.3	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of program benefits, increased flood risk, and financial burdens for residents. There is a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance options. This project promotes public safety.	Strive to maintain compliance with, and good standing in the National Flood Insurance program. The Village routinely inspects risk areas after heavy rains to make recommendations.	Yes	N/A	On-going	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations
6	1.3	Drought, Earthquake, Extreme	Develop, enhance, and implement: There is a need to ensure a	Continue to develop, enhance, and	No	N/A	12-60 Months	Emergency Management with support	\$10,000	Ensure all plans are updated and aligned with one another;	Local Department	H	Safety/Security	Local Plans and Regulations

## SECTION 23: MITIGATION ACTIONS

### VILLAGE OF ROUND LAKE MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.	implement existing emergency plans.				from County OEM and NYS DHSES		Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Budget, Staff time			
7	1.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely manner. This project promotes public safety.	Create/enhance/maintain mutual aid agreements with neighboring communities.	No	N/A	36-48 Months	Emergency Management, DPW and Roads, in conjunction with Malta Highway Department	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Local Department Budget, Staff time	H	Safety/Security	Preparedness



## SECTION 23: MITIGATION ACTIONS

### VILLAGE OF ROUND LAKE MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
8	3.1	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Public Awareness Program: The general public may not be aware of the risk of hazards that could impact the County. Creating a support fund could encourage community members to support mitigation projects and costs associated with them. This project promotes public safety.	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle. The Village sets aside funding to maintain and improve drainage structures and projects.	No	N/A	60 Months	Town Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	M	Safety/Security	Preparedness

# SECTION 23: MITIGATION ACTIONS

## TOWN OF SARATOGA

TOWN OF SARATOGA MITIGATION ACTIONS														
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.1	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm, Tornado, Wind	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost- effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
2	1.4	Flood	Relocate Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when	H	Safety/Security	Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### TOWN OF SARATOGA MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
				as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.							applicable) local bonds			
3	1.4	Flood	Community Rating System: By exploring the CRS program the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the community's efforts to reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

## SECTION 23: MITIGATION ACTIONS

### TOWN OF SARATOGA MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
4	1.4	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety.	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
5	1.3	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of program benefits, increased flood risk, and financial burdens for residents. There is a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance options. This project promotes public safety.	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	Yes	N/A	60 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations
6	1.3	Drought, Earthquake, Extreme	Develop, enhance, and implement: There is a need to ensure a	Continue to develop, enhance, and	No	N/A	12-60 Months	Emergency Management with support	\$10,000	Ensure all plans are updated and aligned with one another;	Local Department	H	Safety/Security	Local Plans and Regulations

## SECTION 23: MITIGATION ACTIONS

### TOWN OF SARATOGA MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.	implement existing emergency plans.				from County OEM and NYS DHSES		Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Budget, Staff time			
7	1.3	Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely manner. This project promotes public safety.	Create/enhance/maintain mutual aid agreements with neighboring communities.	No	N/A	36-48 Months	Emergency Management, DPW and Roads	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Local Department Budget, Staff time	H	Safety/Security	Preparedness

# SECTION 23: MITIGATION ACTIONS

## TOWN OF SARATOGA MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
8	5.1 5.2 5.3	Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	Emergency Notification System: The general public may not have the means to access educational material or notification alerts. By establishing an area wide notification system ensures community members are aware of risk and able to prepare for the impact. This project promotes public safety.	Support the Installation/ Implementation of Community Emergency Alert System.	No	N/A	24-36 Months	LEMC	\$100,000	Reduce risk to residents through improved communication and early warning.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Communication Safety/Security	Education and Awareness
9	5.1 5.2 5.3	Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm	Public Awareness Program: The general public may not be aware of the risk of hazards that could impact the County. Creating a support fund could encourage community members to support mitigation projects and costs associated with them. This project promotes public safety.	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	No	N/A	60 Months	Town Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	M	Safety/Security	Preparedness

## SECTION 23: MITIGATION ACTIONS

### TOWN OF SARATOGA MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Tornado, Wildfire, Wind, Invasive Species												
10	1.4 3.1	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Restructure/rebuilding culvert system on Neilson Road to allow the water to flow under the roads.	No	Further review required	60 months	NFIP Floodplain Administrator; Engineering Department	\$500,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems Transportation	Structure and Infrastructure
11	1.4 3.1	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Restructure/rebuilding culvert system on Fitch Road to allow the water to flow under the roads.	No	Further review required	60 months	NFIP Floodplain Administrator; Engineering Department	\$1500,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems Transportation	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## CITY OF SARATOGA SPRINGS

CITY OF SARATOGA SPRINGS MITIGATION ACTIONS														
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.3	Flood	Community Rating System: By exploring the CRS program the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the community's efforts to reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/ Security	Local Plans and Regulations
2	1.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/ Tropical Storm, Ice Storm,	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety.	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/ Security	Local Plans and Regulations



# SECTION 23: MITIGATION ACTIONS

CITY OF SARATOGA SPRINGS MITIGATION ACTIONS														
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species												
3	1.3	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of program benefits, increased flood risk, and financial burdens for residents. There is a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance options. This project promotes public safety.	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	Yes	N/A	60 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/ Security	Local Plans and Regulations
4	1.3	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/ Tropical Storm, Ice Storm, Landslide,	Develop, enhance, and implement: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.	Continue to develop, enhance, and implement existing emergency plans.	No	N/A	12-60 Months	Emergency Management with support from County OEM and NYS DHSES	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/ Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

CITY OF SARATOGA SPRINGS MITIGATION ACTIONS														
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species												
5	1.3	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely manner. This project promotes public safety.	Create/enhance/maintain mutual aid agreements with neighboring communities.	No	N/A	36-48 Months	Emergency Management, DPW and Roads	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Local Department Budget, Staff time	H	Safety/ Security	Preparedness
6	1.1 3.3	Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice	Standard for burial of utility lines: Due to the experience of utility failure, would need to explore alternative ways to protect power lines and utility service infrastructure. This project helps ensure critical	Move power, telephone and cable utility wiring underground for critical City infrastructure.	Yes	Further Review Required	24 Months	Department of Public Works	\$1,000,000	Reduce damages to infrastructure; Ensure continuity of critical services during and after event; Reduce damages associated with power outages; Reduce risk of	Local Department Budget	H	Safety/ Security	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

CITY OF SARATOGA SPRINGS MITIGATION ACTIONS														
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	facilities continue to provide services during a power outage caused by unforeseen events.							injuries or fatalities to vulnerable populations.				
7	1.3	Flood	Stormwater management and improvements: Extreme rainfall events result in high stormwater flow rates, which result in the destabilization of stream channels (including streambanks), that causes erosion and deposition within these streams, as well as stream migration. The erosion of streambanks and migration of stream channels can jeopardize adjacent buildings, bridges, culverts, roadways, utilities, and other infrastructure. This project protects the community and reduces risk of flooding.	Upgrade and increase the capacity of the current Stormwater collection system such that there will be a net reduction in the flood risk caused by Stormwater impacts.	No	Further Review	36-60 Months	City Engineer	\$1,000,000	Reduce damages to infrastructure; Ensure continuity of critical services during and after event; Reduce damages associated with power outages; Reduce risk of injuries or fatalities to vulnerable populations	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/ Security	Structure and Infrastructure
8	2.1	Dam Failure, Drought,	EMS Radio Interoperability: Better coordination is needed	Enhance interoperability communications between fire, police,	Yes	N/A	24 Months	Department of Public Safety	\$100,000	Reduce risk to residents through improved	Local Department Budget;	M	Safety/ Security	Education and Awareness

# SECTION 23: MITIGATION ACTIONS

CITY OF SARATOGA SPRINGS MITIGATION ACTIONS														
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	between the three fire departments that serve the town, as well as EMS coverage. This project promotes public safety.	EMS, DPW and emergency management.						communications and early warning. Enhances emergency response.	HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds		Communication	
9	1.4, 3.1	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Rehabilitation needs and areas for new storm system development including culvert replacements and enhanced drainage systems. City has identified area surrounding: Gilbert Road, 5th Ave, Lincoln Ave, Vanderbilt Ave, Walnut St, Saratoga Harness and Flat Tracks and area of North Broadway as High-Risk Storm Water Disaster Areas due to	No	Further review required	60 months	Department of Public Works	\$2,000,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/ Security Water System Transportation	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## CITY OF SARATOGA SPRINGS MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
				topography and geology of these sites within City.										
10	1.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind	Develop, enhance, and implement: There is a need to map the Town hazard locations. Developing a GIS database can show known or suspected hazard locations in real time. It can be updated post disaster to show impacts as well as flooding or other high hazard information. This activity promotes public safety.	Participate in the County's ongoing GIS initiative. Currently, the City is examining and mapping all new and existing electrical, sanitary sewer, water and traffic conduits with GPS Coordinate Systems.	No	N/A	12-24 Months	Department of Public Works and Administrator of POSH	\$50,000	Enhance communication, education, and awareness among local jurisdictions; Improve and develop mitigation strategies; Reduce risk of damages, injuries, and fatalities.	Local Budget	L	Safety/ Security Communication	Education and Awareness
11	1.3	Flood	Development Restrictions: With the increase in development growth there is a need to restrict development in known high-risk hazard areas throughout town. Adoption of development restrictions protects infrastructure, reduces cost of reparation, and	Support/enhance Building and/or Flood code enforcement programs at the local level public education and awareness of current codes. City has developed and is in the process of expanding public awareness	No	N/A	12 months	NFIP Floodplain Administrator	\$10,000	Reduce risk of damages to new structures and infrastructure through building restrictions in high-risk areas.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/ Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

CITY OF SARATOGA SPRINGS MITIGATION ACTIONS														
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			prevents injury to residents.	programs via written and electronic means.										
12	1.1 3.1	Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm, Tornado, Wind	Vegetation Management: Downed trees and branches have impacted right-of-ways and stormwater drainage and a proper maintenance program to reduce the risk of debris should be developed. This action protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Trim trees and vegetation in the City rights-of-way to mitigate potential power loss in storm management.	No	N/A	12 months	Department of Public Works	\$100,000	Reduce damages to infrastructure; Ensure continuity of services during and after event; Reduce damages associated with power outages; Reduce risk of injuries or fatalities to vulnerable populations.	Local Department Budget, Staff time	M	Safety/ Security	Local Plans and Regulations
13	1.3	Dam Failure	Implementation, Monitoring, and Maintenance: Since dams were initially built there has been settling of the dam. Dam safety protocols with dam repair recommendations will keep dams from being compromised.	Implement dam structure repairs as required by dam safety report/protocols. Budget for inspections as required by state law.	No	Further review required	24-60 Months	NFIP Floodplain Administrator; Department of Public Works	\$10,000	Ensuring dams are not compromised and repaired will reduce the risk of breach and failure, while keeping communities safe and saving lives.	Local Department Budget, Staff time	H	Safety/ Security	Structure and Infrastructure
14	1.3	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme	Emergency Notification System: The general public may not have the means to access educational material or notification alerts. By establishing an area wide	Support the Installation/Implementation of Community Emergency Alert System.	No	N/A	24-36 Months	Police Department	\$100,000	Reduce risk to residents through improved communication and early warning.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when	H	Communication Safety/ Security	Education and Awareness

## SECTION 23: MITIGATION ACTIONS

CITY OF SARATOGA SPRINGS MITIGATION ACTIONS														
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	notification system ensures community members are aware of risk and able to prepare for the impact. This project promotes public safety.								applicable) local bonds			
15	1.3	Dam Failure	Implementation, Monitoring, and Maintenance: Since dams were initially built there has been settling of the dam. Dam safety protocols with dam repair and management recommendations will keep dams from being compromised. Engineering study has been completed.	Continue to implement Loughberry Lake dam management by working with engineers, NYS DEC, and NYS DOT to facilitate improvements to the dam embankments, creating a new spillway and addition water diversion mechanisms to safeguard life and property. Engineering has completed their design and the City has begun to solicit bids for the construction phase.	Yes	Further review required	24-36 Months	Department of Public Works	\$100,000	Ensuring dams are not compromised and repaired will reduce the risk of breach and failure, while keeping communities safe and saving lives.	Local Department Budget, Staff time	H	Safety/ Security	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

CITY OF SARATOGA SPRINGS MITIGATION ACTIONS														
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
16	1.1 3.1	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm, Tornado, Wind	Tree Management Education Program: Downed trees and branches have impacted right-of-ways and stormwater drainage, and a proper maintenance program and management notification system should be developed to reduce the risk of debris. Creation of debris management notification allows the governing body to know the location of debris and promote enforcement of building codes. This action protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Promoting public and private tree management, providing links for emergency management notifications via Nixle, Code Red, 511NY, and National Grid weblinks, and promoting protection of public and private infrastructure through enforcement of building codes.	No	N/A	12 months	Department of Public Works and Police Department	\$20,000	Reduce damages to infrastructure; Ensure continuity of services during and after event; Reduce damages associated with power outages; Reduce risk of injuries or fatalities to vulnerable populations.	Local Department Budget, Staff time	M	Safety/Security	Education and Awareness



# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF SCHUYLERVILLE

### VILLAGE OF SCHUYLERVILLE MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	2.1, 2.2, 2.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Public Education Program: The general public may not have a full understanding of the risk associated with hazards impacting the planning area. Education programs can provide life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Implement an education and awareness program utilizing media, social media, bulletins, flyers, etc. to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. Include links to weather alerts and departmental phone listings with contact personnel for residents.	No	N/A	12 months	Emergency Management	\$10,000	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	H	Communication	Education and Awareness
2	1.1	Flood	Champlain Canalway Recreation Hub Connector: In the Spring of 2022, one of the three culverts that allows the water to flow from the Turning Basin into the Champlain Canal under Route 29 at the Eastern end of the village, collapsed. This culvert runs under Route 29, a very busy highway heavily	Assess existing failed culvert to design and install a clear span bridge over the Champlain Canal on Route 29 just east of the intersection of 29 and 4 in Schuylerville. This would allow for a much greater flow of fresh water into the Champlain Canal and create a "water trail"	No	Further review required	48 months	Emergency Management, DPW	\$600,000	Reduce damages caused by flooding by maintaining or restoring drainage capacity.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Water Systems Transportation	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF SCHUYLERVILLE MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			travelled by trucks. The north side of this highway where it passes over the Champlain Canal culvert is extremely dangerous for pedestrians and cyclists. Without a functioning canal to direct water flow, excess water from rainfall can result in localized flooding. This project protects communities and reduces risk of flooding.	along the Old Champlain Canalway.										
3	1.1	Flood, Hail, Hurricane/ Tropical Storm, Ice Storm, Lightning, Snowstorm Tornado, Wind	Routine tree trimming program: There are several trees along streets and parks that need to be assessed by an Arborist and either trimmed or removed. In a recent previous severe storm event, a huge tree limb fell on and totaled a car. These limbs pose a risk to nearby infrastructure and powerlines. Downed trees and branches have impacted rights-of-way and stormwater drainage and a proper maintenance program to reduce the risk of debris should be developed. This action protects infrastructure, reduces cost of	Adopt and implement a routine tree trimming program that clears tree limbs near power lines and/or hanging in right-of-way; Remove dead trees from right of way and drainage systems on a scheduled basis.	No	N/A	48 months	Emergency Management, DPW	\$100,000	Reduce damages to infrastructure; Ensure continuity of services during and after event; Reduce damages associated with power outages; Reduce risk of injuries or fatalities to vulnerable populations.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Energy (Power/Fuel)	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF SCHUYLERVILLE MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			reparation, and prevents injury to residents. This project helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.											
4	1.1	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm, Tornado, Wind	Increase drainage capacity; Heavy rain (2' or more) results in flooding that causes damage to Villane and private property. Areas of concern include properties around Champlain Canal and Village retention ponds. Flooding also causes erosion of retention pond banks. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Clean sediment in canal, add stormwater detention and/or retention basins as deemed necessary to reduce flood risk.	No	Further review required	48 months	Emergency Management, DPW	\$10,000,000	Reduce flood risk through improved drainage capacity; Reduce risk of damages and injuries; Reduce emergency response demands.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
5	1.4	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm, Tornado, Wind	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### VILLAGE OF SCHUYLERVILLE MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
				<p>viable candidates for retrofitting based on cost- effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding. Priority assessment at the DPW Garage and Water Plant.</p>										
6	1.3	Flood	<p>Community Rating System: By exploring the CRS program the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the community's efforts to reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.</p>	<p>Consider participation in incentive-based programs such as CRS.</p>	Yes	N/A	36 Months	NFIP Floodplain Administrator	\$10,000	<p>Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.</p>	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF SCHUYLerville MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
7	1.3	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of program benefits, increased flood risk, and financial burdens for residents. There is a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance options. This project promotes public safety.	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	Yes	N/A	60 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations
8	1.3	Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/ Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	Develop, enhance, and implement: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.	Continue to develop, enhance, and implement existing emergency plans.	No	N/A	12-60 Months	Emergency Management with support from County OEM and NYS DHSES	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
9	5.1, 5.2, 5.3	Drought, Earthquake Extreme	Create, enhance, and maintain: Mutual aid agreements are crucial in	Create/enhance/ maintain mutual aid agreements with	No	N/A	36-48 Months	Emergency Management,	\$10,000	Ensure mutual aid agreements remain updated and	Local Department	H	Safety/Security	Preparedness

## SECTION 23: MITIGATION ACTIONS

### VILLAGE OF SCHUYLerville MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely manner. This project promotes public safety.	neighboring communities.				DPW and Roads		effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Budget, Staff time			
10	1.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety.	Support County-wide initiatives identified in the County Annex.	No	N/A	12-60 Months	Appropriate Departments	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations

## SECTION 23: MITIGATION ACTIONS

### VILLAGE OF SCHUYLerville MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
11	1.1	Flood	Feasibility Study: A feasibility study should be completed to determine the best mitigation efforts for the environmental concerns to protect the WWTP prevent flooding related issues. This project would improve flood mitigation on bodies at the WWTP and protect life and safety while decreasing the environmental impact. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Investigate mitigation actions to protect the Schuylerville WWTP's from the flood hazard. Both facilities are located within the flood hazard area.	Yes	Further review required	48 Months	NFIP Floodplain Administrator	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Water Systems	Structure and Infrastructure
12	1.1	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Restructure/rebuilding Canal culvert system to allow the water to flow under the roads.	No	Further review required	24 months	NFIP Floodplain Administrator; Engineering Department	\$500,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; NY Forward Grant	H	Safety/Security Water Systems Transportation	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF SOUTH GLENS FALLS

### VILLAGE OF SOUTH GLENS FALLS MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.4	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm Tornado, Wind	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost- effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
2	1.4	Flood	Relocate Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when	H	Safety/Security	Structure and Infrastructure



# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF SOUTH GLENS FALLS MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
				as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.							applicable) local bonds			
3	1.3	Flood	Community Rating System: By exploring the CRS program the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the community's efforts to reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations
4	1.3	Drought, Earthquake Extreme	Implementation, Monitoring, and Maintenance: There is a	Continue to support the implementation,	No	N/A	12-60 Months	Emergency Management	\$10,000	Ensure local hazard mitigation plan remains updated	Local Department	H	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF SOUTH GLENS FALLS MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.	monitoring, maintenance, and updating of this Plan, as defined in Section 24.				with support from County OEM and NYS DHSES		and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Budget, Staff time			
5	1.3	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of program benefits, increased flood risk, and financial burdens for residents. There is a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance options. This project promotes public safety.	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	Yes	N/A	60 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations
6	5.1, 5.2, 5.3	Drought, Earthquake, Extreme Cold, Extreme Heat,	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements	Create/enhance/maintain mutual aid agreements with neighboring communities.	No	N/A	36-48 Months	Emergency Management, DPW and Roads	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with	Local Department Budget, Staff time	H	Safety/Security	Preparedness

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF SOUTH GLENS FALLS MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	are up to date will ensure that neighboring communities can help one another in a timely manner. This project promotes public safety.							one another and ready to assist when needed.				
7	2.1	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Emergency Notification System: The general public may not have the means to access educational material or notification alerts. By establishing an area wide notification system ensures community members are aware of risk and able to prepare for the impact. This project promotes public safety.	Support the Installation/ Implementation of Community Emergency Alert System.	No	N/A	24-36 Months	LEMC	\$100,000	Reduce risk to residents through improved communication and early warning.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Communication Safety/Security	Education and Awareness
8	3.1	Drought, Earthquake, Extreme Cold,	Public Awareness Program: The general public may not be aware of the risk of hazards that	Create a mitigation support fund to provide matching funds on an ongoing basis for	No	N/A	60 Months	Village Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	M	Safety/Security	Preparedness

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF SOUTH GLENS FALLS MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	could impact the County. Creating a support fund could encourage community members to support mitigation projects and costs associated with them. This project promotes public safety.	municipality and residential mitigation projects which will fund cost sharing portions of projects and be replenished during the annual budget cycle.										
9	1.1	Flood	Water infrastructure improvements: Inadequate and undersized drainage systems cause flooding, damage to roadways, and create hazardous driving conditions for motorists. The addition of new fire hydrants and updated water mains would provide access to critical services in a timely manner. This project would protect the community, provide updated hydrants for	Upgrade water mains on Haviland Ave and Baker Ave. Replace antiquated six-inch water main with new DOH and engineer approved eight-inch water main. Also replace all service lines to adjacent homes and new fire hydrants. Removal of road and earth in the affected area would be performed by a qualified contractor or said municipality.	No	Further review required	36-60 Months	NFIP Floodplain Administrator; Engineering Department; Public Works	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Water Systems Transportation	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF SOUTH GLENS FALLS MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			firefighting actions and reduce flooding.											
10	1.1	Flood	Feasibility Study: A feasibility study should be completed to determine the best mitigation efforts for the water plant concerns to protect greenspace and prevent flooding or erosion related issues. This project would improve flood mitigation on bodies of water and protect life and safety while decreasing the environmental impact.	Analyze risk to the water plant on Beach Road and determine a long-term plan to protect Village's investment.	Yes	Further review required	36-48 Months	NFIP Floodplain Administrator	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Water Systems	Structure and Infrastructure
11	1.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm	Develop, enhance, and implement: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.	Continue to develop, enhance, and implement existing emergency plans.	No	N/A	12-60 Months	Emergency Management with support from County OEM and NYS DHSES	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulation

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF SOUTH GLENS FALLS MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Tornado, Wildfire, Wind, Invasive Species												

# SECTION 23: MITIGATION ACTIONS

## TOWN OF STILLWATER

TOWN OF STILLWATER MITIGATION ACTIONS														
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.4	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm, Tornado, Wind	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost- effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
2	1.4	Flood	Relocate Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when	H	Safety/Security	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## TOWN OF STILWATER MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
				as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.							applicable) local bonds			
3	1.3	Flood	Community Rating System: By exploring the CRS program, the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the community's efforts to reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations



# SECTION 23: MITIGATION ACTIONS

## TOWN OF STILWATER MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
4	1.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety.	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
5	1.3	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of program benefits, increased flood risk, and financial burdens for residents. There is a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance options. This project promotes public safety.	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	Yes	N/A	60 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## TOWN OF STILWATER MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
6	5.1, 5.2, 5.3	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely manner. This project promotes public safety.	Create/enhance/maintain mutual aid agreements with neighboring communities. Possible options listed in the Comprehensive Plan include the following: Conduct an Intermunicipal Cooperation Roundtable to promote intermunicipal coordination and communication, and expand joint operations with the Sheriff's Office, State Police and Mechanicville Police to maximize results.	No	N/A	36-48 Months	Emergency Management, DPW and Roads	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Local Department Budget, Staff time	H	Safety/Security	Preparedness
7	1.3	Dam Failure	Develop, enhance, and implement: There is a need to ensure that all dams are identified and risks are assessed. An emergency action plan should include inundation maps, responsibilities, dam information, and procedures to follow in an emergency situation.	Create/update the Emergency Action Plans for all dams located within the municipality.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure Emergency Action Plans are in place for each identified dam. Ensure the plan is aligned with other plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations

## SECTION 23: MITIGATION ACTIONS

### TOWN OF STILWATER MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
8	3.1	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	Public Awareness Program: The general public may not be aware of the risk of hazards that could impact the County. Creating a support fund could encourage community members to support mitigation projects and costs associated with them. This project promotes public safety.	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	No	N/A	60 Months	Town Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	M	Safety/Security	Preparedness
9	1.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice	Create, enhance, and maintain: Capital Improvement Plans (CIP) outline the investments and strategies to maintain critical infrastructure. Critical infrastructure protection is critical in disaster or emergency situations. Ensuring that the CIP is created and up to date will assist with	Continue to review and update Town Capital Improvement Plan (CIP) to provide and prioritize a long- term plan for infrastructure improvements.	Yes	N/A	On-going	NFIP Floodplain Administrator	\$10,000	Reduce the risk of damage and the loss of life. Protect critical infrastructure.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## TOWN OF STILWATER MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	resilience and recovery in the community and protect critical infrastructure.											
10	1.3	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	Review and update planning and zoning codes: Current standards do not fully account for hazard mitigation and building and zoning codes should be reviewed and updated. Enhancing local regulations are proven mitigation but enforcement is key component to ensure compliance. Jurisdictions need to evaluate and (where necessary) update local regulations. This action protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Continue to perform a comprehensive review and evaluation of Stillwater's planning and zoning regulations, per the Comprehensive Plan.	No	N/A	On-going	NFIP Floodplain Administrator; Engineering Department	\$10,000	Reduce risk of damages to structures through improved construction techniques; Reduce recovery efforts for the community after an event.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations
11	1.3, 6.1	Dam Failure, Drought, Earthquake, Extreme	Community Shelter Needs Assessment: The community should complete a needs assessment to see what	Continue on going Needs Assessment for each of the community service providers to ensure adequate	No	Further review required	On-going	Office of Emergency Management; Community	\$100,000	Reduce risk to citizens by providing shelter during	Local Department Budget; HMGP, BRIC,	M	Safety/Security Food/Hydratio n/Shelter	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## TOWN OF STILWATER MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	resources they have, what is needed, and what locations could be used as a shelter site. Considering potential site locations or construction, a community shelter will be needed to help reduce injuries or fatalities to at risk and vulnerable residents. This project promotes public safety.	facilities and services for residents (for example, emergency services, shelters), per the Comprehensive Plan. Make necessary upgrades based on assessment.				Services Department		extreme weather events.	CDBG, PA 406 (when applicable) local bonds			
12	2.1	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind,	Public Awareness Program: The community services may be something private citizens may be unaware of. The communication of trainings, community events, and information that is offered by the town can be posted on the website. This action can decrease risks and improve communication when urgent situations arise. This project promotes public safety.	Use the Town's web site to continue to inform the public regarding the Fire/Police/EMS services and ways they can reduce risk to natural hazard events.	No	N/A	12 Months	Information Technology	\$5,000	Reduce the risk of damage and the loss of life. Improve communication during blue sky days and urgent times.	Local Department Budget; Staff Time	M	Safety/Security Communication	Education and Awareness

# SECTION 23: MITIGATION ACTIONS

## TOWN OF STILWATER MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Invasive Species												
13	2.1	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	Training and Exercises Program: Training and exercises reveal gaps in local capabilities and identifying and addressing these gaps promotes public safety. In addition, ensuring local responders are capable of handling emergencies, minimizing the risk to people, property, and the environment. This action promotes public safety.	Continue to coordinate with the State, County, and local service providers to expand the delivery of fire safety/prevention programs.	No	N/A	12 Months	Fire Department	\$10,000	Enhance communication, education, and awareness among local jurisdictions; Improve and develop mitigation strategies; Reduce risk of damages, injuries, and fatalities.	Local Department Budget, Staff time	M	Safety/Security	Education and Awareness Preparedness
14	1.3	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm, Tornado, Wind	Stormwater/Flood Management: Flooding and severe storms has caused concerns and risk. Loose branches, brush and vegetation mix with drainage water and cause damming and plugged culverts. When this occurs, flood water escapes the existing drainage network, causing	Continue to update the Town stormwater management plan and focus on sub-basins where there is chronic flooding, per FMA. Implement new state regulations as required.	No	Further review required	On-going	NFIP Floodplain Administrator	\$500,000	Reduce flood risk; reduce damages and risk of injuries or fatalities; reduce loss of function; reduce emergency response required during flood events.	Local Department Budget; local bonds	H	Water Systems Safety/Security	Local Plans and Regulations

## SECTION 23: MITIGATION ACTIONS

### TOWN OF STILWATER MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			significant damage to public and private property. Recovery efforts are time consuming and labor intensive. This project protects the community and reduces risk of flooding.											
15	4.1, 4.2, 4.3	Flood	Feasibility Study: A feasibility study should be done to determine the extent of hazard impacts among the Old Champlain Canal and what mitigation actions, if any, can be taken to reduce the impact and improve resiliency or opens up green space opportunities. This project protects water systems, reduces the cost of reparation, and prevents injury to residents.	Explore potential passive recreational uses of the Old Champlain Canal and towpath via a trail system or linear park. Town has identified two projects to complete a Town Trail System including developing the multi-use trail to Mechanicville and Stratton Lane to the Saratoga Battlefield. Continue to explore additional strategies to promote undeveloped land near Old Champlain Canal to support periodic access to the canal for routine maintenance activities to ensure that stormwater is being	No	Further review required	24-36 Months	NFIP Floodplain Administrator	\$100,000	Reduce the risk of damage and the loss of life. serve to provide Enhance open space and green space within community. Reduce impervious surfaces and promote infiltration.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Water Systems	Structure and Infrastructure Natural Systems Protection

## SECTION 23: MITIGATION ACTIONS

### TOWN OF STILWATER MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
				effectively and safely conveyed, per FMA.										
16	2.1	Flood	Flood Public Awareness Program: The general public may not be aware of the risk of hazards that could impact the community. Creating a public education program could encourage community members to support mitigation actions in their home thus increasing safety among the community. This project promotes public safety.	As outlined in the FMA, the Town will work to increase public education on flooding and work closely with those who reside in local flood areas. Town and Village will look to provide information, as available, on the potential causes of flooding, the availability of flood insurance and specific techniques for flood proofing property. Alternatively, the Town will consider providing education on flooding and its mitigation through the Town newsletter or developing an educational brochure.	No	N/A	On-going	Office of Emergency Management; NFIP Floodplain Administrator	\$10,000	Enhance communication, education, and awareness among local jurisdictions; Improve and develop mitigation strategies; Reduce risk of damages, injuries, and fatalities.	Local Department Budget, Staff time	L	Safety/Security Communication	Education and Awareness
17	1.3	Flood	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the CIP is	Incorporate engineering and maintenance improvement items related to flood prevention and mitigation in capital	No	Further review required	24-36 Months	Engineering Department	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget; Staff time	M	Safety/Security	Structure and Infrastructure



## SECTION 23: MITIGATION ACTIONS

### TOWN OF STILWATER MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			aligned with other needs in the community. Engineering projects and maintenance of critical facilities should be incorporated into the budget planning and the CIP for the community to be more resilient and have all plans and projects aligned with community goals. This project promotes public safety.	improvements and budget planning, as outlined in the FMA.										
18	3.1	Flood	Create, enhance, and maintain: A grant committee can assist with resilience and recovery in the community and protect critical infrastructure by maintaining awareness of available funding and pursuing this funding. The funding will assist with project creation and reduce the loss of life and damage. This project promotes public safety.	Continue coordinating with the Stillwater Grants Committee on securing funding to implement the recommendations outlined in the FMA.	No	N/A	12-24 Months	Town Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget; Staff time	M	Safety/Security	Preparedness
19	4.3	Flood	Stream Stabilization: Stream banks along steeper roadways are prone to significant	Pursue riverbank stabilization and erosion and sedimentation control projects at	No	Further review required	12 Months	NFIP Floodplain Administrator	\$100,000	Reduce risk of flood damages through improved drainage capacity/stormwater	Local Department Budget	M	Safety/Security Water Systems	Natural Systems Protection

# SECTION 23: MITIGATION ACTIONS

## TOWN OF STILWATER MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			erosion, as the result of extreme rainfall events. During these events, peak stormwater flows generate high flow velocities, resulting in significant erosion and deepening of stream banks, including damage to roadways. This damage presents increased hazards for motorists. This project protects the community and reduces risk of flooding.	problem locations within the Hudson Riverfront Area, per FMA.						diversion; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.				
20	1.3	Flood	Hudson Riverfront Area Maintenance Program: To prevent the damage from disasters, the community would need to ensure that known flood areas are maintained and inspected routinely. Creating an inspection and maintenance schedule will provide protection against known hazards and mitigation projects may be incorporated into this as needed to increase resiliency and safety. This project protects	Conduct long-term inspection and maintenance/necessary improvement within the Hudson Riverfront Area, per FMA.	No	Further review required	36-48 Months	NFIP Floodplain Administrator	\$50,000	Reduce risk of flood damages through improved maintenance and inspection; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget, Staff time	M	Safety/Security Water Systems	Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### TOWN OF STILWATER MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			infrastructure, reduces cost of repairation, and prevents injury to residents.											
21	1.1	Flood	Stormwater Piping Improvements: Inadequate drainage systems cause flooding, damages to roadways, and create hazardous driving conditions for motorists. This project protects the community and reduces the risk of flooding.	Improve/upgrade and increase capacity of the storm sewer infrastructure on Lake Street and Park Avenue to convey floodwaters to Schuyler Creek, per FMA.	No	Further review required	36-60 Months	NFIP Floodplain Administrator	\$100,000	Reduce flood risk through improved drainage capacity; Reduce risk of damages and injuries; Reduce emergency response demands.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Water Systems	Structure and Infrastructure
22	1.1	Flood	Flood Study: A flood study should be done to determine the extent of flooding and bridge damage on Meadow Lane. The study should show the causes, extent, the water pathway, the areas of concern due to flooding, and mitigation projects that can be done to improve resiliency and decrease impact from the flooding events. This project protects the community and reduces the risk of flooding.	Evaluate the effect of the existing private wooden bridge on channel capacity and flooding. Remove or replace bridge to provide a greater channel cross- section if indicated by evaluation (NYS RT 67, Meadow Lane, Anthony Kill Area), per FMA.	No	Further review required	36 Months	NFIP Floodplain Administrator; Engineering Department	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security	Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### TOWN OF STILWATER MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
23	4.3	Flood	Old Champlain Canal Flooding Study: Extreme rainfall events result in high stormwater flow rates, which result in the destabilization of stream channels (including streambanks), that causes erosion and deposition within these streams, as well as stream migration. The erosion of streambanks and migration of stream channels can jeopardize adjacent buildings, bridges, culverts, roadways, utilities, and other infrastructure. This project protects the community and reduces the risk of flooding.	Provide channel and embankment improvement projects for the Old Champlain Canal and Schuyler Creek to develop adequate and stable channel cross-sections to convey storm flows. Projects should include construction of access ways, clearing of overgrowth, removal of accumulated sediment and debris from channel, establish channel lines and grades, bank stabilization, sediment and erosion control measures and reinforcement of banks to prevent overtopping and breaching, per FMA.	No	Further review required	36-48 Months	NFIP Floodplain Administrator	\$100,000	Reduce the risk of flood damage due to erosion or scour during flood events. Reduce risk of injuries to residents; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds		Safety/Security Water Systems	Structure and Infrastructure
24	1.1	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply	Maintain and improve (increase conveyance) channel for the existing drainage ditch along its 2,500-foot length from Stratton Lane north to its confluence with the	No	Further review required	60 months	NFIP Floodplain Administrator	\$3,000,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when	H	Safety/Security Water Systems Transportation	Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### TOWN OF STILWATER MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Hudson River, possibly in partnership with NYSDOT for capacity improvements to culvert crossing under NYS RTS 4 & 32, per FMA.						emergency services during and after a flood event.	applicable) local bonds			
25	4.3	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Provide channel maintenance and improvement projects for the Old Champlain Canal along its 5,200-foot length from Stratton Lane north to where it passes under RTS 4 & 32 through two large concrete box culvert Projects should include construction of access ways, clearing of overgrowth, removal of accumulated sediment and debris from channel, establish channel lines and grades, bank stabilization, sediment and erosion control measures, reinforcement of banks to prevent overtopping and breaching. Planning for these drainage	No	Further review required	60 months	NFIP Floodplain Administrator; Department of Engineering	\$3,000,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems Transportation	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## TOWN OF STILWATER MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
				projects should be coordinated with plans for future recreational development of the Old Champlain Canal and parallel towpath, and wetlands preservation considerations, per FMA.										
26	4.3	Flood	Saratoga Lake Flooding Study: Extreme rainfall events result in high stormwater flow rates, which result in the destabilization of stream channels (including streambanks), that causes erosion and deposition within these streams, as well as stream migration. The erosion of streambanks and migration of stream channels can jeopardize adjacent buildings, bridges, culverts, roadways, utilities, and other infrastructure. This project protects the community and reduces the risk of flooding.	Review 2023 engineering study to implement identified recommendation to provide lakeshore stabilization and erosion and sedimentation control projects at problem locations on Saratoga Lake.	No	Further review required	36-48 Months	NFIP Floodplain Administrator	\$100,000	Reduce the risk of flood damage due to erosion or scour during flood events. Reduce risk of injuries to residents; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Water Systems	Natural Systems Protection

## SECTION 23: MITIGATION ACTIONS

### TOWN OF STILWATER MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
27	4.3	Flood	Saratoga Lake Flooding Study: Extreme rainfall events result in high stormwater flow rates, which result in the destabilization of stream channels (including streambanks), that causes erosion and deposition within these streams, as well as stream migration. The erosion of streambanks and migration of stream channels can jeopardize adjacent buildings, bridges, culverts, roadways, utilities, and other infrastructure. This project protects the community and reduces the risk of flooding.	Provide tributary stream channel and bank improvement projects at problem locations in the Saratoga Lake area, per FMA.	No	Further review required	36-48 Months	NFIP Floodplain Administrator	\$100,000	Reduce the risk of flood damage due to erosion or scour during flood events. Reduce risk of injuries to residents; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Water Systems	Structure and Infrastructure
28	4.3	Flood	Old Champlain Canal Flooding Study: Extreme rainfall events result in high stormwater flow rates, which result in the destabilization of stream channels (including streambanks), that causes erosion and deposition within these streams, as	Provide channel improvements along the Old Champlain Canal drainage way just north of the railroad embankment in the Riverside area to control ice formation by eliminating standing water, per FMA.	No	Further review required	36-48 Months	NFIP Floodplain Administrator	\$100,000	Reduce the risk of flood damage due to erosion or scour during flood events. Reduce risk of injuries to residents; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Water Systems	Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### TOWN OF STILWATER MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			well as stream migration. The erosion of streambanks and migration of stream channels can jeopardize adjacent buildings, bridges, culverts, roadways, utilities, and other infrastructure. This project protects the community and reduces the risk of flooding.											
29	4.3	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Provide channel improvement projects for the Old Champlain Canal along its 5,800 feet from Halfway House Road south to its confluence with the Hudson River. Projects should include construction of access ways, clearing of overgrowth, removal of accumulated sediment and debris from channel, establish channel lines and grades, bank stabilization, sediment and erosion control measures and	No	Further review required	60 months	NFIP Floodplain Administrator; Department of Engineering	\$3,000,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems	Structure and Infrastructure



## SECTION 23: MITIGATION ACTIONS

### TOWN OF STILWATER MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
				reinforcement of banks to prevent overtopping and breaching, per FMA.										
30	1.1	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Evaluate installation of a culvert crossing River Road (NYS RTS 4 & 32) to convey overflow from the Old Champlain Canal to the Hudson River just north of the railroad embankment at the Iron Bridge. (Per FMA)	No	Further review required	60 months	NFIP Floodplain Administrator	\$1,000,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems Transportation	Structure and Infrastructure
31	1.1	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Evaluate installation of a culvert crossing under Burns Bridge Road, Towpath Road and Hudson Avenue (NYS RTS 4 & 32) directly to the Hudson River. The proposed culvert would convey stormwater flow from the southern end of the Gurba Subdivision drainage-way east to the river. A culvert in this location would also serve to relieve downstream	No	Further review required	60 months	Saratoga County	\$2,000,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems Transportation	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## TOWN OF STILWATER MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
				flooding on Halfway House Road, Mitchell Road and in the Riverside Area, per FMA.										
32	1.3	Flood	Flood Study: A flood study should be done to determine the extent of flooding on Lohnes Road. The study should show the causes, extent, the water pathway, the areas of concern due to flooding, and mitigation projects that can be done to improve resiliency and decrease impact from the flooding events. This project protects the community and reduces the risk of flooding.	Hire a consultant to conduct a study of the flooding caused by rainfall and snowmelt on Lohnes Road. The town will work with the consultant to identify and implement possible solutions to mitigate the flooding hazard.	No	Further review required	36 Months	NFIP Floodplain Administrator; Engineering Department	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security/Transportation	Education and Awareness Structure and Infrastructure
33	1.3	Flood	Flood Study: A flood study should be done to determine the extent of flooding on 1940 State Route 4. The study should show the causes, extent, the water pathway, the areas of concern due to flooding, and mitigation projects that can be done to improve resiliency and decrease impact from the	Hire a consultant to conduct a study of the flooding caused by rainfall and snowmelt at 1940 State Route 4. The town will work with the consultant to identify and implement possible solutions to mitigate the flooding hazard.	No	Further review required	36 Months	NFIP Floodplain Administrator; Engineering Department	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security/Transportation	Education and Awareness Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### TOWN OF STILWATER MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			flooding events. This project protects the community and reduces the risk of flooding.											
34	1.3	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Develop, enhance, and implement: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.	Continue to develop, enhance, and implement existing emergency plans.	No	N/A	12-60 Months	Emergency Management with support from County OEM and NYS DHSES	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulation

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF STILLWATER

### VILLAGE OF STILLWATER MITIGATION PROJECTS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.1	Flood	Newland-Wood Fire Company 59 Fire House Improvements: The firehouse is outdated and currently has structural and electrical issues. The structure also does not accommodate the size or shape of currently manufactured firefighting equipment. As a result, the community is in need for improvements to the firehouse in order to meet current and future public safety needs.	Relocate and/or modify the firehouse to meet public safety needs, ensuring the structure is outside of hazard prone areas and is overall hazard resistant.	Yes	Further review required	60 Months	Fire Department, Emergency Management	\$2,000,000	Ensure continuity of critical services and emergency response. Reduce risk of infrastructure damage. Reduce risk of injuries and fatalities.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
2	1.1	Flood, Wildfire	Hudson Avenue Water Line Project: The existing water system serving the Village of Stillwater consists of water lines ranging in size from 4" to 12" with ages dating to the 1930s. The water line continues to be in danger of structural failure, has the potential for bacteriological contamination of the drinking water supply and poses a safety risk to operation and	Rehabilitate and/or upgrade the Hudson Avenue Water Line to mitigate structural damage, prevent water supply contamination during flood events, and ensure fire protection measures.	Yes	Further review required	60 Months	Public Works and Water Departments	\$2,500,000	Overall reduce risk of infrastructure damage, ensure the continuity of critical services, and reduce risk of water supply contamination. The Village water system serves over 4,000 people through 1,500 service connections. The proposed improvements included in the project impact the	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems	Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### VILLAGE OF STILLWATER MITIGATION PROJECTS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			maintenance employees. In addition, a structural failure has the potential of causing a failure in drinking water supply and fire protection for areas of the Village and major disruptions in traffic on State Road Route 4. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.							entire service area and is needed to maintain fire flow requirements and peak flow requirements throughout the Village.				
3	1.1	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	Rehabilitation of Wastewater Treatment Plant: The Village wastewater treatment plant and collection system dates to the late 1930s and early 1940s. Most of the wastewater treatment plant systems were installed in 1990. Due to the system's age, upgrades are required to several of the mechanical and structural systems. In addition, the Bunce Lane pumping station (Pump Station #1) needs upgrades. All the upgrades are needed to mitigate natural hazard impacts and ensure the continuity of critical	Implement upgrades to local wastewater infrastructure as identified in the Village's Wastewater Treatment Plant Rehabilitation Project (July 2023) to ensure infrastructure is hazard resistant.	Yes	Further review required	60 Months	Public Works and Water Departments	\$1,000,000	Ensure the continuity of critical services (the sewer system currently serves a population of 1,810 people through 800 residential service connections within the Village and portions of the Town); Reduce risk of damages to infrastructure.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF STILLWATER MITIGATION PROJECTS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			services. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.											
4	1.4	Flood, Hail, Hurricane/ Tropical Storm, Ice Storm, Lightning, Snowstorm, Tornado, Wind	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost- effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding. Priority assessment includes Stillwater Elementary, Middle and High School campuses.	Yes	Further review required	60 Months	NFIP Floodplain Administrator. ISD Administration	\$1,000,000	Reduce the risk of damage and loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
5	1.4	Flood	Relocate Structures: Structures located in known hazard-prone	Where appropriate, support purchase, or relocation of structures	Yes	Further review required	60 Months	NFIP Floodplain Administrator.	\$1,000,000	Reduce the risk of damage and loss of life.	Local Department Budget;	H	Safety/Security	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF STILLWATER MITIGATION PROJECTS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding. . Priority assessment includes Stillwater Elementary, Middle and High School campuses.				ISD Administration			HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds			
6	1.3	Flood	Community Rating System: By exploring the CRS program the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the community's efforts to reduce and avoid flood damage to insurable	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF STILLWATER MITIGATION PROJECTS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.											
7	1.3	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of program benefits, increased flood risk, and financial burdens for residents. There is a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance options. This project promotes public safety.	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	Yes	N/A	60 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations
8	1.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm	Develop, enhance, and implement: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.	Continue to develop, enhance, and implement existing emergency plans.	No	N/A	12-60 Months	Emergency Management with support from County OEM and NYS DHSES	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities. Ensure local hazard mitigation plan remains updated and effective.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations



## SECTION 23: MITIGATION ACTIONS

### VILLAGE OF STILLWATER MITIGATION PROJECTS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Tornado, Wildfire, Wind, Invasive Species.												
9	5.1, 5.2, 5.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely manner. This project promotes public safety.	Create/enhance/maintain mutual aid agreements with neighboring communities. Possible options listed in the Comprehensive Plan include the following: Conduct an Intermunicipal Cooperation Roundtable to promote intermunicipal coordination and Communication. Expand joint operations with the Sheriff's Office, State Police and Mechanicville Police to maximize results.	No	N/A	36-48 Months	Emergency Management, DPW and Roads	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Local Department Budget, Staff time	H	Safety/Security	Preparedness
10	1.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with	Support County-wide initiatives identified in the County Annex.	No	N/A	12-60 Months	Appropriate Departments	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations

## SECTION 23: MITIGATION ACTIONS

### VILLAGE OF STILLWATER MITIGATION PROJECTS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	its goals. This project promotes public safety.							reduction activities.				
11	2.1	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Emergency Notification System: The general public may not have the means to access educational material or notification alerts. By establishing an area wide notification system ensures community members are aware of risk and able to prepare for the impact. This project promotes public safety.	Support the Installation/ Implementation of Community Emergency Alert System.	No	N/A	24-36 Months	LEMC	\$100,000	Reduce risk to residents through improved communication and early warning.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Communication Safety/Security	Education and Awareness
12	3.1	Drought, Earthquake, Extreme Cold,	Public Awareness Program: The general public may not be aware of the risk of hazards that	Create a mitigation support fund to provide matching funds on an ongoing basis for	No	N/A	60 Months	Village Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	M	Safety/Security	Preparedness

## SECTION 23: MITIGATION ACTIONS

VILLAGE OF STILLWATER MITIGATION PROJECTS														
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	could impact the County. Creating a support fund could encourage community members to support mitigation projects and costs associated with them. This project promotes public safety.	municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.										
13	1.3	Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind,	Create, enhance, and maintain: Capital Improvement Plans (CIP) outline the investments and strategies to maintain critical infrastructure. Critical infrastructure protection is critical in disaster or emergency situations. Ensuring that the CIP is created and up to date will assist with resilience and recovery in the community and protect critical infrastructure. This project protects infrastructure, reduces cost of	Continue to review and update Village Capital Improvement Plan (CIP) to provide and prioritize a long-term plan for infrastructure improvements.	Yes	N/A	24-36 Months	NFIP Floodplain Administrator	\$10,000	Reduce the risk of damage and the loss of life. Protect critical infrastructure.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF STILLWATER MITIGATION PROJECTS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Invasive Species	reparation, and prevents injury to residents.											
14	1.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	Review and update planning and zoning codes: Current regulations need to be reviewed and updated to ensure effectiveness. Enhancing local regulations are proven mitigation but enforcement is key component to ensure compliance. Jurisdictions need to evaluate and (where necessary) update local regulations. This action protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Perform a comprehensive review and evaluation of Stillwater's planning and zoning regulations, as outlined in the Comprehensive Plan.	No	N/A	12 Months	NFIP Floodplain Administrator; Engineering Department	\$10,000	Reduce risk of damages to structures through improved construction techniques; Reduce recovery efforts for the community after an event.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations
15	6.1	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm,	Community Shelter Needs Assessment: The community should complete a needs assessment to see what resources they have, what is needed, and what locations could be used as a shelter site. Considering potential site	Conduct Needs Assessment for each of the community service providers to ensure adequate facilities and services for residents (for example, emergency services, shelters). Implement and make necessary	No	Further review required	48-60 Months	Office of Emergency Management; Community Services Department	\$100,000	Reduce risk to citizens by providing shelter during extreme weather events.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security	Local Plans and Regulations

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		Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	locations or construction, a community shelter will be needed to help reduce injuries or fatalities to at risk and vulnerable residents. This project promotes public safety.	upgrades to enhance capabilities, as outlined in the Comprehensive Plan.										
16	2.1	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Public Awareness Program: The community services may be something private citizens may be unaware of. The communication of trainings, community events, and information that is offered by the town can be posted on the website. This action can decrease risks and improve communication when urgent situations arise.	Use the Village's web site to better inform the public regarding the Fire/Police/EMS services to inform the community of natural hazards that affect the areas and possible mitigation measures to reduce risk.	No	N/A	12 Months	Information Technology	\$5,000	Reduce the risk of damage and the loss of life. Improve communication during blue sky days and urgent times.	Local Department Budget; Staff Time	M	Safety/Security Communication	Education and Awareness
17	2.1	Drought, Earthquake, Extreme Cold, Extreme Heat,	Training and Exercises Program: Training and exercises reveal gaps in local capabilities and identifying and addressing these gaps promotes	Work with the State, County, and local service providers to expand the delivery of fire safety/prevention	No	N/A	12 Months	Fire Department	\$10,000	Enhance communication, education, and awareness among local jurisdictions; Improve and	Local Department Budget, Staff time	M	Safety/Security	Education and Awareness Preparedness

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		Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	public safety. In addition, ensuring local responders are capable of handling emergencies, minimizing the risk to people, property, and the environment. This action promotes public safety.	programs, per the Comprehensive Plan.						develop mitigation strategies; Reduce risk of damages, injuries, and fatalities.				
18	1.3	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm, Tornado, Wind	Stormwater/Flood Management: Flooding and severe storms has caused concerns and risk. Loose branches, brush and vegetation mix with drainage water and cause damming and plugged culverts. When this occurs, flood water escapes the existing drainage network, causing significant damage to public and private property. Recovery efforts are time consuming and labor intensive. This project protects the community and reduces the risk of flooding.	Prepare/Update the Village's stormwater management plan and focus on sub-basins where there is chronic flooding, per FMA.	No	Further Review Required	12 – 60 months	NFIP Floodplain Administrator	\$500,000	Reduce flood risk; reduce damages and risk of injuries or fatalities; reduce loss of function; reduce emergency response required during flood events.	Local Department Budget; local bonds	H	Water Systems Safety/Security	Local Plans and Regulations Structure and Infrastructure

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19	4.1, 4.2, 4.3	Flood	Feasibility Study: A feasibility study should be done to determine the extent of hazard impacts among the Old Champlain Canal and what mitigation actions, if any, can be taken to reduce the impact and improve resiliency or opens up green space opportunities. This project protects water systems, reduces the cost of reparation, and prevents injury to residents.	Explore potential passive recreational uses of the Old Champlain Canal and towpath via a trail system or linear park. Town has identified two projects to complete a Town Trail System including developing the multi-use trail to Mechanicville and Stratton Lane to the Saratoga Battlefield. Continue to explore additional strategies to promote undeveloped land near Old Champlain Canal to support periodic access to the canal for routine maintenance activities to ensure that stormwater is being effectively and safely conveyed, per FMA.	No	Further review required	24-36 Months	NFIP Floodplain Administrator	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Water Systems	Structure and Infrastructure Natural Systems Protection
20	5.2, 5.3	Flood	Create, enhance, and maintain: A committee can assist with resilience and recovery in the community and protect the community by maintaining awareness of	Conduct a study to assess the chronic flooding problem of ice jams on the Hudson River in the vicinity of the lower dam (lock C3/upper Mechanicville)	No	Further review required	36-48 Months	NFIP Floodplain Administrator	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; Staff time	M	Safety/Security Water Systems	Structure and Infrastructure

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			known hazards while working with a consulting company or subject matter experts to perform a study on the ice jams to determine what is the best course of action to protect the community and the critical infrastructure. This project promotes public safety.	and make recommendations on how to alleviate this problem. This Committee should involve the Town and Village of Stillwater, the City of Mechanicville, the New York State Canal Corporation, New York State Electric and Gas, Stillwater Power, the Saratoga County Emergency Management Office and any other agencies and organizations with a stake in this issue. (Per FMA)										
21	2.1, 2.2, 2.3	Flood	Public Awareness Program: The general public may not be aware of the risk of hazards that could impact the community. Creating a public education program could encourage community members to support mitigation actions in their home thus increasing safety among the community. This	As outlined in the FMA, the Village will work to increase public education on flooding and work closely with those who reside in local flood areas. Town and Village will look to provide information, as available, on the potential causes of flooding, the availability of flood insurance and	No	N/A	12 Months	Office of Emergency Management; NFIP Floodplain Administrator	\$10,000	Enhance communication, education, and awareness among local jurisdictions; Improve and develop mitigation strategies; Reduce risk of damages, injuries, and fatalities.	Local Department Budget, Staff time	L	Safety/Security Communication	Education and Awareness



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			project promotes public safety.	specific techniques for flood proofing property. Alternatively, the Village will consider providing education on flooding and its mitigation through the Village newsletter or developing an educational brochure.										
22	1.3	Flood	Feasibility Study: A feasibility study should be done to determine the extent of hazard impacts among the Old Champlain Canal and what mitigation actions, if any, can be taken to reduce the impact and improve resiliency or opens up green space opportunities. This project protects water systems, reduces the cost of reparation, and prevents injury to residents. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Undertake a feasibility study to examine the possibility of establishing a trail or linear park along the Old Champlain Canal. Prioritize and implement recommending mitigation projects as outlined in the study.	No	Further review required	24-36 Months	NFIP Floodplain Administrator	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security	Education and Awareness Structure and Infrastructure

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23	1.3	Flood	Develop, enhance, and implement: There is a need to ensure that gaps in zoning ordinance are identified and risks are assessed. With that gap analysis the zoning tools can be utilized to implement the recommendations from the comprehensive plan, thus making the community zoning practices more resilient to unexpected events and keeping the community safe. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Amend the Village site development law to: a) require stormwater analysis and mitigation for development and land clearing of a certain size, and b) to require erosion and sediment control.	No	N/A	12-36 Months	NFIP Floodplain Administrator	\$10,000	Ensure the zoning ordinances are aligned with other plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
24	1.3	Flood	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the CIP is aligned with other needs in the community. Engineering projects and maintenance of critical facilities should be incorporated into the	Incorporate engineering and maintenance items related to flood prevention and mitigation in capital improvements and budget planning, per FMA.	No	N/A	26-36 Months	NFIP Floodplain Administrator; Engineering Department	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget; Staff time	M	Safety/Security	Structure and Infrastructure

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			budget planning and the CIP for the community to be more resilient and have all plans and projects aligned with community goals. This project promotes public safety.											
25	3.1	Flood	Create, enhance, and maintain: A grant committee can assist with resilience and recovery in the community and protect critical infrastructure by maintaining awareness of available funding and pursuing this funding. The funding will assist with project creation and reduce the loss of life and damage. This project promotes public safety.	Coordinate with the Stillwater Grants Committee with the task of securing funding to implement the recommendations outlined in FMA.	No	N/A	12-24 Months	Village Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget; Staff time	M	Safety/Security	Preparedness
26	4.3	Flood	River Flooding Study: Extreme rainfall events result in high stormwater flow rates, which result in the destabilization of stream channels (including streambanks), that causes erosion and deposition within these streams, as well as	Pursue riverbank stabilization and erosion and sedimentation control projects at problem locations within the Hudson River Area, per FMA.	No	Further review required	36-48 Months	NFIP Floodplain Administrator	\$100,000	Reduce the risk of flood damage due to erosion or scour during flood events. Reduce risk of injuries to residents; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Water Systems	Natural Systems Protection

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			stream migration. The erosion of streambanks and migration of stream channels can jeopardize adjacent buildings, bridges, culverts, roadways, utilities, and other infrastructure. This project protects the community and reduces the risk of flooding.											
27	4.3	Flood	Hudson Riverfront Flooding Study: Extreme rainfall events result in high stormwater flow rates, which result in the destabilization of stream channels (including streambanks), that causes erosion and deposition within these streams, as well as stream migration. The erosion of streambanks and migration of stream channels can jeopardize adjacent buildings, bridges, culverts, roadways, utilities, and other infrastructure. This project protects the	Provide tributary stream channel and bank improvement projects at problem locations within the Hudson Riverfront Area, per FMA.	No	Further review required	36-48 Months	NFIP Floodplain Administrator	\$100,000	Reduce the risk of flood damage due to erosion or scour during flood events. Reduce risk of injuries to residents; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Water Systems	Natural Systems Protection

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			community and reduces the risk of flooding.											
28	1.3	Flood	Hudson Riverfront Area Maintenance Program: To prevent the damage from disasters, the community would need to ensure that known flood areas are maintained and inspected routinely. Creating an inspection and maintenance schedule will provide protection against known hazards and mitigation projects may be incorporated into this as needed to increase resiliency and safety. This project protects the community and reduces risk of flooding.	Conduct long-term inspection and maintenance/necessary improvement within the Hudson Riverfront Area, per FMA.	No	Further review required	36-48 Months	NFIP Floodplain Administrator	\$50,000	Reduce risk of flood damages through improved maintenance and inspection; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget, Staff time	M	Safety/Security Water Systems	Structure and Infrastructure
29	4.3	Flood	Old Champlain Canal Flooding Study: Extreme rainfall events result in high stormwater flow rates, which result in the destabilization of stream channels (including streambanks), that causes erosion and deposition within these streams, as well as stream migration.	Provide channel and embankment improvement projects for the Old Champlain Canal and Schuyler Creek to develop adequate and stable channel cross-sections to convey storm flows. Projects should include construction of access	No	Further review required	36-48 Months	NFIP Floodplain Administrator	\$100,000	Reduce the risk of flood damage due to erosion or scour during flood events. Reduce risk of injuries to residents; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Water Systems	Natural Systems Protection

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			The erosion of streambanks and migration of stream channels can jeopardize adjacent buildings, bridges, culverts, roadways, utilities, and other infrastructure. This project protects the community and reduces the risk of flooding.	ways, clearing of overgrowth, removal of accumulated sediment and debris from channel, establish channel lines and grades, bank stabilization, sediment and erosion control measures and reinforcement of banks to prevent overtopping and breaching, per FMA.										
30	1.1	Flood	Stormwater Piping Improvements: Inadequate drainage systems cause flooding, damages to roadways, and create hazardous driving conditions for motorists. This project protects the community and reduces the risk of flooding.	Improve/upgrade and increase capacity of the storm sewer infrastructure on Lake Street and Park Avenue to convey floodwaters to Schuyler Creek, per FMA.	No	Further review required	36-60 Months	NFIP Floodplain Administrator	\$100,000	Reduce flood risk through improved drainage capacity; Reduce risk of damages and injuries; Reduce emergency response demands.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Water Systems	Structure and Infrastructure
31	1.1	Flood	Flood Study: A flood study should be done to determine the extent of flooding and bridge damage on Meadow Lane. The study should show the causes, extent,	Evaluate the effect of the existing private wooden bridge on channel capacity and flooding. Remove or replace bridge to provide a greater	No	Further review required	36 Months	NFIP Floodplain Administrator; Engineering Department	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when	M	Safety/Security	Structure and Infrastructure

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			the water pathway, the areas of concern due to flooding, and mitigation projects that can be done to improve resiliency and decrease impact from the flooding events. This project protects the community and reduces the risk of flooding.	channel cross- section if indicated by evaluation (NYS RT 67, Meadow Lane, Anthony Kill Area), per FMA.							applicable) local bonds			
32	4.3	Flood	Anthony Kill Flooding Study: Extreme rainfall events result in high stormwater flow rates, which result in the destabilization of stream channels (including streambanks), that causes erosion and deposition within these streams, as well as stream migration. The erosion of streambanks and migration of stream channels can jeopardize adjacent buildings, bridges, culverts, roadways, utilities, and other infrastructure. This project protects the community and reduces the risk of flooding.	Provide stream channel improvement projects along the Anthony Kill in the Village of Stillwater. Projects should include construction of access ways, removal of accumulated sediment and debris from channel, establish channel lines and grades, bank stabilization and sediment and erosion control measures, per FMA.	No	Further review required	36-48 Months	NFIP Floodplain Administrator	\$100,000	Reduce the risk of flood damage due to erosion or scour during flood events. Reduce risk of injuries to residents; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds		Safety/Security Water Systems	Natural Systems Protection

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33	1.1	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Maintain and improve (increase conveyance) channel for the existing drainage ditch along its 2,500-foot length from Stratton Lane north to its confluence with the Hudson River, possibly in partnership with NYSDOT for capacity improvements to culvert crossing under NYS RTS 4 & 32, per FMA.	No	Further review required	60 months	NFIP Floodplain Administrator	\$2,000,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems Transportation	Structure and Infrastructure
34	1.1	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Provide channel maintenance and improvement projects for the Old Champlain Canal along its 5,200-foot length from Stratton Lane north to where it passes under RTS 4 & 32 through two large concrete box culvert Projects should include construction of access ways, clearing of overgrowth, removal of accumulated sediment and debris from channel, establish channel lines and grades, bank	No	Further review required	60 months	NFIP Floodplain Administrator; Engineering Department	\$3,000,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems Transportation	Structure and Infrastructure



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				stabilization, sediment and erosion control measures, reinforcement of banks to prevent overtopping and breaching. Planning for these drainage projects should be coordinated with plans for future recreational development of the Old Champlain Canal and parallel towpath, and wetlands preservation considerations, per FMA.										
35	4.3	Flood	Saratoga Lake Flooding Study: Extreme rainfall events result in high stormwater flow rates, which result in the destabilization of stream channels (including streambanks), that causes erosion and deposition within these streams, as well as stream migration. The erosion of streambanks and migration of stream channels can jeopardize adjacent buildings,	Provide lakeshore stabilization and erosion and sedimentation control projects at problem locations on Saratoga Lake, per FMA.	No	Further review required	36-48 Months	NFIP Floodplain Administrator	\$100,000	Reduce the risk of flood damage due to erosion or scour during flood events. Reduce risk of injuries to residents; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Water Systems	Natural System Protection

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			bridges, culverts, roadways, utilities, and other infrastructure. This project protects the community and reduces the risk of flooding.											
36	4.3	Flood	Saratoga Lake Flooding Study: Extreme rainfall events result in high stormwater flow rates, which result in the destabilization of stream channels (including streambanks), that causes erosion and deposition within these streams, as well as stream migration. The erosion of streambanks and migration of stream channels can jeopardize adjacent buildings, bridges, culverts, roadways, utilities, and other infrastructure. This project protects the community and reduces the risk of flooding.	Provide tributary stream channel and bank improvement projects at problem locations in the Saratoga Lake area, per FMA.	No	Further review required	36-48 Months	NFIP Floodplain Administrator	\$100,000	Reduce the risk of flood damage due to erosion or scour during flood events. Reduce risk of injuries to residents; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Water Systems	Natural System Protection
37	4.3	Flood	Old Champlain Canal Flooding Study: Extreme rainfall events result in high stormwater flow	Provide channel improvements along the Old Champlain Canal drainage way just north	No	Further review required	36-48 Months	NFIP Floodplain Administrator	\$100,000	Reduce the risk of flood damage due to erosion or scour during flood events.	Local Department Budget; HMGP,	M	Safety/Security Water Systems	Structure and Infrastructure

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			rates, which result in the destabilization of stream channels (including streambanks), that causes erosion and deposition within these streams, as well as stream migration. The erosion of streambanks and migration of stream channels can jeopardize adjacent buildings, bridges, culverts, roadways, utilities, and other infrastructure. This project protects the community and reduces the risk of flooding.	of the railroad embankment in the Riverside area to control ice formation by eliminating standing water, per FMA.						Reduce risk of injuries to residents; Reduce burden on emergency services during and after a flood event.	BRIC, CDBG, PA 406 (when applicable) local bonds			
38	4.3	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Provide channel improvement projects for the Old Champlain Canal along its 5,800 feet from Halfway House Road south to its confluence with the Hudson River. Projects should include construction of access ways, clearing of overgrowth, removal of accumulated sediment and debris from	No	Further review required	60 months	NFIP Floodplain Administrator	\$3,000,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems	Structure and Infrastructure

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				channel, establish channel lines and grades, bank stabilization, sediment and erosion control measures and reinforcement of banks to prevent overtopping and breaching, per FMA.										
39	1.1	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Evaluate installation of a culvert crossing River Road (NYS RTS 4 & 32) to convey overflow from the Old Champlain Canal to the Hudson River just north of the railroad embankment at the Iron Bridge, per FMA.	No	Further review required	60 months	NFIP Floodplain Administrator	\$1,000,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems Transportation	Structure and Infrastructure
40	1.1	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community	Evaluate installation of a culvert crossing under Burns Bridge Road, Towpath Road and Hudson Avenue (NYS RTS 4 & 32) directly to the Hudson River. The proposed culvert would convey stormwater flow from the southern end	No	Further review required	60 months	NFIP Floodplain Administrator	\$1,000,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Water Systems Transportation	Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### VILLAGE OF STILLWATER MITIGATION PROJECTS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			and reduces the risk of flooding.	of the Gurba Subdivision drainage-way east to the river. A culvert in this location would also serve to relieve downstream flooding on Halfway House Road, Mitchell Road and in the Riverside Area, per FMA.										
41	1.3	Flood	Flood Study: A flood study should be done to determine the extent of flooding on Ferry Lane. The study should show the causes, extent, the water pathway, the areas of concern due to flooding, and mitigation projects that can be done to improve resiliency and decrease impact from the flooding events. This project protects the community and reduces the risk of flooding.	Hire an engineering consultant to conduct a study of the area to develop a comprehensive solution to divert floodwaters from the area of Ferry Lane. Prioritize and implement recommended improvements identified within the study.	No	Further review required	36 Months	Village of Stillwater Board	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security	Education and Awareness Structure and Infrastructure
42	1.3	Flood	Flood Study: A flood study should be done to determine the extent of flooding on Bunce Road. The study should show the causes, extent, the	Hire an engineering consultant to conduct a study of the area to develop a comprehensive solution	Yes	Further review required	36 Months	Village of Stillwater Board	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC,	M	Safety/Security	Education and Awareness Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### VILLAGE OF STILLWATER MITIGATION PROJECTS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			water pathway, the areas of concern due to flooding, and mitigation projects that can be done to improve resiliency and decrease impact from the flooding events. This project protects the community and reduces the risk of flooding.	to divert floodwaters from the area of Bunce Lane and the Pump Station. Prioritize and implement recommended improvements identified within the study.							CDBG, PA 406 (when applicable) local bonds			
43	1.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety.	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF VICTORY

### VILLAGE OF VICTORY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.1	Flood	Drain and Culvert Improvements: Inadequate drainage systems cause flooding, damage to roadways, and create hazardous driving conditions for motorists. This action protects the community and reduces the risk of flooding.	Upgrade undersized stormwater drains and culverts with focus on local road and new development.	No	Further review required	18 months	NFIP Floodplain Administrator	\$1,000,000	By identifying vulnerable high infrastructures and making necessary improvements to expand drainage capability reduces flood risk and risk of damages and injuries. In addition, this would also reduce emergency response demands.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Water Systems Transportation	Structure and Infrastructure
2	1.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	Infrastructure Improvement Planning: The Village's current infrastructure is in need of assessment to ensure critical facilities have a reduce risk to the vulnerabilities of natural hazards. In addition, the Village is unable to support the development of new businesses and industries, limiting the tax revenue and hindering overall growth.	Develop a strategic infrastructure improvement plan and implement recommended projects to upgrade essential infrastructure components (roads, sewage, water supply, etc.). Ensure all infrastructure is hazard resistant and resilient to future changes.	Yes	Further review required	60 Months	DPW, Village Board, Planning Board, Zoning Board	\$1,000,000	Reduce the risk of damages to critical infrastructure and services. Ensure the continuity of critical services during hazard events. Increase tax revenue to promote growth and resilience.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security	Structure and Infrastructure
3	1.1	Flood, Wildfire	Development of new fire station and community	Assess feasibility to upgrade or construct a	Yes	Further review	60 Months	Emergency Management,	\$1,000,000	Reduce the risk of injury and fatalities	Local Department	M	Safety/Security	Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### VILLAGE OF VICTORY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			center: Enhance operational capacity to ensure appropriate accommodations for residents/evacuees and ensuring appropriate response during and after a disaster event. During hazard events the Fire Station will serve as a community center for impacted residents and will be equipped with backup generators. This project helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.	fire station outside of high hazard areas, ensuring facility is hazard resistant to mitigate natural disaster impacts and is additionally able to serve as a community center.		required		Fire Department		to residents. The fire department serves more than 600 residents in a 34 square mile area. Ensure continuity of critical services and emergency response.	Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds			
4	1.4	Flood, Hail, Hurricane/ Tropical Storm, Ice Storm, Lightning, Snowstorm Tornado, Wind	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost- effectiveness versus relocation. Where retrofitting is	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure



# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF VICTORY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
				determined to be a viable option, consider implementation of that action based on available funding.										
5	1.4	Flood	Relocate Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
6	1.3	Flood	Community Rating System: By exploring the CRS program the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF VICTORY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			risk resulting from the community's efforts to reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.											
7	1.3	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of program benefits, increased flood risk, and financial burdens for residents. There is a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance options. This project promotes public safety.	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	Yes	N/A	60 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulation
8	1.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice	Develop, enhance, and implement: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards	Continue to develop, enhance, and implement existing emergency plans. Support County-wide initiatives identified in the County Annex.	No	N/A	12-60 Months	Emergency Management with support from County OEM and NYS DHSSES	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulation

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF VICTORY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	and being NIMS compliant while working with the Emergency Operations Plan.											
9	5.1, 5.2, 5.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely manner. This project promotes public safety.	Create/enhance/maintain mutual aid agreements with neighboring communities.	No	N/A	36-48 Months	Emergency Management, DPW and Roads	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Local Department Budget, Staff time	H	Safety/Security	Preparedness
10	3.1	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical	Public Awareness Program: The general public may not be aware of the risk of hazards that could impact the County. Creating a support fund could encourage community members to support mitigation projects	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be	No	N/A	60 Months	Village Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	M	Safety/Security	Preparedness

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF VICTORY MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	and costs associated with them. This project promotes public safety.	replenished during the annual budget cycle.										
11	1.3	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety.	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## TOWN OF WATERFORD

TOWN OF WATERFORD MITIGATION ACTIONS														
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.														
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.4	Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm Tornado, Wind	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost- effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding. Priority assessment includes Town Hall and Sewage Plant.	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
2	1.4	Flood	Relocate Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA	H	Safety/Security	Structure and Infrastructure

# SECTION 23: MITIGATION ACTIONS

## TOWN OF WATERFORD MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			cost of reparation, and prevents injury to residents.	damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding. Priority assessment includes Town Hall and Sewage Plant.							406 (when applicable) local bonds			
3	1.3	Flood	Community Rating System: By exploring the CRS program, the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the community's efforts to reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## TOWN OF WATERFORD MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			floodplain management. This project promotes public safety.											
4	1.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety.	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
5	1.3	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of program benefits, increased flood risk, and financial burdens for residents. There is a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	Yes	N/A	60 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## TOWN OF WATERFORD MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			options. This project promotes public safety.											
6	1.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	Develop, enhance, and implement: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.	Continue to develop, enhance, and implement existing emergency plans.	No	N/A	12-60 Months	Emergency Management with support from County OEM and NYS DHSES	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
7	5.1, 5.2, 5.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely manner. This project promotes public safety.	Create/enhance/maintain mutual aid agreements with neighboring communities.	No	N/A	36-48 Months	Emergency Management, DPW and Roads	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Local Department Budget, Staff time	H	Safety/Security	Preparedness



# SECTION 23: MITIGATION ACTIONS

## TOWN OF WATERFORD MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind												
8	1.3	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	Develop, enhance, and implement: There is a need to ensure that gaps in zoning ordinance are identified and risks are assessed. With that gap analysis the zoning tools can be utilized to implement the recommendations from the comprehensive plan, thus making the community zoning practices more resilient to unexpected events and keeping the community safe. This project protects the community and reduces risk of flooding.	Amend the Zoning Ordinances of the Town and Village to correct existing ambiguities and problems and incorporate zoning tools to implement recommendations in the Comprehensive Plan and the Local Waterfront Revitalization Plan. Per the Comprehensive Plan.	No	N/A	12-36 Months	NFIP Floodplain Administrator	\$10,000	Ensure the zoning ordinances are aligned with other plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
9	1.3	Dam Failure	Implementation, Monitoring, and Maintenance: Since dams were initially built there has been settling of the dam. Dam safety protocols with dam repair recommendations will keep dams from being compromised.	Create/update the Emergency Action Plans for all dams located within the municipality.	No	N/A	24-60 Months	NFIP Floodplain Administrator; Engineering Department	\$10,000	Ensuring dams are not compromised and repaired will reduce the risk of breach and failure, while keeping communities safe and saving lives.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## TOWN OF WATERFORD MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
10	1.1	Dam Failure	Implementation, Monitoring, and Maintenance: Since dams were initially built there has been settling of the dam. Dam safety protocols with dam repair recommendations will keep dams from being compromised.	Implement dam structure repairs as required by dam safety report/protocols.	No	Further review required	24-36 Months	LEMC	\$100,000	Reduce risk to residents through improved communication and early warning.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure
11	2.1	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Emergency Notification System: The general public may not have the means to access educational material or notification alerts. By establishing an area wide notification system ensures community members are aware of risk and able to prepare for the impact. This project promotes public safety.	Support the Installation/ Implementation of Community Emergency Alert System.	No	N/A	24-36 Months	LEMC	\$100,000	Reduce risk to residents through improved communication and early warning.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Communication Safety/Security	Education and Awareness

## SECTION 23: MITIGATION ACTIONS

### TOWN OF WATERFORD MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
12	3.1	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	Public Awareness Program: The general public may not be aware of the risk of hazards that could impact the County. Creating a support fund could encourage community members to support mitigation projects and costs associated with them. This project promotes public safety.	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	No	N/A	60 Months	Town Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	M	Safety/Security	Preparedness

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF WATERFORD

### VILLAGE OF WATERFORD MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.4	Flood, Hail, Hurricane/ Tropical Storm, Ice Storm, Lightning, Snowstorm, Tornado, Wind	Retrofit RL/SRL Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost- effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding. Priority assessment includes: Village Hall, Senior Citizens Center, Library, Waterford Police Department, Waterford Rescue Squad (EMS), Water Plant, and Pump Station	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### VILLAGE OF WATERFORD MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
				(located at the end of 1a.)										
2	1.4	Dam Failure, Flood	Relocate Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding. Priority assessment includes: Village Hall, Senior Citizens Center, Library, Waterford Police Department, Waterford Rescue Squad (EMS), Water Plant, and Pump Station	Yes	Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security	Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### VILLAGE OF WATERFORD MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
				(located at the end of 1a.)										
3	1.3	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of program benefits, increased flood risk, and financial burdens for residents. There is a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance options. This project promotes public safety.	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	Yes	N/A	On-going	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations
4	1.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety.	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60 Months	NFIP Floodplain Administrator	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF WATERFORD MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Species												
5	5.1, 5.2, 5.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one another in a timely manner. This project promotes public safety.	Continue to maintain mutual aid agreements with neighboring communities including Saratoga County and neighboring counties to assist in emergency response such as DPW, FD, PD, and EMS. Create mutual aid agreements as needed.	No	N/A	On-going	Emergency Management, DPW and Roads	\$10,000	Ensure mutual aid agreements remain updated and effective; Ensure local jurisdictions remain aligned with one another and ready to assist when needed.	Local Department Budget, Staff time	H	Safety/Security	Preparedness
6	2.1	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning,	Emergency Notification System: The general public may not have the means to access educational material or notification alerts. By establishing an area wide notification system ensures community members are aware of risk and able to prepare for the impact. This project promotes public safety.	Support the installation and implementation of a Community Emergency Alert System and warning sirens.	No	N/A	24-36 Months	LEMC	\$100,000	Reduce risk to residents through improved communication and early warning.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Communication Safety/Security	Education and Awareness

# SECTION 23: MITIGATION ACTIONS

## VILLAGE OF WATERFORD MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Snowstorm Tornado, Wildfire, Wind, Invasive Species												
7	3.1	Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/ Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	Public Awareness Program: The general public may not be aware of the risk of hazards that could impact the County. Creating a support fund could encourage community members to support mitigation projects and costs associated with them. This project promotes public safety.	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	No	N/A	60 Months	Village Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	M	Safety/Security	Preparedness
8	1.3	Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/	Develop, enhance, and implement: There is a need to ensure that gaps in zoning ordinance are identified and risks are assessed. With that gap analysis the zoning tools can be utilized to	Continue to review and amend the Zoning Ordinances of the Town and Village to correct existing ambiguities and problems and incorporate zoning tools to implement	No	N/A	12-36 Months	NFIP Floodplain Administrator	\$10,000	Ensure the zoning ordinances are aligned with other plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations



## SECTION 23: MITIGATION ACTIONS

### VILLAGE OF WATERFORD MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	implement the recommendations from the comprehensive plan, thus making the community zoning practices more resilient to unexpected events and keeping the community safe. This project protects the community and reduces risk of flooding.	recommendations in the Comprehensive Plan and the Local Waterfront Revitalization Plan, per the Comprehensive Plan.										
9	1.1	Flood	Feasibility Study: A feasibility study should be done to determine the extent of the flooding and what mitigation actions can be taken to reduce the impact and improve resiliency. This project protects infrastructure, reduces the cost of reparation, and prevents injury to residents.	Complete an assessment or study that will assess current flood risk. Implement recommended mitigation actions to mitigate flooding at Waterford Police Department.	Yes	Further review required	24-36 Months	NFIP Floodplain Administrator	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security	Structure and Infrastructure
10	1.1, 1.3	Flood	Feasibility Study and Needs Assessment: A feasibility study should be done to determine the extent of hazard impacts in the community and where the priority areas are in an effort to support a needs assessment for the Village. Once this is	Conduct a study to assess flood risks and study response tactics to enhance the development of a needs assessment. Study results will prioritize areas and vulnerable population in greatest need. Work on	No	N/A	24-36 Months	Assistant to Public Safety Commissioner	\$300,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security	Education and Awareness Structure and Infrastructure

## SECTION 23: MITIGATION ACTIONS

### VILLAGE OF WATERFORD MITIGATION ACTIONS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			determined then a list of what mitigation actions, if any, can be taken to reduce the impact and improve resiliency. An evacuation route can be determined based off the priority areas identified. A needs assessment should be done when the areas of concern are noted. This needs assessment should look at what resources the community has in place, what the gaps are, how to fix the identified gaps, and suggestions for mitigation projects to make the community safer in known high-risk areas. This project protects critical infrastructure, reduces the cost of reparation, and prevents injury to residents.	developing an appropriate evacuation strategy. Needs assessment study can include but is not limited to: transportation needs of people with access and functional, resident 65 and older, shelters with a generator in the event of a power outage, and a consolidated phone list of support personal and resources.										
11	1.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/	Develop, enhance, and implement: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project	Continue to develop, enhance, and implement existing emergency plans.	No	N/A	12-60 Months	Emergency Management with support from County OEM and NYS DHSES	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations

## SECTION 23: MITIGATION ACTIONS

### VILLAGE OF WATERFORD MITIGATION ACTIONS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species.	promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.											

# SECTION 23: MITIGATION ACTIONS

## TOWN OF WILTON

### TOWN OF WILTON MITIGATION PROJECTS

\*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.

Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.4 3.1	Dam Failure, Flood	Culvert and drainage upgrades: Throughout the County culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community and reduces the risk of flooding.	Implement the culvert and drainage upgrades throughout the community to handle demand of flooding on roads and property	No	Further review required	12-24 Months	Town Engineering Department	\$450,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security Transportation	Structure and Infrastructure
2	1.1 3.1	Hail, Hurricane/Tropical Storm, Ice Storm, Lightning, Snowstorm, Tornado, Wind	Tree Trimming Program: Downed trees and branches have impacted right-of-ways and stormwater drainage and a proper maintenance program to reduce the risk of debris should be developed. This action protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Continue to provide tree trimming along roadways.	No	N/A	12 Months	Town Highway Department	\$100,000	Reduce damages to infrastructure; Ensure continuity of services during and after event; Reduce damages associated with power outages; Reduce risk of injuries or fatalities to vulnerable populations.	Local Department Budget, Staff time	M	Safety/Security Transportation	Structure and Infrastructure
3	2.1	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme	Education and Awareness Program: To limit the threat to the community, developing a program to educate citizens of hazards that can threaten the area and mitigation	Notifying local citizens of extreme hazards or weather events by informing them through Code Red, Town Website and county resources.	No	N/A	12 Months	Town Administration	Staff Time	Promote hazard awareness and protect citizens from potential injuries and damages.	Local Department Budget, Staff time	H	Communication	Education and Awareness

# SECTION 23: MITIGATION ACTIONS

## TOWN OF WILTON MITIGATION PROJECTS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	measures to reduce injuries, fatalities, and property damages. Include links to weather alerts and departmental phone listings with contact personnel for residents.											
4	1.3	Flood	Community Rating System: By exploring the CRS program the County would potentially receive insurance premium rates that are discounted to reflect the reduced flood risk resulting from the community's efforts to reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.	Consider participation in incentive-based programs such as CRS.	Yes	N/A	36 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

## SECTION 23: MITIGATION ACTIONS

### TOWN OF WILTON MITIGATION PROJECTS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
5	1.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety.	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-260 Months	NFIP Floodplain Administrator	\$10,000	Ensure local hazard mitigation plan remains updated and effective; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
6	1.3	Flood	NFIP Participation: Failure to adhere to NFIP requirements can result in loss of program benefits, increased flood risk, and financial burdens for residents. There is a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance options. This project promotes public safety.	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	Yes	N/A	60 Months	NFIP Floodplain Administrator	\$10,000	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	M	Safety/Security	Local Plans and Regulations

## SECTION 23: MITIGATION ACTIONS

### TOWN OF WILTON MITIGATION PROJECTS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
7	5.1	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	Create, enhance, and maintain: Creating an inventory of identified community resources will aid in the resilience of the community and identify gaps that need to be filled.	Construct an inventory of community resources. Based on inventory assessment, develop a plan to enhance capabilities to reduce long-term effects of natural hazards.	No	N/A	12-60 Months	Office of Emergency Management	\$10,000	Ensure that all community resources are identified to maintain resilience in emergency or incident situations.	Local Department Budget, Staff time	H	Safety/Security	Education and Awareness Local Plans and Regulations
8	1.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado,	Develop, enhance, and implement: There is a need to map the Town hazard locations. Developing a GIS database can show known or suspected hazard locations in real time. It can be updated post disaster to show impacts as well as flooding or other high hazard information. This activity promotes public safety.	Continue to enhance the Town of Wilton GIS system to map natural and manmade hazard locations, including new hazards that may not be mapped within the system.	No	N/A	12-24 Months	NFIP Floodplain Administrator	\$50,000	Enhance communication, education, and awareness among local jurisdictions; Improve and develop mitigation strategies; Reduce risk of damages, injuries, and fatalities.	Local Budget	L	Safety/Security Communication	Local Plans and Regulations Education and Awareness

## SECTION 23: MITIGATION ACTIONS

### TOWN OF WILTON MITIGATION PROJECTS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Wildfire, Wind												
9	5.1	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	Community Shelter: The community should complete a needs assessment to see what resources they have, what is needed, and what locations could be used as a shelter site. Considering potential site locations or construction, a community shelter will be needed to help reduce injuries or fatalities to at risk and vulnerable residents. This project promotes public safety.	Community assessment of shelter within community. Based on assessment, upgrade necessary facilities to enhance shelter capabilities and/or enhance agreements with American Red Cross to augment shelters along with the Office of Emergency Management.	No	Further review required	48-60 Months	Office of Emergency Management	\$100,000	Reduce risk to citizens by providing shelter during extreme weather events. Reduce risk of injury and fatality.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security Food/Hydratio n/Shelter	Preparedness Structure and Infrastructure
10	1.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm	Develop, enhance, and implement: There is a need to ensure that all hazards are identified and risks are assessed. An emergency action plan should include inundation maps, responsibilities, and procedures to follow in an emergency situation. This project promotes public safety.	Continue to maintain and update the Town's Emergency Response Plan.	No	N/A	12-60 Months	Office of Emergency Management	\$10,000	Ensure Emergency Action Plans are in place for the town. Ensure the plan is aligned with other plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations



## SECTION 23: MITIGATION ACTIONS

### TOWN OF WILTON MITIGATION PROJECTS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Tornado, Wildfire, Wind												
11	1.3	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind	Develop, enhance, and implement: Developing a post disaster, Continuity of Operations Plan (COOP), or recovery plan will address the needs for the critical facilities and critical services to remain active during post disaster for community members to access. Having a COOP plan in place will allow the town to recover quickly and may mitigate known gaps or issues that hinder post-disaster recovery. A plan will provide a pathway of resiliency for the town. This project promotes public safety.	Continue to review and update post-disaster action plan for natural hazard events that will address the continuity of local government operations.	No	N/A	12-60 Months	Office of Emergency Management	\$10,000	A post-recovery plan provides a pathway for recovery and allows continuity of critical services to continue. It provides community safety and security.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulations
12	5.2	Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/Tropical	Implementation, Monitoring, and Maintenance: Creation of a routine meeting schedule will allow the agencies to work together. There is a need to ensure a structured approach to guarantee that all	Continue local coordination with agencies responsible for the protection of natural resources, including the NYS Department of Environmental Conservation, the U.S. Army Corps of	No	N/A	24-36 Months	Office of Emergency Management	\$10,000	Reduce the risk of damage and the loss of life. Improve communication during blue sky days and urgent times.	Local Department Budget; Staff Time	M	Safety/Security Communication	Preparedness

## SECTION 23: MITIGATION ACTIONS

### TOWN OF WILTON MITIGATION PROJECTS

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Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Storm, Ice Storm, Landslide, Lightning, Snowstorm, Tornado, Wildfire, Wind, Invasive Species	agencies coordinate during pre and post disaster times. Continuing to coordinate with these agencies ensures that all entities are working together to protect the local community. This project promotes public safety.	Engineers, and the U.S. Fish and Wildlife Service.										
13	5.2	Flood	Implementation, Monitoring, and Maintenance: Since dams may be built in areas with beaver activity, monitoring and situational awareness is necessary to ensure repairs and mitigation actions are taken. Dam safety protocols with dam repair recommendations will keep dams from being compromised.	Continue to increase local coordination with DEC and adjoining townships to identify and maintain situation awareness of risk areas related to beaver dams, including but not limited to the use of UAV. As identified, make necessary improvements to reduce flood risk.	No	N/A	24-60 Months	Town Emergency Response Committee, Engineering Department and Highway Department	\$70,000	Ensuring dams are not compromised and repaired will reduce the risk of breach and failure, while keeping communities safe and saving lives.	Local Department Budget, Staff time	H	Safety/Security	Structure and Infrastructure
14	2.1, 2.2, 2.3	Dam Failure, Drought, Earthquake, Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/	Public Education Program: The general public may not have a full understanding of the risk associated with hazards impacting the planning area. Education programs can provide life safety benefits to residents in the area and provide	Continue on-going PR campaign to educate residents and business owners to ensure all cellular phones are registered with the CodeRed database maintained by Saratoga County.	No	N/A	12 months	Emergency Management; Information Technology	\$10,000	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	H	Communication	Education and Awareness

## SECTION 23: MITIGATION ACTIONS

### TOWN OF WILTON MITIGATION PROJECTS

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		Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	information on mitigation measures residents can employ to reduce damages to their property.											
15	1.3	Dam Failure, Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/ Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire, Wind, Invasive Species	Develop, enhance, and implement: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards and being NIMS compliant while working with the Emergency Operations Plan.	Continue to develop, enhance, and implement existing emergency plans.	No	N/A	12-60 Months	Emergency Management with support from County OEM and NYS DHSES	\$10,000	Ensure all plans are updated and aligned with one another; Ensure local jurisdictions remain aligned with the Plans goals and risk reduction activities.	Local Department Budget, Staff time	H	Safety/Security	Local Plans and Regulation



**SARATOGA**  
**COUNTY** NEW YORK

SECTION 24  
**PLAN**  
**MAINTENANCE**

## SECTION 24: PLAN MAINTENANCE

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### PLAN MAINTENANCE PROCEDURES

The following is an explanation of how the participating jurisdictions within Saratoga County, and the general public will be involved in implementing, evaluating, and enhancing the Plan over time. When the plan is discussed in all maintenance procedures it includes mitigation actions and hazard assessments. The sustained hazard mitigation planning process consists of four main parts:

- Incorporation
- Monitoring and Evaluation
- Updating
- Continued Public Involvement

### INCORPORATION

Participating jurisdictions within Saratoga County will be responsible for further development and implementation of mitigation actions. Each action has been assigned to a specific department within the participating jurisdictions. The following describes the process by which participating jurisdictions will incorporate elements of the mitigation plan into other planning mechanisms.

#### PROCESS OF INCORPORATION

Once the Plan Update is adopted, participating jurisdictions within Saratoga County will implement actions based on priority and the availability of funding. The planning area currently implements policies and programs to reduce loss to life and property from hazards. The mitigation actions developed for this Plan Update enhance this ongoing effort and will be implemented through other program mechanisms where possible.

The potential funding sources listed for each identified action may be used when the jurisdiction seeks funds to implement actions. An implementation time period or a specific implementation date has been assigned to each action as an incentive for completing each task and gauging whether actions are implemented in a timely manner.

Participating jurisdictions within Saratoga County will integrate implementation of their mitigation actions with other plans and policies such as construction standards and emergency management plans, and ensure that these actions, or proposed projects, are reflected in other planning efforts.

## SECTION 24: PLAN MAINTENANCE

Coordinating and integrating components of other plans and policies into goals and objectives of the Plan Update will further maximize funding and provide possible cost-sharing of key projects, thereby reducing loss of lives and property and mitigating hazards affecting the area.

Upon formal adoption of the Plan Update, planning team members from each participating jurisdiction will work to integrate the hazard mitigation strategies into other plans and codes as they are developed. Participating team members will conduct periodic reviews of plans and policies, once per year at a minimum, and analyze the need for revisions in light of the approved Plan. The planning team will review all comprehensive land use plans (applicable jurisdictions only), capital improvement plans (applicable jurisdictions only), annual budget reviews, emergency operations or management plans (applicable jurisdictions only), and transportation plans (applicable jurisdictions only) to guide and control development. Participating jurisdictions will ensure that capital improvement planning (applicable jurisdictions only) in the future will also contribute to the goals of this hazard mitigation Plan Update to reduce the long-term risk to life and property from all hazards. Within one year of formal adoption of the hazard mitigation Plan Update, existing planning mechanisms will be reviewed by each jurisdiction.

Saratoga County is committed to supporting the participating jurisdictions as they implement their mitigation actions. Planning team members will review and revise, as necessary, the long-range goals and objectives in strategic plan and budgets to ensure that they are consistent with this mitigation action plan. Additionally, the planning area will work to advance the goals of this hazard mitigation plan through its routine, ongoing, long-range planning, budgeting, and work processes.

Table 24-1 identifies types of planning mechanisms and examples of methods for incorporating the Plan Update into other planning efforts. The team members, listed in Table 24-2 below, will be responsible for the review of these planning mechanisms and their incorporation of the plan, with the exception of the Floodplain Management Plans; the jurisdictions who have a Floodplain Administrator on staff will be responsible for incorporating the plan when floodplain management plans are updated, or new plans are developed.

**Table 24-1. Methods of Incorporation of the Plan**

PLANNING MECHANISM	JURISDICTION / TITLE RESPONSIBLE	INCORPORATION OF PLAN
Annual Budget Review	<b>Saratoga County</b> – Director of Planning <b>Town of Ballston</b> – Town Supervisor <b>Village of Ballston Spa</b> – Village Administrator <b>Town of Charlton</b> – Town Supervisor <b>Town of Clifton Park</b> – Director of Planning <b>Town of Corinth</b> – Town Supervisor <b>Village of Corinth</b> – Mayor <b>Town of Day</b> – Town Supervisor <b>Town of Edinburg</b> – Town Supervisor <b>Town of Galway</b> – Town Supervisor <b>Village of Galway</b> – Mayor <b>Town of Greenfield</b> – Town Supervisor <b>Town of Hadley</b> – Town Supervisor <b>Town of Halfmoon</b> – Town Supervisor <b>Town of Malta</b> – Town Supervisor <b>City of Mechanicville</b> – Mayor	Various departments and key personnel that participated in the planning process for participating jurisdictions within Saratoga County will review the Plan and mitigation actions therein when conducting their annual budget review. Allowances will be made in accordance with grant applications sought, and mitigation actions that will be undertaken, according to the implementation schedule of the specific action.

## SECTION 24: PLAN MAINTENANCE

PLANNING MECHANISM	JURISDICTION / TITLE RESPONSIBLE	INCORPORATION OF PLAN
	<p> <b>Town of Milton</b> – Town Supervisor  <b>Town of Moreau</b> – Town Supervisor  <b>Town of Northumberland</b> – Town Supervisor  <b>Town of Providence</b> – Town Supervisor  <b>Village of Round Lake</b> – Mayor  <b>Town of Saratoga</b> – Town Supervisor  <b>City of Saratoga Springs</b> – Mayor  <b>Village of Schuylerville</b> – Mayor  <b>Village of South Glens Falls</b> – Mayor  <b>Town of Stillwater</b> – Town Supervisor  <b>Village of Stillwater</b> – Mayor  <b>Village of Victory</b> – Mayor  <b>Town of Waterford</b> – Town Supervisor  <b>Village of Waterford</b> – Mayor  <b>Town of Wilton</b> – Town Supervisor                 </p>	
<p>Capital Improvement Plans</p>	<p> <b>Town of Ballston</b> – Town Supervisor  <b>Town of Corinth</b> – Town Supervisor  <b>Village of Corinth</b> – Mayor  <b>Town of Greenfield</b> – Town Supervisor  <b>Town of Malta</b> – Town Supervisor  <b>City of Mechanicville</b> – Mayor  <b>Town of Providence</b> – Town Supervisor  <b>Town of Saratoga</b> – Town Supervisor  <b>City of Saratoga Springs</b> – Mayor  <b>Village of Schuylerville</b> – Mayor  <b>Village of South Glens Falls</b> – Mayor  <b>Town of Stillwater</b> – Town Supervisor  <b>Village of Stillwater</b> – Mayor                 </p>	<p>Several participating jurisdictions within Saratoga County have a Capital Improvement Plan (CIP) in place or under development. Prior to any revisions to the CIP, City, Town, and Village departments will review the risk assessment and mitigation strategy sections of the HMAP, as limiting public spending in hazardous zones is one of the most effective long-term mitigation actions available to local governments.</p>
<p>Community Wildfire Protection Plan</p>	<p><b>Town of Wilton</b> – Town Supervisor</p>	<p>Community Wildfire Protection Plans (CWPPs) include preventative and corrective actions to address a community’s risk of damage from wildfire. Information found in Section 18 of this Plan Update discussing the people and property at risk to wildfire will be reviewed and revised when participating jurisdictions develop a CWPP.</p>
<p>Comprehensive Plans</p>	<p> <b>Town of Ballston</b> – Town Supervisor  <b>Village of Ballston Spa</b> – Village Administrator  <b>Town of Charlton</b> – Town Supervisor  <b>Town of Clifton Park</b> – Director of Planning  <b>Town of Corinth</b> – Town Supervisor  <b>Village of Corinth</b> – Mayor  <b>Town of Day</b> – Town Supervisor  <b>Town of Galway</b> – Town Supervisor                 </p>	<p>Several participating jurisdictions within Saratoga County have a Comprehensive Land Use Plan in place. Since comprehensive plans involve developing a unified vision for a community, the mitigation vision and goals of the Plan will be reviewed in the</p>

## SECTION 24: PLAN MAINTENANCE

PLANNING MECHANISM	JURISDICTION / TITLE RESPONSIBLE	INCORPORATION OF PLAN
	<b>Village of Galway – Mayor</b> <b>Town of Greenfield – Town Supervisor</b> <b>Town of Hadley – Town Supervisor</b> <b>Town of Halfmoon – Town Supervisor</b> <b>Town of Malta – Town Supervisor</b> <b>City of Mechanicville – Mayor</b> <b>Town of Milton – Town Supervisor</b> <b>Town of Moreau – Town Supervisor</b> <b>Town of Northumberland – Town Supervisor</b> <b>Town of Providence – Town Supervisor</b> <b>Village of Round Lake – Mayor</b> <b>Town of Saratoga – Town Supervisor</b> <b>City of Saratoga Springs – Mayor</b> <b>Village of Schuylerville – Mayor</b> <b>Village of South Glens Falls – Mayor</b> <b>Town of Stillwater – Town Supervisor</b> <b>Village of Stillwater – Mayor</b> <b>Village of Victory – Mayor</b> <b>Town of Waterford – Town Supervisor</b> <b>Village of Waterford – Mayor</b> <b>Town of Wilton – Town Supervisor</b>	development or revision of a Comprehensive Plan.
Floodplain Management Plans	<b>Town of Ballston – Floodplain Administrator</b> <b>Village of Ballston Spa – Floodplain Administrator</b> <b>Town of Charlton – Floodplain Administrator</b> <b>Town of Clifton Park – Floodplain Administrator</b> <b>Town of Corinth – Floodplain Administrator</b> <b>Village of Corinth – Floodplain Administrator</b> <b>Town of Day – Floodplain Administrator</b> <b>Town of Galway – Floodplain Administrator</b> <b>Town of Hadley – Floodplain Administrator</b> <b>Town of Halfmoon – Floodplain Administrator</b> <b>Town of Malta – Floodplain Administrator</b> <b>City of Mechanicville – Floodplain Administrator</b> <b>Town of Milton – Floodplain Administrator</b> <b>Town of Moreau – Floodplain Administrator</b> <b>Town of Northumberland – Floodplain Administrator</b> <b>Town of Providence – Floodplain Administrator</b> <b>Village of Round Lake – Floodplain Administrator</b> <b>Town of Saratoga – Floodplain Administrator</b> <b>City of Saratoga Springs – Floodplain Administrator</b> <b>Village of Schuylerville – Floodplain Administrator</b> <b>Village of South Glens Falls – Floodplain Administrator</b> <b>Town of Stillwater – Floodplain Administrator</b> <b>Village of Stillwater – Floodplain Administrator</b> <b>Town of Waterford – Floodplain Administrator</b>	Floodplain management plans include preventative and corrective actions to address the flood hazard. Therefore, the actions for flooding and information found in Section 10 of this Plan Update discussing the people and property at risk to flood will be reviewed and revised when the County, Cities, Towns, and Villages within Saratoga County update their management plans or develops new plans.



## SECTION 24: PLAN MAINTENANCE

PLANNING MECHANISM	JURISDICTION / TITLE RESPONSIBLE	INCORPORATION OF PLAN
	<b>Village of Waterford</b> – Floodplain Administrator <b>Town of Wilton</b> – Floodplain Administrator	
Grant Applications	<b>Saratoga County</b> – Director of Planning <b>Town of Ballston</b> – Town Supervisor <b>Village of Ballston Spa</b> – Village Administrator <b>Town of Charlton</b> – Town Supervisor <b>Town of Clifton Park</b> – Director of Planning <b>Town of Corinth</b> – Town Supervisor <b>Village of Corinth</b> – Mayor <b>Town of Day</b> – Town Supervisor <b>Town of Edinburg</b> – Town Supervisor <b>Town of Galway</b> – Town Supervisor <b>Village of Galway</b> – Mayor <b>Town of Greenfield</b> – Town Supervisor <b>Town of Hadley</b> – Town Supervisor <b>Town of Halfmoon</b> – Town Supervisor <b>Town of Malta</b> – Town Supervisor <b>City of Mechanicville</b> – Mayor <b>Town of Milton</b> – Town Supervisor <b>Town of Moreau</b> – Town Supervisor <b>Town of Northumberland</b> – Town Supervisor <b>Town of Providence</b> – Town Supervisor <b>Village of Round Lake</b> – Mayor <b>Town of Saratoga</b> – Town Supervisor <b>City of Saratoga Springs</b> – Mayor <b>Village of Schuylerville</b> – Mayor <b>Village of South Glens Falls</b> – Mayor <b>Town of Stillwater</b> – Town Supervisor <b>Village of Stillwater</b> – Mayor <b>Village of Victory</b> – Mayor <b>Town of Waterford</b> – Town Supervisor <b>Village of Waterford</b> – Mayor <b>Town of Wilton</b> – Town Supervisor	The HMAP will be evaluated by participating jurisdictions within Saratoga County when grant funding is sought for mitigation projects. If a project is not in the Plan Update, a Plan Revision may be necessary to include the action in the Plan.
Regulatory Plans	<b>Saratoga County</b> – Director of Planning <b>Town of Ballston</b> – Town Supervisor <b>Village of Ballston Spa</b> – Village Administrator <b>Town of Charlton</b> – Town Supervisor <b>Town of Clifton Park</b> – Director of Planning <b>Town of Corinth</b> – Town Supervisor <b>Village of Corinth</b> – Mayor <b>Town of Day</b> – Town Supervisor <b>Town of Edinburg</b> – Town Supervisor <b>Town of Galway</b> – Town Supervisor <b>Village of Galway</b> – Mayor <b>Town of Greenfield</b> – Town Supervisor <b>Town of Hadley</b> – Town Supervisor	Currently, several participating jurisdictions within Saratoga County have regulatory plans in place, such as Emergency Operations Plans, Land Use Plans, and Evacuation Plans. The Plan Update will be consulted when County, City, Town, and Village departments review or revise their current regulatory planning mechanisms, or in the development of regulatory plans that are not currently in place.

## SECTION 24: PLAN MAINTENANCE

PLANNING MECHANISM	JURISDICTION / TITLE RESPONSIBLE	INCORPORATION OF PLAN
	<b>Town of Halfmoon</b> – Town Supervisor <b>Town of Malta</b> – Town Supervisor <b>City of Mechanicville</b> – Mayor <b>Town of Milton</b> – Town Supervisor <b>Town of Moreau</b> – Town Supervisor <b>Town of Northumberland</b> – Town Supervisor <b>Town of Providence</b> – Town Supervisor <b>Village of Round Lake</b> – Mayor <b>Town of Saratoga</b> – Town Supervisor <b>City of Saratoga Springs</b> – Mayor <b>Village of Schuylerville</b> – Mayor <b>Village of South Glens Falls</b> – Mayor <b>Town of Stillwater</b> – Town Supervisor <b>Village of Stillwater</b> – Mayor <b>Village of Victory</b> – Mayor <b>Town of Waterford</b> – Town Supervisor <b>Village of Waterford</b> – Mayor <b>Town of Wilton</b> – Town Supervisor	

## MONITORING AND EVALUATION

Periodic revisions of the Plan are required to ensure that goals, objectives, and mitigation actions are kept current. When the plan is discussed in these sections it includes the risk assessment and mitigation actions as a part of the monitoring, evaluating, updating and review process. Revisions may be required to ensure the Plan is in compliance with federal and state statutes and regulations. This section outlines the procedures for completing Plan revisions, updates, and review. Table 24-2 indicates the department and title of the party responsible for Plan monitoring, evaluating, updating, and review of the Plan.

**Table 24-2. Team Members Responsible for Plan Monitoring, Evaluating, Updating, and Review of the Plan**

JURISDICTION	TITLE
Saratoga County	Emergency Management Director
Town of Ballston	Town Supervisor
Village of Ballston Spa	Village Administrator
Town of Charlton	Town Supervisor
Town of Clifton Park	Director of Planning
Town of Corinth	Town Supervisor
Village of Corinth	Mayor
Town of Day	Town Supervisor
Town of Edinburg	Town Supervisor
Town of Galway	Town Supervisor

## SECTION 24: PLAN MAINTENANCE

JURISDICTION	TITLE
Village of Galway	Mayor
Town of Greenfield	Town Supervisor
Town of Hadley	Town Supervisor
Town of Halfmoon	Town Supervisor
Town of Malta	Town Supervisor
City of Mechanicville	Mayor
Town of Milton	Town Supervisor
Town of Moreau	Town Supervisor
Town of Northumberland	Town Supervisor
Town of Providence	Town Supervisor
Village of Round Lake	Mayor
Town of Saratoga	Town Supervisor
City of Saratoga Springs	Mayor
Village of Schuylerville	Mayor
Village of South Glens Falls	Mayor
Town of Stillwater	Town Supervisor
Village of Stillwater	Mayor
Village of Victory	Mayor
Town of Waterford	Town Supervisor
Village of Waterford	Mayor
Town of Wilton	Town Supervisor

### MONITORING

Designated Planning Team members are responsible for monitoring, evaluating, updating, and reviewing the Plan, as shown in Table 24-2. Individuals holding the title listed in Table 24-2 will be responsible for monitoring the Plan on an annual basis. Plan monitoring includes reviewing and incorporating into the Plan other existing planning mechanisms that relate or support goals and objectives of the Plan; monitoring the incorporation of the Plan into future updates of other existing planning mechanisms as appropriate; reviewing mitigation actions submitted and coordinating with various County, City, Town, and Village departments to determine if mitigation actions need to be re-evaluated and updated; evaluating and updating the Plan as necessary; and monitoring plan maintenance to ensure that the process described is being followed, on an annual basis, throughout the planning process. The Planning Team will develop a brief report that identifies policies and actions in the plan that have been successfully implemented and any changes in the implementation process needed for continued success. A summary of meeting notes will report the particulars involved in developing an action into a project. In addition to the

## SECTION 24: PLAN MAINTENANCE

annual monitoring, the Plan will be similarly reviewed immediately after extreme weather events include but not limited to state and federally declared disasters.

### EVALUATION

As part of the evaluation process, the Planning Team will assess changes in risk; determine whether the implementation of mitigation actions is on schedule; determine whether there are any implementation problems, such as technical, political, legal, or coordination issues; and identify changes in land development or programs that affect mitigation priorities for each respective department or organization.

The Planning Team will meet on an annual basis to evaluate the Plan and identify any needed changes and assess the effectiveness of the plan achieving its stated purpose and goals. The team will evaluate the number of mitigation actions implemented along with the loss-reduction associated with each action. Actions that have not been implemented will be evaluated to determine if any social, political, or financial barriers are impeding implementation and if any changes are necessary to improve the viability of an action. The team will evaluate changes in land development and/or programs that affect mitigation priorities in their respective jurisdictions. The annual evaluation process will help to determine if any changes are necessary. In addition, the Plan will be similarly evaluated immediately after extreme weather events including but not limited to state and federally declared disasters.

## UPDATING

### PLAN REVISIONS

At any time, minor technical changes may be made to update the Saratoga County Hazard Mitigation Action Plan Update 2025. Material changes to mitigation actions or major changes in the overall direction of the Plan or the policies contained within it, must be subject to formal adoption by the participating jurisdictions.

The participating jurisdictions within Saratoga County will review proposed revisions and vote to accept, reject, or amend the proposed change. Upon ratification, the Revision will be transmitted to DHSES.

In determining whether to recommend approval or denial of a Plan Revision request, participating jurisdictions will consider the following factors:

- Errors or omissions made in the identification of issues or needs during the preparation of the Plan Update;
- New issues or needs that were not adequately addressed in the Plan Update; and
- Changes in information, data, or assumptions from those on which the Plan Update was based.

### FIVE (5) YEAR REVIEW

The Plan will be thoroughly reviewed by the Planning Team at the end of three years from the approval date, to determine whether there have been significant changes in the planning area that necessitate changes in the types of mitigation actions proposed. Factors that may affect the content of the Plan include new development in identified hazard areas, increased exposure to hazards, disaster declarations, increase or decrease in capability to address hazards, and changes to federal or state legislation.

## SECTION 24: PLAN MAINTENANCE

The Plan review process provides the participating jurisdictions within Saratoga County an opportunity to evaluate mitigation actions that have been successful, identify losses avoided due to the implementation of specific mitigation measures, and address mitigation actions that may not have been successfully implemented as assigned.

It is recommended that the full Executive and Advisory Planning Team (Section 2, Tables 2-1 and 2-2) meet to review the Plan at the end of three years because grant funds may be necessary for the development of a five-year update. Reviewing planning grant options in advance of the five-year Plan update deadline is recommended considering the timelines for grant and planning cycles can be in excess of a year.

Following the Plan review, any revisions deemed necessary will be summarized and implemented according to the reporting procedures and Plan Revision process outlined herein. Upon completion of the review, update, and revision process the revised Plan will be submitted to DHSES for final review and approval in coordination with FEMA.

## CONTINUED PUBLIC INVOLVEMENT

Public input was an integral part of the preparation of this Plan and will continue to be essential for Plan updates. The Public will be directly involved in the annual evaluation, monitoring, reviews, and cyclical updates. Changes or suggestions to improve or update the Plan will provide opportunities for additional public input.

The public can review the Plan on the participating jurisdictions' websites, where officials and the public are invited to provide ongoing feedback, via email. A paper copy of the entire plan will be kept at the Saratoga County Sheriff's Office of Emergency Management, and paper copies of jurisdictions' annexes will be kept at their respective municipal offices.

The Planning Team may also designate voluntary citizens from the planning area or willing stakeholder members from the private sector businesses that were involved in the Plan's development to provide feedback on an annual basis. It is important that stakeholders and the immediate community maintain a vested interest in preserving the functionality of the planning area as it pertains to the overall goals of the mitigation plan. The Planning Team is responsible for notifying stakeholders and community members on an annual basis and maintaining the Plan.

Media, including local newspaper and radio stations, will be used to notify the public of any maintenance or periodic review activities during the implementation, monitoring, and evaluation phases. Additionally, local news media will be contacted to cover information regarding Plan updates, status of grant applications, and project implementation. Local and social media outlets, such as Facebook and Instagram will keep the public and stakeholders apprised of potential opportunities to fund and implement mitigation projects identified in the Plan.



**SARATOGA**  
**COUNTY** NEW YORK



APPENDIX A  
**PLANNING TEAM**

# APPENDIX A: PLANNING TEAM

Planning Team Members..... 1  
 Stakeholders ..... 5

## PLANNING TEAM MEMBERS

The Saratoga County Hazard Mitigation Plan Update 2025 was organized using a direct representative model. An Executive Planning Team from Saratoga County and participating jurisdictions, shown in Table A-1, was formed to coordinate planning efforts and request input and participation in the planning process. Table A-2 reflects the Advisory Planning Team, consisting of representatives from area organizations and departments that participated throughout the planning process. Table A-3 is comprised of stakeholders who were invited to provide Plan input. Public outreach efforts and meeting documentation is provided in Appendix E.

**Table A-1. Executive Planning Team**

ORGANIZATION / DEPARTMENT	TITLE
Saratoga County – Emergency Management	Deputy Director / Fire Coordinator
Saratoga County – Emergency Management	Director
Town of Ballston – Town Board	Town Supervisor
Village of Ballston Spa – Village Board	Mayor
Town of Charlton – Town Board	Town Supervisor
Town of Clifton Park – Planning and Zoning	Director
Town of Clifton Park – Safety and Security	Director
Town of Corinth – Town Board	Town Supervisor
Village of Corinth – Village Board	Mayor
Town of Day – Highway	Deputy Superintendent
Town of Edinburg – Highway	Superintendent
Town of Galway – Town Board	Town Supervisor
Village of Gallway – Village Board	Mayor
Town of Greenfield – Town Board	Town Supervisor
Town of Hadley – Town Board	Town Supervisor
Town of Halfmoon – Building and Code Enforcement	Code Enforcement Officer
Town of Malta – Town Board	Town Supervisor
City of Mechanicville – Mayor’s Office	Mayor
Town of Milton – Highway	Deputy Superintendent
Town of Milton – Stormwater Management	Stormwater Management Officer (SMO)
Town of Moreau – Town Board	Town Supervisor
Town of Northumberland – Building	Building Code Administrator

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ORGANIZATION / DEPARTMENT	TITLE
Town of Providence – Highway	Superintendent
Village of Round Lake – Village Board	Mayor
Town of Saratoga – Town Board	Town Supervisor
City of Saratoga Springs – Fire	Assistant Fire Chief
City of Saratoga Springs – Police	Assistant Chief
City of Saratoga Springs – Risk and Safety	Director
Village of Schuylerville – Administration	Village Clerk
Village of South Glens Falls – Village Board	Mayor
Town of Stillwater – Town Board	Town Supervisor
Village of Stillwater – Administration	Village Engineer
Village of Victory – Administration	Village Secretary
Town of Waterford – Administration	Code Enforcement Officer
Village of Waterford – Village Government	Mayor
Town of Wilton – Building	Supervising Building Inspector / Code Enforcement Officer Zoning Officer / Fire Marshall

**Table A-2. Advisory Planning Team**

ORGANIZATION / DEPARTMENT	TITLE
Saratoga County – Emergency Services	Deputy Director / EMS Coordinator
Saratoga County – Emergency Services	Specialist
Saratoga County – Government	County Supervisor – Saratoga Springs
Saratoga County – Planning	Director
Saratoga County – Planning	GIS
Saratoga County – Public Works	Commissioner
Saratoga County – Public Works	Director
Saratoga County – Sewage District	Executive Director
Saratoga County – Sheriff’s Office	Undersheriff
Saratoga County – Water Authority	Executive Director
Town of Ballston – Local Emergency Management Committee (LEPC)	Chair
Town of Ballston – Local Emergency Management Committee (LEPC)	Committee Member
Town of Ballston – Town Board	Deputy Town Supervisor / Highway Superintendent



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ORGANIZATION / DEPARTMENT	TITLE
Village of Ballston Spa – Administration	Village Administrator
Town of Charlton – Highway	Superintendent
Town of Charlton – Police and Constables	Senior Constable
Town of Charlton – Zoning and Building	Building Inspector / Code Enforcement
Town of Clifton Park – Building and Development	Director
Town of Clifton Park – Highway	Superintendent
Town of Clifton Park – Town Board	Town Supervisor
Town of Corinth – Assessor’s Office	Secretary
Town of Corinth – Building	Code Enforcement
Town of Corinth – Highway	Superintendent
Village of Corinth – Administration	Village Clerk / Treasurer
Village of Corinth – Building	Inspector
Village of Corinth – Village Board	Trustee
Town of Day – Highway	Superintendent
Town of Day – Town Board	Councilman / EMS Representative
Town of Day – Town Board	Town Supervisor
Town of Edinburg – Town Board	Town Supervisor
Town of Galway – Highway	Superintendent
Town of Greenfield – Supervisor’s Office	Confidential Secretary to the Supervisor
Town of Greenfield – Code Enforcement	Building Inspector / Zoning Administrator
Town of Greenfield – Code Enforcement	Officer
Town of Greenfield – Highway	Superintendent
Town of Hadley – Highway	Superintendent / Water District Commissioner
Town of Halfmoon – Building and Code Enforcement	Code Enforcement Officer <sup>1</sup>
Town of Halfmoon – Highway	Superintendent
Town of Halfmoon – Town Board	Town Supervisor
Town of Malta – Fire	Fire Chief
Town of Malta – Highway	Superintendent
City of Mechanicville – Building and Code Enforcement	Code Enforcement Officer

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<sup>1</sup> This is not a duplication to the Executive Planning Team. Multiple representatives from this department participated in the planning process.

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ORGANIZATION / DEPARTMENT	TITLE
Town of Milton – Comptroller's Office	Comptroller
Town of Milton – Highway	Superintendent
Town of Milton – Town Board	Town Supervisor
Town of Moreau – Building	Building, Planning and Development Coordinator
Town of Moreau – Highway	Superintendent
Town of Moreau – Supervisor's Office	Confidential Secretary to the Supervisor
Town of Northumberland – Administration	Town Supervisor
Town of Northumberland – Highway	Highway Superintendent
Town of Providence – Town Board	Town Supervisor
Village of Round Lake – Administration	Village Clerk
Village of Round Lake – Building and Code Enforcement	Building Inspector / Code Enforcement Officer
Town of Saratoga – Administration	Town Clerk
Town of Saratoga – Highway	Superintendent
City of Saratoga Springs – Accounts	Commissioner
City of Saratoga Springs – Mayor's Office	Deputy Mayor
City of Saratoga Springs – Mayor's Office	Executive Assistant
City of Saratoga Springs – Mayor's Office	Mayor
City of Saratoga Springs – Planning and Economic Development	Administrator
City of Saratoga Springs – Public Works	Deputy Commissioner
Village of Schuylerville – Village Board	Mayor
Village of South Glens Falls – Administration	Village Clerk / Treasurer
Village of South Glens Falls – Administration	Village Deputy Treasurer
Village of South Glens Falls – Public Works	Superintendent
Town of Stillwater – Building, Planning and Development	Senior Planner / Stormwater Management Officer
Town of Stillwater – Highway	Superintendent
Town of Stillwater – Police	Chief of Police
Village of Stillwater – Village Board	Mayor
Village of Victory – Village Board	Deputy Mayor / Trustee
Village of Victory – Village Board	Mayor
Village of Victory – Public Works	Provisional Working Supervisor
Town of Waterford – Supervisor's Office	Junior Accountant

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ORGANIZATION / DEPARTMENT	TITLE
Town of Waterford – Highway	Superintendent
Town of Waterford – Police	Public Safety Commissioner
Town of Waterford – Town Board	Town Supervisor
Town of Wilton – Comptroller’s Officer	Comptroller
Town of Wilton – Engineering	Director of Planning & Engineering
Town of Wilton – Highway	Superintendent
Town of Wilton – Town Board	Town Supervisor

## STAKEHOLDERS

The following groups listed in Table A-3 represent a list of organizations invited to stakeholder meetings, public meetings, and workshops throughout the planning process and include members of community groups, non-profit organizations, private businesses, universities, neighboring communities, and legislators. Members of the public were also invited to participate via email throughout the planning process. For a list of attendees at meetings, please see Appendix E<sup>2</sup>.

**Table A-3. Stakeholders**

AGENCY	TITLE	STAKEHOLDER TYPE
Albany County	Emergency Management Coordinator	Neighboring Community
Albany Medical – Saratoga	General Representative	Healthcare Agency
American Red Cross	Disaster Program Manager	Nonprofit / Community-Based Organization
American Red Cross	Regional Director	Nonprofit / Community-Based Organization
Arvin Hart Fire	Fire Chief	Community-Based Organization
Ballston Community Public Library	Director	Community-Based Organization
Ballston Lake Fire Department	Fire Chief	Community-Based Organization
Ballston Spa Central School District	Superintendent	Academia
Ballston Spa Fire Department	Fire Chief	Community-Based Organization
Ballston Spa Public Library	Director	Community-Based Organization
Burnt Hills – Ballston Lake Central School District	Superintendent	Academia
Burnt Hills Fire Department	Fire Chief	Community-Based Organization
Captain Community Human Services	Executive Director	Community-Based Organization
Capital Region Transportation Council	Director of Regional Planning	Regional Agency

<sup>2</sup> Information contained in Appendix E is exempt from public release under the Freedom of Information Act (FOIA).

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AGENCY	TITLE	STAKEHOLDER TYPE
Catholic Charities	Chief Executive Officer	Nonprofit / Community-Based Organization
Charlton Fire Department	Fire Chief	Community-Based Organization
Clifton Park – Halfmoon Fire Department	Fire Chief	Community-Based Organization
Corinth Central School District	Superintendent	Academia
Corinth Fire Department	Fire Chief	Community-Based Organization
Corinth Free Library	Director	Community-Based Organization
Corinth, Town of	HOA President	Community-Based Organization
Corinth, Town of	HOA Treasurer	Community-Based Organization
Cornell Cooperative Extension	Executive Director	Community-Based Organization
Daily Gazette	Director of Content	Community-Based Organization
Edinburg Common School	Superintendent	Academia
Edinburg Fire Department	Fire Chief	Community-Based Organization
Ellis Medicine	General Representative	Healthcare Agency
Federal Emergency Management Association (FEMA)	Mitigation Planner	Federal Agency
Four Winds Psychiatric Hospital	Administrative Assistance	Healthcare Agency
Fulton County	Director of Emergency Management	Neighboring Community
Galway Central School District	Superintendent	Academia
Galway Fire Department	Fire Chief	Community-Based Organization
Galway Public Library	Director	Community-Based Organization
Gansevoort Fire District	Fire Chief	Community-Based Organization
Greenfield Fire District	Fire Chief	Community-Based Organization
Habitat for Humanity	President	Nonprofit / Community-Based Organization
Hadley Luzerne Central School District	Superintendent	Academia
Halfmoon-Waterford Fire Department	Fire Chief	Community-Based Organization
Harmony Corners Fire Department	Fire Chief	Community-Based Organization
Hillcrest Fire	Fire Chief	Community-Based Organization
H.O.P.E Home of Orphaned Pets	President	Community-Based Organization
Jonesville Fire Department	Fire Chief	Community-Based Organization
Life Works	Executive Director	Community-Based Organization
Malta Ridge Fire	Fire Chief	Community-Based Organization

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AGENCY	TITLE	STAKEHOLDER TYPE
Malta, Town of	CERT Lead	Community-Based Organization
Mechanicville Area Community Services Center	President	Community-Based Organization
Mechanicville Central School District	Superintendent	Academia
Mechanicville District Public Library	Director	Community-Based Organization
Mechanicville Fire	Fire Chief	Community-Based Organization
Milton (Rock City Falls) Fire	Fire Chief	Community-Based Organization
Montgomery County	Director of Emergency Management	Neighboring Community
National Grid	Customer and Community Account Manager	Utility Provider
New York State (NYS) Department of Environmental Conservation	Director of Division of Forest Protection	State Agency
New York State (NYS) Department of Environmental Conservation	Director of the Division of Lands & Forests	State Agency
New York State (NYS) Department of Environmental Conservation	Director of the Division of Operations	State Agency
New York State (NYS) Department of Environmental Conservation	Director of the Office of Climate Change	State Agency
New York State (NYS) Department of Environmental Conservation	Director of Office of Indian Nation Affairs	State Agency
New York State (NYS) Department of Environmental Conservation, Region 5	Environmental Conversation Officer	State Agency
New York State (NYS) Department of Health	Capital District Representative	State Agency
New York State (NYS) Department of Homeland Security and Emergency Services (DHSES), Region III	Disaster Preparedness	State Agency
New York State (NYS) Department of Homeland Security and Emergency Services (DHSES)	Hazard Mitigation Planner (contractor)	State Agency
New York State (NYS) Department of Homeland Security and Emergency Services (DHSES)	Mitigation Planning Supervisor	State Agency
New York State (NYS) Department of Homeland Security and Emergency Services (DHSES)	Planning Manager	State Agency
New York State (NYS) Department of Homeland Security and Emergency Services (DHSES)	Planning Manager, Disaster Recovery	State Agency
New York State (NYS) Department of Homeland Security and Emergency Services (DHSES)	Planning Manager, Hazard Mitigation	State Agency

## APPENDIX A: PLANNING TEAM

AGENCY	TITLE	STAKEHOLDER TYPE
New York State (NYS) Department of Homeland Security and Emergency Services (DHSES), Region III	Regional Director	State Agency
New York State (NYS) Department of Housing and Community Renewal	Press Office Representative	State Agency
New York State (NYS) Department of Transportation, Region 1	Regional Director	State Agency
New York State (NYS) Department of Transportation, Region 1	Resident Engineer Saratoga County	State Agency
New York State (NYS) Electric and Gas (NYSEG)	Government & Community Relations Program Manager	Utility Provider
New York State (NYS) Environmental Facilities Corporation	Press Office Representative	State Agency
New York State Legislature	Executive Chamber, Governor	State Agency
New York State Legislature	Senator of the 44 <sup>th</sup> District	State Agency
New York State (NYS) Office of Parks, Recreation and Historic Preservation	Grant Administrator – Capital District	State Agency
New York State (NYS) Office of Resilient Homes and Communities – Governor’s Office of Storm Recovery	ADA Coordinator	State Agency
New York State (NYS) Office of Resilient Homes and Communities – Governor’s Office of Storm Recovery	Press Office Representative	State Agency
New York State (NYS) Office for Small Cities – Empire State Development	Regional Director – Capital District	State Agency
New York State (NYS) Rural Housing Coalition	General Representative	State Agency
NOAA	Weather Coordination Meteorologist - Albany	Federal Agency
North Rivers Family Service	Chief Executive Officer	Community-Based Organization
Northside (Peck Hose) Fire	Fire Chief	Community-Based Organization
NWS	Senior Service Hydrologist	Federal Agency
Providence Fire	Fire Chief	Community-Based Organization
Quaker Springs Fire	Fire Chief	Community-Based Organization
Rebuilding Together Saratoga	Executive Director	Community-Based Organization
Regional Foodbank of Northeast NY	Chief Operations Officer	Community-Based Organization
Rexford Fire	Fire Chief	Community-Based Organization
RISE Housing and Support Services	Executive Director	Community-Based Organization
Round Lake Fire	Fire Chief	Community-Based Organization
Round Lake Library	Librarian	Community-Based Organization

## APPENDIX A: PLANNING TEAM

AGENCY	TITLE	STAKEHOLDER TYPE
Salvation Army of Saratoga Springs	Lieutenant	Nonprofit / Community-Based Organization
Salvation Army of Saratoga Springs	Office Representative	Nonprofit / Community-Based Organization
Saratoga Chambers of Commerce	Vice President of Communications	Community-Based Organization
Saratoga Chambers of Commerce	Vice President of Office Operations	Community-Based Organization
Saratoga County Water Authority	General Representative	Utility Provider
Saratoga Housing Authority	Executive Director	Community-Based Organization
Saratoga PLAN (Preserving Land and Nature)	Executive Director	Community-Based Organization
Saratoga Springs City School District	Superintendent	Academia
Saratoga Springs Fire	Fire Chief	Community-Based Organization
Saratoga Springs Preservation Foundation	Executive Director	Community-Based Organization
Schenectady County	Director of Emergency Management	Neighboring Community
Schuylerville Central School District	Superintendent	Academia
Schuylerville Fire	Fire Chief	Community-Based Organization
Schuylerville Public Library	Librarian	Community-Based Organization
Shenendehowa Central School District	Superintendent	Academia
Skidmore College	Safety and Security Officer	Academia
South Glens Falls Fire	Fire Chief	Community-Based Organization
Stillwater Central School District	Superintendent	Academia
Stillwater Fire	Fire Chief	Community-Based Organization
Stillwater Public Library	Director	Community-Based Organization
S.U.N.Y Empire State University	Media Representative	Academia
U.S. Army Corps of Engineers	North Atlantic Regional Representative	Federal Agency
U.S. Fish & Wildlife, Region 5	Regional Director	Federal Agency
Victory Mills Fire	Fire Chief	Community-Based Organization
Vischer's Ferry Fire Department	Fire Chief	Community-Based Organization
Warren County	Director of Emergency Management	Neighboring Community
Washington County	Director of Public Safety	Neighboring Community
Waterford Fire	Fire Chief	Community-Based Organization
Waterford – Halfmoon Union Free School District	Superintendent	Academia

## APPENDIX A: PLANNING TEAM

AGENCY	TITLE	STAKEHOLDER TYPE
Waterford Public Library	Librarian	Community-Based Organization
West Charlton Fire	Fire Chief	Community-Based Organization
West Crescent Fire Department	Fire Chief	Community-Based Organization
Wilton Fire	Fire Chief	Community-Based Organization





# SARATOGA COUNTY NEW YORK

APPENDIX B  
**PUBLIC SURVEY  
RESULTS**

The background image shows two police officers in uniform on a boat. The officer in the foreground is wearing a cap and a vest with 'POLICE' written on it. The officer behind him is also wearing a vest with 'POLICE' written on it. The boat has a Raymarine HD COLOR display on the dashboard. The background shows a lake and a forested hillside with a house.

# APPENDIX B: PUBLIC SURVEY RESULTS

Overview ..... 1  
Public Survey Results..... 2

## OVERVIEW

Saratoga County prepared a public survey that requested public opinion on a wide range of questions relating to natural hazards. The survey was made available via the participating jurisdictions’ websites. This survey link was also distributed at public meetings and stakeholder events throughout the planning process.

A total of 69 surveys were collected, the results of which are analyzed in Appendix B. The purpose of the survey was twofold: 1) to solicit public input during the planning process, and 2) to help the jurisdictions identify any potential actions or problem areas.

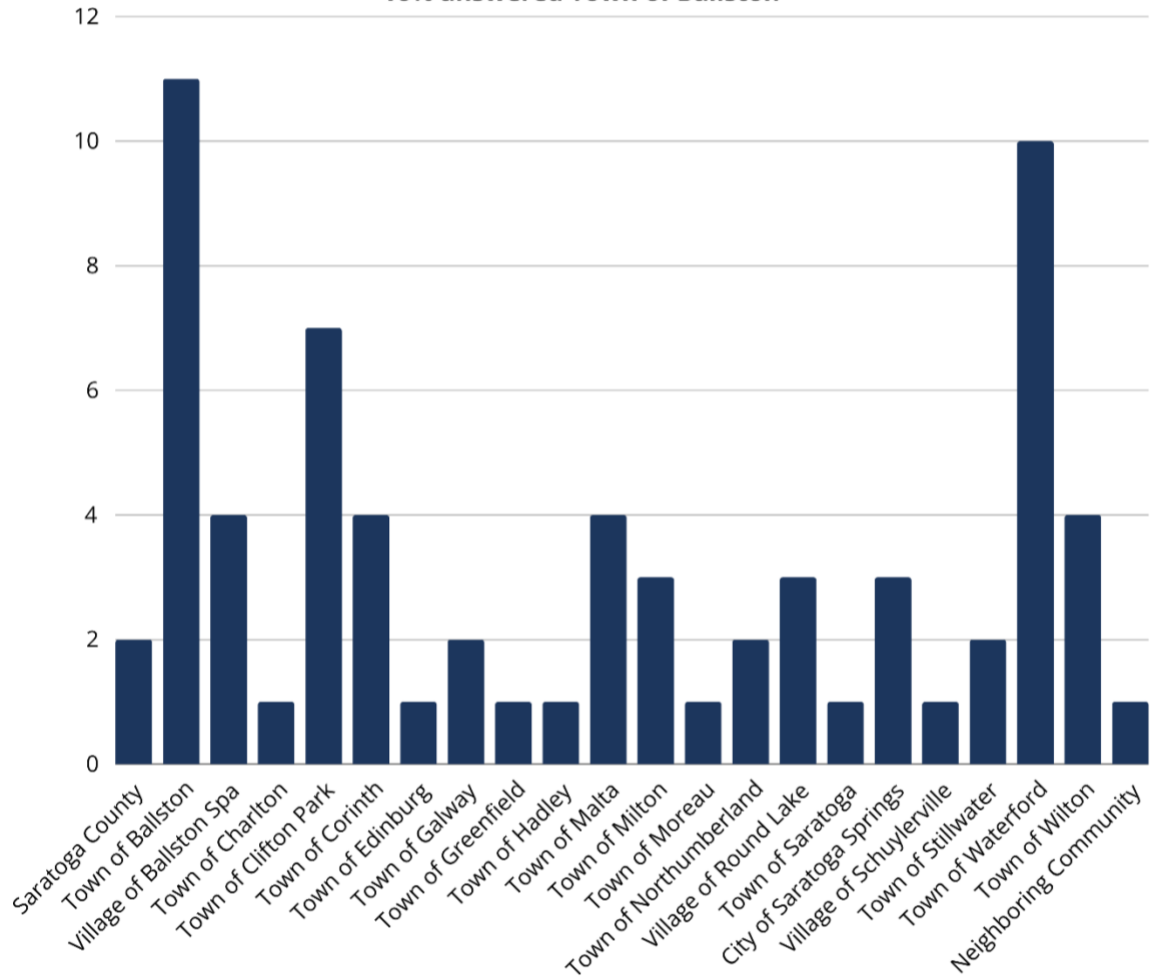
All public survey results were discussed and shared with the Planning Team during the Mitigation Strategy Workshop. These results are also provided below. The survey results provide information regarding the public’s experience with natural hazards, their perceived hazards of concern, recommended mitigation actions, and additional valuable insights. Overall, this survey enhances the mitigation planning process by ensuring the plan properly represents the community, is informed through local knowledge, and by promoting equity.

# APPENDIX B: PUBLIC SURVEY RESULTS

## PUBLIC SURVEY RESULTS

### 69 TOTAL RESPONSES

16% answered Town of Ballston



## APPENDIX B: PUBLIC SURVEY RESULTS

### Have you ever experienced or been impacted by a disaster?



**41%**  
**Responded**  
**'Yes'**

#### Personal experiences shared in survey responses included:

"High flood waters from the Hudson. Several ice storms with extended power outages."

"I had family who lost their home during the tornado in Mechanicville, as well as working in both Hurricane Sandy and Irene."

"Drainage pipe on the side of our house to the woods was crushed for years before it was fixed. Only after we had trees behind our house fall, making the ground unstable."

"Winter storms in April, straight line wind damage, spongy moth, invasive vines strangling trees."

"Hurricane Irene / Lee, Herkimer floods, Hurricane Sandy."

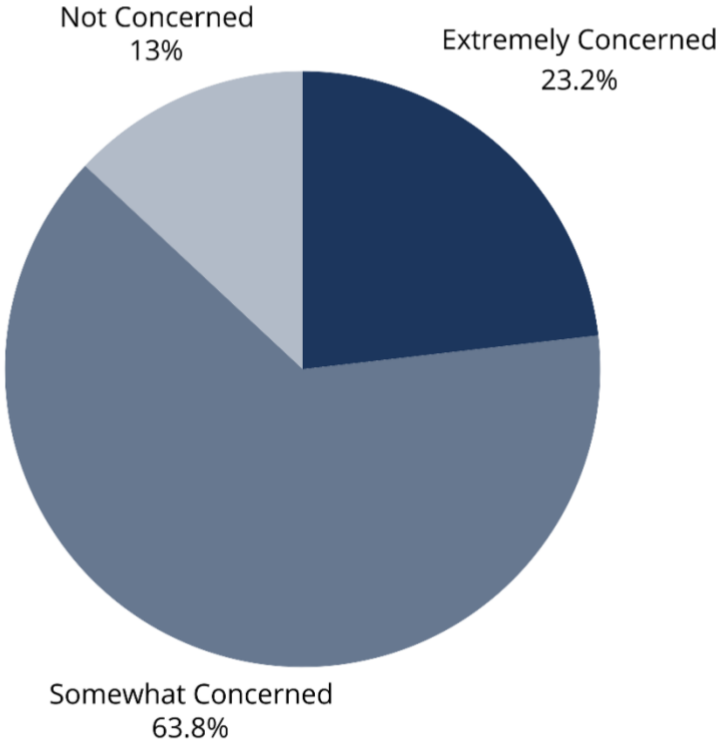
"Heavy flooding on Tennantville Road and Shields Road."

**32% of those who have been impacted by a disaster mentioned flooding and wind in their explanations.**



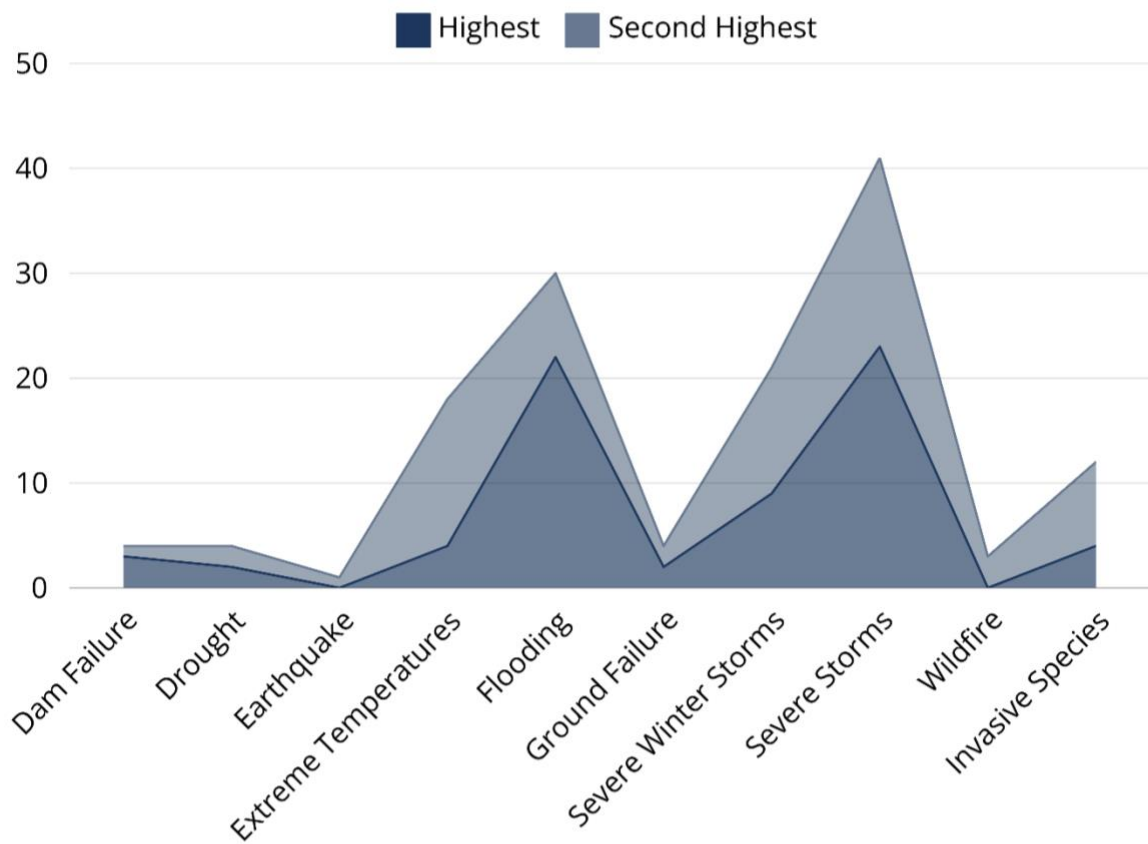
APPENDIX B: PUBLIC SURVEY RESULTS

**Concern level for the possibility of their community being impacted by a disaster.**



## APPENDIX B: PUBLIC SURVEY RESULTS

**With the consideration of frequency of occurrence and potential impact severity, please select the one hazard you think is the highest and second highest threat to your neighborhood:**



**Is there another hazard not listed above that you think is a wide-scale threat to your neighborhood?**



Cyber Security



Hazardous Materials



Air Quality



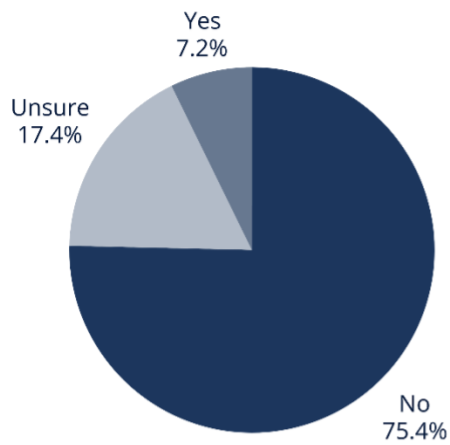
Water Contamination



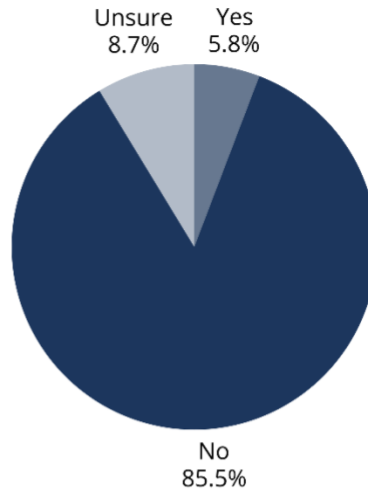
Train Derailment

## APPENDIX B: PUBLIC SURVEY RESULTS

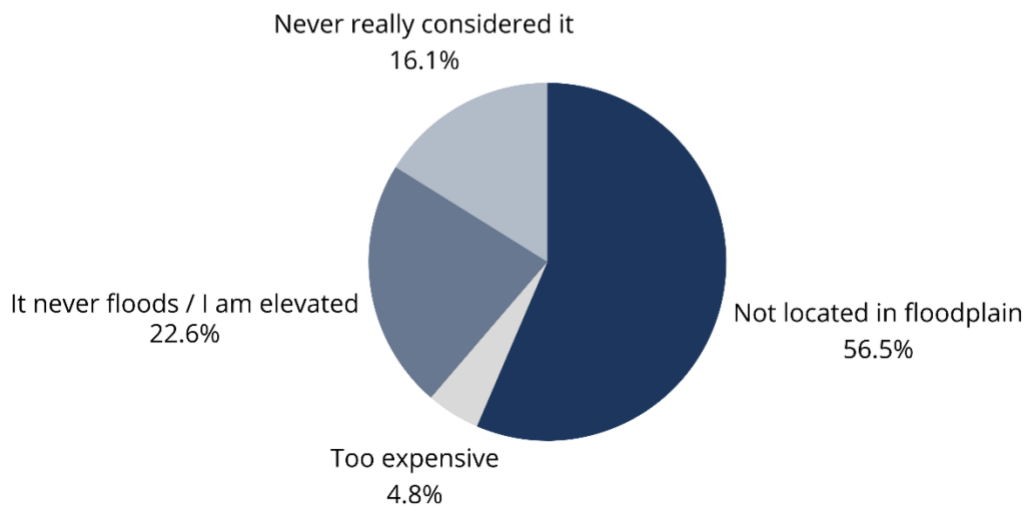
**Is your home located in a floodplain?**



**Do you have flood insurance?**



**If you do not have flood insurance, why not?**



## APPENDIX B: PUBLIC SURVEY RESULTS

### Have you taken any actions to make your home or neighborhood more resistant to hazards?



**42%**  
**Responded**  
**'Yes'**

**34% of those who have taken action through tree removal/fuel reduction**



**70% of survey responders are interested in making their homes or neighborhoods more resistant to hazards.**



#### **Actions taken included:**

"Designed landscape berms and ground plantings to prevent surface water flash flooding."

"Pea stone border around house. Connected to sewer. Installed solar panels. Plant vegetable garden."

"I lead the Emergency Management Service in my community."

"We have an emergency kit readily available. Not just first aid supplies."

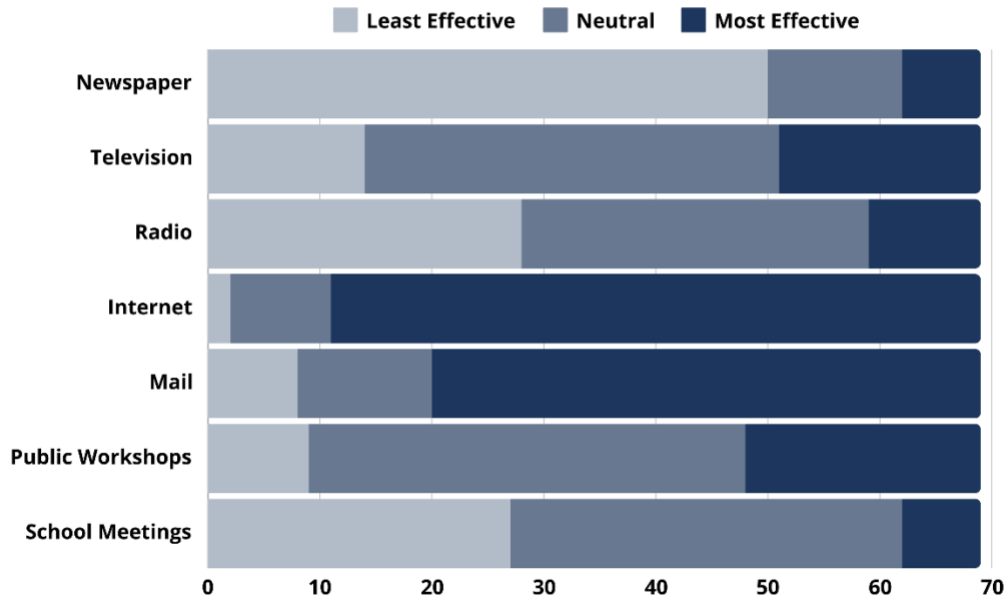
"Back up generator and new roof with six feet of ice and water barrier from the roof edge line. Down gutters on home."

"Making sure tree limbs are trimmed away from power lines."

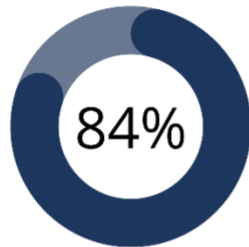


# APPENDIX B: PUBLIC SURVEY RESULTS

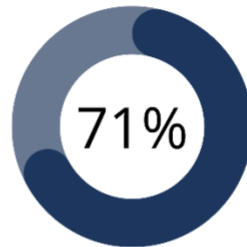
**What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?**



**Effectiveness of communication methods for receiving information about how to make your home and neighborhood more resistant to hazards**



Internet



Mail

**Additional communication methods recommended:**



Texts / Alerts



Email



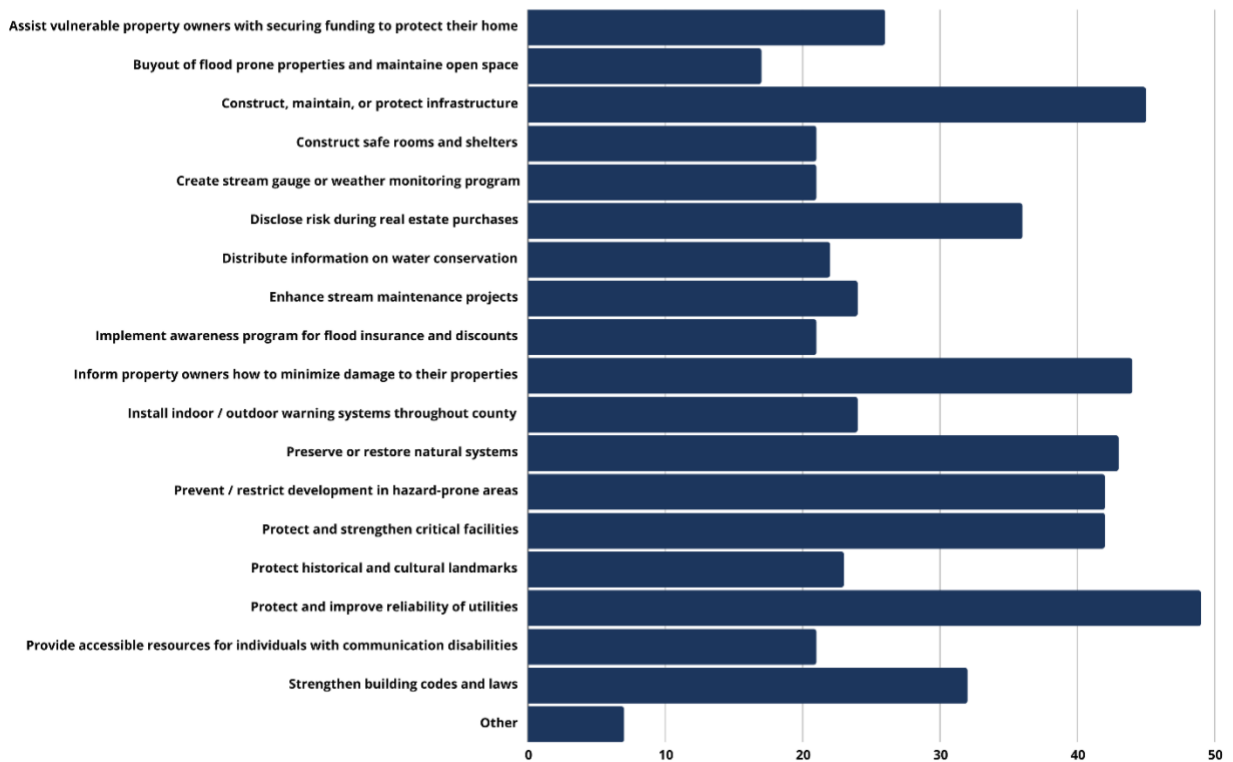
Door Flyers



Social Media

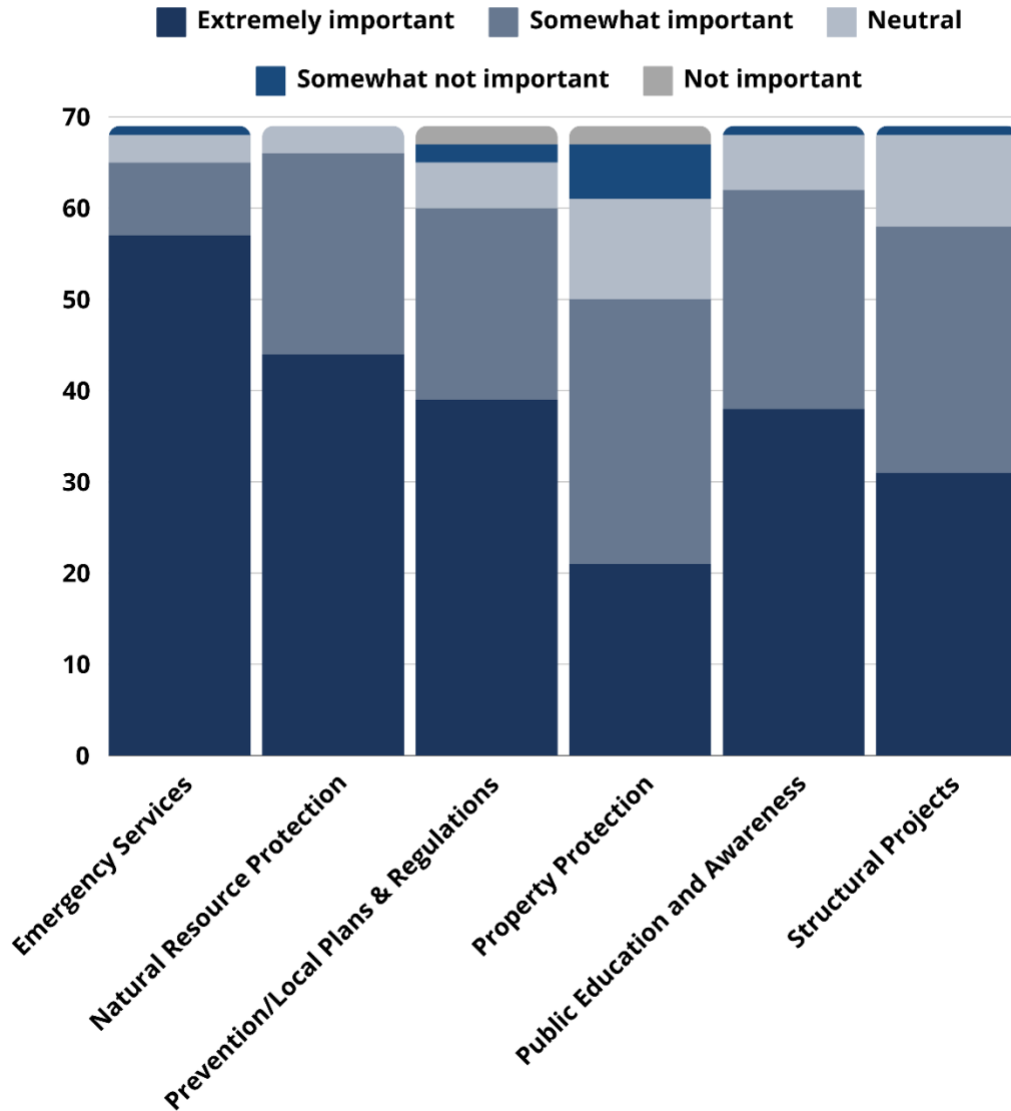
## APPENDIX B: PUBLIC SURVEY RESULTS

**In your opinion, please select steps your local government should prioritize to reduce or eliminate the risk of future hazard damages in your neighborhood.**



## APPENDIX B: PUBLIC SURVEY RESULTS

**A number of community-wide activities can reduce our risk from hazards. In general, these activities fall into one of the following six broad categories. Please tell us how important you think each one is for your community to consider pursuing.**



**Emergency Services** - Actions that protect people and property during and immediately after a hazard event. Examples include warning systems, evacuation planning, emergency response training, and protection of critical facilities or systems.

**Natural Resource Protection** - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. Examples include floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.

**Prevention / Local Plans & Regulations** - Administrative or regulatory actions that influence the way land is developed and buildings are built. Examples include planning and zoning, building codes, open space preservation, and floodplain regulations.

## APPENDIX B: PUBLIC SURVEY RESULTS

**Property Protection** - Actions that involve the modification of existing buildings to protect them from a hazard or removal from the hazard area. Examples include acquisition, relocation, elevation, structural retrofits, and storm shutters.

**Public Education and Awareness** - Actions to inform citizens about hazards and techniques they can use to protect themselves and their property. Examples include outreach projects, school education programs, library materials, and demonstration events.

**Structural Projects** - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard. Examples include dams, levees, seawalls detention / retention basins, channel modification, retaining walls, and storm sewers.



**SARATOGA**  
**COUNTY** NEW YORK

SARATOGA COUNTY

PAUL E. LENT  
PUBLIC SAFETY



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APPENDIX C

**CRITICAL FACILITIES**

## APPENDIX C: CRITICAL FACILITIES

Appendix C is For **Official Use Only (FOUO)** and may be exempt from public release under the Freedom of Information Act (FOIA).



**SARATOGA**  
**COUNTY** NEW  
YORK

APPENDIX D  
**DAM LOCATIONS**

## APPENDIX D: DAM LOCATIONS

Appendix D is **For Official Use Only (FOUO)** and may be exempt from public release under the Freedom of Information Act (FOIA).





**SARATOGA**  
**COUNTY** NEW  
YORK

APPENDIX E  
**MEETING**  
**DOCUMENTATION**

## APPENDIX E: MEETING DOCUMENTATION

Appendix E is **For Official Use Only (FOUO)** and may be exempt from public release under the Freedom of Information Act (FOIA).



**SARATOGA**  
**COUNTY** NEW YORK

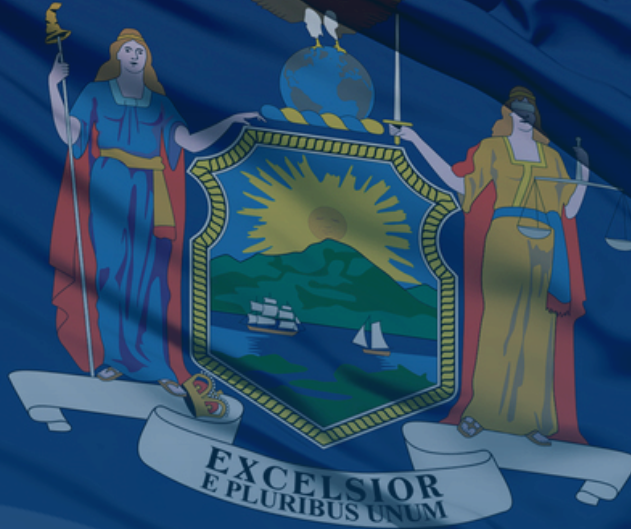
APPENDIX F  
**CAPABILITY**  
**ASSESSMENT**

## APPENDIX F: CAPABILITY ASSESSMENT

Appendix F is **For Official Use Only (FOUO)** and may be exempt from public release under the Freedom of Information Act (FOIA).



**SARATOGA**  
**COUNTY** NEW YORK



APPENDIX G  
**STATE AND  
FEDERAL FUNDING  
OPPORTUNITIES**

# APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

Overview ..... 1

## OVERVIEW

New York State utilizes state funds to improve statewide hazard mitigation capabilities and advance their hazard mitigation goals to help identify, understand, and manage various risks associated with natural hazards. State funds also provide funding for state facility and infrastructure upgrades, hazard mapping, mitigation planning, and other mitigation programmatic activities. Table G-1 describes varied loan and grant programs offered by state agencies for which mitigation activities may be eligible.

**Table G-1. Summary of State Funded Mitigation Programs**

AGENCY	FUNDING PROGRAM
DEC	<ul style="list-style-type: none"> <li>• Clean Water Act Section 604(b)</li> <li>• Hudson River Estuary Program Grants</li> <li>• Urban &amp; Community Forestry Program Costs Share Grants</li> <li>• Wastewater Infrastructure Engineering Planning Grant</li> <li>• Water Quality Improvement (WQIP) Program</li> </ul>
DHSES	<ul style="list-style-type: none"> <li>• Emergency Management Performance Grant Program (EMPG)</li> <li>• Fire Prevention and Control – Recruitment and Retention Grant Program</li> <li>• Hazard Mitigation Grant Program</li> <li>• Hazard Mitigation Revolving Local Fund (HM RLF)</li> <li>• Hazardous Materials Emergency Preparedness (HMEP) Grant Program</li> </ul>
EFC	<ul style="list-style-type: none"> <li>• Green Innovation Grant Program</li> </ul>
NYS DOS	<ul style="list-style-type: none"> <li>• Local Waterfront Revitalization Program Grants</li> </ul>
NYSDOT	<ul style="list-style-type: none"> <li>• Emergency Relief Program</li> </ul>
HCR	<ul style="list-style-type: none"> <li>• Community Development Block Grant (CDBG)</li> </ul>
OCR	<ul style="list-style-type: none"> <li>• Community Development Block Grant for Rural New York</li> </ul>

In addition to State funded programs, many local jurisdictions benefit from federal mitigation funding opportunities. FEMA’S Hazard Mitigation Assistance is a primary source for the implementation of mitigation projects throughout the Nation. Table G-2 described additional Federal, State, Local, and Non-Profit mitigation funding sources specifically within the State of Texas.

## APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

**Table G-2. Federal, State, Local and Non-Profit Mitigation Funding Sources in Texas**

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Agricultural Conservation Easement Program (ACEP)	Federal	NRCS	DEC	Provides financial and technical assistance to help conserve agricultural lands and wetlands and their related benefits.
Agricultural Management Assistance (AMA)	Federal	USDA, NRCS	DEC	Provides financial and technical assistance to agricultural producers to voluntarily address issues such as water management, water quality, and erosion control by incorporating conservation methods into their farming operations.
Agricultural Water Enhancement Program (AWEP)	Federal	USDA, NRCS	NYSDAM	Voluntary conservation initiative that provides financial and technical assistance to agricultural producers to implement water enhancement activities on agricultural land to conserve surface and ground water and improve water quality.
AmeriCorps	Federal	Corporation for National & Community Service	Commission on National and Community Service	Provides funding for volunteers to serve communities, including disaster prevention. AmeriCorps/Vista has assisted local communities with wildfire mitigation projects.
American Recovery and Reinvestment Act (ARRA)	Federal	EPA	DOH/EFC	Provided significant funding for states to finance high priority water infrastructure projects through a \$2 billion appropriation to the DWSRF (see below) program and a \$4 billion appropriation to the CWSRF program.
Aquatic Ecosystem Restoration	Federal	DOD-USACE		Direct Support for carrying out aquatic ecosystem restoration project that will improve the equality of the environment.
Assistance to Firefighters Program - Fire Prevention & Safety (FP&S) Grants	Federal	FEMA		The grant program contains the Assistance to Firefighters Grants (AFG), Fire Prevention & Safety (FP&S), and Staffing for Adequate Fire and Emergency Response (AFER).
Beneficial Uses of Dredged Materials	Federal	DOD-USACE		Direct Assistance for projects that protect, restore, and create aquatic and ecologically related habitats, including wetlands, in connection with dredging and authorized Federal navigation project
Bridges Replacement and Rehabilitation	Federal	US DOT Federal Highway Administration FHWA		Funding for eligible bridges on any public road that require replacement or rehabilitation.

## APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Building Resilient Infrastructure & Communities (BRIC)	Federal	FEMA	DHSES	Pre-disaster/annual cycle addressing all natural hazards, emphasis on infrastructure & lifelines.
Carbon Reduction Program (CRP)	Federal	USDOT		Designed to fund projects that are designed to reduce transportation emissions (CO2). Will fund a wide range of projects designed to reduce carbon dioxide emissions from on-road highway sources.
Center for Integration of Natural Disaster Information	Federal	DOI/USGS, The Center for Integration of Natural Hazards Research		Technical Assistance: Develops and evaluates technology for information integration and dissemination.
Chesapeake Bay Stewardship Fund	Federal	NFWF	DEC	Grants to restore the habitats and water quality of the Chesapeake Bay watershed.
Clean School Bus Program	Federal	EPA		Replace existing school buses with zero-emission and low-emission models.
Clean Water Act Section 319 Grants	Federal	EPA	DEC	Grants to State to implement non-point source programs, including support for non-structural watershed resource restoration activities.
Clean Water Act Section 604(b)	State	DEC	DEC	Provides funding for to regional planning organizations for planning activities
Clean Water State Revolving Fund	Federal	EPA	DEC	Providing Loans at actual or below-market interest rates to help build, repair, relocate, or replace wastewater treatment plants.
Coastal and Estuarine Land Conservation Program (CELCP)	Federal	NOAA	DEC	New York has an approved plan which qualifies the State to receive federal funding under this program. Priority is given to lands which can be effectively managed and protected and that have significant ecological value.
Coastal Management Program (CMP)	Federal	NOAA	DOS	The Coastal Management Program (CMP) provides a framework for federal and State agency decision-making which affects the coastal area. Policies promote the beneficial use of coastal resources and prevention of their impairment, and management of major activities substantially affecting coastal resources.
Coastal Zone Management Program	Federal	DOC/NOAA		Grants for planning and implementation of non-structural coastal flood and hurricane hazard mitigation projects and coastal wetlands restoration.
Community Assistance Program (CAP)	Federal	FEMA, NFIP	DEC	Product-oriented financial assistance program directly related to the flood loss reduction objectives of the NFIP.



## APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Community Development Block Grant (CDBG) State Administered Program	Federal	HUD	OCR	Grants to States to develop viable communities (e.g., housing, a suitable living environment, expanded economic opportunities) in non-entitled areas, for low- and moderate-income persons.
Community Development Block Grant – Disaster Recovery (CDBG-DR)	Federal	HUD		Grants to fund recovery in cities, counties and State after a Presidential Declaration.
Community Development Block Grant – Entitlement Communities Program	Federal	HUD		Grants to entitled cities and urban counties to develop viable communities (e.g., decent housing, a suitable living environment, expanded economic opportunities), principally for low- and moderate-income persons.
Community Fire Protection Program	Federal	USDA	OFPC	Mitigation delivered via USDA Forest Service and Private Forestry Coop Fire Program.
Community Rating System	Federal	FEMA		Voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. CRS not only assist communities in reducing flood risks, but also enhances public safety, reduces damages to property and public infrastructure, avoids economic disruption and losses, reduces human suffering, and protects the environment. Technical assistance on designing and implementing some activities is available at no charge. Participating in the CRS provides an incentive to maintaining and improvement a community’s floodplain management program over the years. Implementing some CRS activities can help project qualify for certain other Federal assistance funds.
Community Wildfire Defense Grant	Federal	USFS	DEC	Offers financial assistance to at-risk local communities with planning for and mitigating against the risk of catastrophic wildfire. This program is authorized in Public Law 117-58, the Infrastructure Investment and Jobs Act. Two primary objectives: The development and revision of Community Wildfire Protection Plans (CWPP), and the implementation of projects described in a CWPP that is less than ten years old. Prioritizes at-risk communities that are in an area identified as having high or very high wildfire hazard potential, are low-income, and/or have been impacted by a severe disaster. No minimum federal funding limit for projects.

## APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Conservation Contracts	Federal	USDA-FSA		Debt reduction for delinquent and non-delinquent borrowers in exchange for Conservation contracts placed on environmentally sensitive real property that secures FSA Loans.
Conservation Innovation Grants (CIG)	Federal	USDA, NRCS		Voluntary program intended to stimulate the development and adoption of innovative conservation approaches and technologies while leveraging federal investment in environmental enhancement and protection, in conjunction with agricultural production.
Conservation Technical Assistance (CTA) Program	Federal	USDA-NRCS		Technical assistance for run-off retardation and soil erosion prevention to reduce hazards to life and property.
Decision, Risk, and Management Science Program	Federal	NSF		Funding for research and related educational activities on risk, perception, communication, and management (primarily technological hazards).
Delaware River Restoration Fund	Federal	NFWF	DEC	Funding to improve water quality and habitat in the Delaware River watershed.
Disaster Mitigation Planning and Technical Assistance	Federal	DOC, EDA		Technical and planning assistance grants for capability building and mitigation project activities focusing on creating disaster resistant jobs and workplaces.
Division of Homeland Security Financial Assistance	Federal	US Department of Homeland Security		Supports a wide variety of funding and financial assistance programs that support preparedness, resilience, and post-disaster relief.
Drinking Water State Revolving Fund (DWSRF)	Federal	EPA	DOH	Makes funds available to drinking water systems to finance infrastructure improvements. The program also emphasizes providing funds to small and disadvantaged communities and to programs that encourage pollution prevention as a tool for ensuring safe drinking water.
Economic Development Administration Grants and Investments	Federal	U.S. DOC, EDA	ESD	Invests and provides grants for community construction projects, including mitigation activities.
Emergency Community Water Assistance Grants	Federal	USDA		\$150,000 to \$500,000 available to rural communities with populations over 10,000 people with a median household income less than \$65,900. Provides assistance to communities who have experienced a decline in quantity or quality of drinking water as a result of an emergency including drought.

## APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Emergency Management/ Mitigation Training	Federal	FEMA		Training in disaster mitigation, preparedness, planning
Emergency Management Institute	Federal	FEMA		Training education programs to prepare emergency management professionals to prepare for, respond to, and recover from disasters and emergency.
Emergency Management Performance Grant (EMPG)	Federal	FEMA	DHSES	The EMPG program provides a yearly allocation of funding to support state and local emergency management programs. This has included providing some funding for local mitigation plans, mitigation-oriented studies, and related activities.
Emergency Relief (ER) Program	Federal	US DOT - FHWA	NYDOT	Provides funds for roads and bridges on Federal-aid highways that are damaged as a direct result of a natural disaster or catastrophic failure from an external cause.
Emergency Watershed Protection Program (EWP)	Federal	USDA, NRCS		Provides technical and financial assistance for relief from imminent hazards in small watersheds, and to reduce vulnerability of life and property in small watershed areas damaged by severe natural hazard events.
Environmental Justice Government-to-Government Program (EJG2G)	Federal	EPA		Provides funding to support government activities that lead to measurable environmental or public health impacts in communities disproportionately burdened by environmental harms.
Environmental Justice Collaborative Problem Solving Program	Federal	EPA		Provides funding directly to community-based organizations to address environmental injustices.
Environmental Quality Incentives Program (EQUIP)	Federal	USDA, NRCS	DEC	Voluntary conservation program for farmers that provides technical, educational, and limited financial assistance to encourage environmental enhancement.
Farm Ownership Loans	Federal	USDA-FSA		Direct loans, guaranteed / insured loans, and technical assistance to farmers so that they may develop, construct, improve, or repair farm homes, farms, and service buildings, and to make other necessary improvements.
Federal Land Transfer/ Federal Land to Parks Program	Federal	DOI-NPS		Identifies, assesses, and transfers available Federal real property for acquisition for State and local parks and recreation, such as open space.

## APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Fire Management Assistance Grants (FMAG)	Federal	FEMA	DHSES	Provides fire suppression support to states when loss of life and property are imminent. Wildfire mitigation is also eligible under emergency protection if life is in imminent danger.
Fire Prevention and Control – Recruitment and Retention Grant Program	State	DHSES	DHSES	Grant program to support the recruitment and retention of volunteer firefighters and emergency services personnel by promoting the development of, or supporting existing, regional recruitment and retention efforts. The program's primary objectives are to support organizational leadership development through education and training and to develop and implement recruitment and retention programs and materials.
Fire Prevention and Safety Grant Program	Federal	US Fire Administration		Grants to support projects that enhance the safety of the public and firefighters from fire and related hazards. The primary goal is to target high-risk populations and reduce injury and prevent death.
Flood Mitigation Assistance (FMA) Program	Federal	FEMA	DHSES	Grants to States and communities for pre-disaster mitigation to help reduce or eliminate the long-term risk of flood damage to structures insurable under the National Flood Insurance Program.
Floodplain Management Services	Federal	DOD-USACE		Technical and planning assistance at the local, regional, or national level needed to support effective floodplain management.
Forest Land Enhancement Program	Federal	USDA, NRCS	DEC	Provides educational, technical, and financial assistance to help landowners implement sustainable forestry management objectives.
Forest Legacy Program	Federal	USFS	DEC	Program providing funding to protect private forest lands that are environmentally, economically, and socially critical. This program reduces development in the wildland-urban interface.
Great Lakes Shoreline Cities Green Infrastructure Grants	Federal	EPA	DEC	Funding to improve urban water quality through activities that also support community revitalization and other local priorities.
Great Lakes Restoration Initiative	Federal	DPS/USFS	DEC	Green infrastructure projects that improve habitat and other ecosystem functions in the Great Lakes are eligible for funding.
Green Innovation Grant Program	State	NYEFC	NYEFC	Supports projects that utilize unique stormwater infrastructure design and create cutting-edge green technologies. Funding for eight specific green infrastructure projects.

## APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Greenhouse Gas Reduction Fund (GGRF)	Federal	EPA		This program is a \$27-billion investment to mobilize financing and private capital to combat crisis and deliver lower energy costs to communities, particularly communities that have been historically left behind. This includes National Clean Investment Fund: \$14 billion competition will fund 2-3 nonprofits with private capital provides. Clean Communities Investment Accelerator: \$6 billion competition will fund 2-7 hub non-profits with plans and capabilities to rapidly build the clean financing capability of specific networks. Solar for All: \$7 billion will provide up to 60 grants.
Grid Resilience Program (GRIP)	Federal	DOE		Enhance grid flexibility and improve the resilience of the nation's power grid against threats of extreme weather and climate change.
Hazard Mitigation Grant Program (HMGP)	Federal	FEMA	DHSES	Grants to States and communities for implementing long-term hazard mitigation measures following a major disaster declaration. Post-disaster multi-hazard mitigation funding for federally declared disasters. HMGP Post Fire funds are available for FMAG declarations.
Hazard Mitigation Revolving Loan Fund (HM RLF)	State	DHSES	DHSES	The revolving loan funds provide hazard mitigation assistance for local governments to reduce risk from natural hazards and disasters. DHSES has established priorities for this program.
Hazardous Materials Emergency Preparedness (HMEP) Grant Program	State	DHSES	DHSES/ USDOT	Grant funding available to help facilitate preparedness in transporting hazardous materials. The program recognizes Local Emergency Planning Committees (LEPCs) as applicants to maximize funding impact in regional partnerships.
Healthy Forests Reserve Program (HFRP)	Federal	NRCS	DEC	Assist landowners, on a voluntary basis, in restoring, enhancing and protecting forestland resources on private lands through easements.
High Hazard Potential Dam Rehabilitation Program (HHPDR)	Federal	FEMA	DEC	Provides assistance for technical, planning, design and other pre-construction activities related to the repair, replacement, reconstruction, or removal activities associated with rehabilitation of an eligible high hazard potential dam.
Highway Bridge Replacement and Rehabilitation Program	Federal	FHWA	NYDOT	Provides funding to enable states to improve the condition of highway bridges through replacement, rehabilitation and systematic preventive maintenance. Also includes the National Historic Covered Bridge Preservation Program.

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HOME Disaster Relief	Federal	HUD	DHSES	The New York HOME Disaster Relief Program is a long-term housing program designed to help eligible organizations serve income eligible households impacted by disasters. Funds are available to assist with federal or state declared disasters, or other natural or man-made disasters that may occur. The Department's practice is to maintain a HOME Disaster Relief Fund balance of \$1 million whenever possible. These funds can be accessed to support impacted households not located in communities that receive HOME funds directly from the U.S. Department of Housing and Urban Development (HUD).
HOME Investments Partnership Program	Federal	HUD		Grants to States, local government and consortia for permanent and transitional housing (including support for property acquisition and rehabilitation) for low-income persons.
Homeland Security Grant Program (HSGP)	Federal	Department of Homeland Security	DHSES	Homeland security activities identified in the state and local strategic plans. Funding supports threat & hazard and risk identification for natural, technological, and human-caused hazards. Some prevention activities may be considered mitigation.
Hospital Preparedness Program (HPP) Cooperative Agreement	Federal	HHS	NYDOH	HPP is the primary source of federal funding for health care system preparedness and response and, in collaboration with public health, prepares health care delivery systems to save lives through the development of health care coalitions (HCCs). Under the direction of the HPP providers, the HCCs develop plans and provide training, and coordinate regional exercises.
Hudson River Estuary Program Grants	State	DEC	DEC	Implement priorities outlined in the Hudson River Estuary Action Agenda aimed at: conserving or improving clean water; fish, wildlife and their habitats; waterway access; community resiliency; and river scenery.
Hydrologic Research Grants	Federal	NOAA		Up to \$125,000 to conduct joint research and development on pressing surface water hydrology issues common to national, regional, local operational offices. Eligible applicants are federally recognized agencies of state or local governments, quasi-public institutions such as water supply or power companies, hydrologic consultants and companies involved in using and developing hydrologic forecasts.
Indian Housing Assistance (Housing Improvement Program)	Federal	DOI-BIA		Project grants and technical assistance to substantially eliminate sub-standard Indian housing.

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Individual Assistance (IA)	Federal	FEMA	DHSES	Following a disaster, funds can be used to mitigate hazards when repairing individual and family homes.
In-Lieu Fee Program Mitigation Projects	Federal	USACE	Community Applicants	Restoration, establishment, enhancement, and/or preservation of aquatic resources through funds paid to a governmental or non-profit natural resources management entity to satisfy compensatory mitigation requirements for Department of the Army permits.
Land Acquisition	Federal	DOI-FWS		Acquires or purchases easements on high quality lands and waters for inclusion into the National Wildlife Refuge System.
Landowner Incentive Program	Federal	USFWS	DEC	A unique partnership between the DEC and private landowners to protect the habitat of at-risk species on private lands. Landowner involvement is entirely voluntary.
Local Waterfront Revitalization Program Grants	State	Dept of State	DOS	Matching grants to revitalize communities and waterfronts. Funded project may include green infrastructure projects.
Long Island Sound Futures Fund	Federal	NFWF	DEC	Supports projects in local communities to protect and restore the Long Island Sound. Green infrastructure has been a funding priority in previous RFPs.
Mapping Standards Support	Federal	DOI=USGS		Expertise in mapping and digital data standards to support the National Flood Insurance Program.
Mitigation Banks	Federal	USACE	Community Applicants	Mitigation Banks are sites approved by the Corps to sell compensatory mitigation credits for projects resulting in unavoidable impacts to waters of the U.S. When a permit is issued that requires compensatory mitigation, the permit will specify how many credits are required to be purchased at an approved mitigation bank.
National Earthquake Hazards Reduction Program (NEHRP)	Federal	FEMA		Provides money to support enhanced earthquake risk assessments in local hazard mitigation plans and other earthquake hazard mitigation and preparedness activities.
National Coastal Resiliency Fund (NCRF)	Federal	NFWF		Restore, increase, and strengthen natural infrastructure to protect coastal communities while enhancing habitats for fish and wildlife. Project categories include Community Capability Building & Planning, Site Assessment & Preliminary Design, Final Design and Permitting, and Implementation.
National Dam Safety Program	Federal	FEMA		Technical assistance, training, and grants to help improve State dam safety programs.

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National Digital Orthophoto Program	Federal	DOI-USGS		Develops topographic quadrangles for use in mapping of flood and other hazards.
National Earthquake Hazard Reduction Program (NEHRP) in Earth Sciences	Federal	NSF		Research into basic and applied earth and building sciences.
National Earthquake Hazards Reduction Program	Federal	FEMA; DOI-USGS		Training, planning and technical assistance under grants to States or local jurisdictions.
National Earthquake Hazard Reduction Program	Federal	DOI-USGS		Seismic mapping for U.S.
National Flood Insurance Program	Federal	FEMA		Formula grants to States to assist communities to comply with NFIP floodplain management requirements (Community Assistance Program).
National Flood Insurance Program: Flood Mapping	Federal	FEMA		Flood insurance rate maps and flood plain management maps for all NFIP communities;
National Flood Insurance Program: Technical Mapping Advisory Council	Federal	DOI-USGS		Technical guidance and advice to coordinate FEMA's map modernization efforts for the National Flood Insurance Program.
National Training and Education (NTE)	Federal	FEMA		Educational and training programs through the National Training and Education (NTE) online Course Catalog, which provides searchable, integrated information on courses provided or managed by FEMA's Center for Domestic Preparedness (CDP), Emergency Management Institute (EMI), and National Training and Education Division (NTED).
National Weather Service (NWS)	Federal	NOAA - NWS		NWS offers storm spotter training, along with weather and flooding safety guides. They can also sometimes provide funding to support severe weather signage in parks or other public places.



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NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
National Wildlife Wetland Refuge System	Federal	USFWS	DEC	Provides funding for the acquisition of lands into the federal wildlife refuge system.
Non-Structural Alternatives to Structural Rehabilitation of Damaged Flood Control Works	Federal	DOD-USACT		Direct planning and construction grants for non- structural alternatives to the structural rehabilitation of flood control works damaged in floods or coastal storms. \$9 million FY99
North American Wetland Conservation Fund	Federal	USFWS	DEC	Provides funding for wetland conservation projects. Cost-share grants to stimulate public/private partnerships for the protection, restoration and management of wetland habitats.
NRCS Conservation Programs	Federal	USDA, NRCS	Community Applicants	Provides funding through a number of programs for the conservation of natural resources.
Office of Disaster Assistance	Federal	SBA		Provides financial assistance through low interest disaster loans to businesses of all sizes, private non-profit organizations, homeowners, and renters to repair or replace real estate, personal property, machinery & equipment, inventory and business assets that have been damaged or destroyed in a declared disaster.
Partners for Fish and Wildlife	Federal	USFWS	DEC	Provides financial and technical assistance to landowners for wetland restoration projects in “Focus Areas” of the state.
Physical Disaster Loans and Economic Injury Disaster Loans	Federal	SBA		Disaster loans to non-farm, private sector owners of disaster damaged property for uninsured losses. Loans can be increased by up to 20 percent for mitigation purposes.
Planning Assistance to States	Federal	USACE	DEC	Provides assistance to states in planning for the development, utilization, and conservation of water and related land resources.
Pre-Disaster Mitigation Loan Program	Federal	SBA		Provides low-interest loans to small businesses for mitigation projects.
Pollution Prevention Grant: Environmental Justice in Communities	Federal	EPA		To support technical assistance for businesses to specifically target an improve human health and the environment in disadvantaged communities.

## APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Pollution Prevention Grant: Environmental Justice Through Safer and More Sustainable Products	Federal	EPA		Supports technical assistance to businesses to increase the supply, demand, and use of safer and more sustainable products, such as those that are certified DPS's Safer Choice program, or those that confirm to EPA's Recommendations for Specifications, Standards, and Ecolabels for Federal Purchasing.
Post-Disaster Economic Recovery Grants and Assistance	Federal	DOC-EDA		Grant funding to assist with the long-term economic recovery of communities, industries, and firms adversely impacted by disasters.
Pre-Disaster Mitigation (PDM)	Federal	FEMA		Congressionally directed funding for local governments, tribes and states to plan for and implement sustainable cost-effective measures designed to reduce risk to individuals and property from future natural hazards.
Preparedness (Non-Disaster) Grants	Federal	FEMA		Provides financial assistance through Non-Disaster Grants to state and local governments with preparedness program. Program funding is meant to enhance the capacity of state and local emergency responders to prevent, respond to, and recover from a weapons of mass destruction terrorism incident involving chemical, biological, radiological, nuclear, and explosive devices and cyber-attacks.
Project Impact: Building Disaster Resistant Communities	Federal	FEMA		Funding and technical assistance to communities and States to implement a sustained pre-disaster mitigation program.
Project Modifications for Improvement of the Environment	Federal	DOD-USACE		Provides for ecosystem restoration by modifying structures and/or operations or water resources projects constructed by the USACE or restoring areas where a USACE project contributed to the degradation of an area.
Protection of Essential Highways, Highway Bridge Approaches, and Public Works	Federal	USACE		Technical assistance to ensure bank protection of highways, highway bridges, essential public works, churches, hospitals, schools, and other nonprofit public services endangered by flood-caused erosion.
Public Assistance	Federal	FEMA		Grants to States and communities to repair damaged infrastructure and public facilities and help restore government or government-related services.

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Public Assistance (PA) Section 406 funds	Federal	FEMA	DHSES	Following a disaster, funds can be used to mitigate hazards when repairing damage to a public structure or infrastructure. Wildfire mitigation is also eligible under emergency protection if life is in imminent danger.
Public Health Emergency Preparedness (PHEP) Cooperative Agreement	Federal	CDC	DOH	Helps health departments build and strengthen their abilities to effectively respond to a range of public health threats, including infectious diseases, natural disasters, and biological, chemical, nuclear, and radiological events. Preparedness activities funded by the PHEP cooperative agreement specifically target the development of emergency-ready public health departments that are flexible and adaptable.
Public Housing Capital Fund	Federal	HUD		Funding to public housing agencies for modernization needs resulting from natural disasters (including elevation, flood proofing, and retrofit).
Repetitive Flood Claims Program	Federal	FEMA		The Repetitive Flood Claims (RFC) grant program provides funds to assist States and communities reduce flood damages to insured properties that have had one or more claims to the National Flood Insurance Program (NFIP).
Risk MAP Program	Federal	FEMA, NFIP	DEC	Establishes or updates floodplain mapping and multi-hazard risk products.
Rural Development Assistance - Housing	Federal	USDA-Rural Housing Service	NASDA	Provides grants and loans for infrastructure and public safety development and enhancement in rural areas. Provides \$100,000 or 75% of the total project, whichever is less.
Rural Development Assistance – Utilities	Federal	USDA-Rural Development	EFC	RUS administers programs that provide much-needed infrastructure or infrastructure improvements to rural communities. These include water and waste treatment, electric power and telecommunications services. Direct and guaranteed rural economic loans and business enterprise grants to address utility issues and development needs.
Section 108 Loan Guarantee Program	Federal	HUD		Loan guarantees to public entities for community and economic development (including mitigation measures).
Section 502 Loan Guaranteed Loan Program	Federal	USDA-RHS		Provides loans, loan guarantees, and technical assistance to very low and low-income applicants to purchase, build, or rehabilitate a home in a rural area.
Section 504 Loans for Housing	Federal	USDA-RHS		Repair loans, grants and technical assistance to very low-income senior homeowners living in rural areas to repair their homes and remove health and safety hazards.

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Severe Repetitive Loss Program (SRL)	Federal	FEMA		The Severe Repetitive Loss (SRL) grant program provides funding to reduce or eliminate the long-term risk of flood damage to severe repetitive loss (SRL) structures insured under the National Flood Insurance Program (NFIP).
Silver Jackets	Federal	USACE	DEC	Can provide funding for flood related studies, public awareness, risk analysis, and flood response plans. Construction of small flood control projects.
Small Flood Control Projects (USACE Section 205)	Federal	USACE	DEC	Authorizes use of USACE to do feasibility and construction of small flood control projects.
Societal Dimensions of Engineering, Science, and Technology Program	Federal	NSF		Funding for research and related educational activities on topics such as ethics, values, and the assessment, communication, management and perception of risk
Soil Survey	Federal	USDA-NRCS		Maintains soil surveys of counties or other areas to assist with farming, conservation, mitigation or related purposes.
State Water Resources Research Act Program	Federal	USGS	DEC	USGS in cooperation with the National Institutes for Water Resources supports an annual call for proposals to focus on water problems and issues that are of a regional or interstate nature or relate to a specific program priority identified by the Secretary of the Interior and the Institutes.
Stream Gauging and Flood Monitoring Network	Federal	DOE-USGS		Operation of a network of over 7,000 stream gauging stations that provide data on the flood characteristics of rivers.
Surface Transportation Program	Federal	USDOT/ FHWA		Funding for activity including safety construction and transportation enhancements. Transportation enhancements encompass a broad range of safety education, environmental and historically related activities.
Transfers of Inventory Farm Properties to Federal and State Agencies for Conservation Purposes	Federal	USDA-FSA		Transfers title of certain inventory farm properties owned by FSA to Federal and State agencies for conservation purposes (including the restoration of wetlands and floodplain areas to reduce future flood potential)

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Transportation Enhancement program	Federal	FHA	NYDOT	Provides opportunities for non-traditional transportation related activities. Projects should go above and beyond standard transportation activities and be integrated into the surrounding environment in a sensitive and creative manner that contributes to the livelihood of the communities, promotes the quality of our environment, and enhances the aesthetics of our roadways. Projects undertaken with enhancement funds are eligible for reimbursement of up to 80 percent of allowable costs.
Urban & Community Forestry Program Cost Share Grants	State	DEC	DEC	Assistance to communities to comprehensive planning, management, and education to create healthy urban and community forests. Street tree planning, one eligible project type, may fit will with the green infrastructure projects.
Urban Waters Small Grants	Federal	EPA	DEC	Funding to improve urban water quality through activities that also support community revitalization and other local priorities. RFPs may include green infrastructure.
United States Geological Survey (USGS)	Federal	USGS		USGS issues competitive grants and cooperative agreements to support research in earthquake hazards, the physics of earthquakes, earthquake occurrence, and earthquake safety policy.
USDA Conservation Programs	Federal	USDA		Programs include: Conservation Reserve Program, Conservation Reserve Enhancement Program, Emergency Conservation Program, Emergency Forest Restoration Program, Farmable Wetlands Program, Grassland Reserve Program, Source Water Protection Program. These programs work to address a large number of farming and ranching related conservation issues including: drinking water protection, reducing soil erosion, wildlife habitat preservation, preservation and restoration of forests and wetlands, aiding farmers whose farms are damaged by natural disasters.
Volcano Hazards Program	Federal	DOS-USGS		Technical assistance through volcano hazard warnings and operation of four volcano observatories to monitor and assess volcano hazard risk.
Water and Waste Disposal Direct Loans and Grants	Federal	USDA		Financial assistance through grant programs to develop water and waste disposal systems in rural areas and towns with a population not in excess of 10,000.

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Water Quality Improvement Project (WQIP) Program	State	DEC	DEC	Competitive, reimbursement grant program for projects that reduce polluted runoff, improve water quality and restore habitat.
Watershed Processes and Water Resources – National Research Initiative Standard Research (Part T)	Federal	USDA	DEC	\$100,000 available. Sponsors research that addresses two areas: (1) understanding fundamental watershed processes; and (2) developing appropriate technology and management practices for improving the effective use of water (consumptive and nonconsumptive) and protecting or improving water quality for agriculture and forestry production.
Watershed Protection and Flood Prevention Program	Federal	USDA-NRCS		Technical and financial assistance for installing works of improvement to protect, develop, and utilize land or water resources in small watersheds under 250,000 acres.
Watershed Surveys and Planning	Federal	USDA-NRCS		Provides technical assistance and funding for local and state governments to protect watersheds, and conduct surveys and planning studies for appraising water and related resources, and service formulating alternative plans for conservation use and development.
Watershed Surveys and Planning	Federal	USDA-NRCS		Surveys and planning studies for appraising water and related resources and formulating alternative plans for conservation use and development. Grants and advisory/counseling services to assist w/ planning and implementation improvement.
WaterSMART – Drought Response Program	Federal	USDA	DEC	\$500,000 available. Innovative research in understanding fundamental processes that affect the quality and quantity of water resources at diverse spatial and temporal scales, ways on improving water resource management in agriculture, forested, and rangeland watersheds, and developing appropriate technology to reach those goals.
Wastewater Infrastructure Engineering Planning Grants	State	DEC	DEC	Grant program for municipalities to help pay for initial planning of water quality projects eligible for the Clean Water State Revolving Fund.
Wetlands Protection – Development Grants	Federal	EPA		Grants to support the development and enhancement of State and tribal wetlands protection programs.
Wetlands Reserve Program	Federal	USDA, NRCS		Financial and technical assistance to protect and restore wetlands through easements and restoration agreements.

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Wildlife Habitat Incentive Program (WHIP)	Federal	USDA, NRCS	DEC	Voluntary program for conservation-minded landowners who want to develop and improve wildlife habitat on agricultural land, nonindustrial private forest land, and tribal land.