ONTARIO COUNTY
HAZARD MITIGATION ACTION PLAN



UPDATE 2024

October 31, 2024 - October 30, 2029

Maintaining a Safe, Secure, and Sustainable Community

Ontario County NEW YORK

H2O PARTNERS

PLAN TITLE	Ontario County 2024
PLAN TYPE	Multi-Jurisdiction
APA DATE	10/15/24
PLAN APPROVAL DATE	10/31/24
EXPIRATION DATE	10/30/29

ID	COMMUNITY NAME	ADOPTION DATE	JURISDICTION APPROVAL DATE	JURISDICTION STATUS	ELIGIBLE FOR FUNDING
1	Bloomfield village	10/23/24	11/21/24	Approved	Yes
2	Bristol town	10/15/24	11/21/24	Approved	Yes
3	Canadice town	10/14/24	11/21/24	Approved	Yes
4	Canandaigua city	10/03/24	11/21/24	Approved	Yes
5	Canandaigua town	10/28/24	11/21/24	Approved	Yes
6	Clifton Springs village	10/15/24	11/21/24	Approved	Yes
7	East Bloomfield town	10/15/24	11/21/24	Approved	Yes
8	Farmington town	10/22/24	11/21/24	Approved	Yes
9	Geneva city	11/06/24	11/21/24	Approved	Yes
10	Geneva town	10/08/24	11/21/24	Approved	Yes
11	Gorham town	10/30/24	11/21/24	Approved	Yes
12	Hopewell town	10/16/24	11/21/24	Approved	Yes
13	Manchester town	10/08/24	11/21/24	Approved	Yes
14	Manchester village	11/07/24	11/21/24	Approved	Yes
15	Naples town	11/06/24	11/21/24	Approved	Yes
16	Naples village	10/16/24	11/21/24	Approved	Yes
17	Ontario County	10/24/24	10/31/24	Approved	Yes
18	Phelps town	10/15/24	11/21/24	Approved	Yes
19	Phelps village	10/14/24	11/21/24	Approved	Yes
20	Richmond town	10/08/24	11/21/24	Approved	Yes
21	Rushville village	10/21/24	11/21/24	Approved	Yes
22	Seneca town	10/15/24	11/21/24	Approved	Yes
23	Shortsville village	10/09/24	11/21/24	Approved	Yes
24	South Bristol town	10/15/24	11/21/24	Approved	Yes
25	Victor town	10/15/24	11/21/24	Approved	Yes
26	Victor village	10/07/24	11/21/24	Approved	Yes

27	West Bloomfield town	10/09/24	11/21/24	Approved	Yes

For more information, visit our website at:

https://www.ontariocountyny.gov/

Written comments should be forwarded to:

H2O Partners, Inc.
P. O. Box 160130
Austin, Texas 78716
info@h2opartnersusa.com
www.h2opartnersusa.com

SECTION 1 – INTRODUCTION

Background....1
Scope and Participation....1
Purpose....2
Authority....3
Summary of Sections....3

SECTION 2 – PLANNING PROCESS

Plan Preparation and Development....1
Review and Incorporation of Existing Plans....14
Timeline for Implementing Mitigation Actions....17
Public and Stakeholder Involvement....18

SECTION 3 – COUNTY PROFILE

Overview....1
Population and Demographics....5
Homeless Population....6
Population Growth....7
Economic Impact....8
Natural, Cultural, and Historic Resources....10
Existing Land Use and Development Trends....11
Changes in Vulnerability....13
Future Growth and Development....14

SECTION 4 – RISK OVERVIEW

Hazard Description....1
Disaster Declaration History....5
Natural Hazards and Climate Change....6
Overview of Hazard Analysis....8
Hazard Ranking....9

SECTION 5 – DAM FAILURE

Hazard Description....1
Location....2
Extent....5

Historical Occurrences 7
Probability of Future Events 8
Vulnerability and Impact 8
Climate Change Considerations 10

SECTION 6 – DROUGHT

Hazard Description 1
Location 1
Extent 3
Historical Occurrences 4
Probability of Future Events 6
Vulnerability and Impact 6
Climate Change Considerations 12

SECTION 7 – EXTREME COLD

Hazard Description 1
Location 2
Extent 2
Historical Occurrences 3
Probability of Future Events 5
Vulnerability and Impact 5
Climate Change Considerations 10

SECTION 8 – EXTREME HEAT

Hazard Description 1
Location 1
Extent 2
Historical Occurrences 4
Probability of Future Events 5
Vulnerability and Impact 5
Climate Change Considerations 9

SECTION 9 – FLOOD

Hazard Description 1
Location 1

Extent 4
Historical Occurrences 6
Probability of Future Events 11
Vulnerability and Impact 11
Climate Change Consideration 18
NFIP Participation 18
NFIP Compliance and Maintenance 21
Repetitive Loss 25

SECTION 10 – HAIL

Hazard Description 1
Location 2
Extent 2
Historical Occurrences 3
Probability of Future Events 6
Vulnerability and Impact 7
Climate Change Considerations 12

SECTION 11 – ICE STORM

Hazard Description 1
Location 2
Extent 2
Historical Occurrences 3
Probability of Future Events 4
Vulnerability and Impact 4
Climate Change Considerations 9

SECTION 12 – LANDSLIDE

Hazard Description 1
Location 2
Extent 2
Historical Occurrences 4
Probability of Future Events 5
Vulnerability and Impact 5

Climate Change Considerations 6

SECTION 13 – LIGHTNING

Hazard Description 1
Location 1
Extent 1
Historical Occurrences 2
Probability of Future Events 4
Vulnerability and Impact 4
Climate Change Considerations 9

SECTION 14 – SNOW STORM

Hazard Description 1
Location 2
Extent 2
Historical Occurrences 3
Probability of Future Events 6
Vulnerability and Impact 7
Climate Change Considerations 11

SECTION 15 – TORNADO

Hazard Description 1
Location 1
Extent 3
Historical Occurrences 5
Probability of Future Events 8
Vulnerability and Impact 8
Climate Change Considerations 15

SECTION 16 – WILDFIRE

Hazard Description 1
Location 1
Extent 2
Historical Occurrences 6
Probability of Future Events 9

Vulnerability and Impact 10
Climate Change Considerations 13

SECTION 17 – WIND

Hazard Description 1
Location 1
Extent 2
Historical Occurrences 3
Probability of Future Events 14
Vulnerability and Impact 14
Climate Change Considerations 20

SECTION 18 – FIRE

Hazard Description 1
Location 1
Extent 2
Historical Occurrences 2
Probability of Future Events 3
Vulnerability and Impact 3
Climate Change Considerations 6

SECTION 19 – HAZARDOUS MATERIALS

Hazard Description 1
Location 2
Extent 3
Historical Occurrences 4
Probability of Future Events 4
Vulnerability and Impact 4
Climate Change Considerations 7

SECTION 20 – INFESTATION

Hazard Description 1
Location 2
Extent 3
Historical Occurrences 6

Probability of Future Events 6
Vulnerability and Impact 7
Climate Change Considerations 10

SECTION 21 – TERRORISM

Hazard Description 1
Location 2
Extent 2
Historical Occurrences 3
Probability of Future Events 4
Vulnerability and Impact 4
Climate Change Considerations 5

SECTION 22 – UTILITY FAILURE

Hazard Description 1
Location 3
Extent 3
Historical Occurrences 4
Probability of Future Events 5
Vulnerability and Impact 6
Climate Change Considerations 8

SECTION 23 – WATER SUPPLY CONTAMINATION

Hazard Description 1
Location 3
Extent 3
Historical Occurrences 5
Probability of Future Events 6
Vulnerability and Impact 6
Climate Change Considerations 8

SECTION 24 – MITIGATION STRATEGY

Mitigation Goals 1
Goal 1 1
Goal 2 1

Goal 3 2
Goal 4 2
Goal 5 2
Goal 6 2

SECTION 25 – PREVIOUS ACTIONS

Summary 1
Ontario County 2
Village of Bloomfield 10
Town of Bristol 14
Town of Canadice 17
City of Canandaigua 21
Town of Canandaigua 24
Village of Clifton Springs 27
Town of East Bloomfield 31
Town of Farmington 33
City of Geneva 36
Town fo Geneva 39
Town of Gorham 42
Town of Hopewell 45
Town of Manchester 47
Village of Manchester 49
Town of Naples 53
Village of Naples 56
Town of Phelps 59
Village of Phelps 64
Town of Richmond 65
Village of Rushville 71
Town of Seneca 73
Town of South Bristol 76
Town of Victor 80
Village of Victor 83
Town of West Bloomfield 86

SECTION 26 – MITIGATION ACTIONS

Summary 1
Ontario County 5
Village of Bloomfield 18
Town of Bristol 26
Town of Canadice 37
City of Canandaigua 44
Town of Canandaigua 51
Village of Clifton Springs 61
Town of East Bloomfield 70
Town of Farmington 78
City of Geneva 86
Town of Geneva 102
Town of Gorham 109
Town of Hopewell 117
Town of Manchester 126
Village of Manchester 133
Town of Naples 146
Village of Naples 152
Town of Phelps 159
Village of Phelps 168
Town of Richmond 175
Village of Rushville 190
Town of Seneca 197
Village of Shortsville 203
Town of South Bristol 209
Town of Victor 216
Village of Victor 223
Town of West Bloomfield 230

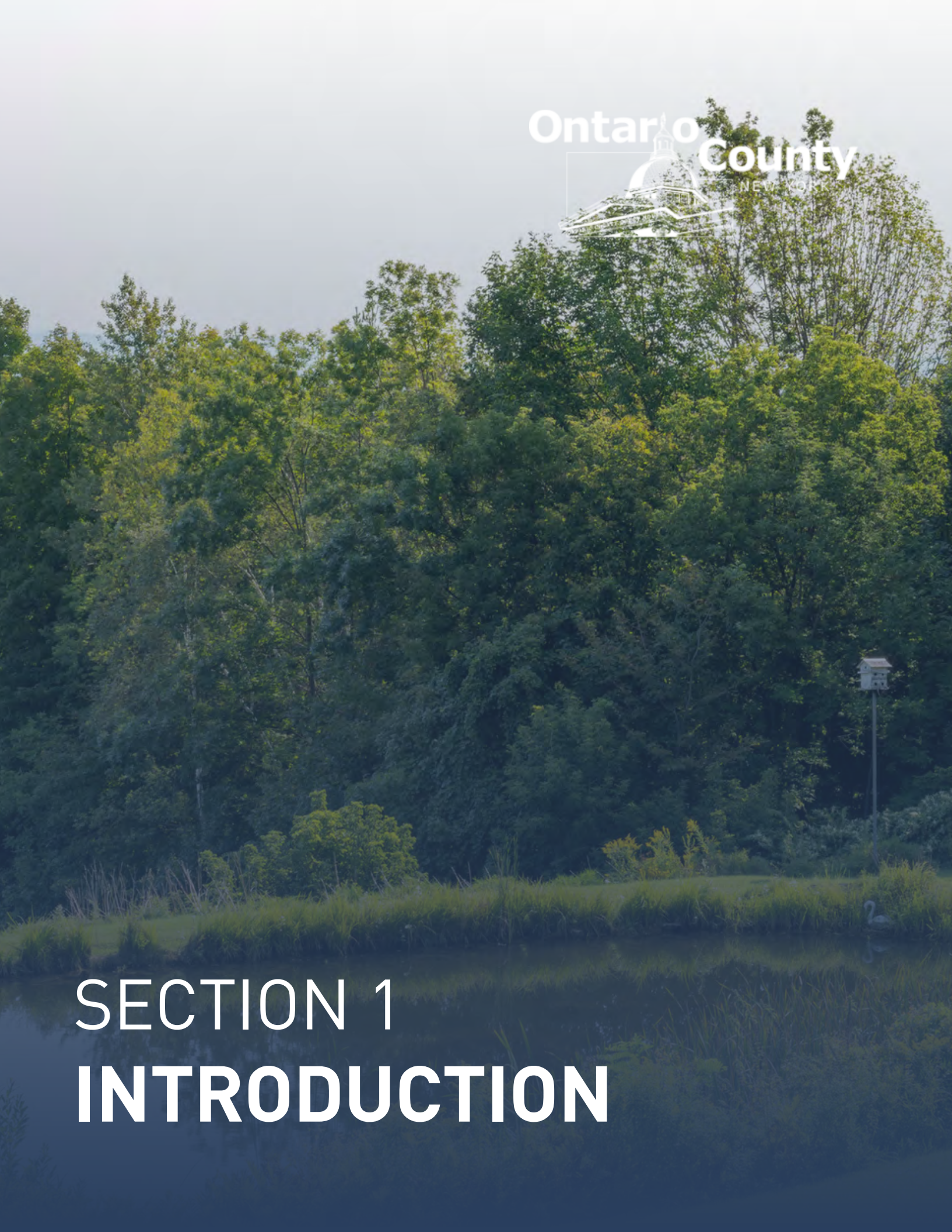
SECTION 27 – PLAN MAINTENANCE

Plan Maintenance Procedures 1
Incorporation 1

Monitoring and Evaluation 5
Updating 7
Continued Public Involvement 8

APPENDIX A – PLANNING TEAM
APPENDIX B – PUBLIC SURVEY RESULTS
APPENDIX C – CRITICAL FACILITIES
APPENDIX D – DAM LOCATIONS
APPENDIX E – MEETING DOCUMENTATION
APPENDIX F – CAPABILITY ASSESSMENT
APPENDIX G – STATE AND FEDERAL FUNDING OPPORTUNITIES
APPENDIX H – FLOOD INSURANCE RATE MAPS

ANNEX A – ONTARIO COUNTY
ANNEX B – VILLAGE OF BLOOMFIELD
ANNEX C – TOWN OF BRISTOL
ANNEX D – TOWN OF CANADICE
ANNEX E – CITY OF CANANDAIGUA
ANNEX F – TOWN OF CANANDAIGUA
ANNEX G – VILLAGE OF CLIFTON SPRINGS
ANNEX H – TOWN OF EAST BLOOMFIELD
ANNEX I – TOWN OF FARMINGTON
ANNEX J – CITY OF GENEVA
ANNEX K – TOWN OF GENEVA
ANNEX L – TOWN OF GORHAM
ANNEX M – TOWN OF HOPEWELL
ANNEX N – TOWN OF MANCHESTER
ANNEX O – VILLAGE OF MANCHESTER
ANNEX P – TOWN OF NAPLES
ANNEX Q – VILLAGE OF NAPLES
ANNEX R – TOWN OF PHELPS
ANNEX S – VILLAGE OF PHELPS
ANNEX T – TOWN OF RICHMOND
ANNEX U – VILLAGE OF RUSHVILLE
ANNEX V – TOWN OF SENECA
ANNEX W – VILLAGE OF SHORTSVILLE
ANNEX X – TOWN OF SOUTH BRISTOL
ANNEX Y – TOWN OF VICTOR
ANNEX Z – VILLAGE OF VICTOR
ANNEX AA – TOWN OF WEST BLOOMFIELD



SECTION 1
INTRODUCTION

SECTION 1: INTRODUCTION

Background 1
Scope and Participation 1
Purpose 2
Authority 3
Summary of Sections 3

BACKGROUND

Ontario County is in western New York State in the Finger Lakes Region. Originally much larger than it is today, the county shrunk as portions of land were split off to form neighboring counties throughout the 18th and 19th centuries. Today, the county has a total area of 663 square miles, of which roughly 644 square miles are land, and 18 square miles are water.

Part of the Rochester metropolitan area, Ontario County is surrounded by Monroe County to the northwest, Wayne County to the northeast, Seneca County to the east, Yates County to the southeast, Steuben County to the south, and Livingston County to the west. The City of Canandaigua is the county seat.

Ontario County is prone to large amounts of snow that can result in flood events. While flooding is a well-known risk, Ontario County is susceptible to a wide range of natural hazards, including but not limited to thunderstorms, flooding, extreme cold, hail, ice storms, heat, winter storms, drought, heavy snow, and strong wind. These life-threatening hazards can destroy property, disrupt the economy, and lower the overall quality of life for individuals.[1]

While it is impossible to prevent an event from occurring, the effect from many hazards to people and property can be lessened. This concept is known as hazard mitigation, which is defined by the Federal Emergency Management Agency (FEMA) as *sustained actions taken to reduce or eliminate long-term risk to people and property from hazards and their effects.*[2] 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.

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 update to a hazard mitigation plan addresses hazard vulnerabilities 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 AND PARTICIPATION

Ontario County's Plan is a multi-jurisdictional plan. Table 1-1 shows the participating jurisdictions in this Plan Update.

[1] Source: http://www.usa.com/ontario-county-ny.htm
[2] Source: http://www.fema.gov/hazard-mitigation-planning-resources

Table 1-1. Participating Jurisdictions

PARTICIPATING JURISDICTIONS	
Ontario County	
Village of Bloomfield	Town of Bristol
Town of Canadice	City of Canandaigua
Town of Canandaigua	Village of Clifton Springs
Town of East Bloomfield	Town of Farmington
City of Geneva	Town of Geneva
Town of Gorham	Town of Hopewell
Town of Manchester	Village of Manchester
Town of Naples	Village of Naples
Town of Phelps	Village of Phelps
Town of Richmond	Village of Rushville
Town of Seneca	Village of Shortsville
Town of South Bristol	Town of Victor
Village of Victor	Town of West Bloomfield

Representatives from these jurisdictions provided valuable input into the planning process. All municipalities in the county participated in the mitigation planning process. Throughout the plan "Ontario County planning area" refers to the entire planning area which includes all participating jurisdictions.

The focus of the Plan is to identify activities to mitigate hazards classified as "high" or "moderate" risk, as determined through a detailed hazard risk assessment conducted for Ontario County and the participating jurisdictions. The hazard classification enables the County and participating jurisdictions to prioritize mitigation actions based on hazards which can present the greatest risk to lives and property in the geographic scope (i.e., planning area).

PURPOSE

The Plan was prepared by Ontario County, participating jurisdictions, and H_2O Partners, Inc. The purpose of the Plan is to protect people and structures and to minimize the costs of disaster response and recovery. The goal of the Plan is to minimize or eliminate long-term risks to human life and property from known hazards by identifying and implementing cost-effective hazard mitigation actions. The planning process is an opportunity for Ontario County, the participating jurisdictions, 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 the Ontario County planning area.

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

SECTION 1: INTRODUCTION

Ontario County, participating jurisdictions, and planning participants identified 13 natural hazards and 6 human-caused hazards to be addressed by the Plan. The specific intentions of the Plan are to:

- Minimize disruption to Ontario County and the participating jurisdictions 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 grant and technical assistance programs offered by the State or Federal government. The Plan will enable Ontario County and participating jurisdictions to take advantage of rapidly developing mitigation grant opportunities as they arise; and
- Ensure that Ontario County and participating jurisdictions maintain eligibility for the full range of future Federal disaster relief.

AUTHORITY

The Plan is tailored specifically for Ontario County, participating jurisdictions, and plan participants including Planning Team members, stakeholders, and the general public who participated in the Plan 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).

SUMMARY OF SECTIONS

Sections 1 and 2 of the Plan 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 the planning area's population and economy.

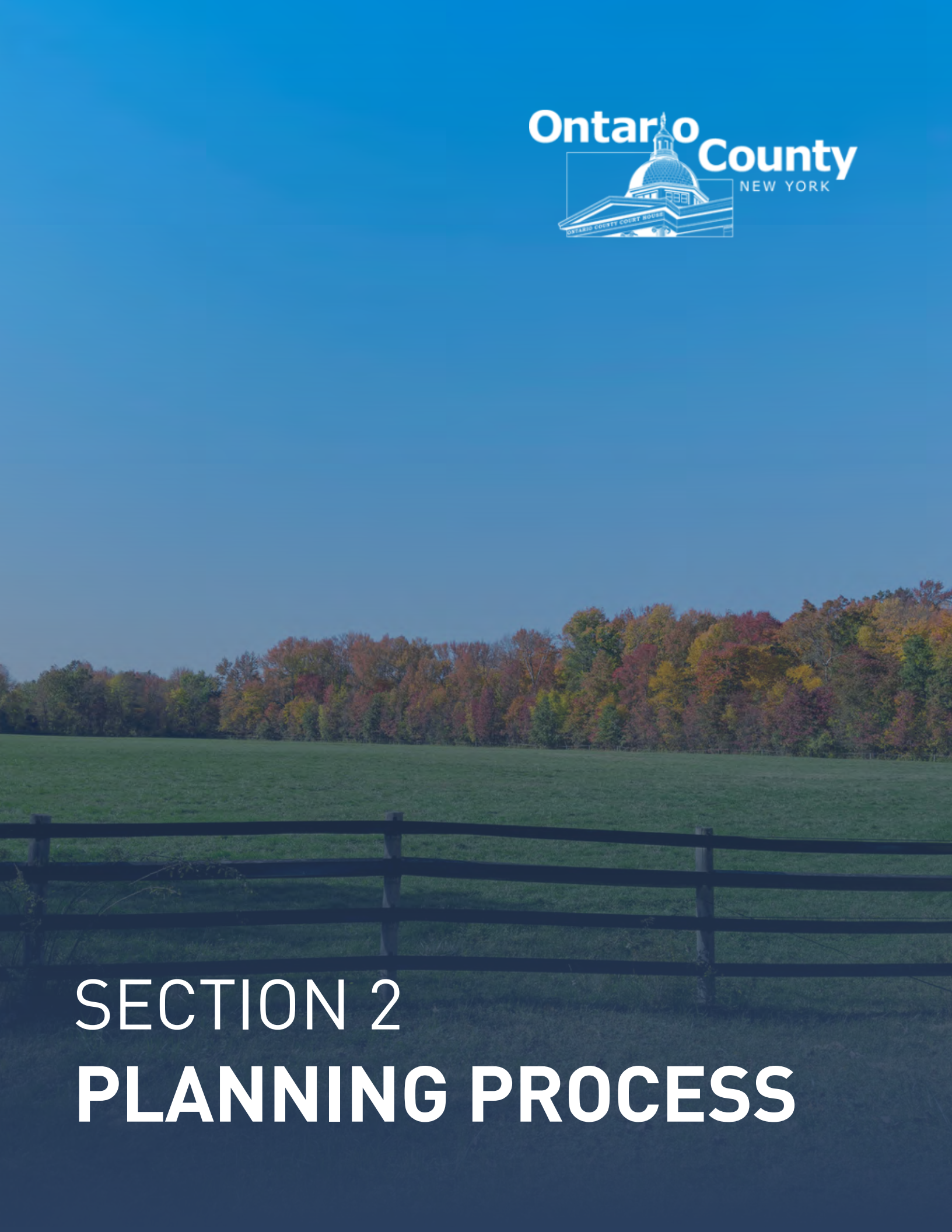
Sections 4 through 23 present a hazard overview and information on individual natural hazards in the planning area. For each hazard, the Plan presents a description of the hazard, a list of historical hazard events, and the results of the vulnerability and risk assessment process.

Section 24 presents hazard mitigation goals and objectives. Previous mitigation actions for Ontario County and the participating jurisdictions are presented in Section 25, while Section 26 identifies new mitigation actions. Section 27 presents Plan maintenance mechanisms. Annexes A through AA provide local risks and mitigation strategies unique to each participating jurisdiction.

SECTION 1: INTRODUCTION

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 dam locations and storage capacities for all dams that are located in the participating jurisdictions. Appendix E contains information regarding workshops and meeting documentation, and the Capability Assessment results for Ontario County and participating jurisdictions are located in Appendix F. Appendix G includes State and Federal Funding Opportunities.[3]

[3] Information contained in some of these appendices are exempt from public release under the Freedom of Information Act (FOIA).



SECTION 2
PLANNING PROCESS

SECTION 2: PLANNING PROCESS

Plan Preparation and Development 1
Overview of the Plan 1
Planning Team 2
Planning Process 12
Kickoff Workshop 12
Hazard Identification 13
Risk Assessment 13
Mitigation Review and Development 13
Review and Incorporation of Existing Plans 14
Review 14
Incorporation of Existing Plans into the HMAP Process 15
Incorporation of the HMAP into Other Planning Mechanisms 15
Plan Review and Plan Update 17
Timeline for Implementing Mitigation Actions 17
Public and Stakeholder Involvement 18
Stakeholder Involvement 18
Public Meetings 25
Public Participation Survey 25

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

Ontario County hired H_2O Partners, Inc. (Consultant Team), to provide technical support and oversee the development of the Ontario County Hazard Mitigation Plan Update 2024. 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.

Figure 2-1. Mitigation Planning Process



Ontario County, participating jurisdictions, and the Consultant Team met in July 2023 to begin organizing resources, identifying Planning Team members, and shaping a Capability Assessment.

PLANNING TEAM

Key members of H_2O Partners, Inc. developed the Plan Update in conjunction with the Planning Team. The Planning Team, comprised of county and municipal representatives and other stakeholders, 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 Ontario County, shown in Table 2-1, was formed to coordinate planning efforts and request input and participation in the planning process. Participation in this planning process is defined as being engaged in the process through attending meetings, providing data and related information, providing updates on previous actions, and reviewing and commenting on draft versions of the plan. Table 2-2 reflects the Advisory Planning Team, consisting of additional representatives from area organizations and departments from the participating jurisdictions within Ontario 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
Ontario County	Senior Planner*
Village of Bloomfield	Mayor*

ORGANIZATION / DEPARTMENT	TITLE
Town of Bristol	Town Supervisor*
Town of Canadice	Town Supervisor*
City of Canandaigua	City Manager*
Town of Canandaigua	Town Supervisor*
Village of Clifton Springs	Mayor*
Town of East Bloomfield	Town Supervisor*
Town of Farmington	Town Supervisor*
City of Geneva	City Manager*
Town of Geneva	Town Supervisor*
Town of Gorham	Town Supervisor*
Town of Hopewell	Town Supervisor*
Town of Manchester	Town Supervisor*
Village of Manchester	Mayor*
Town of Naples	Town Supervisor*
Village of Naples	Mayor*
Town of Phelps	Town Supervisor*
Village of Phelps	Mayor*
Town of Richmond	Town Supervisor*
Village of Rushville	Mayor*
Town of Seneca	Town Supervisor*
Village of Shortsville	Mayor*
Town of South Bristol	Town Supervisor*
Town of Victor	Town Supervisor*
Village of Victor	Mayor*
Town of West Bloomfield	Town Supervisor*

Table 2-2. Advisory Planning Team

ORGANIZATION / DEPARTMENT	TITLE
Ontario County	Associate Planner*
Ontario County	Chief Communication Officer for the County Sheriff's Office
Ontario County	Code Enforcement Officer*
Ontario County	Commissioner of the Public Works Department*

ORGANIZATION / DEPARTMENT	TITLE
Ontario County	County Public Health – Emergency Preparedness Coordinator
Ontario County	County Public Works - Supervisor Building and Grounds
Ontario County	County Supervisor for City of Canandaigua Wards 1 & 4
Ontario County	County Supervisor for City of Canandaigua Wards 2 & 3
Ontario County	County Supervisor for City of Geneva Wards 1 & 2
Ontario County	County Supervisor for City of Geneva Wards 3 & 4
Ontario County	County Supervisor for City of Geneva Wards 5 & 6
Ontario County	Deputy County Administrator
Ontario County	Director of Emergency Management
Ontario County	Director of Public Health
Ontario County	Director of the Planning Department*
Ontario County	GIS Coordinator
Ontario County	Highway & Stormwater Management Program Coordinator*
Ontario County	Supervisor for County Highway Department
Ontario County	Undersheriff for the County Sheriff's Office
Village of Bloomfield	Code Enforcement Officer*
Village of Bloomfield	Superintendent of the Department of Public Works*
Village of Bloomfield	Village Clerk
Town of Bristol	Council Member Position 4*
Town of Bristol	Park Commissioner
Town of Bristol	Planning Board Secretary
Town of Bristol	Highway Superintendent
Town of Bristol	Town Clerk
Town of Canadice	Code Enforcement Officer*
Town of Canadice	Highway Superintendent
Town of Canadice	Town Board Councilman*
Town of Canadice	Town Board Councilwoman*
Town of Canadice	Town Clerk
City of Canandaigua	Chief of Police

ORGANIZATION / DEPARTMENT	TITLE
City of Canandaigua	City Clerk
City of Canandaigua	Code Enforcement Officer*
City of Canandaigua	Director of Development*
City of Canandaigua	Director of Public Works*
City of Canandaigua	Mayor*
Town of Canandaigua	Code Enforcement Officer*
Town of Canandaigua	Highway & Water Superintendent
Town of Canandaigua	Planner for the Development Office*
Town of Canandaigua	Town Manager*
Town of Canandaigua	Town Clerk
Town of Canandaigua	Zoning Inspector*
Town of Canandaigua	Zoning Officer*
Village of Clifton Springs	Code Enforcement Officer*
Village of Clifton Springs	Fire Chief
Village of Clifton Springs	Highway & Water Superintendent
Village of Clifton Springs	Superintendent of Wastewater (Sewage)
Village of Clifton Springs	Village Clerk
Town of East Bloomfield	Code Enforcement Officer*
Town of East Bloomfield	Town Clerk
Town of Farmington	Administrative Assistant for the Planning, Building, and Zoning Department
Town of Farmington	Code Enforcement Officer*
Town of Farmington	Director of Planning and Development*
Town of Farmington	Highway & Park Superintendent
Town of Farmington	Secretary to the Department of Planning and Zoning
Town of Farmington	Town Clerk
Town of Farmington	Water & Sewer Superintendent
City of Geneva	Building & Zoning Coordinator*
City of Geneva	Chief of Police
City of Geneva	City Clerk
City of Geneva	Deputy Fire Chief
City of Geneva	Director of Public Works*
City of Geneva	Fire Chief

ORGANIZATION / DEPARTMENT	TITLE
City of Geneva	Mayor*
City of Geneva	Project Coordinator
Town of Geneva	Code Enforcement Officer*
Town of Geneva	Highway Superintendent
Town of Geneva	Town Clerk
Town of Geneva	Water & Sewer Superintendent
Town of Gorham	Town Clerk
Town of Gorham	Highway Superintendent
Town of Gorham	Water Supervisor
Town of Gorham	Zoning Officer*
Town of Hopewell	Code Enforcement Officer*
Town of Hopewell	Highway Superintendent
Town of Hopewell	Town Clerk
Town of Hopewell	Water District Superintendent
Town of Manchester	Code Enforcement Officer I*
Town of Manchester	Code Enforcement Officer II*
Town of Manchester	Highway Superintendent
Town of Manchester	Town Clerk
Town of Manchester	Water Superintendent
Village of Manchester	Code Enforcement Officer*
Village of Manchester	Supervisor of the Department of Public Works*
Village of Manchester	Village Clerk
Town of Naples	Code Enforcement Officer*
Town of Naples	Superintendent of the Department of Public Works & Highway
Town of Naples	Town Clerk
Village of Naples	Code Enforcement Officer*
Village of Naples	Superintendent of the Department of Public Works
Village of Naples	Village Clerk
Town of Phelps	Code Enforcement Officer*
Town of Phelps	Confidential Secretary to the Town Supervisor
Town of Phelps	Highway Superintendent

ORGANIZATION / DEPARTMENT	TITLE
Town of Phelps	Superintendent of the Department of Public Works
Town of Phelps	Town Board Councilman*
Town of Phelps	Town Clerk
Town of Phelps	Water Superintendent
Village of Phelps	Code Enforcement Officer*
Village of Phelps	Superintendent of the Department of Public Works
Village of Phelps	Village Clerk
Town of Richmond	Code Enforcement Officer*
Town of Richmond	Director of Recreation
Town of Richmond	Highway Superintendent
Town of Richmond	Town Clerk
Town of Richmond	Town Planning Board Member*
Village of Rushville	Code Enforcement Officer*
Village of Rushville	Superintendent of the Public Works Department
Village of Rushville	Village Clerk
Town of Seneca	Code Enforcement Officer*
Town of Seneca	Highway Superintendent
Town of Seneca	Town Clerk
Town of Seneca	Water Superintendent
Village of Shortsville	Code Enforcement Officer*
Village of Shortsville	Deputy Mayor
Village of Shortsville	Supervisor of the Department of Public Works*
Village of Shortsville	Village Clerk
Town of South Bristol	Assistant for the Planning Board & Zoning Board
Town of South Bristol	Code Enforcement Officer*
Town of South Bristol	Highway Superintendent
Town of South Bristol	Town Clerk
Town of Victor	Director of Economic Development*
Town of Victor	Fire Marshal
Town of Victor	Highway Superintendent
Town of Victor	Planning and Building Project Coordinator*

ORGANIZATION / DEPARTMENT	TITLE
Town of Victor	Town Clerk
Village of Victor	Code Enforcement Officer*
Village of Victor	Superintendent of the Department of Public Works*
Village of Victor	Village Clerk
Town of West Bloomfield	Highway Superintendent
Town of West Bloomfield	Town Clerk
Town of West Bloomfield	Zoning Officer *

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 Team, 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 by organization and title.

Based on results of completed Capability Assessment, Ontario County and participating jurisdictions described methods for achieving future hazard mitigation measures by expanding existing capabilities. For example, many of the participating jurisdictions do not have an emergency operations plan or evacuation plan in place. 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 include the following:

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

JURISDICTION	OPPORTUNITIES
Ontario County	o Developing land use and building ordinances that will require all new county buildings to conform to the highest mitigation standards. o Develop model ordinance language for municipalities to adopt higher floodplain standards.
Village of Bloomfield	o Develop a Capital Improvement Plan based on information in the risk assessment and identified mitigation projects within the HMAP. o Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. o Developing land use and building ordinances that will require all new developments to conform to the highest mitigation standards.
Town of Bristol	o Integrate risk information from HMAP into future updates to Comprehensive Plan. o Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. o Developing land use and building ordinances that will require all new developments to conform to the highest mitigation standards.
Town of Canadice	o Develop a Capital Improvement Plan based on information in the risk assessment and identified mitigation projects within the HMAP. o Integrate risk information from HMAP into future updates to Comprehensive Plan.

JURISDICTION	OPPORTUNITIES
Town of Canadice (continued)	o Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. o Developing land use and building ordinances that will require all new developments to conform to the highest mitigation standards.
City of Canandaigua	o Integrate risk information from HMAP into future updates to Comprehensive Plan. o Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. o Developing land use and building ordinances that will require all new developments to conform to the highest mitigation standards.
Town of Canandaigua	o Integrate risk information from HMAP into future updates to Comprehensive Plan. o Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. o Developing land use and building ordinances that will require all new developments to conform to the highest mitigation standards.
Village of Clifton Springs	o Develop a Capital Improvement Plan based on information in the risk assessment and identified mitigation projects within the HMAP. o Integrate risk information from HMAP into future updates to Comprehensive Plan. o Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes.
Town of East Bloomfield	o Integrate risk information from HMAP into future updates to Comprehensive Plan. o Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. o Developing land use and building ordinances that will require all new developments to conform to the highest mitigation standards.
Town of Farmington	o Integrate risk information from HMAP into future updates to Comprehensive Plan. o Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. o Developing land use and building ordinances that will require all new developments to conform to the highest mitigation standards.
City of Geneva	o Integrate risk information from HMAP into future updates to Comprehensive Plan. o Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. o Developing land use and building ordinances that will require all new developments to conform to the highest mitigation standards.
Town of Geneva	o Develop a Capital Improvement Plan based on information in the risk assessment and identified mitigation projects within the HMAP. o Integrate risk information from HMAP into future updates to Comprehensive Plan. o Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. o Developing land use and building ordinances that will require all new developments to conform to the highest mitigation standards.
Town of Gorham	o Integrate risk information from HMAP into future updates to Comprehensive Plan. o Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes.

JURISDICTION	OPPORTUNITIES
Town of Gorham (continued)	o Developing land use and building ordinances that will require all new developments to conform to the highest mitigation standards.
Town of Hopewell	o Integrate risk information from HMAP into future updates to Comprehensive Plan. o Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. o Developing land use and building ordinances that will require all new developments to conform to the highest mitigation standards.
Town of Manchester	o Develop a Capital Improvement Plan based on information in the risk assessment and identified mitigation projects within the HMAP. o Integrate risk information from HMAP into future updates to Comprehensive Plan. o Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. o Developing land use and building ordinances that will require all new developments to conform to the highest mitigation standards.
Village of Manchester	o Integrate risk information from HMAP into future updates to Comprehensive Plan. o Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. o Developing land use and building ordinances that will require all new developments to conform to the highest mitigation standards.
Town of Naples	o Develop a Capital Improvement Plan based on information in the risk assessment and identified mitigation projects within the HMAP. o Integrate risk information from HMAP into future updates to Comprehensive Plan. o Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. o Developing land use and building ordinances that will require all new developments to conform to the highest mitigation standards.
Village of Naples	o Integrate risk information from HMAP into future updates to Comprehensive Plan. o Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. o Developing land use and building ordinances that will require all new developments to conform to the highest mitigation standards.
Town of Phelps	o Integrate risk information from HMAP into future updates to Comprehensive Plan. o Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. o Developing land use and building ordinances that will require all new developments to conform to the highest mitigation standards.
Village of Phelps	o Develop a Capital Improvement Plan based on information in the risk assessment and identified mitigation projects within the HMAP. o Integrate risk information from HMAP into future updates to Comprehensive Plan. o Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. o Developing land use and building ordinances that will require all new developments to conform to the highest mitigation standards.
Town of Richmond	o Develop a Capital Improvement Plan based on information in the risk assessment and identified mitigation projects within the HMAP.

JURISDICTION	OPPORTUNITIES
Town of Richmond (continued)	o Integrate risk information from HMAP into future updates to Comprehensive Plan. o Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. o Developing land use and building ordinances that will require all new developments to conform to the highest mitigation standards.
Village of Rushville	o Integrate risk information from HMAP into future updates to Comprehensive Plan. o Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. o Developing land use and building ordinances that will require all new developments to conform to the highest mitigation standards.
Town of Seneca	o Integrate risk information from HMAP into future updates to Comprehensive Plan. o Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. o Developing land use and building ordinances that will require all new developments to conform to the highest mitigation standards.
Village of Shortsville	o Develop a Capital Improvement Plan based on information in the risk assessment and identified mitigation projects within the HMAP. o Integrate risk information from HMAP into future updates to Comprehensive Plan. o Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. o Developing land use and building ordinances that will require all new developments to conform to the highest mitigation standards.
Town of South Bristol	o Develop a Capital Improvement Plan based on information in the risk assessment and identified mitigation projects within the HMAP. o Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. o Developing land use and building ordinances that will require all new developments to conform to the highest mitigation standards.
Town of Victor	o Integrate risk information from HMAP into future updates to Comprehensive Plan. o Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. o Developing land use and building ordinances that will require all new developments to conform to the highest mitigation standards.
Village of Victor	o Integrate risk information from HMAP into future updates to Comprehensive Plan. o Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. o Developing land use and building ordinances that will require all new developments to conform to the highest mitigation standards.
Town of West Bloomfield	o Develop a Capital Improvement Plan based on information in the risk assessment and identified mitigation projects within the HMAP. o Integrate risk information from HMAP into future updates to Comprehensive Plan. o Reviewing current floodplain ordinances for opportunities to increase resiliency such as modifying permitting or building codes. o Developing land use and building ordinances that will require all new developments to conform to the highest mitigation standards.

Sample hazard mitigation actions developed with similar hazard risk were shared at the meetings. These important discussions resulted in development of multiple mitigation actions that are included in the Plan 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 flooding, ice storm, snow storm, thunderstorm wind and extreme cold. The actions include but are not limited to drainage improvement projects, improved storm water collection and conveyance systems, development of evacuation routes, and implementing public information programs that will include flood management techniques and residential mitigation measures to reduce risk to life and property.

PLANNING PROCESS

The process used to prepare the Plan 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 Kickoff Workshop. Hazards were identified and assessed, and results associated with each of the hazards were provided at the Risk Assessment Workshop. Based on Ontario County's identified vulnerabilities, specific mitigation strategies were discussed and developed at the Mitigation Strategy Workshop. Finally, Plan maintenance and implementation procedures were developed and are included in Section 27. Participation of Planning Team members, stakeholders, and the public at each of the workshops is documented in Appendix E.

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;
- Implementation problems, such as technical, political, legal, and coordination issues that may hinder development;
- Anticipated outcomes; and
- How Ontario County, participating jurisdictions, agencies, and partners will participate in implementing the Plan.

KICKOFF WORKSHOP

The Kickoff Workshop was held at the County Sheriff's Office, in the Board of Supervisors Meeting Room, on September 14, 2023. The initial workshop informed participating officials and key department personnel about how the planning process pertained to their distinct roles and responsibilities. Engagement of stakeholder groups included invitations to a variety of interested parties, including but not limited to the County Soil and Conservation District, local watershed councils, fire departments, jurisdictional historians, local Medical Centers, Ontario County Chamber of Commerce, and the local university and college. 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. Participants ranked hazards high to low in terms of perceived level of risk, frequency of occurrence, and potential impact.

HAZARD IDENTIFICATION

At the Kickoff Workshop and through email 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 and human-caused hazards. Once identified, the teams narrowed the list to significant hazards by reviewing hazards affecting the area as a whole, the 2018 Ontario County Multi-Jurisdictional All-Hazard Mitigation Plan Update, and initial study results from reputable sources such as federal and state agencies, including the 2019 New York State Hazard Mitigation Plan. Based on this initial analysis, the teams identified a total of 13 natural hazards and 6 human-caused hazards, which pose a significant threat to the planning area.

RISK ASSESSMENT

An initial risk assessment for Ontario County and the participating jurisdictions was completed in October 2023 and results were presented to Planning Team members at the Risk Assessment Workshop held on October 24, 2023. 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. Each participant at the Risk Assessment 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. A hazard profile and vulnerability analysis for each of the hazards can be found in Sections 5 through 23.

MITIGATION REVIEW AND DEVELOPMENT

Developing the Mitigation Strategy for the Plan involved identifying mitigation goals and new mitigation actions. A Mitigation Workshop was held at the Safety Training Facility in Ontario County. 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, winter storm, and landslide projects, as well as identifying the need to regulate the growth in development. 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. The prioritization method was based on FEMA's STAPLEE 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 26.

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 the program name, authority, purpose of the program, and types of assistance and eligible projects when available.
- 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, 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 Ontario 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 through 23) 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 development requirements.

INCORPORATION OF EXISTING PLANS INTO THE HMAP PROCESS

A Capability Assessment was completed by key departments from the participating jurisdictions within Ontario County which provided information pertaining to existing plans, policies, ordinances, and regulations to be integrated into the goals and objectives of the Plan. 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, Capital Improvements Plans, for jurisdictions with a plan in place, were reviewed to incorporate any mitigation actions into this plan. Additionally, policies and ordinances were reviewed by participating jurisdictions. Other plans were reviewed, such as Floodplain Management Plans and Transportation Plans, to identify any additional mitigation actions. Finally, the 2018 Ontario County Multi-Jurisdictional All-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 2019 New York State Hazard Mitigation Plan was also used as a guidance document, along with FEMA materials, in the development of the Ontario County Plan Update.

INCORPORATION OF THE HMAP INTO OTHER PLANNING MECHANISMS

Planning Team members will integrate implementation of the Plan with other planning mechanisms for Ontario County, such as the Capital Improvements Plan. Existing plans for Ontario County will be reviewed and incorporated into the Plan, as appropriate. This section discusses how the Plan will be implemented by Ontario County and the participating jurisdictions. 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.

Ontario County and the participating jurisdictions will be responsible for implementing hazard mitigation actions contained in Section 26. 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.

Ontario County and the participating jurisdictions will integrate hazard mitigation actions contained in the Plan with existing planning mechanisms such as Emergency Operations or Management Plans, Evacuation Plans, and other local and area planning efforts. Ontario 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, Planning Team members from Ontario County and 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 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 amendments or updates in light of the approved Plan. Ontario County and the participating jurisdictions 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.

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.

Furthermore, Ontario County will work with neighboring jurisdictions to advance the goals of the Plan 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
Grant Applications	The Plan will be evaluated by Ontario County and participating jurisdictions when grant funding is sought for mitigation projects. If a project is not in the Plan, an amendment may be necessary to include the action in the Plan.
Annual Budget Review	Various departments and key personnel that participated in the planning process for Ontario County and participating jurisdictions 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.
Regulatory Plans	Currently, Ontario County and participating jurisdictions have regulatory plans in place, such as Emergency Operations Plans, Continuity of Operations Plans, Economic Development, and Evacuation Plans. The Plan will be consulted when County, City, Town or Village departments review or revise their current regulatory planning mechanisms, or in the development of regulatory plans that are not currently in place.
Capital Improvement Plans	Ontario County and participating jurisdictions have a Capital Improvement Plan (CIP) in place. Prior to any revisions to the CIP, County, City, Town, or 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.

PLANNING MECHANISM	INCORPORATION OF PLAN
Comprehensive Plans	Several participating jurisdictions within Ontario County have Long-term Comprehensive Development Plans 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.
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 9 of this Plan discussing the people and property at risk to flood, will be reviewed and revised when Ontario County, as well as each participating jurisdiction, updates their management plans or develops new plans.

Appendix F 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. The majority of participating municipalities have building codes in place; refer to Appendix F for a complete inventory of each jurisdiction's capabilities.

It should be noted for the purposes of the Plan Update that the 2018 Ontario County Multi-Jurisdictional All-Hazard Mitigation Plan has been used as a reference when reviewing and updating local plans for the entire planning area as well as when updating floodplain ordinances for the jurisdictions that participate in the National Flood Insurance Program. Examples of integration of the 2018 Plan include the following: the Ontario County Capital Improvement Plan includes all the mitigation actions identified in the 2018 All-Hazards Multi-Jurisdictional Plan; the Town of Farmington's 2021 Comprehensive Plan Update includes information on mitigation actions specific to drainage issues from the 2018 All-Hazards Mitigation Plan; other participating jurisdictions did not integrate the previous 2018 All-Hazards Mitigation Plan but as noted above, all jurisdictions will identify opportunities for integration of the 2024 Plan Update into other local planning mechanisms.

PLAN REVIEW AND PLAN UPDATE

As with the development of the Plan Update, Ontario 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.

TIMELINE FOR IMPLEMENTING MITIGATION ACTIONS

Both the Executive Planning Team (Table A-1, Appendix A) and the Advisory Planning Team (Table A-2, Appendix A) 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 individual hazard mitigation action tables included in the Plan Update for Ontario County and participating jurisdictions.

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 Ontario County's comprehensive planning process, budgetary constraints, and community needs. Ontario County and the participating jurisdictions 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 implemented 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 Ontario County's Plan 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 available for public review on each of the participating jurisdiction's website.

The draft Plan was made available to the general public for review and comment on Ontario County's website for 30 days. The public was notified at the public meetings that the draft Plan 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 by the Ontario County Emergency Management Services at the Safety Training Facility along with being available at the Board of Supervisors meeting. Two Board of Supervisors meetings were held during the 30 day public review period. No feedback was received on the draft Plan, although it was given on the public survey and all relevant information was incorporated into the Plan.

The Plan will be advertised and posted on Ontario County's website upon approval from FEMA.

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, neighboring jurisdictions, school districts, and hospitals were invited to participate in development of the Plan. The

Stakeholder Group (Table A-3 in Appendix A, and Table 2-5, below), included a broad range of representatives from both the public and private sector and served as a key component in Ontario County's outreach efforts for development of the Plan. Documentation of stakeholder meetings is found in Appendix E. A list of organizations invited to attend via email is found in Table 2-5.

Table 2-5. Stakeholder Working Group

AGENCY	TITLE	PARTICIPATED
American Farmland Trust	New York Office Representative	
American Red Cross of Ontario	Executive Director	
ARC of Ontario	Executive Director	
Bishop Sheen Ecumenical Housing Foundations Inc.	Ontario County Flood Assistance Representative	
Bristol Fire Department	Fire Chief	
Canandaigua – Farmington Water District	Water Superintendent	
Canandaigua Fire Department	Fire Chief	X
Canandaigua Lake Watershed Association	Administrative Coordinator	
Canandaigua Lake Watershed Council	Watershed Manager	X
Canandaigua School District	Superintendent	
Canandaigua VA Fire Department	Fire Chief	X
Chamber of Commerce Ontario County	General Representative	
Cheshire Fire Department	Fire Chief	X
City of Canandaigua	City Historian	
City of Geneva	City Historian	
Clifton Springs Fire Department	Fire Chief	
Clinton Springs Hospital & Clinic	Chief Operating Officer	
Community Choice Aggregation Energy Choice	General Representative	
Crystal Springs Fire Department	Fire Chief	
East Bloomfield Fire Department	Fire Chief	X
East Bloomfield School District	Superintendent	
Empire State Development Corporation	Finger Lake Region Representative	
Family Counseling of the Finger Lakes	General Representative	
Family Counseling of the Finger Lakes, Substance Abuse Treatment Facility	Outreach Representative	
Farmington Fire Department	Fire Chief	X
Federal Emergency Management Association (FEMA)	Mitigation Planner	

AGENCY	TITLE	PARTICIPATED
Finger Lakes Community Choice	General Representative	
Figure Lakes Community College	Executive Assistant to the President	
Finger Lakes Community College	President	
Finger Lakes Health College of Nursing / Marion S. Whelen School of Practical Nursing	Dean	
Finger Lakes Institute - Seneca Lake Watershed	Watershed Steward	
Figure Lakes Land Trust	Director of Operations	
Finger Lakes Land Trust	Senior Director of Press Inquires	
Finger Lakes Trail System	General Representative	
Fishers Fire Department	Fire Chief	X
Genesee Valley Conservancy	Executive Director	
Geneva Business Improvement District	Executive Director	
Geneva City School District	Assistant to Superintendent	
Geneva Fire Department	Fire Chief	X
Geneva General / Finger Lakes Health	Vice President of Community Services	
Geneva General Hospital	Associate Director of Community Outreach & Engagement	
Geneva Housing Authority	General Representative	
Geneva School District	Grants Coordinator	
Geneva School District	Superintendent	
Gorham Fire Department	Fire Chief	
Gorham-Middlesex School District	Superintendent	
Habitat for Humanity	Executive Director	
Hall Fire Department	Fire Chief	X
Hemlock & Canadice Lake Water Supply	Hemlock Water Treatment Plant Manager	
Hobart & William Smith College	General Representative	
Honeoye Central School District	Superintendent	
Honeoye - Richmond Fire Department	Fire Chief	
Honeoye Lake Watershed	Watershed Representative	
Honeoye Lake Watershed Task Force	Chairman	
Honeoye Valley Association	President	
Hopewell Fire Department	Fire Chief	X

AGENCY	TITLE	PARTICIPATED
Ionia Fire Department	Fire Chief	
Livingston County	Director of Emergency Management	
Livonia Central School	Assistant Superintendent of Operations	
Manchester Fire Department	Fire Chief	X
Monroe County	Deputy Director of Public Safety	
Naples Central School District	Superintendent	
Naples Fire Department	Fire Chief	X
Naples Open Cupboard	General Representative	
Naples Water Utility Department	General Representative	
National Grid	Ontario Consumer Representative	
New York State Assembly	131 District Representative	
New York State Assembly	133 District Representative	
NYS Department of Environmental Conservation	Administrative Assistant to the Office of Indian Nation Affairs	
NYS Department of Environmental Conservation	Director of Division of Forest Protection	
NYS Department of Environmental Conservation	Director of the Division of Lands & Forests	
NYS Department of Environmental Conservation	Director of the Division of Operations	
NYS Department of Environmental Conservation	Director of the Office of Climate Change	
NYS Department of Environmental Conservation	Director of Office of Indian Nation Affairs	
NYS Department of Environmental Conservation, Region 8	Environmental Conversation Officer	
NYS Department of Health	Geneva District Representative	
NYS Department of Homeland Security and Emergency Services (DHSES), Region V	Environmental Specialist	X
NYS Department of Homeland Security and Emergency Services (DHSES), Region V	Hazard Mitigation Planner (consultant)	X
NYS Department of Homeland Security and Emergency Services (DHSES), Region V	Hazard Mitigation Project Manager	X
NYS Department of Homeland Security and Emergency Services (DHSES), Region V	Hazard Mitigation Planning Supervisor	X

AGENCY	TITLE	PARTICIPATED
NYS Department of Housing and Community Renewal	Press Office Representative	
NYS Department of Transportation, Region 4	Regional Coordinator	
NYS Department of Transportation, Region 4	Resident Engineer Ontario County	
NYS Department of Transportation, Region 4	Safety Engineer	
NYS Department of Transportation, Region 4	Wayne-Ontario Regional Representative	
NYS Electric and Gas (NYSEG)	Director of Transmission Services	
NYS Energy Research & Development (NYSERDA)	General Representative	
NYS Environmental Facilities Corporation	Press Office Representative	
New York State Legislature	Governor	
New York State Legislature	Senator of the 54th District	
NYS Office for Small Cities – Empire State Development	Finger Lake Regional Representative	
NYS Office of Parks, Recreation and Historic Preservation	Regional Director for Finger Lake Region	
NYS Office of Parks, Recreation and Historic Preservation	Historic Preservation Program Analyst	
NYS Office of Parks, Recreation and Historic Preservation	Historic Preservation Public Outreach Representative	
NYS Office of Resilient Homes and Communities – Governor's Office of Storm Recovery	ADA Coordinator	
NYS Office of Resilient Homes and Communities – Governor's Office of Storm Recovery	Press Office Representative	
NYS Rural Housing Coalition	General Representative	
NYS Thruway Authority	Stormwater Regional Representative	
NOAA	General Outreach	
Northside Fire Department	Fire Chief	
NWS	Regional Representative	
Oak Corners Fire Department	Fire Chief	
Ontario County Cornell Cooperative Extension	Executive Director	
Ontario County Agriculture Enhancement Board	Senior Planner	
Ontario County Office of Aging	Director	

AGENCY	TITLE	PARTICIPATED
Ontario County Office of Economic Development and Industrial Development Agency	Director	
Ontario County Humane Society	General Representative	
Ontario County Partnership	Executive Director	
Ontario County Soil and Water Conservation District	District Manager	X
Ontario County Soil and Water Conservation District	Watershed Inspector	
Ontario Pathways	Board Member	
PathStone	Ontario County Flood Assistance Representative	
Phelps-Clifton Springs School District	Superintendent	
Phelps Fire Department	Fire Chief	
Port Gibson Fire Department	Fire Chief	
Rochester Gas and Electric Corporation (RGE) (Avangrid is the Parent Company)	General Representative	
St. Frances de Sales/St. Stephens Catholic School	Principal	
St. Peter's Community Ares Academy	Head of School	
Seneca Castle	Fire Chief	
Seneca County	County Manager	
Seneca Housing Inc	General	
Seneca Lake Pure Waters Association	Administrative Coordinator	
Shortsville Fire Department	Fire Chief	X
Stanley Fire Department	Fire Chief	X
The Never Alone Club	Program Chaperone	
Thompson Hospital	Community Wellness Manager	
Town of Bristol	Town Historian	
Town of Canadice	Town Historian	
Town of Canandaigua	Town Historian	
Town of East Bloomfield	Town Historian	
Town of Farmington	Town Historian	
Town of Geneva	Town Historian	
Town of Gorham	Town Historian	
Town of Hopewell	Town Historian	

AGENCY	TITLE	PARTICIPATED
Town of Manchester	Town Historian	
Town of Naples	Town Historian	
Town of Phelps / Village of Phelps	Town Historian	
Town of Richmond	Town Historian	
Town of Seneca	Town Historian	
Town of South Bristol	Town Historian	
Town of Victor / Village of Victor	Town Historian	
U.S. Army Corps of Engineers	Regional Representative	
U.S. Fish & Wildlife, Region 5	Regional Director	
Victor Fire Department	Fire Chief	X
Victor Hiking Trails Inc.	Chairperson	
Victor School District	Superintendent	
Village of Bloomfield	Village Historian	
Village of Clifton Springs	Village Historian	
Village of Manchester	Village Historian	
Village of Naples	Village Historian	
Village of Rushville	Village Historian	
Village of Shortsville	Village Historian	
Wayland Cohocton School	Superintendent	
Wayne-Finger Lakes Boces Adult and Continuing Education	Assistant Superintendent for Administration	
West Bloomfield Fire Department	Fire Chief	X
West Bloomfield Historical Society	General Representative	
West Lake Road Fire Department	Fire Chief	
White Spring Fire Department	Fire Chief	
Yates County	Director of Emergency Management	

Stakeholders and participants from neighboring communities that attended the Planning Team and public meetings played a key role in the planning process. For example, flooding was one of the major concerns for the stakeholders heard during outreach, leading to the County including several actions to implement stream stabilization, ditch stabilization, stormwater detention basin, and stormwater debris basin programs in conjunction with the Ontario County Soil and Water District. Additionally, some local jurisdictions included local flood mitigation projects.

SECTION 2: PLANNING PROCESS

PUBLIC MEETINGS

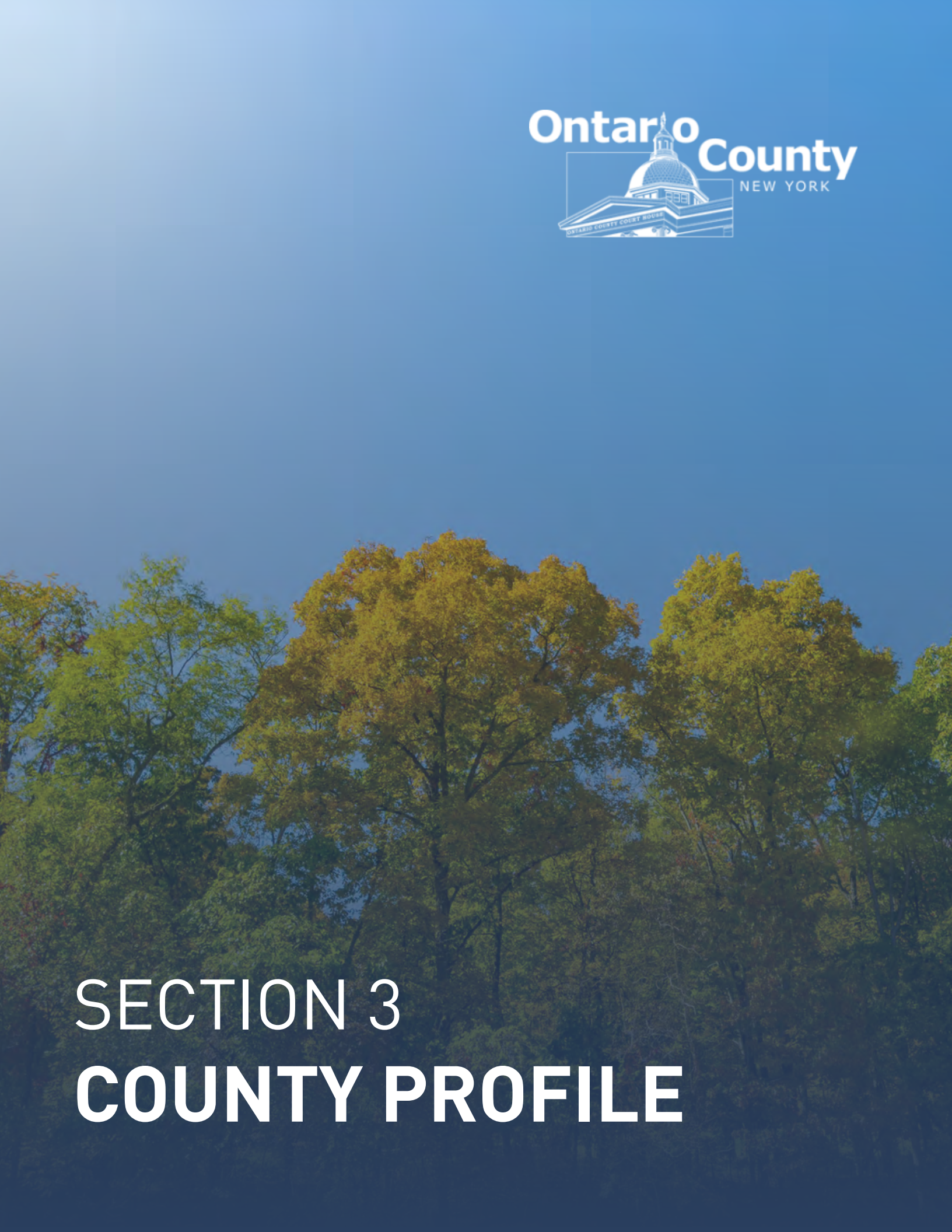
A series of public meetings were held throughout the planning area to collect public and stakeholder input. Topics of discussion included the purpose of hazard mitigation, discussion of the planning process, and types of natural hazards. Each participating jurisdiction within Ontario County released 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 X (formerly known as Twitter), through the local media, and/or posting the information on bulletin boards in public facilities. A flyer was developed in both English and Spanish to advertise the planning process to the public. 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. Documentation on the public meetings are found in Appendix E.

Public meetings were held on the following dates and locations:

- September 14, 2023, Ontario County Safety Training Facility
- October 24, 2023, Ontario County Safety Training Facility

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 and 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 Ontario County's website. Hard copies were also posted in neighborhood libraries to allow those without internet access the ability to still complete the survey and participate in the planning process. The survey was also translated to Spanish to give an opportunity for non-English speakers in the planning area the opportunity to provide input to the Planning Team. A total of 202 surveys were completed online. The survey results are analyzed in Appendix B. Ontario County reviewed the input from the surveys and decided which information to incorporate into the Plan as hazard mitigation actions. For example, many citizens mentioned concerns about flooding and suggested drainage improvements, such as creating proper drainage or keeping ditches free of debris to reduce potential flooding. In response to the public input, several actions were added to the plan to implement drainage improvements and flood control measures throughout the County and participating jurisdictions, including increasing dimensions of drainage culverts, and implementing stream restoration / channelization program.



Ontario County
NEW YORK

SECTION 3

COUNTY PROFILE

SECTION 3: COUNTY PROFILE

Overview 1
Population and Demographics 5
Homeless Population 6
Population Growth 7
Economic Impact 8
Natural, Cultural, and Historic Resources 10
Existing Land Use and Development Trends 11
Future Growth and Development 13

OVERVIEW

Located eight miles southeast of the City of Rochester, Ontario County lies in the heart of upstate New York. The county spans 663 square miles of the Finger Lakes region, named for its 11 lakes which drain into Lake Ontario to the north. The City of Canandaigua was founded as the county seat in 1789. In total, Ontario County contains 2 cities, 16 towns, 8 villages, 2 colleges, and 17 school districts. The county is home to over 112,000 residents, making it the 26th most populous county in the State of New York.

Ontario County has a humid continental climate, typically experiencing four distinct seasons throughout the year. On average, yearly temperatures in the county range from a low of 17°F in January to a high of 82°F in July. Several lakes border the county, those being Seneca Lake to the east, Canandaigua Lake to the southeast, and Hemlock Lake to the west. Other significant bodies of water within the county include Canadice Lake, Honeoye Lake, Flint Creek, and Canandaigua Outlet.

The landscape of Ontario County is varied, with the northern part of the county comprising a lowland region and the southern portion being hillier and more forested with hardwood trees. Much of the county's land is fertile for agriculture, which makes up a significant portion of its economy. According to Ontario County's 2021 Consolidated Agricultural District Profile, the county contains 184,186 acres of farmland across 833 individual farms.[1]

The area that would become Ontario County was originally long controlled by the Seneca people, one of the Five Nations of the Iroquois Confederacy, hundreds of years before European settlers arrived in the Americas. The Seneca Iroquois maintained control of the county's territory, along with most of western and central New York, until after the Revolutionary War. In the war, Seneca warriors and Loyalist Rangers used villages at Canandaigua, Honeoye, Naples, and Geneva as staging areas for frontier raids. These villages were devastated by American troops under General John Sullivan in 1779.

After the Revolution, natives were forced to cede control of the land in the Finger Lakes Region. Two Massachusetts speculators, Oliver Phelps and Nathaniel Gorham, purchased a large tract of this land from the natives in 1788. Ontario County was then established in 1789 to govern these purchased lands. The original Ontario County was much larger than it is today. In the decades

[1] Source: https://ontariocountyny.gov/1607/Agricultural-Districts

that followed the Revolutionary War, many portions of Ontario were split off into new counties, lending Ontario County the nickname “the Mother of Counties” in western New York.

The late 1800’s saw substantial growth take place in Ontario County, spurred on by the completion of the Lehigh Valley Railroad in 1892 and the extensive lake boat system in the county being replaced by miles of good roads, for which the Town of Canandaigua received national publicity in 1894.

Major industries in Ontario County have long been agriculture and tourism, with manufacturing becoming an economic pillar more recently. The county remains an agricultural center committed to the wine and grape industry, dairy, and grain. Today, tourist crowds flock to Ontario to visit historic sites, resorts and hotels, and other attractions like the Sonnenberg State Historic Sites and Canandaigua Lake. In the manufacturing industry, products such as enamelware, farm machinery, chemical products, cereal, and, increasingly, high tech products like computer applications are manufactured in Ontario County.[2]

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

[2] Source: https://ontariocountyny.gov/137/County-History

Figure 3-1. Location of Ontario County

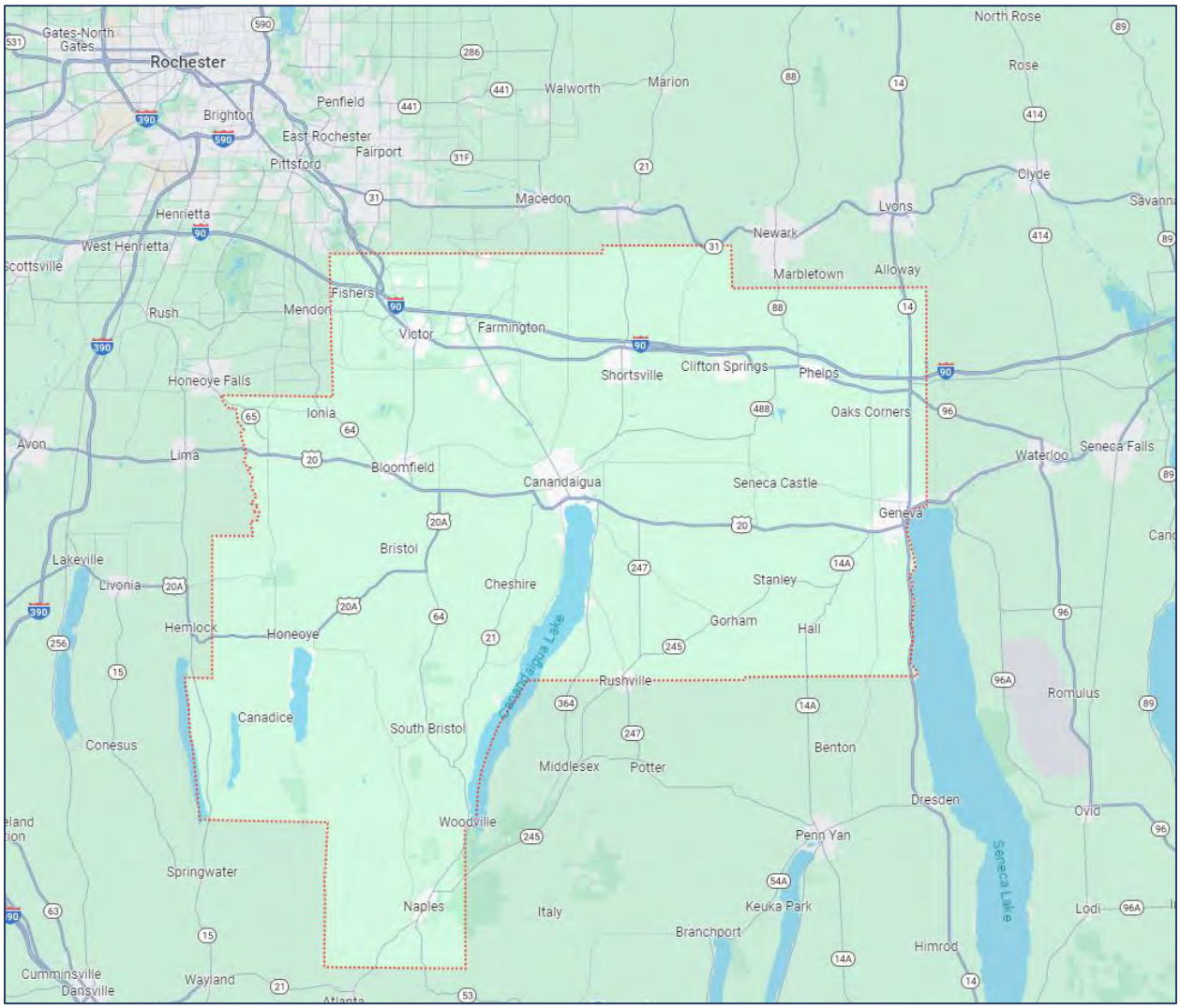
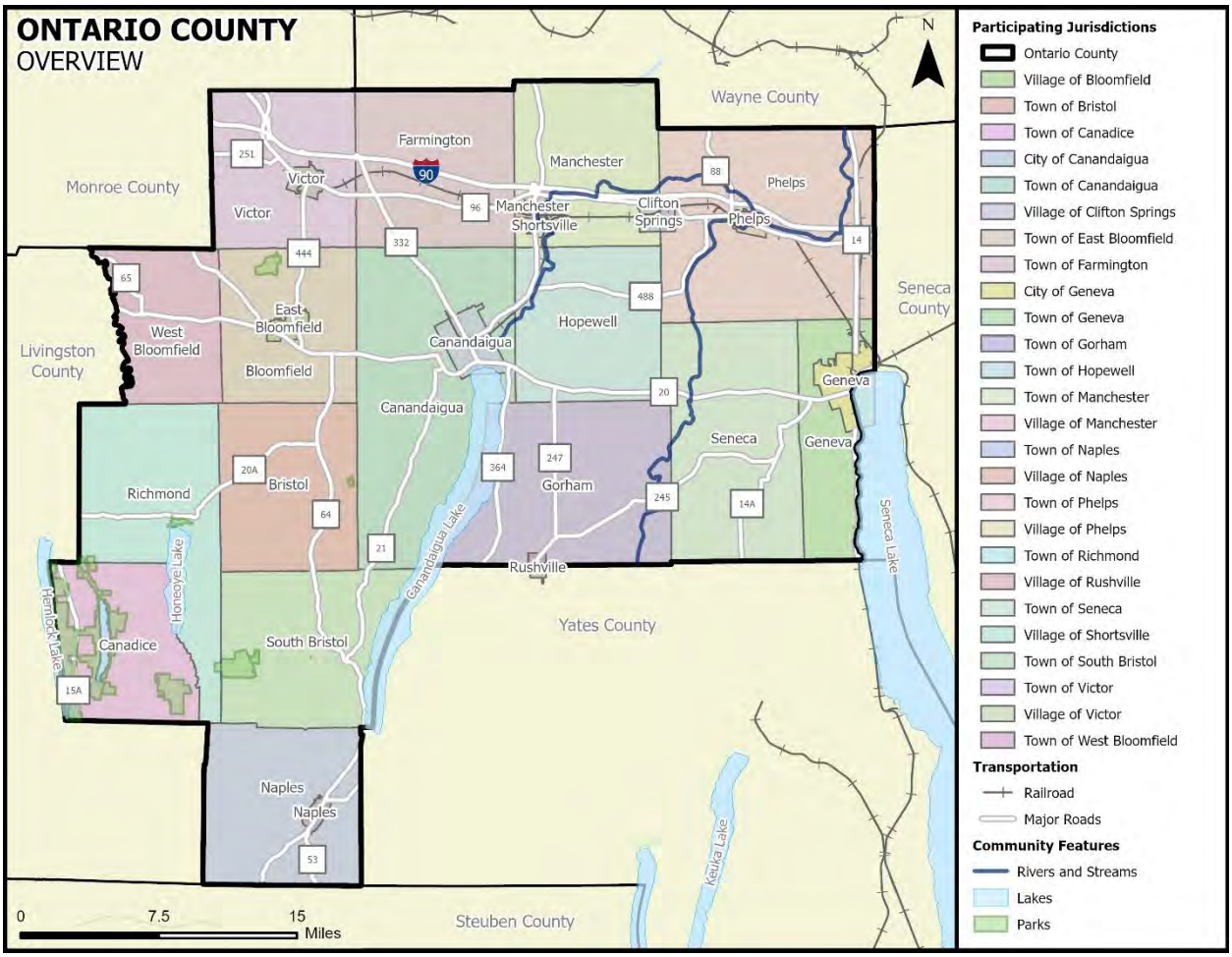


Figure 3-2 shows the participating jurisdictions within Ontario County that are covered in this Plan Update.

Figure 3-2. Ontario County Planning Area[3]



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

Table 3-1. Participating Jurisdictions

PARTICIPATING JURISDICTIONS	
Ontario County	
Town of Bristol	Village of Bloomfield
Town of Canadice	City of Canandaigua
Town of Canandaigua	Village of Clifton Springs
Town of East Bloomfield	Town of Farmington
City of Geneva	Town of Geneva
Town of Gorham	Town of Hopewell

[3] Map sources: ESRI OpenStreetMap (Custom: no labels), Census TIGER/LINE (2022), Ontario County Information Technology Department (2023)

PARTICIPATING JURISDICTIONS	
Town of Manchester	Village of Manchester
Town of Naples	Village of Naples
Town of Phelps	Village of Phelps
Town of Richmond	Village of Rushville
Town of Seneca	Village of Shortsville
Town of South Bristol	Town of Victor
Village of Victor	Town of West Bloomfield

POPULATION AND DEMOGRAPHICS

According to the 2020 Census population count, Ontario County has an official population of 112,458 residents, a 4.2 percent increase since the 2010 census. Table 3-2 summarizes select characteristics of vulnerable or sensitive populations in the Ontario County and the participating jurisdictions using data from the U.S. Census Bureau 2021 American Community Survey (ACS) five-year estimates. Note that in some cases the 2021 ACS estimates may differ from the 2020 Census counts; the ACS estimates are used throughout this section for consistency.[4]

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 2021 POPULATION	PERCENTAGE CHANGE 2010-2021	ESTIMATED VULNERABLE OR SENSITIVE POPULATIONS[5]		
				Youth (Under 5)	Elderly (Over 65)	Below Poverty Level
Village of Bloomfield	1,361	1,435	5.44%	44	265	102
Town of Bristol	2,315	2,195	-5.18%	60	490	156
Town of Canadice	1,664	1,690	1.56%	68	369	118
City of Canandaigua	10,545	10,563	0.17%	431	2,234	845
Town of Canandaigua	10,020	10,994	9.72%	353	2,241	902
Village of Clifton Springs	2,127	1,954	-8.13%	65	475	221
Town of East Bloomfield	3,634	3,655	0.58%	178	804	223
Town of Farmington	11,825	14,108	19.31%	978	2,092	1298

[4] Source: https://www.census.gov/en.html and https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/2021/

[5] The Estimated Vulnerable or Sensitive Populations are based off the 2021 American Community Survey 5-Year Estimates Data Profiles.

JURISDICTION	TOTAL 2010 POPULATION	TOTAL 2021 POPULATION	PERCENTAGE CHANGE 2010-2021	ESTIMATED VULNERABLE OR SENSITIVE POPULATIONS[5]		
				Youth (Under 5)	Elderly (Over 65)	Below Poverty Level
City of Geneva	13,261	12,577	-5.16%	781	1,856	2339
Town of Geneva	3,291	3,457	5.04%	138	1,035	322
Town of Gorham	4,247	4,145	-2.4%	267	1,068	211
Town of Hopewell	3,747	3,834	2.32%	76	820	318
Town of Manchester	9,395	9,392	-0.03%	399	1,908	996
Village of Manchester	1,709	1,507	-11.82%	67	318	133
Town of Naples	2,502	2,444	-2.32%	63	510	491
Village of Naples	1,041	864	-17%	32	174	175
Town of Phelps	7,072	6,733	-4.79%	445	1,203	572
Village of Phelps	1,989	2,081	4.63%	206	332	348
Town of Richmond	3,361	3,370	0.27%	52	925	64
Village of Rushville	677	581	-14.18%	17	111	30
Town of Seneca	2,721	2,672	-1.8%	151	482	142
Village of Shortsville	1,439	1,831	27.24%	56	297	103
Town of South Bristol	1,590	1,727	8.62%	38	539	124
Town of Victor	14,275	15,779	10.54%	783	3,198	410
Village of Victor	2,696	2,744	1.78%	126	545	148
Town of West Bloomfield	2,466	2,725	10.5%	121	780	278
Ontario County	**107,931**	**112,060**	**3.83%**	**5,382**	**22,554**	**9,525**

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.[6]

Homelessness has increased over the past decade in mostly rural counties in the Finger Lakes region, according to a report released by Rochester-based health research organization Common Ground Health. The report shows homelessness increased by 215% collectively across Ontario, Seneca, Wayne, and Yates counties between 2007 and 2021. Increases are attributed to a number of issues including high housing costs, mental health issues, substance abuse, and long-

[6] National Alliance to End Homelessness, *What Causes Homelessness?*, 2022

standing inequalities that lead to poverty. In the Finger Lakes region, seven out of the nine counties have zip codes where more than 20% of the population lives in poverty.[7]

New York State has adopted a "Code Blue" policy to provide shelter for homeless populations during periods of cold temperatures. Ontario 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 Ontario County Commissioner of Human Services provided the most recent data available on the average weekly homeless populations in Ontario County (Table 3-3) and included weekly averages from the past four years. The county accepts all homeless populations seeking shelter during a code blue alert until the temperature is sustained above freezing.

Table 3-3. Average Weekly Homeless Populations

YEAR	TOTAL	PERCENT CHANGE
2020	102	-
2021	89	-12.7%
2022	166	+86.5%
2023	176	+6.0%

POPULATION GROWTH

The official 2020 Ontario County population is 112,458. Overall, Ontario County experienced an increase in population between 1990 and 2020 of 18.3 percent, or an increase by 17,357 residents. Between 2010 and 2020, the Town of Farmington experienced the greatest rate of growth (19.8%) among all jurisdictions, and the Village of Naples saw the largest percentage of population decline (-10.6%). Generally, Ontario County experienced a total growth rate of 4.2 percent between 2010 and 2020. Table 3-4 provides historic growth rates in Ontario County.

Table 3-4. Population Growth by Jurisdiction 1990-2020[8]

JURISDICTION	1990	2000	2010	2020	POP CHANGE 1990-2020	PERCENT OF CHANGE	POP CHANGE 2010-2020	PERCENT OF CHANGE
Village of Bloomfield	-	1,267	1,361	1,277	-	-	-84	-6.2%
Town of Bristol	2,071	2,421	2,315	2,284	213	10.3%	-31	-1.3%
Town of Canadice	1,857	1,846	1,664	1,668	-189	-10.2%	4	0.2%
City of Canandaigua	10,725	11,418	10,545	10,576	-149	-1.4%	31	0.3%
Town of Canandaigua	7,160	7,649	10,020	11,109	3,949	55.2%	1,089	10.9%
Village of Clifton Springs	2,175	2,223	2,127	2,209	34	1.6%	82	3.9%

[7] Common Ground Health, *Unhomed: A Spotlight on Homelessness in the Finger Lakes Region,* January 18, 2023: https://media.cmsmax.com/ravk3pgz5ktlujs1r08ci/regional-spotlight-on-homelessness-final.pdf
[8] U.S. Census Bureau

JURISDICTION	1990	2000	2010	2020	POP CHANGE 1990-2020	PERCENT OF CHANGE	POP CHANGE 2010-2020	PERCENT OF CHANGE
Town of East Bloomfield	3,258	3,361	3,634	3,640	382	11.7%	6	0.2%
Town of Farmington	10,381	10,585	11,825	14,170	3,789	36.5%	2,345	19.8%
City of Geneva	14,143	13,617	13,261	12,812	-1,331	-9.4%	-449	-3.4%
Town of Geneva	2,967	3,289	3,291	3,473	506	17.1%	182	5.5%
Town of Gorham	3,497	3,776	4,247	4,106	609	17.4%	-141	-3.3%
Town of Hopewell	3,016	3,346	3,747	3,931	915	30.3%	184	4.9%
Town of Manchester	9,351	9,258	9,395	9,404	53	0.6%	9	0.1%
Village of Manchester	1,598	1,475	1,709	1,640	42	2.6%	-69	-4.0%
Town of Naples	2,559	2,441	2,502	2,403	-156	-6.1%	-99	-4.0%
Village of Naples	1,237	1,072	1,041	931	-306	-24.7%	-110	-10.6%
Town of Phelps	6,749	7,017	7,072	6,637	-112	-1.7%	-435	-6.2%
Village of Phelps	1,978	1,969	1,989	1,851	-127	-6.4%	-138	-6.9%
Town of Richmond	3,230	3,452	3,361	3,360	130	4.0%	-1	0.0%
Village of Rushville	609	621	677	651	42	6.9%	-26	-3.8%
Town of Seneca	2,747	2,731	2,721	2,644	-103	-3.7%	-77	-2.8%
Village of Shortsville	1,485	1,320	1,439	1,400	-85	-5.7%	-39	-2.7%
Town of South Bristol	1,663	1,645	1,590	1,641	-22	-1.3%	51	3.2%
Town of Victor	7,191	9,823	14,275	15,860	8,669	120.6%	1,585	11.1%
Village of Victor	2,308	2,433	2,696	2,744	436	18.9%	48	1.8%
Town of West Bloomfield	2,536	2,549	2,466	2,740	204	8.0%	274	11.1%
Ontario County	**95,101**	**100,224**	**107,931**	**112,458**	**17,357**	**18%**	**4,527**	**4.2%**

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 Ontario 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 2021 five-year estimates, 63 percent of the population 16 years and over is employed in the labor force. The per capita income is $39,751 and the median household income countywide is $70,694. It is estimated that 34 percent of households have incomes below $50,000. Families with incomes below the poverty level in 2021 made up 5.2 percent of all families. Of families that have children under 18 years old, 8.1 percent are below the poverty level.

Table 3-5 and Table 3-6 show the various occupations and industries within Ontario County, according to the 2021 estimates by the American Community Survey.

Table 3-5. Occupations of Employed Population in Ontario County[9]

OCCUPATION	ESTIMATE	PERCENT
Civilian employed population 16 years and over	55,765	-
Management, business, science, and arts occupations	24,768	44.4%
Sales and office occupations	11,133	20%
Service occupations	9,114	16.3%
Production, transportation, and material moving occupations	5,895	10.6%
Natural resources, construction, and maintenance occupations	4,855	8.7%

Table 3-6. Industries of Employed Population in Ontario County[10]

INDUSTRY	ESTIMATE	PERCENT
Civilian employed population 16 years and over	55,765	-
Educational services, and health care and social assistance	16,053	28.8%
Retail trade	6,210	11.1%
Manufacturing	6,193	11.1%
Professional, scientific, and management, and administrative and waste management services	5,866	10.5%
Arts, entertainment, and recreation, and accommodation and food services	5,311	9.5%
Construction	3,721	6.7%
Finance and insurance, and real estate and rental and leasing	2,825	5.1%
Other services, except public administration	2,426	4.4%
Public administration	2,074	3.7%
Transportation and warehousing, and utilities	1,850	3.3%
Wholesale trade	1,399	2.5%
Agriculture, forestry, fishing and hunting, and mining	1,042	1.9%
Information	795	1.4%

[9] 2021 American Community Survey 5-Year Estimates Data Profiles.
[10] 2021 American Community Survey 5-Year Estimates Data Profiles.

NATURAL, CULTURAL, AND HISTORIC RESOURCES

Ontario County's territory is composed of 663 square miles, 644 square miles being land and 18 square miles comprised of water. The county contains or shares five of the Finger Lakes: Canandaigua Lake, Seneca Lake, Honeoye Lake, Hemlock Lake, and Canadice Lake. The Finger Lakes were created by glacial movement, which tilled the soils and made the region ideal for farming; hence, the significance of agriculture in Ontario County since its founding.

The lakes and rivers within the Finger Lakes Watershed provide drinking water to over two million people.[11] Within that larger watershed, the Canandaigua Lake Watershed stretches over much of southern and eastern Ontario County, providing a drinking water source for more than 70,000 people.[12]

Hemlock and Canadice Lakes supply drinking water to the City of Rochester and are characterized by the largely undeveloped landscape surrounding them. This includes the steep hills and trees of the Hemlock-Canadice State Forest, whose scenery and wildlife provide ideal grounds for hunting, fishing, hiking, and birdwatching.

Canandaigua Lake, well known for its clear, well-oxygenated water, provides clean drinking water to the City of Canandaigua and other surrounding communities. The lake's southern end is home to hillside vistas which attract boaters and lakeside residents. Power and fishing boats are able to access the lake at Canandaigua Lake State Marine Park.

Honeoye Lake, while small relative to other Finger Lakes, provides excellent boating and fishing opportunities for walleye, bass, perch, and bluegill.

Seneca Lake has the greatest area and depth of the Finger Lakes and is known as the lake trout capital of the world. Seneca Lake boasts the most wineries of all the Finger Lakes, as the gentle hillsides surrounding the lake offer an ideal climate for grape production.[13]

There are five county parks managed by Ontario County. The county's park system contains a variety of landscapes and settings for recreation, from hiking among the water falls in Grimes Glen County Park to swimming and picnicking at Deep Run Beach Park. With only one county-owned park prior to 1960, recent decades have seen a concerted effort to proliferate the parks system, with the most recent addition being Grimes Glen County Park in 2008.[14]

Ontario County has a rich history that is preserved through its designated historic buildings and sites. Throughout the county, there are 74 buildings, districts, and sites listed on the National Register of Historic Places. The City of Canandaigua has the largest share of historic places in the County, with 18 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

[11] Source: https://www.dec.ny.gov/lands/122661.html
[12] Source: https://www.ontswcd.com/canandaigua-lake-watershed
[13] Source: https://ontariocountyny.gov/1288/Natural-Resources
[14] Source: https://ny-ontariocounty2.civicplus.com/202/County-Parks-System

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 November 2023, there is one federally endangered species, the Northern Long-Eared Bat, in Ontario County. Additionally, there are four other species listed as candidate species, proposed to be added to the endangered / threatened list, or as having their status currently under review. These species are listed in Table 3-7.

Table 3-7. Endangered Species in Ontario County[15]

TYPE of SPECIES	COMMON NAME	SCIENTIFIC NAME	SPECIES STATUS
Clam	Green Floater	Lasmigona subviridis	Proposed Threatened
Mammal	Tricolored Bat	Perimyotis subflavus	Proposed Endangered
Insect	Monarch Butterfly	Danaus plexippus	Candidate
Mammal	Little Brown Bat	Myotis lucifugus	Under Review
Mammal	Northern Long-Eared Bat	Myotis septentrionalis	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 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: Village of Bloomfield, Town of Bristol, Town of Canadice, City of Canandaigua, Town of Canandaigua, Town of East Bloomfield, Town of Farmington, City of Geneva, Town of Geneva, Town of Gorham, Town of Hopewell, Village of Manchester, Town of Naples, Village of Naples, Town of Phelps, Village of Phelps, Town of Richmond, Village of Rushville, Town of Seneca, Town of South Bristol, Town of Victor, Village of Victor, and Town of West Bloomfield.

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 2018 and 2022. The data includes total buildings and total units permitted. Permits are reported annually in September and the data includes that from 2018 through 2022 to demonstrate growth. Of the residential building permits issued in this period, over 97 percent were for single-family buildings and 3 percent for multi-family buildings. Housing type can also be an indication of an individual's ability to recover from a disaster.

[15] U.S. Fish and Wildlife Service, Environmental Conservation Online System https://ecos.fws.gov/ecp/report/species-listings-by-current-range-county?fips=36069

Table 3-8. Building Permits, By Jurisdiction, 2018-2022[16]

JURISDICTION	2018		2019		2020		2021		2022	
	Total Buildings	Total Units	Total Buildings	Total Units	Total Buildings	Total Units	Total Buildings	Total Units	Total Buildings	Total Units
Village of Bloomfield	6	6	0	0	2	2	0	0	0	0
Town of Bristol	3	3	7	7	0	0	3	3	7	7
Town of Canadice	1	1	1	1	10	10	4	4	5	5
City of Canandaigua	6	6	8	8	9	9	38	38	34	34
Town of Canandaigua	39	39	43	43	43	43	54	54	47	154
Village of Clifton Springs	2	2	3	3	0	0	0	0	0	0
Town of East Bloomfield	4	4	2	2	4	4	7	7	5	5
Town of Farmington	83	267	75	81	108	129	90	173	66	110
City of Geneva	1	3	16	18	0	0	0	0	51	51
Town of Geneva	5	7	4	4	7	19	7	8	4	4
Town of Gorham	14	14	5	5	11	11	13	13	11	11
Town of Hopewell	5	5	7	7	5	5	6	6	8	8
Town of Manchester	4	4	0	0	23	23	1	1	2	2
Village of Manchester	0	0	0	0	1	1	0	0	1	1
Town of Naples	5	5	3	3	1	1	6	6	3	3
Village of Naples	0	0	0	0	0	0	0	0	1	1
Town of Phelps	5	5	11	11	9	9	7	7	6	6
Village of Phelps	3	3	3	3	6	6	5	5	1	1
Town of Richmond	3	3	4	4	7	7	8	8	7	7
Village of Rushville	0	0	0	0	0	0	4	4	2	2
Town of Seneca	3	3	2	2	4	4	7	7	9	9
Village of Shortsville	0	0	0	0	0	0	0	0	0	0
Town of South Bristol	11	11	12	12	5	5	7	7	4	4
Town of Victor	57	57	42	42	31	31	83	83	112	118
Village of Victor	1	1	0	0	0	0	0	0	0	0
Town of West Bloomfield	2	2	0	0	3	3	3	3	4	4
Grand Total	**263**	**451**	**248**	**256**	**289**	**322**	**353**	**437**	**390**	**547**

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

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 3-9, 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 Ontario County, which would mean overall growth for the county.

Table 3-9. Ontario County Population Projections[17]

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)
644	107,931	167.6	111,494	173.1	114,385	177.6	115,709	179.7

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 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 is a summary of a sample of Comprehensive Plans participating jurisdictions in Ontario County have in place. Refer to Appendix F Capability Assessment for a complete list of participating jurisdictions with Comprehensive Plans.

The 2021 Town of Farmington Comprehensive Plan Update, adopted January 25, 2022, reflects changes in the community since the 2011 Comprehensive Plan and provides the community's visions through the year 2030. The 2021 Update also incorporates information from the 2018 Ontario County Multi-Jurisdictional Hazard Mitigation Plan including specifics relating to Drainage Divide Inter-Municipal Study (Section 25, Action TF-1). While the Comprehensive Plan doesn't expire until 2030, the Plan includes procedures for an annual reporting process that includes the status updates of implementing actions.

The City of Canandaigua Comprehensive Plan 2020 Update, adopted on September 3, 2020, reflects the community's core values: responsive, participatory governance; caring & respect; integrity; heritage; stewardship; and continuous improvement. The plan will be used as a guiding document for the future growth and development of the city, to make decisions, and set policies. The plan contains goals and recommendations on citywide concerns, including transportation,

[17] Source: https://pad.human.cornell.edu/profiles/Ontario.pdf

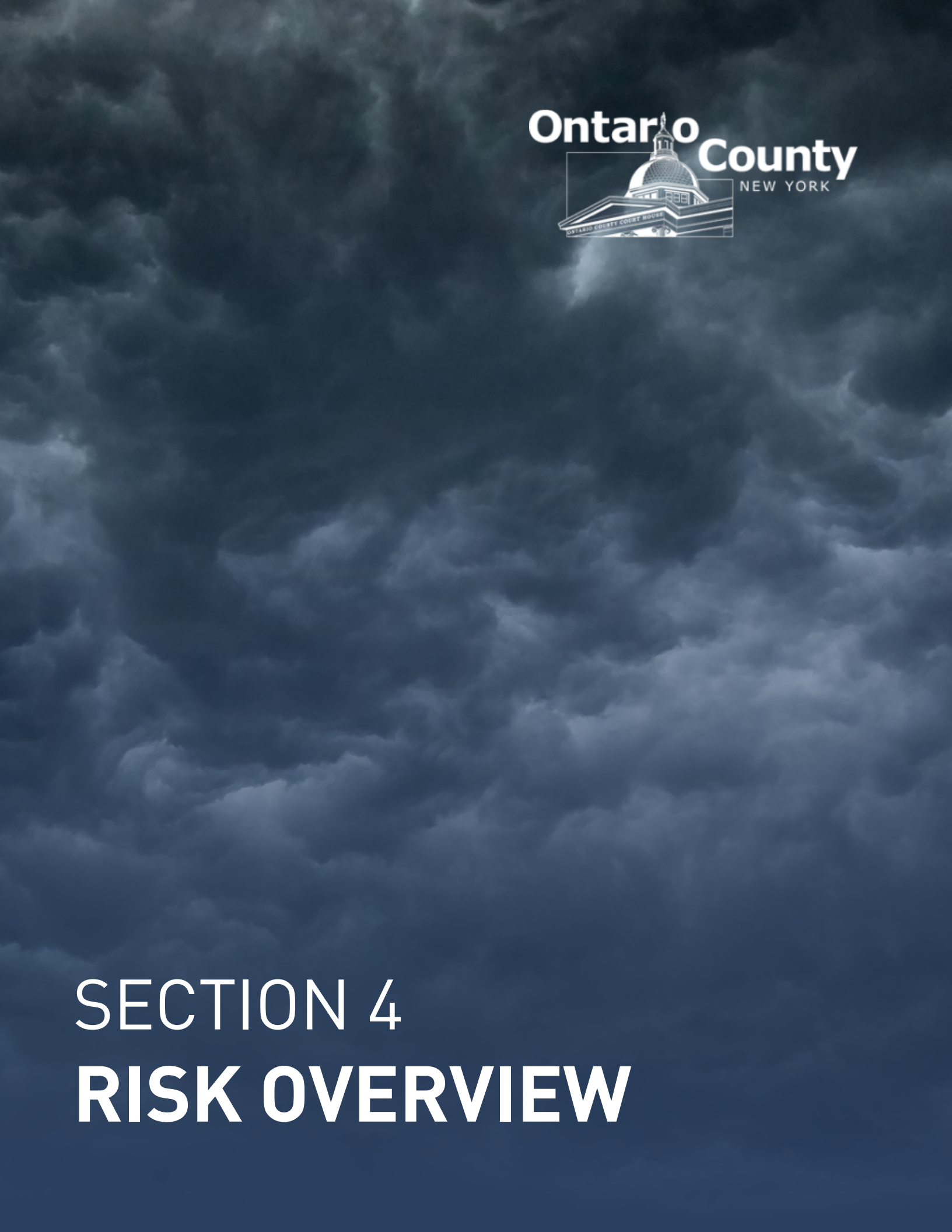
housing, parks and recreation, economy, historic preservation, urban forestry, the environment, and intermunicipal opportunities.

The Town of East & Village of Bloomfield 2020 Comprehensive Plan addresses the needs of the Town of East Bloomfield and Village of Bloomfield, both integrally and separately. The plan's guiding vision is "to maintain an affordable, attractive, livable, historic atmosphere while at the same time providing for, and promoting, orderly growth compatible with small town charm and scenic beauty." The plan includes goals, considerations, and action plans in key areas determined by the community, such as clean sustainable living; preserving and bolstering community assets such as woodlands, parks, library, and school system; and development strategies which will attract and retain families.

The 2018 Town of Bristol Comprehensive Plan Update outlines goals and actions toward fulfilling the Town of Bristol's vision of preserving environmental and natural features, supporting agriculture and business, building upon local infrastructure, and encouraging responsibly planned economic development. The plan identifies seven key topic areas that are important elements within the town: agricultural resources; community character, facilities, and services; economic development; environment and natural resources; housing; infrastructure; and recreational resources. For each of these topic areas, the plan details policy statements, objectives, and actions to guide decision making on these key elements of the community.

A 2017 Joint Comprehensive Plan, adopted in March 2018, was developed by the Town of Manchester, Village of Manchester, Village of Clifton Springs, and Village of Shortsville, with additional guidance from the Ontario County Planning Department. The plan addresses these municipalities as a cohesive community, allowing these jurisdictions to share resources, consider the impacts of local decision-making on the wider community, and avoid duplications of effort. Provided in this plan are community profiles, a framework of the community's goals, future land use summaries, and a matrix listing and describing high priority goals, as well as timeframes and potential partners for those goals.

The Town of Victor Comprehensive Plan, adopted in 2015, provides direction, vision, and an outline to improve both the Town of Victor and Village of Victor. The plan addresses priorities of community such as protecting and enhancing the area's open space and rural character, enhancing walkability, and creating high quality employment opportunities. Topics such as agriculture protection, community development, and transportation are profiled in the plan. Additionally, an implementation plan for identified priorities is included, which will guide community leaders in decision making.



SECTION 4
RISK OVERVIEW

SECTION 4: RISK OVERVIEW

Hazard Description 1
Disaster Declaration History 5
Natural Hazards and Climate Change 6
Overview of Hazard Analysis 8
Hazard Ranking 9

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 23, which include hazard descriptions and vulnerability assessments.

Upon a review of the full range of natural hazards suggested under FEMA planning guidance, Ontario County and the participating jurisdictions assessed the hazards identified in the 2018 Ontario County Multi-Jurisdictional All-Hazard Mitigation Plan and the 2019 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). Ontario County and the participating jurisdictions identified 13 natural hazards and 6 human-caused hazards 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 Ontario County include tornado, snow storm, ice storm, extreme heat, extreme cold, and thunderstorm related hazards including wind, hail, and lightning (Table 4-1).

Geologic hazards are events or incidents associated with the earth's crust. The geologic hazards identified as significant consist of earthquakes and landslides. The only geologic hazard that has been identified as significant for the county is landslide.

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.

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 hazards identified as significant for the county are fire, infestation, hazardous materials, terrorism, utility failure, and water supply contamination.

For the Risk Assessment, the wildfire hazard is considered "other," since this hazard is not considered atmospheric, geologic, hydrologic, technological nor human-caused.

Table 4-1. Hazard Descriptions

HAZARD	DESCRIPTION
ATMOSPHERIC	
Extreme Cold	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.
Extreme Heat	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.
Hail	Hailstorm events are a potentially damaging outgrowth of severe thunderstorms. 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.
Lightning	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.
Tornado	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.
Thunderstorm Wind	A thunderstorm occurs when an observer hears thunder. Radar observers use the intensity of the radar echo to distinguish between rain showers and thunderstorms. Lightning detection networks routinely track cloud-to-ground flashes, and therefore thunderstorms.
Snow Storm	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. Snowstorms typically fall into the following categories: blizzard, blowing snow, snow squalls, snow showers, flurries, and avalanches.
Ice Storm	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.
GEOLOGIC	
Landslide	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.

SECTION 4: RISK OVERVIEW

HAZARD	DESCRIPTION
HYDROLOGIC	
Drought	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.
Flood	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.
OTHER	
Wildfire	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.
TECHNOLOGICAL	
Dam Failure	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.
HUMAN-CAUSED	
Fire	A fire, also referred to as an urban fire, involves the burning of buildings and infrastructure within an urban or developed area. These fires can be contained to a single structure or spread across multiple buildings and properties. Most fires are human caused, examples include burning garbage and debris, discarding cigarettes, knocking over candles inside a home, and leaving a stovetop or cooking appliance unattended. Fires are also caused by technological error which includes defective equipment installation, aging or outdated electrical equipment, and overloaded power surges.
Infestation	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.
Hazardous Materials	Hazardous materials come in the form of explosives, flammable and combustible substances, poisons, and radioactive materials. A hazardous material (HAZMAT) incident involves a substance outside normal safe containment in sufficient concentration to pose a threat to life, property, or the environment.
Terrorism	Terrorism is defined in the Code of Federal Regulations as "The unlawful use of force and violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives." Acts

HAZARD	DESCRIPTION
	of terrorism include threats of terrorism, assassinations, kidnappings, hijackings, bomb scares and bombings, cyber-attacks (computer-based), and the use of chemical, biological, nuclear, and radiological weapons
Utility Failure	A utility failure is the disruption in the services necessary for the operation of critical facilities and services. Utility failures include power outages, water system failures, fuel shortages, and internet or communication failures.
Water Supply Contamination	Water supply contamination occurs when harmful substances, often chemicals or microorganisms, pollute water sources which make the water unusable for drinking, cooking, cleaning, swimming, and other activities.

New York State identifies 18 hazards that pose a risk to the State, in which Ontario County determined that 6 of these hazards pose limited to no risk for Ontario 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
Avalanche	According to the 2019 New York State Plan, Ontario 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.
Coastal Hazards	According to the 2019 New York State Plan, Ontario 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.
Earthquake	According to the 2019 New York State Plan, while the potential for earthquakes exists across New York State, Ontario County is not considered as one of the areas that would experience an amplification of ground motion during seismic activity and there are no historical occurrences of earthquake 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 earthquake and none is expected in the future.
Hurricane	According to the 2019 New York State Plan, Ontario County is not considered a High Risk County for the hurricane hazard and there are no historical occurrences of hurricane for the planning area. Any remnants of a hurricane or tropical storm would only include secondary impacts such as winds and rainfall and would be covered under wind or flood mitigation measures.
Tsunami / Seiche	According to the 2019 New York State Plan, there are no recorded events in recent history that have impacted New York State, and Ontario 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.
Volcano	According to the 2019 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 Ontario 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 Ontario County. Many of the disaster events were regional or statewide.

Between 1953 and November 2023, Ontario County received 19 disaster declarations. Out of 19 declared disasters, the largest number (5) were related to severe storms, followed by flood (3), snowstorm (3), hurricane (2), fire (1), and severe ice storm (1). Four declared disasters are classified as "other." Disaster declarations for Ontario County are listed in Table 4-3 below.

Table 4-3. Disaster Declaration History in Ontario County, 1953-2023[1]

YEAR	DECLARATION TITLE	HAZARD	DECLARATION TYPE	DISASTER No.
1972	Tropical Storm Agnes	Flood	DR	DR-338
1991	Severe Storm, Winter Storm	Snowstorm	DR	DR-898
1993	Severe Blizzard	Snowstorm	EM	EM-3107
1996	Severe Storms/Flooding	Flood	DR	DR-1095
1998	Severe Wx, Sept. 7, 1998	Severe Storm	DR	DR-1244
1999	Winter Storm	Snowstorm	EM	EM-3138
2000	Virus Threat	Biological	EM	EM-3155
2001	Terrorist Attack	Fire	DR	DR-1391
2003	Ice Storm	Severe Ice Storm	DR	DR-1467
2003	Power Outage	Infrastructure	EM	EM-3186
2003	Severe Storms, Tornadoes, and Flooding	Severe Storm	DR	DR-1486
2004	Severe Storms and Flooding	Severe Storm	DR	DR-1534
2005	Hurricane Katrina Evacuation	Hurricane	EM	EM-3262
2011	Severe Storms, Flooding, Tornadoes, and Straight-Line Winds	Flood	DR	DR-1993
2012	Hurricane Sandy	Hurricane	EM	EM-3351
2014	Severe Storms and Flooding	Severe Storm	DR	DR-4180
2020	COVID-19	Biological	EM	EM-3434
2020	COVID-19 Pandemic	Biological	DR	DR-4480

[1] Source: https://www.fema.gov/data-visualization/disaster-declarations-states-and-counties

YEAR	DECLARATION TITLE	HAZARD	DECLARATION TYPE	DISASTER No.
2023	Severe Storms and Flooding	Severe Storm	DR	DR-4723

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 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 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.

Ontario County is within Region 1 for the ClimAID analysis, which includes western New York and the Great Lakes Plain. Climate models project Ontario County to see relatively low rainfall, increasing summer drought risk and negatively impacting agricultural revenue in Region 1, the highest of any region in New York. Average temperature increases of 3.0 to 5.5 degrees by the 2050s and 4.5 to 8.5 degrees by the 2080s are expected. Average precipitation increases of 0 to 10 percent by the 2050s and 0 to 15 percent by the 2080s should be expected. Additional projections for New York State and Region 1 can be found in the ClimAid's most recent publication, *Responding to Climate Change in New York State.*[2]

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, Ontario County has developed a Comprehensive Emergency Management Plan that outlines evacuation and sheltering measures during hazard events.

[2] 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

Table 4-4. Future Trends in Extreme Weather in New York State[3]

HAZARDS	EXPECTED TRENDS
Extreme Temperatures	o 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. o Warmer temperatures could extend the state's growing season by about one month. o Summers will become more intense, and winters will become milder. o Higher frequency of 90°F days. o Higher frequency of heat waves, defined as three or more consecutive days over 90°F. o Extreme cold events are expected to decrease as average temperatures rise. o The coolest days of the summer are expected to continue becoming warmer.
Precipitation	o 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. o Much of the additional precipitation is projected to occur during the winter months. o Late summer and early fall precipitation is projected to slightly decrease. o Northern parts of the state are likely to see the greatest increases in precipitation. o 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.
Drought	o By the end of the century, it is likely that late-summer, short-duration droughts will increase across New York State. o It is currently unknown how multi-year drought risk may change in the future.
Flood	o As sea levels rise, coastal flooding associated with storms is very likely to increase in intensity, frequency, and duration. o More frequent and intense coastal storms will also contribute to larger coastal flooding events. o By the end of the century, coastal flood levels that currently occur once per decade may occur every one to three years. o Flooding at the current 100-year flood level may occur 19 times more often by the end of the century.
Winter Weather	o As the climate warms, the likelihood of winter weather decreases. o Both extreme cold and snowfall either become less frequent or are expected to do so.
Thunderstorms (Wind, Hail, Lightning)	o Historical trend data is unreliable. o 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.

[3] 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

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 Ontario 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 Ontario County and evaluate community assets and their vulnerability to the hazards.

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 Ontario 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 Ontario County was reviewed based on recent development changes that occurred throughout the planning area. The population of Ontario County has grown by 4.2 percent between 2010 and 2020, according 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 2023 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. 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
NATURAL HAZARDS			
Extreme Cold	Highly Likely	Limited	Moderate
Flood	Highly Likely	Major	Moderate
Ice Storm	Occasional	Limited	Moderate
Snow Storm	Highly Likely	Limited	Moderate
Wind	Highly Likely	Substantial	Moderate
Dam Failure	Unlikely	Limited	Low
Drought	Highly Likely	Limited	Low
Extreme Heat	Highly Likely	Limited	Low
Hail	Highly Likely	Limited	Low
Landslide	Unlikely	Limited	Low
Lightning	Highly Likely	Major	Low
Tornado	Occasional	Limited	Low
Wildfire	Highly Likely	Limited	Low

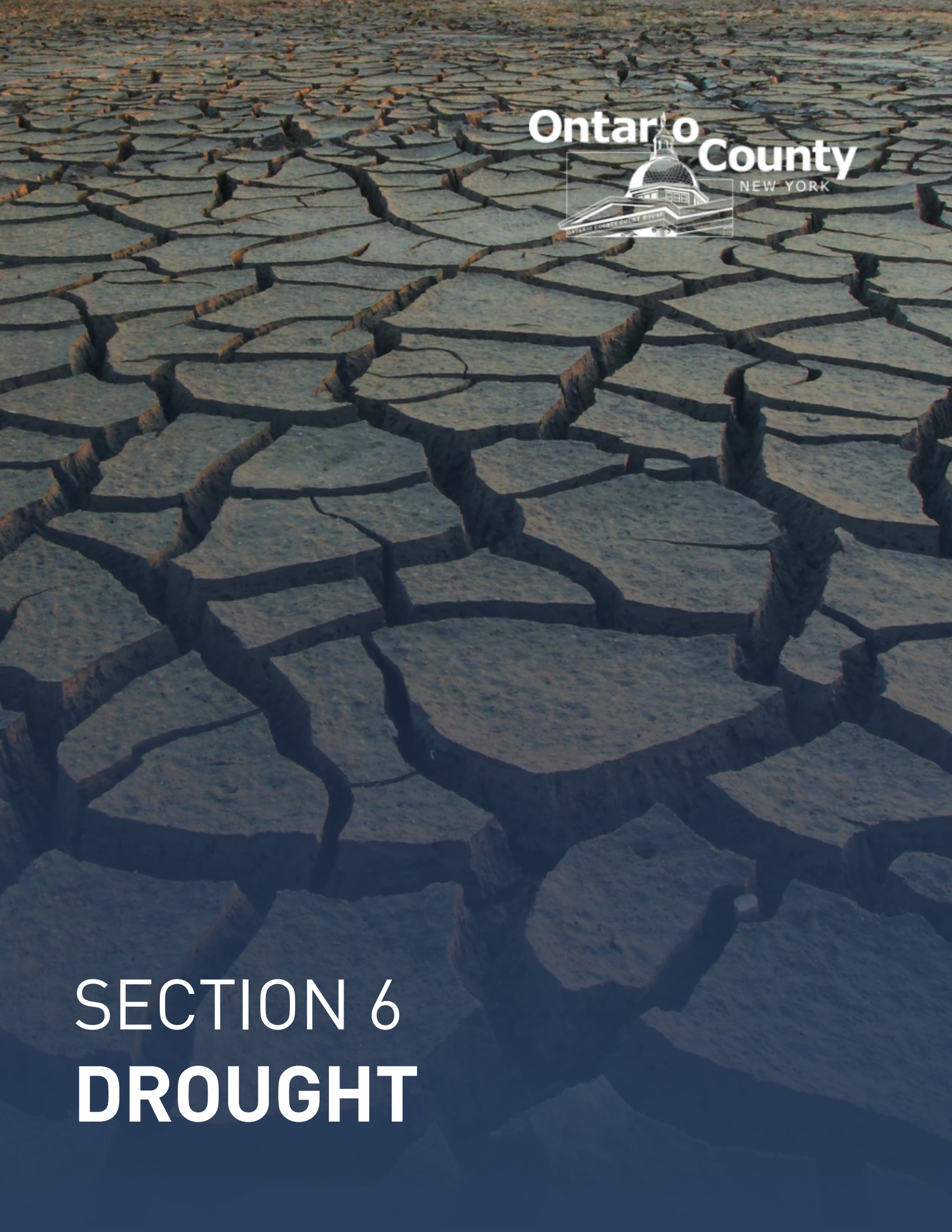
HAZARD	FREQUENCY OF OCCURENCE	POTENTIAL SEVERITY	RANKING
HUMAN-CAUSED HAZARDS			
Fire	Highly Likely	Substantial	Low
Hazardous Materials	Occasional	Major	Low
Infestation	Highly Likely	Limited	Low
Terrorism	Unlikely	Substantial	Low
Utility Failure	Highly Likely	Minor	Low
Water Supply Contamination	Likely	Major	Low



SECTION 5
DAM FAILURE

SECTION 5: DAM FAILURE

Portions of the Ontario 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).



SECTION 6
DROUGHT

SECTION 6: DROUGHT

Hazard Description 1
Location 1
Extent 3
Historical Occurrences 4
Significant Events 6
Probability of Future Events 6
Vulnerability and Impact 6
Assessment of Impacts 10
Climate Change Considerations 12

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[1]

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

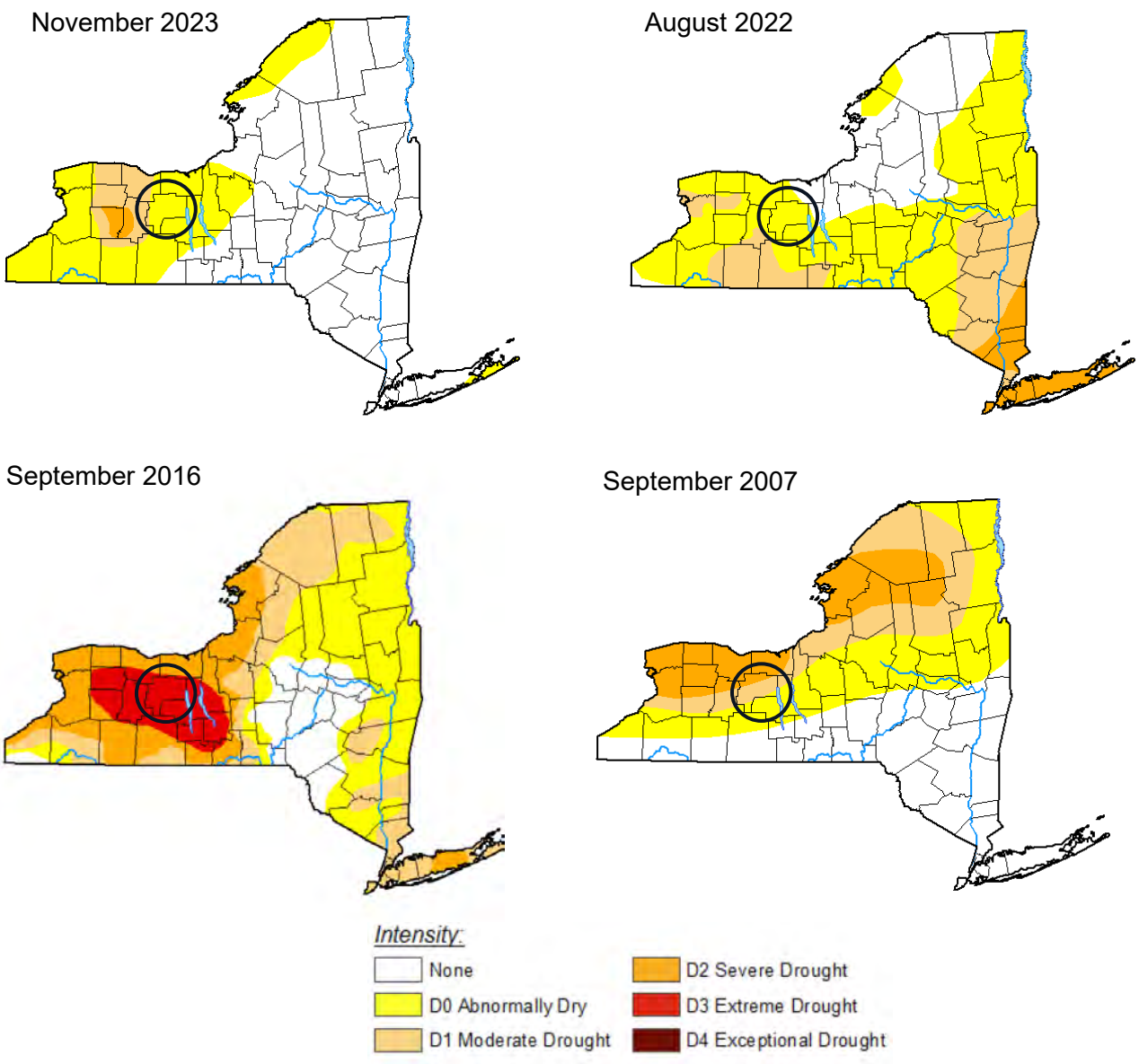
LOCATION

Droughts occur, on average, every two to three years throughout New York State and the Ontario County planning area, including 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 Island to 140 inches in Oswego, east of Lake Ontario. The snowfall and snow cover

[1] Source: Multi-Hazard Identification and Risk Assessment: A Cornerstone of the National Mitigation Strategy, FEMA

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 extreme drought conditions over the last decade. There is no distinct geographic boundary to drought; therefore, it can occur throughout the Ontario County planning area equally.

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



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[2]

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

[2] Source: National Drought Mitigation Center

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[3]

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.

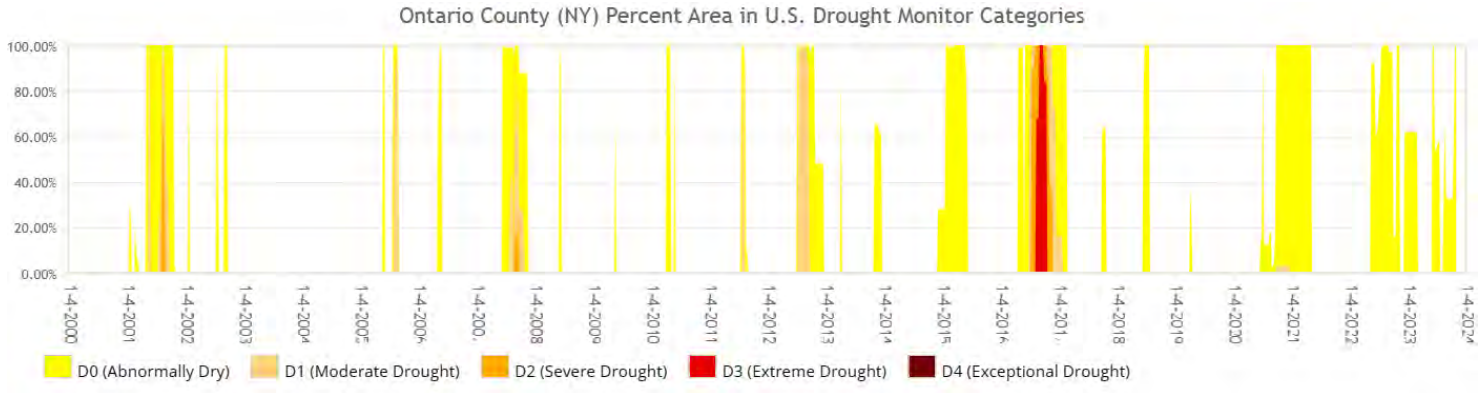
Based on the historical occurrences for drought and the location of the Ontario County planning area, including participating jurisdictions, the area can anticipate a range of drought from abnormally dry to extreme drought, or D0 to D3, based on the Palmer Drought Category. The entire planning area has experienced extreme drought conditions. This is the most extreme drought condition the planning area can anticipate in the future.

HISTORICAL OCCURRENCES

The Ontario County planning area may experience drought conditions in any given year. According to the U.S. Drought Monitor, between January 2000 and November 2023, the Ontario County planning area spent 325 weeks (26%) in some level of drought as defined as Abnormally Dry (D0) or worse conditions. Ontario County has received 4 USDA disaster declarations for drought from 2012 through 2023.

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

Figure 7-2. Ontario County Drought Intensity, January 2000-November 2023[4]



Historical drought information shows the percentage of Ontario 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 Ontario 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 14 historical drought periods were recorded in the U.S. Drought Monitor, impacting Ontario County between January 2000 and November 2023. Property and crop drought damages in the planning area were unavailable.

Table 6-5. Historical Drought Periods, 2000-2023[5]

JURISDICTION	DROUGHT PERIOD	WEEKS
Ontario County	5/8/2001-10/29/2001	25
Ontario County	8/2/2005-9/5/2005	5
Ontario County	6/19/2007-11/26/2007	23
Ontario County	4/13/2010-5/10/2010	4
Ontario County	7/19/2011-8/22/2011	5
Ontario County	7/10/2012-12/24/2012	24
Ontario County	11/5/2013-12/23/2013	7
Ontario County	12/9/2014-6/15/2015	27
Ontario County	4/26/2016-2/27/2017	44
Ontario County	10/3/2017-10/30/2017	4
Ontario County	6/19/2018-7/30/2018	6
Ontario County	6/23/2020-5/10/2021	46
Ontario County	5/17/2022-3/6/2023	42

[4] U.S. Drought Monitor
[5] Historical data is reported from January 2000 through November 2023.

JURISDICTION	DROUGHT PERIOD	WEEKS
Ontario County	6/6/2023-12/4/2023	26

Based on the historical drought events for the Ontario County planning area, including participating jurisdictions, there have been three drought periods reported during since the 2018 Plan.

SIGNIFICANT EVENTS

July - November 2016

A weather pattern supporting dry conditions was prevalent across New York beginning in late July 2016, resulting in below normal precipitation and putting all of Ontario County into Extreme Drought (D3) conditions by late September. Nearly the entire state was in some level of drought, with the worst conditions centered around the Finger Lakes, including Ontario County. There were periodic showers and thunderstorms during this time, but these were localized with precipitation generally coming from frontal boundaries rather than widespread rainfall from larger systems. Rainfall impacts deteriorated due to hot summer temperatures which increased the evaporation rate and quickly dried out the soil. In addition, below normal snowpack from a mild winter left conditions drier than normal going into spring. The USGS ground water level network showed that numerous wells were in the driest 10th percentile. The dry conditions had a negative impact on crops. Results from a survey of over 200 farmers showed that over two-thirds of unirrigated fields had losses between 30 and 90 percent, while irrigated crops had losses up to a third. Drought conditions were relieved by a wetter autumnal pattern and eased by mid-November.

PROBABILITY OF FUTURE EVENTS

Based on available records of historic events, there have been 14 extended time periods of drought conditions (ranging in length from approximately 30 days to over 300 days) within a 23-year reporting period, which provides a probability of one event in the one to two years. This frequency supports a “Highly Likely” probability of future events for the Ontario County planning area. The impact of climate change could produce longer, more severe droughts, exacerbating the current drought conditions and impacts. See additional information on climate change at the end of this section.

VULNERABILITY AND IMPACT

Loss estimates were based on 23 years of statistical data from the U.S. Drought Monitor. 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 Ontario 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)	o Increased law enforcement activities may be required to enforce water restrictions. o Firefighters may have limited water resources to aid in firefighting and suppression activities, increasing risk to lives and property. o Potential for increased number of emergency calls as drought events can lead to cascading hazard events such as wildfires and flash flooding.
Airport, Academic Institutions, Community Residential Facilities, Day Care Facilities, Evacuation Centers & Shelters, Governmental Facilities	o Strain on staff as drought may cause health problems related to low water flows and poor water quality. o Water main breaks due to soil shrinking and swelling cycles could lead to facility closures. o Building foundations may crack due to soil shrinking and swelling cycles. o Operations dependent on water supply may be adversely impacted. o Economic disruptions due to cracked foundations and infrastructure damages as a result of soil shrinking and swelling cycles.
Commercial Suppliers (food, gas, etc.)	o Operations dependent on water supply may be adversely impacted. o Economic disruptions due to cracked foundations and infrastructure damages as a result of soil shrinking and swelling cycles.
Utility Services and Infrastructure (electric, water, wastewater, communications)	o Potential for increased number of emergency calls as drought events can lead to cascading hazard events such as wildfires and flash flooding. o Water main breaks due to soil shrinking and swelling cycles could lead to facility closures. o Operations dependent on water supply may be adversely impacted.

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 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 the ill. The population over 65 in the Ontario County planning area is estimated at 20 percent of the total population and children under the age of 5 are estimated at 5 percent, or an estimated total of 27,936 potentially vulnerable residents in the planning area based on age. During summer drought, or hot and dry conditions, elderly persons, small children, infants and the chronically ill who do not have adequate cooling units in their homes may become more vulnerable to injury and/or death. In addition, an estimated 8.5 percent of the planning area population live below the poverty level (Table 6-7) which may contribute to overall health impacts.

Table 6-7. Populations at Greater Risk by Participating Entity[6]

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5	POPULATION BELOW POVERTY LEVEL
Ontario County	22,554	5,382	9,525
Village of Bloomfield	265	44	102
Town of Bristol	490	60	155
Town of Canadice	369	68	118
City of Canandaigua	2,234	431	845
Town of Canandaigua	2,241	353	902
Village of Clifton Springs	475	65	221
Town of East Bloomfield	804	178	223
Town of Farmington	2,092	978	1,298
City of Geneva	1,856	781	2,339
Town of Geneva	1,035	138	322
Town of Gorham	1,068	267	211
Town of Hopewell	820	76	318
Town of Manchester	1,908	399	996
Village of Manchester	318	67	133
Town of Naples	510	63	491
Village of Naples	174	32	175
Town of Phelps	1,203	445	572
Village of Phelps	332	206	348
Town of Richmond	925	52	64
Village of Rushville	111	17	30
Town of Seneca	482	151	142
Village of Shortsville	297	56	103
Town of South Bristol	539	38	124
Town of Victor	3,198	783	410
Village of Victor	545	126	148
Town of West Bloomfield	780	121	278

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

[6] US Census Bureau, American Community Survey, 2021

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 Ontario 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 Ontario County planning area, including participating jurisdictions.

The Finger Lakes region is the largest producer of wine in the U.S. east of California, boasting over 100 wineries and five wine trails. The Seneca Lake Wine Trail and Canandaigua Lake Wine Trail both fall within the Ontario County planning area and serve as an alluring tourism attraction year-round. While a small amount of water stress may help concentrate the flavor of wine-producing grapes, prolonged periods of drought are known to stunt the growth of shoots and vines, ultimately reducing crop yields.

Ontario County produces 31% of New York crop sales and 69% of the states livestock, poultry and associated products according to the 2017 census of agriculture, with a total market value of products sold exceeding $255 million (2024 dollars). Beef and dairy cattle comprise an important agricultural sector in Ontario County. The Ontario County 2017 livestock inventory indicated more than 60,000 cattle and calves in the planning area. A lactating dairy cow will consume 30 to 50 gallons of water a day. The average adult beef cow requires approximately 12 gallons of water a day. Drought can negatively affect nutrition sources, milk production, and future yields. Dry pastures lead to lower quality hay and increased fire danger. Decreases in feed availability can lead to overgrazing. Heat stress can decrease milk production in dairy cattle and lower quality in beef. 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 Ontario County planning area includes 14,896 acres of public parks and conservation areas. Hemlock-Canadice State Forest, located along the shores of Hemlock Lake and Canadice Lake, is the largest public park in Ontario County. The two lakes featured within this park are the drinking water source for the City of Rochester and adjacent communities. Hemlock-Canadice State Forest provides habitat for twenty migratory birds and one endangered species, as well as one species under consideration for an official endangered listing. 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.

SECTION 6: DROUGHT

Impacts of past droughts experienced in the Ontario 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. The annualized estimated losses due to drought over the 23-year reporting period in the Ontario County planning area are considered negligible. Table 6-8 shows annualized exposure.

Table 6-8. Estimated Annualized Losses for Ontario County

JURISDICTION	TOTAL PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATES
Ontario County	$0	$0

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 6-9 lists the drought impacts to Ontario County from 2005 to 2022 based on reports received by the Drought Impact Reporter.

Table 6-9. Drought Impacts, 2005-2022

DROUGHT IMPACTS 2005-2021	
Agriculture	10
Business & Industry	3
Energy	0
Fire	0
Plants & Wildlife	5
Relief, Response & Restrictions	4
Society & Public Health	2
Tourism & Recreation	2
Water Supply & Quality	5

Drought has the potential to impact people in the Ontario 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. With consideration for future growth, Ontario County is expected to have a 6.4 percent growth by 2050[7] which can cause concern for the current water infrastructure and

[7] Genesee/Finger Lakes Regional Planning Council, May 2013, Regional Population Forecasts, County, City, Town and Village Projections for the Genesee-Finger Lakes Region out to the year 2050: https://www.gtcmpo.org/sites/default/files/pdf/2014/RegionalPopulationForecast.pdf

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.
- 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 four federally endangered, threatened or candidate species in Ontario 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 may stunt the growth of vines cultivated for wine production leading to smaller crop yields, affecting the availability of product for sale and ability to support tourism along the regional wine trails.

- 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 Ontario County planning area, including all participating jurisdictions, will implement a drought contingency plan / protocol based on their area during time of drought.

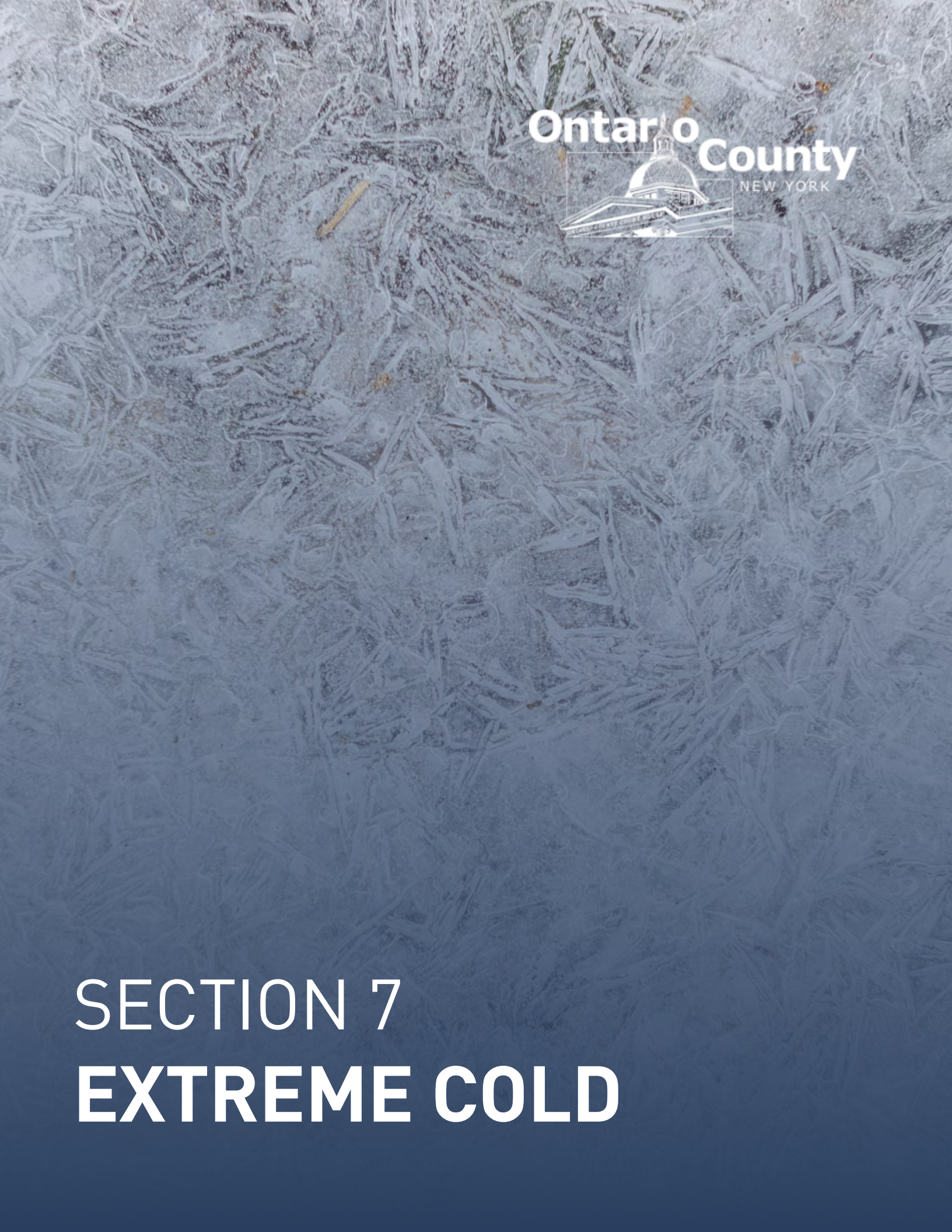
CLIMATE CHANGE CONSIDERATIONS

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.[8]

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.[9]

[8] NOAA, NIDIS, Site Accessed November 2023: 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.

[9] Environmental Protection Agency, EPA 430-F-16-034, August 2016: What Climate Change Means for New York



SECTION 7

EXTREME COLD

SECTION 7: EXTREME COLD

Hazard Description 1
Location 2
Extent 2
Historical Occurrences 3
Significant Events 5
Probability of Future Events 5
Vulnerability and Impact 5
Assessment of Impacts 9
Climate Change Considerations 10

HAZARD DESCRIPTION

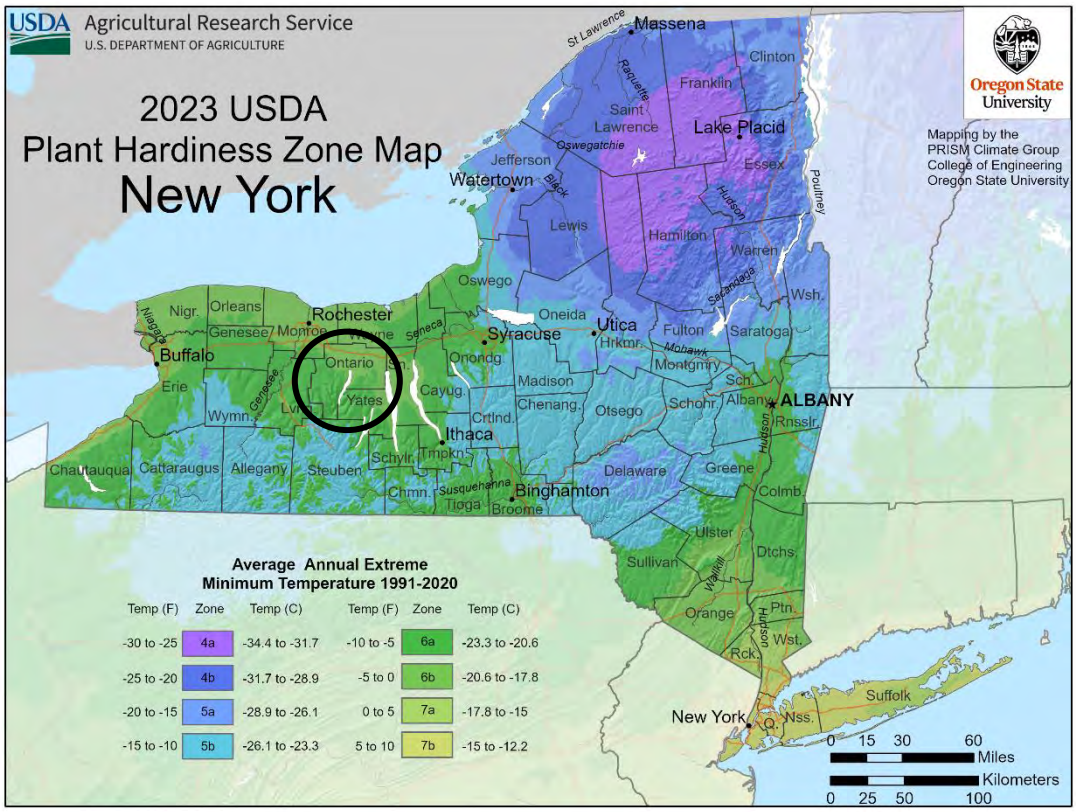


Extreme cold refers to temperatures that are significantly lower than what is normal for a particular region or season. Extreme cold temperatures occur every winter in at least part of the country and affects millions of people across the United States. The arctic air can be dangerous and when combined 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 7-1, the Ontario County planning area, including participating jurisdictions, is in USDA Hardiness Zones 6a and 6b, with annual minimum temperatures between -10°F and 0°F.

Figure 7-1. Annual Minimum Temperature[1]



LOCATION

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

EXTENT

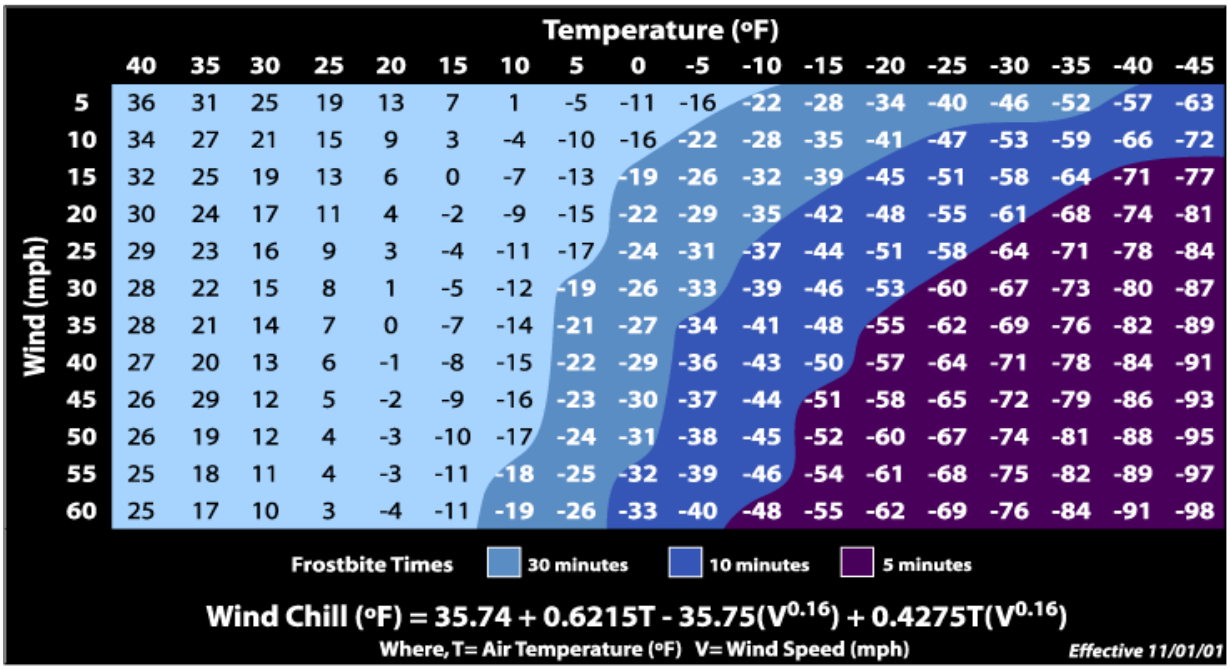
The extent of extreme cold is measured by wind chill, which is the temperature of the atmosphere in relation to wind speed. Wind Chill describes what the air temperature *feels* like to the human skin. In simple terms, the colder the air temperature and the higher the wind speeds the colder it will feel 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 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 7-2 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

[1] Source: USDA

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 7-2. Wind Chill Temperature Index



As described in Figure 7-1, the Ontario County planning area has an average annual minimum cold temperature of 0°F to -10°F. The NCEI Storm Events Database provides historical records of extreme cold, frost, and freeze events in Ontario County since 1996. The coldest reported temperatures in the Ontario 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 28 extreme cold events reported in the Ontario County planning area between 1996 and 2023. It is important to note that the NCEI Storm Events Database only has records dating back to 1996 for Ontario County and while it aims to capture the best available data, it may not account for every event. Table 7-1 shows historical incident information for the planning area. There are no reports of deaths, injuries, or property damage. Extreme cold event data for the planning area is provided on a County-wide basis only in the NCEI database.

Table 7-1. Historical Extreme Cold Events, 1996-2023[2]

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Ontario County	10/19/2008	0	0	$0	$0
Ontario County	5/18/2009	0	0	$0	$0
Ontario County	10/11/2009	0	0	$0	$0
Ontario County	5/9/2010	0	0	$0	$33,937
Ontario County	5/11/2010	0	0	$0	$33,937
Ontario County	10/28/2011	0	0	$0	$0
Ontario County	4/3/2012	0	0	$0	$0
Ontario County	4/5/2012	0	0	$0	$0
Ontario County	4/5/2012	0	0	$0	$0
Ontario County	4/13/2012	0	0	$0	$0
Ontario County	4/17/2012	0	0	$0	$0
Ontario County	4/27/2012	0	0	$0	$0
Ontario County	4/30/2012	0	0	$0	$0
Ontario County	10/12/2012	0	0	$0	$0
Ontario County	5/13/2013	0	0	$0	$0
Ontario County	10/23/2013	0	0	$0	$0
Ontario County	10/28/2013	0	0	$0	$0
Ontario County	2/13/2016	0	0	$0	$0
Ontario County	10/17/2018	0	0	$0	$0
Ontario County	1/30/2019	0	0	$0	$0
Ontario County	5/5/2020	0	0	$0	$0
Ontario County	5/8/2020	0	0	$0	$0
Ontario County	5/9/2020	0	0	$0	$0
Ontario County	5/10/2020	0	0	$0	$0
Ontario County	5/12/2020	0	0	$0	$0
Ontario County	5/13/2020	0	0	$0	$0
Ontario County	5/14/2020	0	0	$0	$0
Ontario County	5/18/2023	0	0	$0	$25,000
Total		**0**	**0**	**$92,874**	

[2] Values are in 2023 dollars. Database was searched for events between 1996 and August 2023. No events were reported for the Ontario County planning area in the database until 2008. This data includes cold/wind chill, extreme cold/wind chill, and frost/freeze events from the NCEI Storm Events Database.

Table 7-2. Historical Extreme Cold Events Summary, 2008-2023

JURISDICTION	NUMBER OF EVENTS	DEATHS	INJURIES	PROPERTY DAMAGES	CROP DAMAGES
Ontario County	28	0	0	$0	$92,874

Based on the list of historical extreme cold events for the Ontario County planning area, 10 of the events have occurred since the 2018 Plan. According to the best available data, $92,874 in crop damage has been reported within the planning area due to extreme cold.

SIGNIFICANT EVENTS

January 30, 2019 – Ontario County

A cold front that brought localized blizzard conditions to the area caused temperatures to drop below zero in the entirety of the Ontario County planning area. The temperatures combined with wind gusts of 35 to 50 mph resulted in wind chills substantially below zero. One fatality occurred due to exposure during this extreme cold event in a neighboring community right outside of Ontario County. This extreme cold outbreak closed almost all area schools and churches because of unsafe travel conditions and concern for human exposure.

February 13, 2016 – Ontario County

A powerful arctic front swept across the Ontario County planning area and resulted in near record cold for the region. In combination with the cold temperatures, brisk westerly winds produced wind chills of -25°F to -30°F. Several warming shelters were opened, and some outdoor activities were cancelled, but because the cold occurred on a weekend, it did not affect many businesses or schools.

May 9-11, 2010 – Ontario County

A very warm spring resulted in an earlier than normal start to the growing season and crops were two to three weeks ahead of their normal growing schedule. A high-pressure weather system brought light winds and clear skies to the region creating ideal conditions for radiational cooling. The temperatures fell below freezing on two consecutive nights and nighttime temperatures for the 10th and 11th ranged from 25°F to 30°F for the region. This freeze resulted in $67,874 (2023 dollars) in damages.

PROBABILITY OF FUTURE EVENTS

According to historical records, the Ontario County planning area is expected to experience approximately one to two extreme cold events each year. The probability of a future extreme cold event affecting the Ontario 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 people experiencing homelessness or 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. 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.

Ontario County is a rich and diverse agricultural area. With more than 800 farms, dairy, beef, sheep, poultry, swine, vegetables, vineyards, orchards, fruit, and greenhouse farms are all a vital part of the food and agricultural industry in the planning area. Ontario County's annual market value of agricultural products sold is over $200,000,000.[3] 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 Ontario County Planning Team identified the following critical facilities (Table 7-3) as assets that are considered the most important to the planning area and are susceptible to a range of impacts caused by winter storm events. For a comprehensive list by participating jurisdiction see Appendix C.

Table 7-3. Critical Facilities Vulnerable to Extreme Cold Events

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Departments (EOC, Fire, Police, EMS), Hospitals and Medical Centers	o Emergency operations, services and response times may be significantly impacted due to power outages, and/or loss of communications. o Exposure to extreme cold can cause illnesses in first responders if exposed for a period of time. o Roads may become impassable due to snow and/or ice impacting response times by emergency services. o Extended power outages due to increased usage may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.
Airport, Academic Institutions, Animal Shelter, Evacuation Centers & Shelters, Governmental Facilities, Residential/ Assisted Living Facilities	o Power outages due to increased usage could disrupt critical care. o Backup power sources could be damaged. o Increased number of patients due to exposure to cold temperatures could lead to a strain on staff. o Water pipes can freeze and burst leading to flooding within facilities. o Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable. o Essential supplies like medicines, water, food, and equipment deliveries may be delayed. o Economic disruption due to power outages negatively impact airport services as well as area businesses reliant on airport operations. o Exposure risks to outdoor workers.
Commercial Supplier (food, gas/fuel, etc.)	o Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable. o Essential supplies like medicines, water, food, and equipment deliveries may be delayed.

[3] Cornell University, Cornell Cooperative Extension, Ontario County, January 1, 2023

CRITICAL FACILITIES	POTENTIAL IMPACTS
Utility Services and Infrastructure (electric, water, wastewater, communications)	o Emergency operations, services and response times may be significantly impacted due to power outages, and/or loss of communications. o Roads may become impassable due to snow and/or ice impacting response times by emergency services. o Power outages due to increased usage could disrupt critical care. o Backup power sources could be damaged. o Water pipes can freeze and burst leading to flooding within facilities.

People and animals are subject to health risks from extended exposure to cold air. 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.[4] 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.

The population over 65 and under the age of 5 in the Ontario County planning area is estimated at 25 percent of the total population or an estimated total of 27,936 potentially vulnerable residents in the planning area based on age. An estimated 8.5 percent of the planning area population live below the poverty level.

Another segment of the population at risk is those who are experiencing homelessness. Data regarding the local population experiencing homelessness is limited to county estimates and is not available for each jurisdiction. Ontario County follows the NYS Code Blue policy. On winter nights when the temperature drops to 32 degrees or below, including wind-chill, between 4:00 PM and 8:00 AM. Accommodations will be provided to anyone who is homeless and seeking shelter in the planning area during a Code Blue to ensure everyone is warm and safe.

Table 7-4. Populations at Greater Risk of Extreme Cold Events[5]

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5	POPULATION BELOW POVERTY LEVEL	HOMELESS POPULATION[6]
Ontario County	22,554	5,382	9,525	176
Village of Bloomfield	265	44	102	-
Town of Bristol	490	60	156	-
Town of Canadice	369	68	118	-
City of Canandaigua	2,234	431	845	-
Town of Canandaigua	2,241	353	902	-
Village of Clifton Springs	475	65	221	-
Town of East Bloomfield	804	178	223	-
Town of Farmington	2,092	978	1298	-

[4] Data USA, Ontario County, New York, 2021
[5] U.S. Census Bureau, American Community Survey, 2021
[6] 2023 Average weekly homeless population for Ontario County.

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5	POPULATION BELOW POVERTY LEVEL	HOMELESS POPULATION[6]
City of Geneva	1,856	781	2339	-
Town of Geneva	1,035	138	322	-
Town of Gorham	1,068	267	211	-
Town of Hopewell	820	76	318	-
Town of Manchester	1,908	399	996	-
Village of Manchester	318	67	133	-
Town of Naples	510	63	491	-
Village of Naples	174	32	175	-
Town of Phelps	1,203	445	572	-
Village of Phelps	332	206	348	-
Town of Richmond	925	52	64	-
Village of Rushville	111	17	30	-
Town of Seneca	482	151	142	-
Village of Shortsville	297	56	103	-
Town of South Bristol	539	38	124	-
Town of Victor	3,198	783	410	-
Village of Victor	545	126	148	-
Town of West Bloomfield	780	121	278	-

Older homes tend to be more vulnerable to the impacts of extreme cold events. Approximately 29,775 housing units (57 percent) in the planning area were built before 1980 (Table 7-5).

Table 7-5. Structures at Greater Risk of Extreme Cold Events[7]

JURISDICTION	SFR STRUCTURES BUILT BEFORE 1980	PERCENT of TOTAL HOUSING UNITS (%)
Ontario County	29,775	57.05
Village of Bloomfield	506	76.32
Town of Bristol	486	43.74
Town of Canadice	713	58.44
City of Canandaigua	3,931	70.64
Town of Canandaigua	1,490	29.11
Village of Clifton Springs	700	84.85

[7] U.S. Census Bureau, American Community Survey, 2021

JURISDICTION	SFR STRUCTURES BUILT BEFORE 1980	PERCENT of TOTAL HOUSING UNITS (%)
Town of East Bloomfield	1,191	73.29
Town of Farmington	2,600	44.73
City of Geneva	4,767	91.81
Town of Geneva	1,340	74.40
Town of Gorham	1,305	60.58
Town of Hopewell	760	48.28
Town of Manchester	2,744	66.33
Village of Manchester	525	74.68
Town of Naples	819	67.24
Village of Naples	422	92.54
Town of Phelps	2,304	78.66
Village of Phelps	830	89.44
Town of Richmond	1,223	62.78
Village of Rushville	193	73.66
Town of Seneca	804	69.25
Village of Shortsville	599	83.78
Town of South Bristol	701	50.76
Town of Victor	1,937	27.90
Village of Victor	696	59.85
Town of West Bloomfield	660	50.65

Extreme cold events have been known to cause injury and fatality to humans. Overall, the average loss estimate of property and crops in the planning area is considered $92,874 with an average annualized loss of $3,377. Based on historic loss and damages, the impact of extreme cold damages on the Ontario County planning area, including participating jurisdictions, can be considered “Limited” severity of impact, meaning minor quality of life lost, critical facilities and services shut down for 24 hours or less, and less than 10 percent of property destroyed or with major damage.

Table 7-6. Extreme Cold Event Damage Totals, 2008-2023

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATES
Ontario County	$92,874	$3,377

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 (20 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.
- Exposed water pipes may freeze and break when exposed to extreme cold temperatures, both residential and commercial structures are vulnerable, causing significant damages.

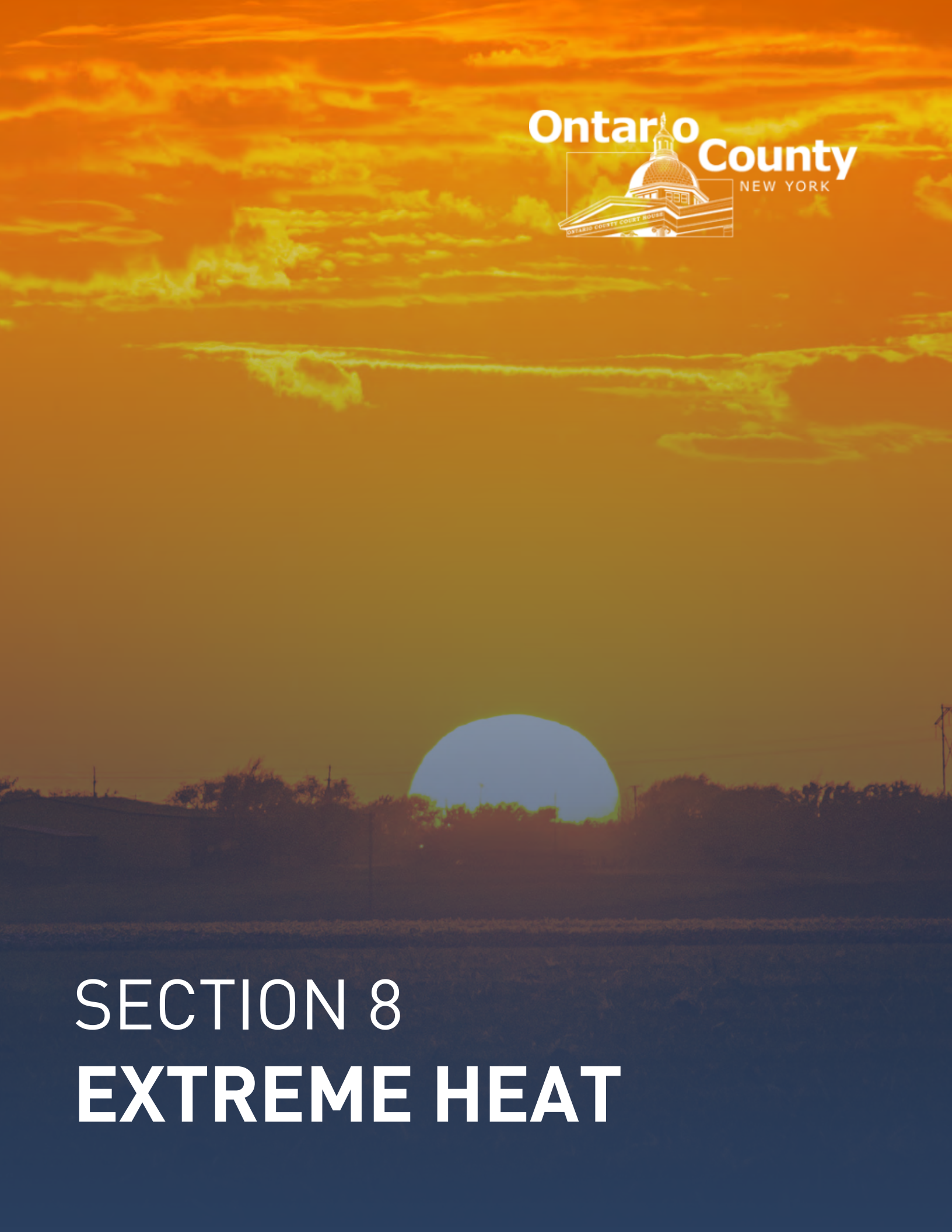
The economic and financial impacts of extreme cold events on the community will depend on the scale of the event, what is damaged, and how quickly repairs to critical components of the economy can be implemented. The level of preparedness and pre-event planning done by community, local businesses, and 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.[8]

While this assessment states that the Northeastern portion of the U.S. will experience fewer cold extremes, data on future impacts is limited and these projections are subject to change as the research evolves.

[8] U.S. Global Change Research Program, Fourth National Climate Assessment, Chapter 18: Northeast



SECTION 8
EXTREME HEAT

SECTION 8: EXTREME HEAT

Hazard Description 1
Location 1
Extent 2
Historical Occurrences 4
Significant Events 5
Probability of Future Events 5
Vulnerability and Impact 5
Assessment of Impacts 8
Climate Change Considerations 9

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 Ontario 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.

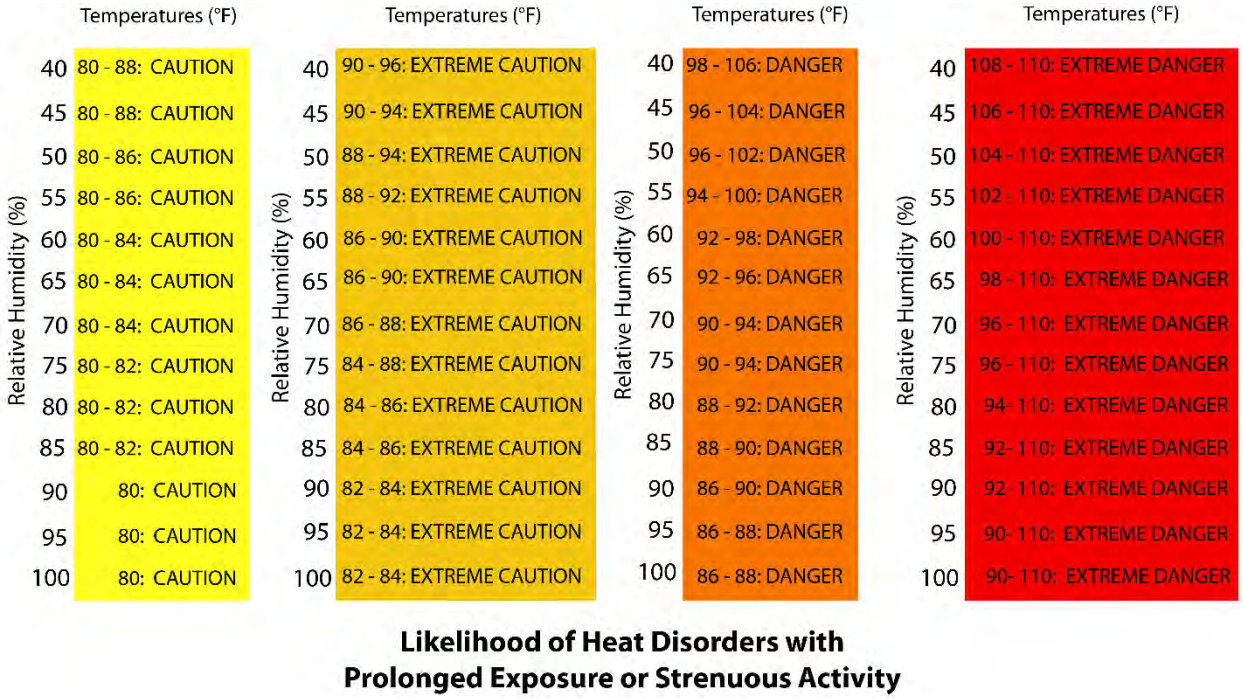
LOCATION

Though a death from extreme heat has not been recorded at any location in the County, there is no specific geographic scope to the extreme heat hazard. The areas where heat stays throughout the day is largely dependent on the type of land use and ground cover. Areas with large amounts of impervious and dark surfaces such as roads and roofs, heat up quickly and remain hot throughout the day. These areas, which tend to be urban and industrial, are not able to cool down overnight and start the day with higher morning temperatures in comparison to less dense areas that have more trees and vegetation Extreme heat could occur anywhere within the Ontario 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 8-1. This index measures how hot it feels outside when humidity is combined with high temperatures.

Figure 8-1. Extent Scale for Extreme Summer Heat[1]



The Extent Scale in Figure 8-1 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 8-1.

[1] Source: NOAA

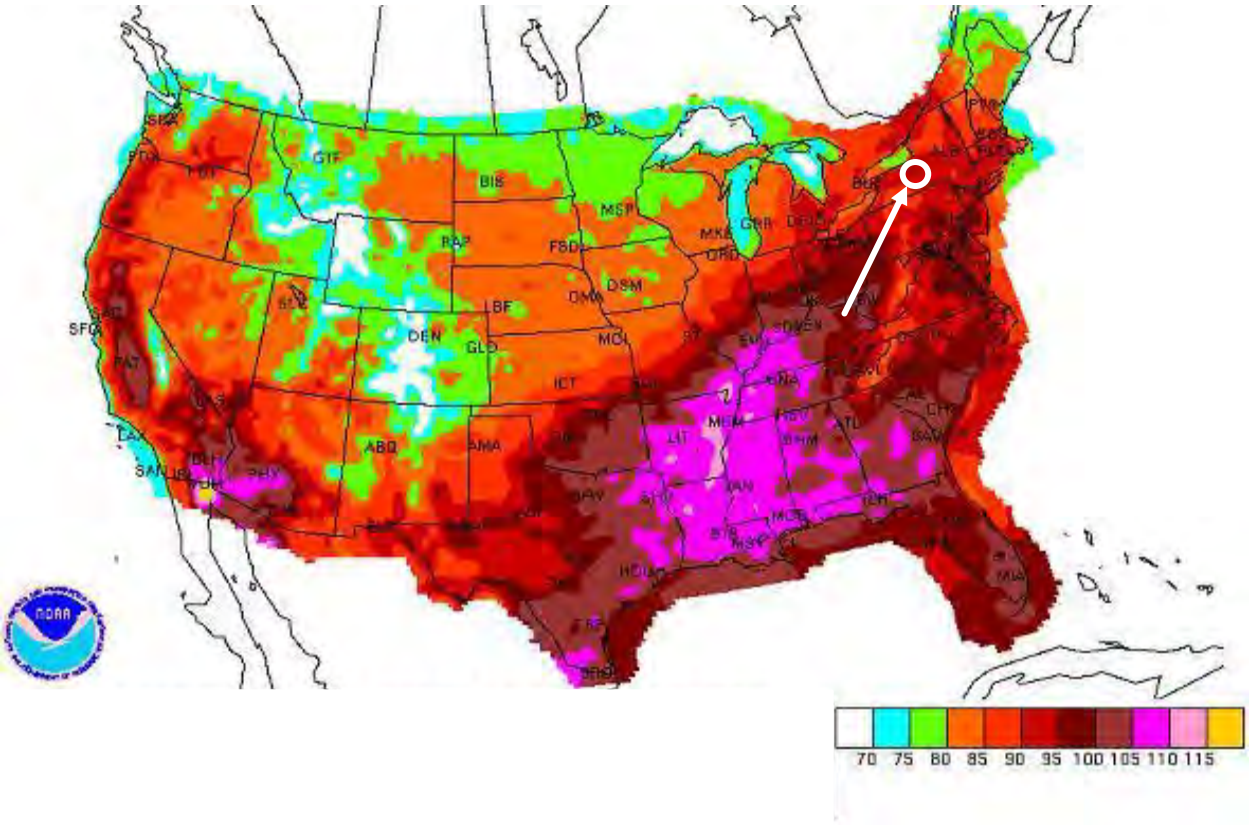
Table 8-1. Heat Index and Warnings

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.	

Ontario County is a part of the geographically diverse Finger Lakes region in New York State. The northern part of the county is comprised of lowlands which give way to hills and lush forests throughout the southern section. It is bounded by Hemlock Lake to the west and Seneca Lake to the east, with three additional Finger Lakes – Canadice Lake, Honeoye Lake, and Canandaigua Lake – also present within the county boundary. Ontario County typically experiences four distinct seasons throughout the year with temperatures averaging below 20°F in the winter and above 80°F in the summer months. Due to its geography and humid summers, the Ontario 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 8-2 displays the daily maximum heat index as derived from NOAA based on data compiled from 1838 to 2015. The white circle shows the Ontario County planning area. The primary orange and partial red colors indicate a daily maximum heat index of 85-95°F. The Ontario County planning area, including all participating jurisdictions, could experience extreme heat from 85°F to 95°F and should mitigate to the extent of “extreme caution”, which can include sunstroke, muscle cramps, heat exhaustion and potential heatstroke with prolonged exposure. This is the highest temperature (extreme caution category) the planning area can anticipate based on historical records.

Figure 12-2. Average Daily Maximum Heat Index Days[2]



HISTORICAL OCCURRENCES

Every summer, the hazard of heat-related illness becomes a significant public health issue throughout much of the U.S. 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 40 deaths related to extreme heat between 2010 and 2022. Table 8-2 depicts the historical occurrences of mortality from heat in New York according to reports in the NCEI database.

Table 8-2. Extreme Heat Related Deaths in New York, 2010-2023

YEAR	DEATHS
2010	10
2011	20
2012	1
2013	9
2014 - 2023	0

[2] Source: NRDC and the white circle indicates the Ontario County planning area.

According to information provided by the NCEI, there have been no recorded heat related incidents located solely within Ontario County. However, only extreme heat events that have been reported have been factored into this Risk Assessment. It is highly likely additional extreme heat occurrences have gone unreported before and during the reporting period. Due to the limited number of reported events, average high temperatures have been analyzed in order to determine the probability of future events. The average annual temperature at the Victor 2NW weather station in the Town of Victor is 58.8°F. The highest maximum temperature takes place in the months of July through September with average maximum temperatures reaching to 80°F.[3]

Table 8-3. Historical Extreme Heat Events, 1996-2023[4]

JURISDICTION	NUMBER OF EVENTS	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Ontario County	0	0	0	$0	$0

Based on the list of historical extreme heat events for the Ontario County planning area including all participating jurisdictions, no new events have been reported to the NCEI since the 2018 plan.

SIGNIFICANT EVENTS

August 10, 2001

A cool summer along the eastern United States ended abruptly when a ridge of high pressure centered off the coast of South Carolina strengthened in late July. It began in early August for the Midwest and western Great Lakes areas before spreading eastward and intensifying. By mid-August it had reached the Finger Lakes region, including Ontario County. There were no reported heat-related illnesses, deaths, or property losses. This temperature is recorded as the all-time high in Ontario County. The City of Canandaigua reported temperatures of 101°F, exceeding the area's daily maximum heat index of 85-95°F.

PROBABILITY OF FUTURE EVENTS

Ontario County has not been severely impacted by extreme heat because the duration of these conditions is relatively short. However, it can be assumed that events have gone unreported due to extreme heat events lasting only for a short period of time such as a day or two. Based on best available data, historical records, and average daily maximum heat index, an extreme heat event is "Highly Likely", or an event probable in the next year. See additional information on the impacts of climate change on the frequency and severity of future extreme heat events at the end of this section.

VULNERABILITY AND IMPACT

There is no defined geographic boundary for extreme heat events. While the entire Ontario 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

[3] Northeast Regional Climate Center. Northeast RCC CLIMOD 2. http://climod2.nrcc.cornell.edu/
[4] Reported events from January 1996 through August 2023.

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 to county estimates and is not available for each jurisdiction.

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 Ontario County planning area is estimated at 20 percent of the total population and children under the age of 5 are estimated at 5 percent, or an estimated total of 27,936 potentially vulnerable residents in the planning area based on age. In addition, an estimated 8.5 percent of the planning area population live below the poverty level (Table 8-4). 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 8-4. Populations at Greater Risk by Jurisdiction[5]

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5	POPULATION BELOW POVERTY LEVEL	HOMELESS POPULATION
Ontario County	22,554	5,382	9,525	176
Village of Bloomfield	265	44	102	-
Town of Bristol	490	60	155	-
Town of Canadice	369	68	118	-
City of Canandaigua	2,234	431	845	-
Town of Canandaigua	2,241	353	902	-
Village of Clifton Springs	475	65	221	-
Town of East Bloomfield	804	178	223	-
Town of Farmington	2,092	978	1,298	-
City of Geneva	1,856	781	2,339	-
Town of Geneva	1,035	138	322	-
Town of Gorham	1,068	267	211	-

[5] U.S. Census Bureau, American Community Survey, 2021

SECTION 8: EXTREME HEAT

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5	POPULATION BELOW POVERTY LEVEL	HOMELESS POPULATION
Town of Hopewell	820	76	318	-
Town of Manchester	1,908	399	996	-
Village of Manchester	318	67	133	-
Town of Naples	510	63	491	-
Village of Naples	174	32	175	-
Town of Phelps	1,203	445	572	-
Village of Phelps	332	206	348	-
Town of Richmond	925	52	64	-
Village of Rushville	111	17	30	-
Town of Seneca	482	151	142	-
Village of Shortsville	297	56	103	-
Town of South Bristol	539	38	124	-
Town of Victor	3,198	783	410	-
Village of Victor	545	126	148	-
Town of West Bloomfield	780	121	278	-

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.

The potential impact of extreme heat for the entire Ontario County planning area 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 27.5-year period, annualized property and crop losses for the Ontario County planning area are considered negligible.

The Ontario 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 Ontario County planning area, including participating jurisdictions. For a comprehensive list by participating jurisdiction please see Appendix C.

Table 8-5. Critical Facilities Vulnerable to Extreme Heat

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Services (EOC, Fire, Police, EMS, Hospitals)	o Emergency operations, services and response times may be significantly impacted due to power outages, and/or loss of communications. o Exposure to heat can cause heat illnesses in first responders, especially for those in heavy equipment. o 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. o Extended power outages due to increased usage may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.
Airport, Academic Institutions, Community Residential Facilities, Evacuation Centers & Shelters, Governmental Facilities	o Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable. o Power outages due to increased usage could disrupt critical care. o Backup power sources could be damaged. o Evacuations may be necessary due to extended power outages, breaks in water main lines or other associated damage to facilities. o Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable. o Economic disruption due to power outages negatively impact airport services as well as area businesses reliant on airport operations.
Commercial Suppliers (food, gas, etc.)	o Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable. o Essential supplies like medicines, water, food, and equipment deliveries may be delayed.
Utility Services and Infrastructure (electric, water, wastewater, communications)	o Emergency operations, services and response times may be significantly impacted due to power outages, and/or loss of communications. o 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. o Breaks in water main lines or other associated damage to facilities

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 (20% of total population) and children under 5 (5% of total population), can face serious or life-threatening health problems from

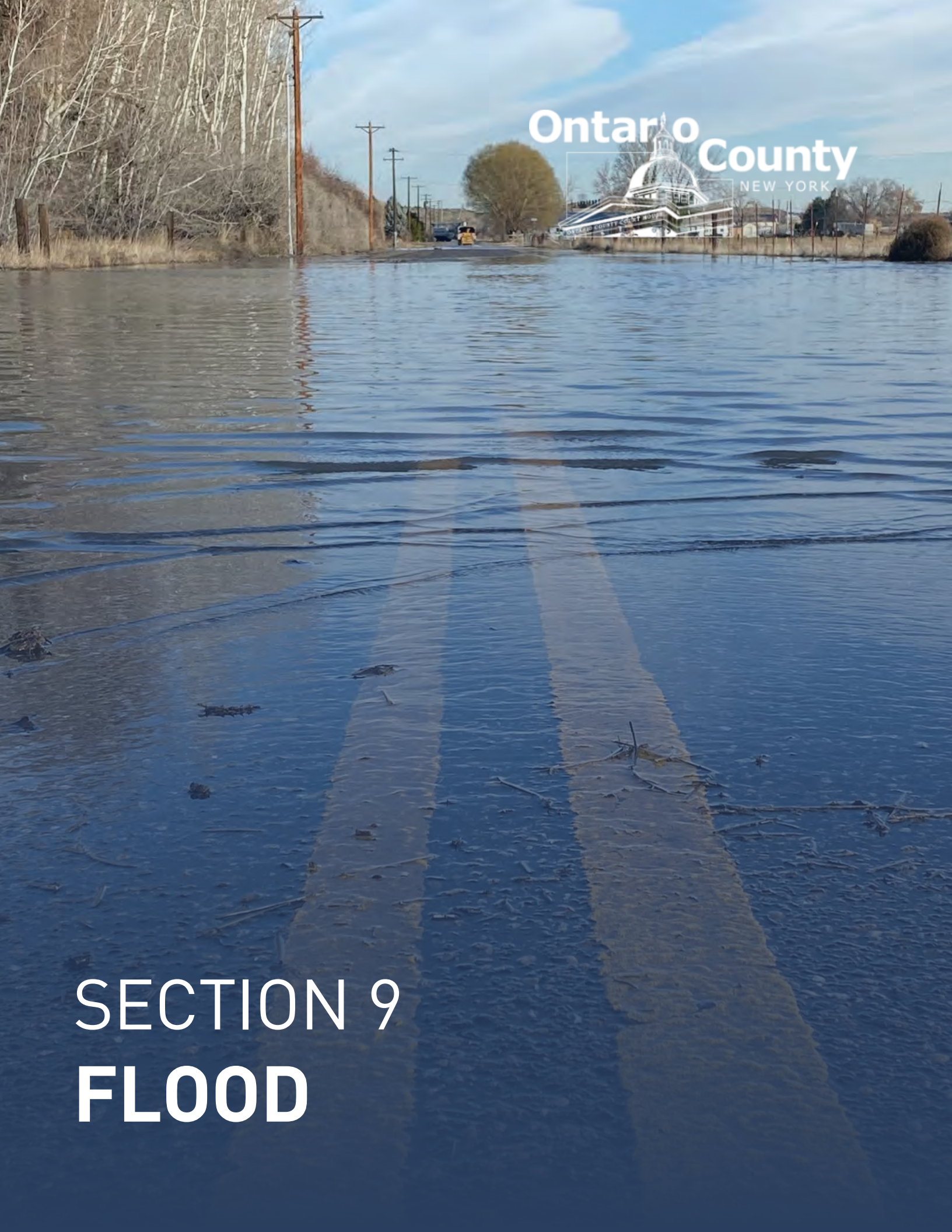
exposure to extreme heat including hyperthermia, heat cramps, heat exhaustion, and heat stroke (or sunstroke).
- Response personnel, including utility workers, public works personnel, and any other professions where individuals are required to work outside, are more subject to extreme heat related illnesses 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 predominant in the Hemlock Lake, Canadice Lake, Honeoye Lake, and Canandaigua Lake 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.

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.[6] Regionally in the Northeast, heat wave events are more severe than in the past and are lasting longer.[7] Future heat wave events statewide are also projected to increase along with the morbidity and mortality rates as a result.

[6] New York State Hazard Mitigation Plan, 2019
[7] Fifth National Climate Assessment, U.S. Global Change Research Program. https://nca2023.globalchange.gov/chapter/21/



SECTION 9
FLOOD

SECTION 9: FLOOD

Hazard Description 1
Location 1
Extent 4
Historical Occurrences 6
Significant Events 9
Probability of Future Events 11
Vulnerability and Impact 11
Assessment of Impacts 16
Climate Change Considerations 18
National Flood Insurance Program (NFIP) Participation 18
NFIP Compliance and Maintenance 21
Repetitive Loss 25

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.

The primary types of general flooding are inland and coastal flooding. Due to Ontario County's inland location, only inland flooding is profiled in this section. 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, typically resulting 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 river flooding.

LOCATION

Flooding is one of the more severe hazards facing Ontario 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 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.

Of the participating jurisdictions in the planning area, 13 have a FIS that covers their jurisdictional boundaries. Each FIS compiles all previous flood information and includes data collected on numerous waterways as well as areas that are most vulnerable to flooding include low-lying areas

throughout the county. In recent years FEMA has developed or updated some flood studies in the area, providing flood hazard boundaries and/or flood elevation data for many streams with no previous delineations.

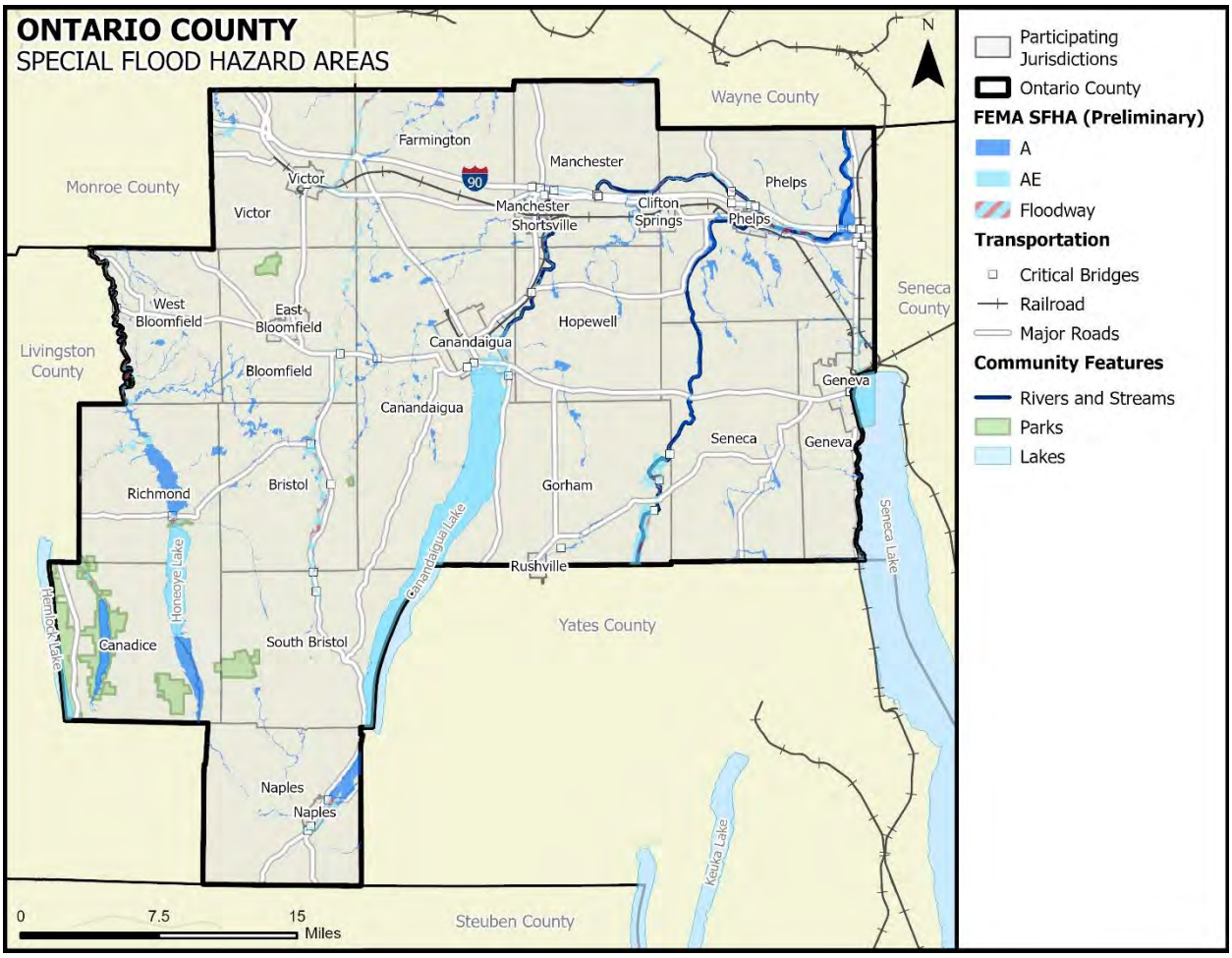
The Flood Insurance Rate Map (FIRM) data provided by FEMA for the Ontario County planning area shows the following flood hazard areas[1]:

- 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 X: Moderate risk areas within the 0.2-percent-annual-chance floodplain, areas of 1-percent-annual-chance flooding where average depths are less than 1 foot, areas of 1-percent-annual-chance flooding where the contributing drainage area is less than 1 square mile, and areas protected from the 1-percent-annual-chance flood by a levee. No BFEs or base flood depths are shown within these zones.

Locations of flood zones in the Ontario County planning area, including participating jurisdictions, based on the digital Flood Insurance Rate Map (DFIRM) from FEMA are illustrated in Figure 9-1. The current regulatory flood insurance rate maps for each participating jurisdiction can be found in Appendix H as well as in each jurisdiction's corresponding annex (Annex A-AA).

[1] 2022 Preliminary DFIRMS have been utilized throughout the plan for all jurisdictions except the Town of Richmond, where current effective FIRM maps were used while the community appeals some portions of the town's preliminary maps.

Figure 9-1. Estimated Flood Zones in Ontario County[2]



[2] Map sources: ESRI OpenStreetMap (Custom: no labels), Census TIGER/LINE (2022), Ontario County Information Technology Department (2023), Ontario County Preliminary Flood Data (2023)

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 9-1 provides a description of FEMA flood zones and the flood impact in terms of severity or potential harm. Flood Zones A, AE, and X are the only hazard areas mapped in the planning area. Figure 9-1 through Figure 9-13 should be read in conjunction with the extent for flooding in Tables 9-1 and 9-2 to determine the intensity of a potential flood event.

Table 9-1. 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.

INTENSITY	ZONE	DESCRIPTION
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 9-2 describes the stream gauge data provided by the United States Geological Survey (USGS).

Table 9-2. Extent for Ontario County[3]

JURISDICTION[4]	PEAK FLOOD EVENT
Town and Village of Victor	Mud Creek east of Victor in Ontario County reached an overflow elevation of 7.85 feet on June 22, 1972. The average overflow elevation for Mud Creek is 6 feet at this site.
Town and Village of Phelps	Flint Creek in Phelps in Ontario County reached an overflow elevation of 5.83 feet on March 30, 1960. The average overflow elevation for Flint Creek is 4.58 feet at this site
City and Town of Canandaigua	Schaeffer Creek near Canandaigua in Ontario County reached an overflow elevation of 15.79 feet on September 9, 2004. The average overflow elevation of Schaeffer Creek is 11.89 at this site.
Ontario County	Irondequoit Creek at Railroad Mills near Fishers hamlet in Ontario County reached an overflow elevation of 10.4 feet on January 8, 1998. The average overflow elevation for Irondequoit Creek is 8.7 feet at this stie.

The range of flood intensity that the planning area can experience is high, or Zone A. Based on historical occurrences, the Ontario County planning area could expect to experience 3 inches of rain within a 6-hour period, resulting in flash flooding.

The data described in Tables 9-1 and 9-2, together with Figure 9-1, and historical occurrences for the area, provides an estimated potential magnitude and severity for the Ontario County planning area, including participating jurisdictions. For example, the Town of Canadice, as shown in Annex

[3] 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.
[4] Severity is provided for jurisdictions where peak data was provided.

D, Figure D-2, has areas designated as Zone A and AE. Reading this figure in conjunction with Table 9-1 means the area is an area of high risk for flood.

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 9-3 identifies historical flood events in the Ontario County planning area. Table 9-4 provides the historical flood event summary. Historical data is provided by planning team members and the Storm Prediction Center (NOAA), NCEI database for the Ontario County planning area, including participating jurisdictions.

There have been 71 recorded flood events in Ontario County, including all participating jurisdictions.

Table 9-3. Historical Flood Events, 1996-2023[5]

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Ontario County	1/19/1996	0	0	$4,220,053	$0
City and Town of Canandaigua[6]	10/19/1996	0	0	$93,547	$0
City and Town of Canandaigua	10/20/1996	0	0	$93,547	$0
Town of South Bristol	1/8/1998	0	0	$27,491	$0
Town of South Bristol	1/8/1998	0	0	$1,833	$0
Town of South Bristol	1/8/1998	0	0	$1,833	$0
Town and Village of Naples[7]	5/12/2000	0	0	$129,521	$0
City and Town of Canandaigua	7/31/2000	0	0	$42,849	$0
City and Town of Canandaigua	7/31/2000	0	0	$42,849	$0
City and Town of Geneva[8]	7/31/2000	0	0	$257,093	$0

[5] Only recorded events with fatalities, injuries, and/or damages are listed, values are in 2023 dollars. Historical events are listed from January 1996 through August 2023.
[6] City and Town of Canandaigua 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.
[7] Town and Village of Naples 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.
[8] City and Town of Geneva 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.

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town and Village of Phelps[9]	8/3/2001	0	0	$66,743	$0
Town and Village of Phelps	5/29/2002	0	0	$411,806	$0
Town of Richmond	8/5/2003	0	0	$3,208,787	$0
City and Town of Canandaigua	5/13/2004	0	0	$15,662	$0
City and Town of Canandaigua	5/14/2004	0	0	$7,831	$0
Town and Village of Naples	5/20/2004	0	0	$9,397,282	$0
Town and Village of Naples	5/22/2004	0	0	$15,662	$0
Ontario County	4/2/2005	0	1	$152,195	$0
Town of South Bristol	6/29/2005	0	0	$38,068	$0
Town of Bristol	6/3/2007	0	0	$106,612	$0
Town of Richmond	6/3/2007	0	0	$21,322	$0
City and Town of Canandaigua	6/28/2010	0	0	$40,764	$0
City and Town of Canandaigua	7/9/2010	0	0	$13,585	$0
Town of Gorham	7/9/2010	0	0	$20,378	$0
Town of Gorham	7/9/2010	0	0	$20,378	$0
Town of Bristol	7/13/2010	0	0	$20,378	$0
Town of Canadice	7/13/2010	0	0	$40,755	$0
Town of Richmond	7/13/2010	0	0	$13,585	$0
Town and Village of Naples	9/30/2010	0	0	$13,559	$0
Town of Canadice	4/26/2011	0	0	$1,448,552	$0
Town and Village of Victor[10]	6/13/2013	0	0	$12,684	$0
Town of Bristol	5/16/2014	0	0	$186,741	$0
Town and Village of Naples	5/16/2014	0	0	$186,741	$0
Town of Canadice	7/28/2014	0	0	$43,509	$0
Town of Richmond	7/28/2014	0	0	$186,467	$0
Town of Seneca	7/28/2014	0	0	$43,509	$0
Town of Canadice	5/18/2015	0	0	$18,682	$0

[9] City and Town of Phelps 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.
[10] Town and Village of Victor 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.

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
City and Town of Geneva	5/18/2015	0	0	$24,909	$0
Town of Canadice	6/14/2015	0	0	$62,054	$0
Town and Village of Naples	6/14/2015	0	0	$18,616	$0
Town of Richmond	6/14/2015	0	0	$31,027	$0
City and Town of Geneva	7/13/2017	0	0	$24,198	$0
Town of Hopewell	7/13/2017	0	0	$60,495	$0
City and Town of Canandaigua	7/23/2017	0	0	$60,495	$0
Town of Canadice	7/23/2017	0	0	$24,198	$0
Town of Farmington	6/20/2019	0	0	$23,125	$0
Town of Richmond	6/20/2019	0	0	$1,156	$0
City and Town of Geneva	8/18/2019	0	0	$1,154	$0
City and Town of Geneva	8/18/2019	0	0	$230,880	$0
City and Town of Canandaigua	7/9/2023	0	0	$501,000	$0
TOTALS		**0**	**1**	**$21,726,160**	**$0**

Table 9-4. Summary of Historical Flood Events, 1996-2023[11]

JURISDICTION	NUMBER OF EVENTS	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Ontario County	2	0	1	$4,372,248	$0
Town of Bristol	4	0	0	$313,731	$0
Town of Canadice	6	0	0	$1,637,750	$0
City and Town of Canandaigua[12]	23	0	0	$912,129	$0
Village of Clifton Springs	0	-	-	-	-
Town of East Bloomfield and Village of Bloomfield[13]	0	-	-	-	-
Town of Farmington	1	0	0	$23,125	$0

[11] Participating jurisdictions with no reported events show a "-" in table columns where damages, deaths or injuries would otherwise be reported.
[12] City and Town of Canandaigua 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.
[13] Town of East Bloomfield and Village of Bloomfield (formerly the Village of East Bloomfield) 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.

JURISDICTION	NUMBER OF EVENTS	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
City and Town of Geneva[14]	7	0	0	$538,234	$0
Town of Gorham	4	0	0	$40,756	$0
Town of Hopewell	1	0	0	$60,495	$0
Town and Village of Manchester[15]	0	-	-	-	-
Town and Village of Naples[16]	7	0	0	$9,761,381	$0
Town and Village of Phelps[17]	3	0	0	$478,549	$0
Town of Richmond	6	0	0	$3,462,344	$0
Village of Rushville	0	-	-	-	-
Town of Seneca	1	0	0	$43,509	$0
Village of Shortsville	0	-	-	-	-
Town of South Bristol	4	0	0	$69,225	$0
Town and Village of Victor[18]	1	0	0	$12,684	$0
Town of West Bloomfield	2	0	0	$0	$0
TOTALS	**72**	**0**	**1**	**$21,726,160**	**$0**

Based on the list of historical flood events for the Ontario County planning area (listed above), ten events have occurred since the 2018 Plan.

SIGNIFICANT EVENTS

July 9, 2023 – Ontario County (DR-4723)

A weak wave aloft interacting with light winds and abundant moisture resulted in slow moving thunderstorms across the Finger Lakes late on the afternoon of the 9th. As storms merged together, they moved even slower with multiple rounds of heavy rain impacting portions of Ontario County. There were significant impacts due to flash flooding including a building collapse on Parrish Street Extension and a water rescue in Canandaigua on Barnes Road in the late afternoon. A state of emergency was declared for Ontario County. Numerous roads were flooded and impassable with some washed out. There were multiple reports of flooded roads in the Canandaigua and Geneva areas. Road closures included Ontario Street, Wood Street, Smith Road, Yerkes Road, Maxwell

[14] City and Town of Genva 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.
[15] Town and Village of Manchester 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.
[16] Town and Village of Naples 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.
[17] Town and Village of Phelps 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.
[18] Town and Village of Victor 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.

Avenue and North Brook Street, Buffalo Street and County Road 30. According to the planning team in the City of Canandaigua a number of roads were closed (West Avenue, Park Avenue, West Gibson Street from Sucker Brook) and debris cleanup was needed. Many basements in Canandaigua were flooded above electric panels. Happiness House, which provides support and resources for children and adults with disabilities in Ontario County was evacuated due to the flooding. Rainfall amounts were uneven, but there were pockets of extreme rainfall with over 5.5 inches near Canandaigua in Ontario County. Through this event several culverts in the Town of Gorham were identified as needing upgrading. The following day, July 10th, electricity was still out at many homes in Canandaigua and the fire departments outside of Ontario County assisted with pumping basements. According to the planning team a new storm water management pond (30 acres) was installed along the Sucker Brook Creek in Canandaigua prior to July 9th and is believed to have mitigated the severity of flooding experienced in Canandaigua.

April 26, 2011 – Ontario County
A line of showers and thunderstorms crossed the area during the evening hours. The thunderstorms were accompanied by strong winds, large hail and intense rains. Following an extremely wet spring, any rain that fell on the saturated ground became runoff. The two to three inches of rainfall resulted in flash flooding in Ontario County. In Ontario County, basements were flooded, and numerous roads were closed in Canandaigua. A mudslide in Canadice closed a section of Route 36. In Ontario County, damage was also reported in Bristol, Hopewell, Naples, Phelps, and Richmond. Property damages are estimated to be $1,448,552 (2023 dollars).

April 2, 2005 – Ontario County
Deep low pressure over Pennsylvania brought copious amounts of precipitation to western and central New York. Rainfalls totals generally ranged from two to three inches. The rain, combined with snowmelt, produced flooding. Roads were closed and basement flooding was reported in Gorham. In Ontario County, a Lyons man was treated for hypothermia after being rescued from flood waters. The man drove his ATV into 8-10 inches of water and the swift current rolled the four-wheeler over and the rider was swept away. Property damages for Ontario County was estimated to be $152,195 (2023 dollars).

Flash Flood on May 20, 2004 – Town of Naples
Slow moving thunderstorms dumped three to four inches of rain in less than an hour on parts of Ontario County. The Town of Naples was the hardest hit. Many roads were washed out. Others were covered with up to three feet of debris and gravel and were impassable. Roads affected included County Routes 36 and 37, Gulick Road and Routes 21 and 245. Schools were closed on the 21st because of hazardous driving conditions. In South Bristol, rocks and mud slid down a hill and partially buried a home. Tons of debris filled the house. Some roads could take weeks to rebuild and re-open. Property damages are estimated to be $9,397,282 (2023 dollars).

Flash Flood on August 5, 2003 – Ontario County
Thunderstorms during the afternoon hours produced several inches of rain over parts of the southern tier to the Finger Lakes region. The heavy rains fell on already saturated ground from storms over the past several weeks. Rainfalls of over an inch and a half in a half hour were reported. In Ontario County, the Towns of Honeoye, East Bloomfield, Bristol, Naples, and Richmond were affected by flooding. Basement flooding was reported in Honeoye. Several roads were washed out and debris and tree limbs were littered throughout the area. Route 20A was

closed by flood waters and a portion of the foundation of the roadway was washed away. Property damages are estimated to be $3,208,787 (2023 dollars).

January 19, 1996 – Ontario County (DR-1095)
A combination of unseasonably warm temperatures and heavy rains between January 18th through 19th caused rapid snowmelt leading to significant flooding across New York State. Impacts included over $100 million in property damages and 10 fatalities.[19]

PROBABILITY OF FUTURE EVENTS

Based on 72 recorded historical occurrences within a 27.5-year reporting period within the Ontario County planning area, flooding is considered "Highly Likely" with 2 to 3 events per year anticipated.

VULNERABILITY AND IMPACT

A property's vulnerability to a flood depends on its location and proximity to the floodplain. Structures that lie along banks of a waterway are the most vulnerable and are often repetitive loss structures. The historical impact for flood for the entire planning area is considered Limited, meaning facilities and services would be shut down for less than 24 hours, and less than 10 percent of property destroyed or with major damage. However, with a historical injury recorded and the significant increase in property damages[20] experienced in recent flood events, the planning team assessed that the impact for flood for Ontario County planning area is considered "Major", meaning injuries or illnesses may result in permanent disability, a complete shutdown of facilities between one and four weeks, and more than 25 percent of property destroyed or with major damage.

Table 9-4 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 9-4. Critical Facilities in the Floodplain

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Departments (EOC, Fire, Police, EMS), Hospitals, Police Stations, Fire Stations	o Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications. o Emergency vehicles can be damaged by rising flood waters. o 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. o Evacuations may be required for entire neighborhoods because of rising floodwaters, further taxing limited response capabilities and increasing sheltering needs for displaced residents. o Power outages could disrupt communications, delaying emergency response times. o Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities.

[19] Flood of January 19-20,1996 in New York State. Water-Resources Investigation Report. U.S. Geological Survey. 1998. Fatalities were located outside of planning area.
[20] Damage figures from recent flood events in the planning area were not available during the drafting of this plan.

CRITICAL FACILITIES	POTENTIAL IMPACTS
	o Washed out roads and bridges can impede emergency response vehicle access to areas. o Increased number of structure fires due to gas line ruptures and downed power lines, further straining the capacity and resources of emergency personnel. o First responders are exposed to downed power lines, contaminated and unusual debris, hazardous materials, and generally unsafe conditions. o Extended power outages and evacuations may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.
Airport, Academic Institutions, Animal Shelter, Evacuation Centers & Shelters, Governmental Facilities, Residential/ Assisted Living Facilities (3 Businesses, 2 Community Facilities, 1 Evacuation Shelter, 1 Municipal Building, 1 Residential Assisted Living Facility located in flood hazard area)	o Structures can be damaged by rising flood waters. o Power outages could disrupt critical care. o Backup power sources could be damaged, inundated or otherwise inoperable. o Critical staff may be impacted and unable to report for duty, limiting response capabilities. o Evacuations may be necessary due to extended power outages, gas line ruptures, or inundation of facilities. o Additional emergency responders and critical aid workers may not be able to reach the area for days. o Power outages and infrastructure damage may prevent larger airports from acting as temporary command centers for logistics, communications, and emergency operations. o Temporary break in operations may significantly inhibit post event evacuations. o Damaged or destroyed highway infrastructure may substantially increase the need for airport operations.
Utility Services and Infrastructure (electric, water, wastewater, communications) (8 Sewage/Water Treatment Plants, 7 Transportation Facilities located in flood hazard area)	o Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications. o Emergency service vehicles can be damaged by rising flood waters. o 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. o Increased number of structure fires due to gas line ruptures and downed power lines, further straining the capacity and resources of emergency personnel. o Service responders are exposed to downed power lines, contaminated and unusual debris, hazardous materials, and generally unsafe conditions. o Extended power outages and evacuations may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.

Historic loss estimates due to flood are presented in Table 9-5 below. Considering 71 flood events over a 27.5-year period, frequency is approximately two to three events every year.

Table 9-5. Potential Annualized Losses

JURISDICTION	PROPERTY DAMAGE	ANNUAL LOSS ESTIMATES
Ontario County	$4,372,248	$158,991
Town of Bristol	$313,731	$11,408
Town of Canadice	$1,637,750	$59,555
City and Town of Canandaigua	$912,129	$33,168
Village of Clifton Springs	$0	$0
Town of East Bloomfield and Village of Bloomfield	$0	$0
Town of Farmington	$23,125	$841
City and Town of Geneva	$538,234	$19,572
Town of Gorham	$40,756	$1,482
Town of Hopewell	$60,495	$2,200
Town and Village of Manchester	$0	$0
Town and Village of Naples	$9,761,381	$354,959
Town and Village of Phelps	$478,549	$17,402
Town of Richmond	$3,462,344	$125,903
Village of Rushville	$0	$0
Town of Seneca	$43,509	$1,582
Village of Shortsville	$0	$0
Town of South Bristol	$69,225	$2,517
Town and Village of Victor	$12,684	$461
Town of West Bloomfield	$0	$0
TOTALS	**$21,726,160**	**$790,042**

While all citizens are at risk of the impacts of a flood, 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 8.5 percent of the planning area population live below the poverty level. While warning times for these type of hazard events should be substantial enough for individuals to seek shelter, individuals who work and recreate outside are also vulnerable to potential impacts of a flood event.

Table 9-6. Populations at Greatest Risk[21]

JURISDICTION	POPULATION BELOW POVERTY LEVEL	PERCENTAGE BELOW POVERTY LEVEL
Ontario County	9,525	8.5
Village of Bloomfield	102	7.1
Town of Bristol	156	7.1
Town of Canadice	118	7
City of Canandaigua	845	8
Town of Canandaigua	902	8.2
Village of Clifton Springs	221	11.3
Town of East Bloomfield	223	6.1
Town of Farmington	1,298	9.2
City of Geneva	2,339	18.6
Town of Geneva	322	9.3
Town of Gorham	211	5.1
Town of Hopewell	318	8.3
Town of Manchester	996	10.6
Village of Manchester	133	8.8
Town of Naples	491	20.1
Village of Naples	175	20.3
Town of Phelps	572	8.5
Village of Phelps	348	16.7
Town of Richmond	64	1.9
Village of Rushville	30	5.2
Town of Seneca	142	5.3
Village of Shortsville	103	5.6
Town of South Bristol	124	7.2
Town of Victor	410	2.6
Village of Victor	148	5.4
Town of West Bloomfield	278	10.2

The severity of a flooding event varies depending on the relative risk to citizens and structures located within the planning area. Table 9-7 depicts the level of impact for the Ontario County planning area, including participating jurisdictions.

[21] U.S. Census Bureau, American Community Survey, 2021

Table 9-7. Impact by Jurisdiction

JURISDICTION	IMPACT	DESCRIPTION
Ontario County	Major	While it is anticipated that the Ontario 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.
Village of Bloomfield	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 Bristol	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 Canadice	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 Canandaigua	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 Canandaigua	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 Clifton Springs	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 East Bloomfield	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 Farmington	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 Geneva	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 Geneva	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 Gorham	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 Hopewell	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 Manchester	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 Manchester	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.

JURISDICTION	IMPACT	DESCRIPTION
Town of Naples	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 Naples	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 Phelps	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 Phelps	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 Richmond	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 Rushville	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 Seneca	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 Shortsville	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 South Bristol	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 Victor	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 Victor	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 West Bloomfield	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 Ontario 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:

- 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.
- 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.
- 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.
- 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.

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.[22] 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.[23] Precipitation during the winter and springs months is also projected to increase.[24] For the Ontario County planning area, climate change is likely to increase the frequency and severity and intensity of flood events in the future. Studies suggest that flooding at the current 100-year flood level may occur 19 times more often by the end of the century.[25]

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 Ontario County, are currently participating in the NFIP and

[22] Fifth National Climate Assessment, U.S. Global Change Research Program. https://nca2023.globalchange.gov/chapter/21/
[23] Fourth National Climate Assessment, U.S. Global Change Research Program. https://nca2018.globalchange.gov/chapter/18/
[24] NOAA National Centers for Environmental Information State Climate Summarieshttps://statesummaries.ncics.org/chapter/ny/
[25] 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

are in good standing. Table 9-8 shows each NFIP participating community's entry date into the program, date of when the FIRM was identified and date of current effective map.

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 authority to regulate development within municipal boundaries. Therefore, all New York counties, including Ontario County, are not eligible applicants for the NFIP.

Table 9-8. Participation in NFIP by Jurisdiction[26]

JURISDICTION	INITIAL FIRM IDENTIFIED	CURRENT EFFECTIVE DATE	ENTRY DATE	CRS ENTRY DATE	CRS CLASS	POLICIES IN FORCE
Ontario County	N/A	N/A	N/A	N/A	N/A	0
Village of Bloomfield[27]	8/15/1983	8/15/1983	2/8/2001	N/A	N/A	0
Town of Bristol	1/20/1984	1/20/1984(M)[28]	1/20/1984	N/A	N/A	0
Town of Canadice	5/15/1984	5/15/1984	5/15/1984	N/A	N/A	3
City of Canandaigua	4/1/1981	9/24/1982	4/1/1981	10/1/2016	8	107
Town of Canandaigua	4/17/1978	3/3/1997	4/17/1978	N/A	N/A	0
Village of Clifton Springs	7/23/1982	7/23/1982(M)	7/23/1982	N/A	N/A	3
Town of East Bloomfield	8/15/1983	8/15/1983	8/15/1983	N/A	N/A	2
Town of Farmington	9/30/1983	9/30/1983	9/30/1983	N/A	N/A	3
City of Geneva	4/15/1982	4/15/1982	4/15/1982	N/A	N/A	50
Town of Geneva	2/15/1978	2/15/1978	2/15/1978	N/A	N/A	0
Town of Gorham	1/5/1978	12/5/1996	1/5/1978	N/A	N/A	4
Town of Hopewell	2/27/1984	2/27/1984(M)	2/27/1984	N/A	N/A	0
Town of Manchester	6/11/1976	3/9/1984(M)	3/9/1984	N/A	N/A	1
Village of Manchester	1/20/1984	1/20/1984(M)	1/20/1984	N/A	N/A	0
Town of Naples	6/8/1984	6/8/1984(M)	6/8/1984	N/A	N/A	23
Village of Naples	9/30/1977	9/30/1977	9/30/1977	N/A	N/A	0
Town of Phelps	12/3/1982	12/3/1982(M)	12/3/1982	N/A	N/A	0
Village of Phelps	1/20/1984	1/20/1984(M)	1/20/1984	N/A	N/A	0
Town of Richmond	12/18/1984	12/18/1984	12/18/1984	N/A	N/A	31
Village of Rushville	6/5/1985	6/5/1985	6/5/1985	N/A	N/A	21

[26] FEMA Community Status Book. Accessed November 16, 2023
[27] Uses Town of East Bloomfield FIRM dated 8/15/1983 Panels: 0008B, 0009B, 0017B, 0020B
[28] (M) No Elevation Determined – All Zone A, C, and X

JURISDICTION	INITIAL FIRM IDENTIFIED	CURRENT EFFECTIVE DATE	ENTRY DATE	CRS ENTRY DATE	CRS CLASS	POLICIES IN FORCE
Town of Seneca	6/22/1984	6/22/1984(M)	6/22/1984	N/A	N/A	2
Village of Shortsville	9/24/1984	9/24/1984(M)	9/24/1984	N/A	N/A	6
Town of South Bristol	7/3/1984	5/18/1998	7/3/1985	N/A	N/A	0
Town of Victor	7/8/1977	9/30/1983	9/30/1983	N/A	N/A	10
Village of Victor	5/17/2004	5/17/2004	5/17/2004	N/A	N/A	0
Town of West Bloomfield	6/1/1978	6/1/1978	6/1/1978	N/A	N/A	0

While Ontario 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. Many of NFIP participating communities in the planning area currently have in place the minimum NFIP standards while other participating communities have adopted additional higher regulatory standards to limit floodplain development and further reduce flood risk.

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.

These flood losses are created by the cumulative effect of obstructions in floodplains which cause an increase in flood heights and velocities, and by the occupancy of flood hazard areas by uses vulnerable to floods and hazardous to other lands because they 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 NFIP communities that are participating jurisdictions in the planning process to continue to promote public health, safety and general welfare by minimizing public and private losses due to flood conditions in specific 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.

NFIP COMPLIANCE AND MAINTENANCE

Ontario 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 26.

Flooding was identified as a high-risk hazard during hazard ranking activities at the Risk Assessment Workshop by the vast 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 9-9). 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 9-10 includes links to the flood damage prevention ordinance for each participating jurisdiction.

Table 9-9. Floodplain Administrators

JURISDICTION	TITLE	PERMIT AUTHORITY
Village of Bloomfield	Code Enforcement Officer	Yes
Town of Bristol	Zoning Officer	Yes
Town of Canadice	Code Enforcement Officer	Yes
City of Canandaigua	Zoning Officer	Yes
Town of Canandaigua	Code Enforcement	Yes
Village of Clifton Springs	Code Enforcement Officer	Yes

JURISDICTION	TITLE	PERMIT AUTHORITY
Town of East Bloomfield	Code Enforcement Officer	Yes
Town of Farmington	Code Enforcement Officer	Yes
City of Geneva	Building Inspector	Yes
Town of Geneva	Code Enforcement Officer	Yes
Town of Gorham	Zoning Officer	Yes
Town of Hopewell	Code Enforcement Officer	Yes
Town of Manchester	Zoning Officer	Yes
Village of Manchester	Code Enforcement Officer	Yes
Town of Naples	Zoning Enforcement Officer	Yes
Village of Naples	Code Enforcement Officer	Yes
Town of Phelps	Code Enforcement Officer	Yes
Village of Phelps	Zoning Officer	Yes
Town of Richmond	Code Enforcement Officer	Yes
Village of Rushville	Zoning Officer	Yes
Town of Seneca	Zoning/Code Enforcement Officer	Yes
Village of Shortsville	Zoning Officer	Yes
Town of South Bristol	Code Enforcement Officer	Yes
Town of Victor	Code Enforcement Officer	Yes
Village of Victor	Code Enforcement Officer	Yes
Town of West Bloomfield	Code Enforcement Officer	Yes

Table 9-10. Flood Damage Prevention Ordinance

JURISDICTION	FLOOD DAMAGE PREVENTION ORDINANCE
Village of Bloomfield	https://ecode360.com/36662551
Town of Bristol	https://ecode360.com/35136586
Town of Canadice	https://www.canadice.org/canadice-town-laws.html
City of Canandaigua	https://ecode360.com/11770872
Town of Canandaigua	https://ecode360.com/9067112
Village of Clifton Springs	Chapter 65, local code book, available for viewing at Clifton Springs Clerks Office
Town of East Bloomfield	https://ecode360.com/12239886
Town of Farmington	https://ecode360.com/10575050
City of Geneva	https://ecode360.com/10593400
Town of Geneva	https://ecode360.com/12653754

JURISDICTION	FLOOD DAMAGE PREVENTION ORDINANCE
Town of Gorham	https://www.gorham-ny.com/pdf/form_application_resource/pdf22_pdf.pdf
Town of Hopewell	Local code #2, adopted in 1989, available for viewing at town hall
Town of Manchester	https://ecode360.com/11043237
Village of Manchester	https://ecode360.com/31581687?highlight=damage,damaging,flood,flood%20damage,flood%20damages,flooding,floods&searchId=22970691509507018
Town of Naples	https://ecode360.com/12677513
Village of Naples	https://ecode360.com/8143903
Town of Phelps	https://ecode360.com/12714535
Village of Phelps	https://ecode360.com/29737913
Town of Richmond	https://ecode360.com/12719675
Village of Rushville	https://www.villageofrushville.org/laws/pdf_43.pdf
Town of Seneca	https://ecode360.com/12888267
Village of Shortsville	https://ecode360.com/12890881
Town of South Bristol	https://ecode360.com/12903125
Town of Victor	https://ecode360.com/8085139
Village of Victor	https://ecode360.com/9478579
Town of West Bloomfield[29]	https://ecode360.com/11768706#11768706

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.

[29] Deficiencies were discovered in the Town of West Bloomfield's flood damage prevention ordinance during the planning process. This deficiency is in the process of being corrected. The link provided in the table will take the reader to the revised flood ordinance (Chapter 82) once the revisions have been adopted. It is noted that the Town is currently a participant in the NFIP and in good standing.

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 9-11 provides the most recent CAV and CAC dates for each participating jurisdiction.

Table 9-11. CAC and CAV Dates in Ontario County[30]

JURISDICTION	CAV DATE	CAC DATE
Ontario County	N/A[31]	N/A
Village of Bloomfield	N/A	N/A
Town of Bristol	7/7/2004	1/14/2016
Town of Canadice	8/13/2014	N/A
City of Canandaigua	4/27/2022	N/A
Town of Canandaigua	5/2/2017	12/3/2009[32]
Village of Clifton Springs	N/A	N/A
Town of East Bloomfield	8/14/1995	N/A
Town of Farmington	N/A	5/6/2015
City of Geneva	4/26/2011	1/7/2022
Town of Geneva	4/27/2023	11/4/2003
Town of Gorham	6/11/2020	N/A
Town of Hopewell	10/7/2005	10/4/2018
Town of Manchester	N/A	N/A
Village of Manchester	N/A	N/A
Town of Naples	9/13/2006	6/15/2016
Village of Naples	2/25/2013	6/15/2016
Town of Phelps	N/A	1/31/2018
Village of Phelps	N/A	N/A
Town of Richmond	7/26/2016	N/A
Village of Rushville	N/A	1/29/2007

[30] New York State Department of Environmental Conservation, Division of Water, Bureau of Flood Protection & Dam Safety
[31] N/A represents communities that have not had a CAV or CAC.
[32] New CAV/CAC planned for FY23.

JURISDICTION	CAV DATE	CAC DATE
Town of Seneca	N/A	5/10/2021
Village of Shortsville	N/A	N/A
Town of South Bristol	6/22/2020	N/A
Town of Victor	5/4/2017	N/A
Village of Victor	N/A	N/A
Town of West Bloomfield	N/A	N/A

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 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.

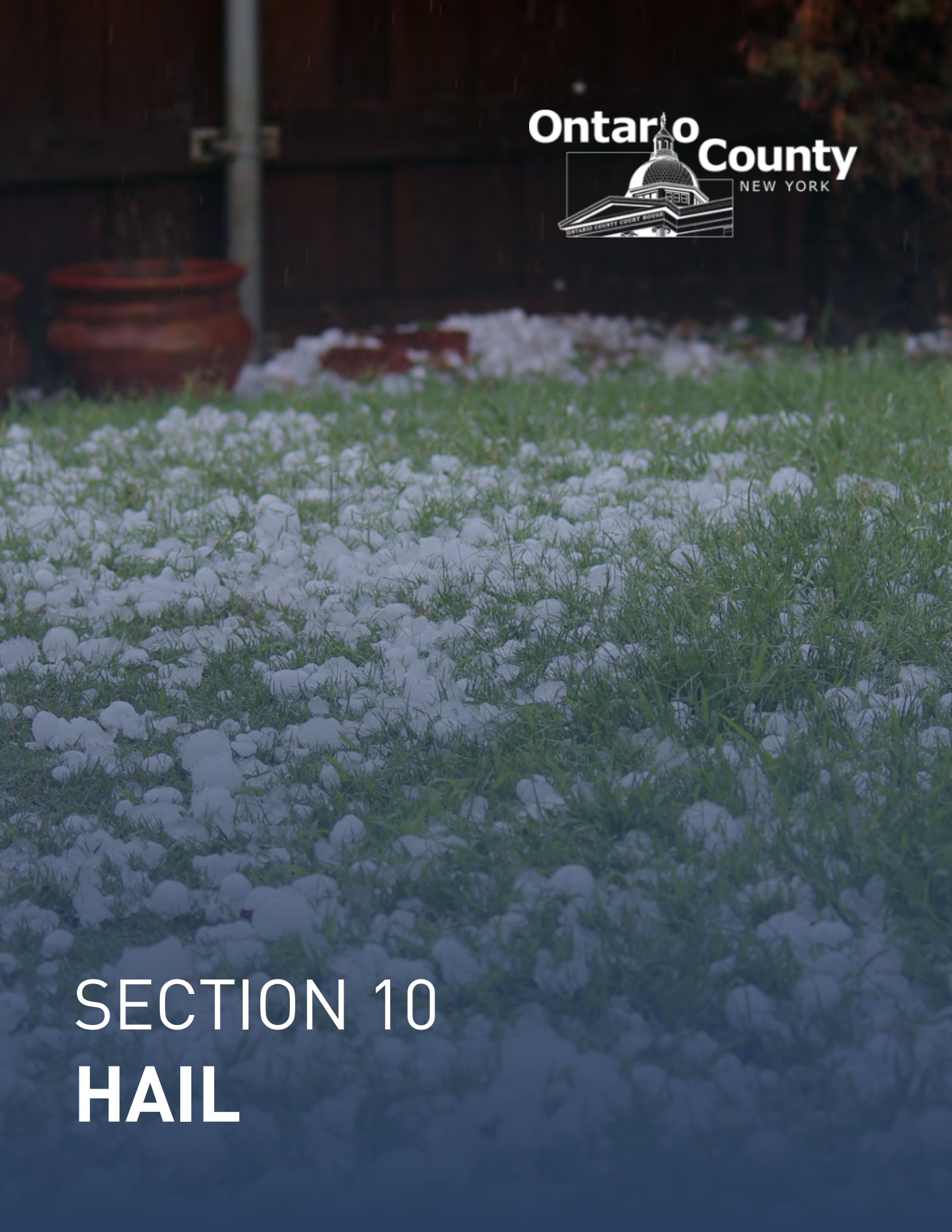
In either scenario, at least two of the referenced claims must have occurred within any ten-year period and must be greater than 10 days apart.[33] Table 9-12 shows repetitive loss and severe repetitive loss properties for the Ontario County planning area.

Table 9-12. Repetitive Loss and Severe Repetitive Loss Properties[34]

JURISDICTION	BUILDING TYPE	NUMBER OF LOSSES	SEVERE REPETITIVE LOSS
Town of Canadice	Single Family	2	No
	Single Family	5	Yes

[33] FEMA, NFIP Manual, Guidance for Severe Repetitive Loss Properties
[34] Each line in Table 9-12 represents a single structure.

JURISDICTION	BUILDING TYPE	NUMBER OF LOSSES	SEVERE REPETITIVE LOSS
City of Canandaigua	2-4 Family Building	3	No
Town of Canandaigua	Single Family	2	No
	Single Family	2	No
	Single Family	2	No
Town of East Bloomfield	2-4 Family Building	2	No
Town of Geneva	Single Family	2	No
Town of Gorham	Single Family	2	No
Village of Naples	Single Family	7	Yes
Town of Richmond	Single Family	3	No
	Single Family	2	No
	Single Family	2	No
	Single Family	4	No
	Single Family	3	No
	Other	2	No
	Single Family	2	No
	Single Family	2	No
	Single Family	2	No
	2-4 Family Building	2	No
	Business	4	Yes
	Single Family	4	Yes
	2-4 Family Building	4	Yes
	Single Family	2	No
Town of Seneca	Single Family	2	No
Town of South Bristol	Single Family	2	No



Ontario County
NEW YORK

SECTION 10
HAIL

SECTION 10: HAIL

Hazard Description 1
Location 2
Extent 2
Historical Occurrences 3
Significant Events 6
Probability of Future Events 6
Vulnerability and Impact 7
Assessment of Impacts 11
Climate Change Considerations 12

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.[1]

[1] National Oceanic and Atmospheric Administration, National Severe Storms Laboratory, Severe Weather 101.

SECTION 10: HAIL

LOCATION

Hailstorms are an extension of severe thunderstorms that could potentially cause severe damage. As a result, they are not confined to any specific geographic location and can vary greatly in size, location, intensity, and duration. Therefore, the entire Ontario County planning area, including all participating jurisdictions, are equally at risk to the hazard of hail. Refer to Figure 10-1 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 10-1.

Table 10-1. Hail Intensity and Magnitude[2]

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 10-1 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 Ontario County planning area may experience hailstorms ranging from an H0 (pea size) to an H6 (ping pong ball size). The largest hail event in the Ontario County planning area took place on May 21, 2013, in the Town of Seneca, and

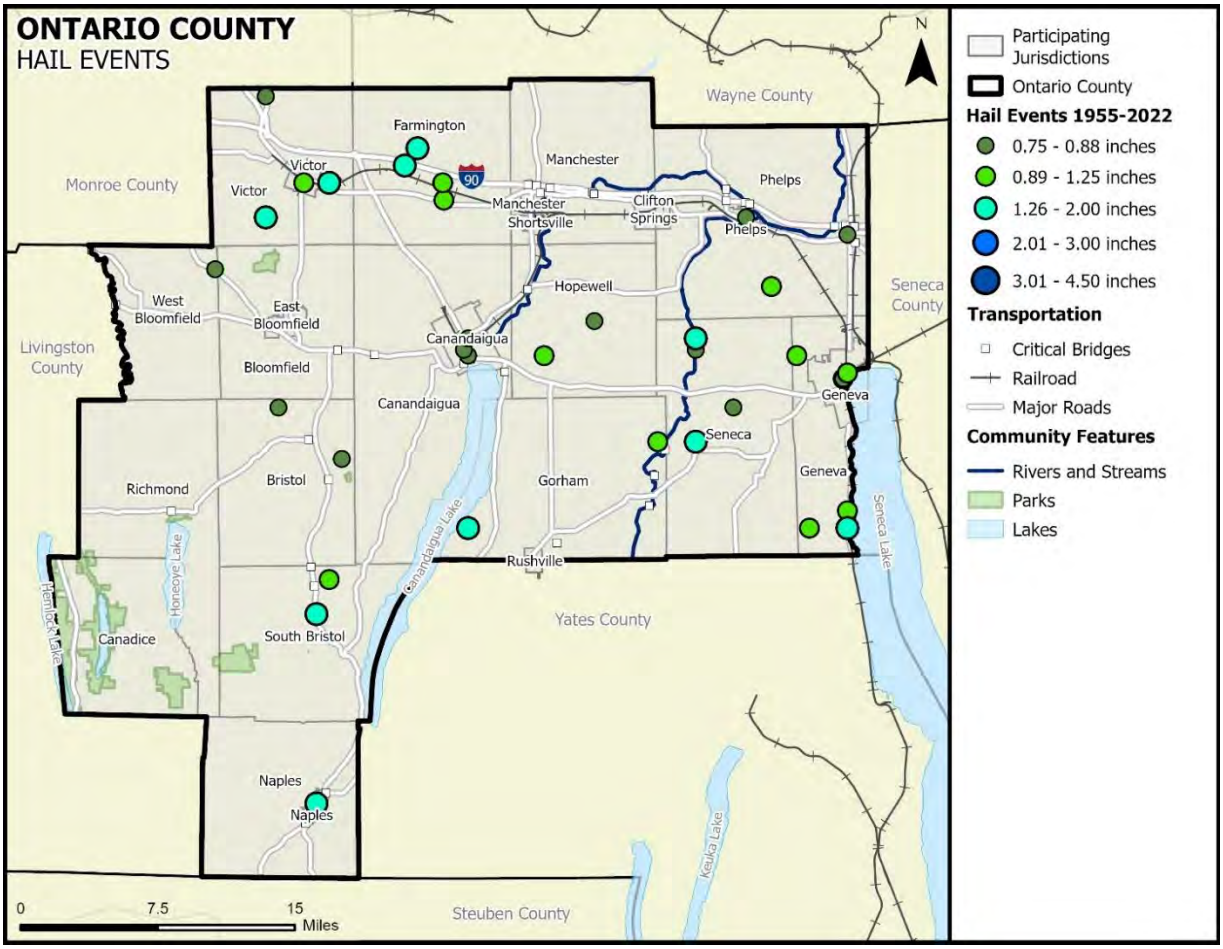
[2] NCEI Intensity Scale, based on the TORRO Hailstorm Intensity Scale.

resulted in hailstone measuring 2 inches in diameter, or an H6, which is considered a destructive hailstorm. The event resulted in more than $19,000 in estimated property damages. Refer to the Historical Occurrences section below for more details on this event. This is the maximum extent the planning area can anticipate in the future, based on historic records.

HISTORICAL OCCURRENCES

Historical evidence shown in Figure 10-1 demonstrates that the planning area is vulnerable to hail events overall. Historical events with reported damage, injuries, or fatalities are shown in Table 10-2 includes all damaging events from January 1956 through August 2023, as recorded in the NCEI Storm Events Database. In total, 46 reported historical hail events have occurred within the Ontario 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 67.5 years. Only those events for the Ontario County planning area with latitude and longitude available were plotted (Figure 10-1).

Figure 10-1. Spatial Historical Hail Events, 1956-2023[3]



[3] Map sources: ESRI OpenStreetMap (Custom: no labels), Census TIGER/LINE (2022), Ontario County Information Technology Department (2023), NOAA Storm Events Database (2023)

Table 10-2. Historical Hail Events, 1956-2023[4]

JURISDICTION	DATE	MAGNITUDE (Inches)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town of West Bloomfield	8/14/1998	0.75	0	0	$9,063	$0
City and Town of Canandaigua	10/13/1999	0.75	0	0	$26,412	$0
City and Town of Geneva[5]	5/10/2000	1	0	0	$17,269	$0
City and Town of Geneva	5/24/2000	0.75	0	0	$86,347	$0
City and Town of Geneva	10/21/2001	0.75	0	0	$3,333	$0
Town of Seneca	4/18/2004	0.75	0	0	$157,538	$0
City and Town of Canandaigua[6]	5/13/2004	0.75	0	0	$7,831	$0
City and Town of Canandaigua	7/25/2006	0.75	0	0	$11,643	$0
Town and Village of Manchester[7]	6/16/2008	1.5	0	0	$67,676	$1,624,227
Town of Farmington	7/23/2008	1.5	0	0	$6,732	$20,197
Town and Village of Victor	8/10/2008	1.75	0	0	$27,037	$0
Town of Seneca	6/22/2011	1.25	0	0	$10,497	$0
Ontario County	5/29/2012	1	0	0	$6,444	$6,444
Town of South Bristol	5/29/2012	1	0	0	$6,444	$6,444
City and Town of Geneva	5/21/2013	1.75	0	0	$6,357	$12,714
City and Town of Geneva	5/21/2013	1.75	0	0	$19,071	$0
City and Town of Geneva	5/21/2013	1	0	0	$6,357	$0
Town of Seneca	5/21/2013	1.75	0	0	$6,357	$12,714
Town of Seneca	5/21/2013	2	0	0	$6,357	$12,714
Town and Village of Victor[8]	6/3/2014	1	0	0	$12,426	$0
City and Town of Geneva	7/31/2014	0.88	0	0	$0	$24,862
City and Town of Geneva	7/31/2014	1	0	0	$12,431	$37,293
Town of Hopewell	5/14/2017	1	0	0	$2,420	$0

[4] Only recorded events with damages are listed. No reports of injuries or fatalities were recorded in the NCEI database. Events reported from January 1956 through August 2023. Damages are presented in 2023 dollar amounts.
[5] City and Town of Genva 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.
[6] City and Town of Canandaigua 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.
[7] Town and Village of Manchester 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.
[8] Town and Village of Victor 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: HAIL

JURISDICTION	DATE	MAGNITUDE (Inches)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town of Farmington	6/16/2022	1.25	0	0	$21,886	$0
TOTALS		**(Max Extent)**	**0**	**0**	**$537,928**	**$1,757,609**

Table 10-3. Historical Hail Events Summary, 1956-2023[9]

JURISDICTION	NUMBER of EVENTS	MAX MAGNITUDE (Inches)	INJURIES	DEATHS	PROPERTY DAMAGE	CROP DAMAGE
Ontario County	9	2	0	0	$6,444	$6,444
Village of Bloomfield and Town of East Bloomfield[10]	0	-	-	-	-	-
Town of Bristol	2	0.88	0	0	$0	$0
Town of Canadice	0	-	-	-	-	-
City and Town of Canandaigua	4	0.75	0	0	$45,886	$0
Village of Clifton Springs	0	-	-	-	-	-
Town of Farmington	4	1.75	0	0	$28,618	$20,197
City and Town of Geneva[11]	10	1.75	0	0	$151,165	$74,869
Town of Gorham	0	-	-	-	-	-
Town of Hopewell	2	1	0	0	$2,420	$0
Town and Village of Manchester	2	1.5	0	0	$67,676	$1,624,227
Town and Village of Naples[12]	0	-	-	-	-	-
Town and Village of Phelps[13]	3	1.25	0	0	$0	$0
Town of Richmond	0	-	-	-	-	-
Village of Rushville	0	-	-	-	-	-
Town of Seneca	4	2	0	0	$180,749	$25,428
Village of Shortsville	0	-	-	-	-	-
Town of South Bristol	1	1	0	0	$6,444	$6,444

[9] Participating jurisdictions with no reported events show a "-" in table columns where damages, deaths or injuries would otherwise be reported.

[10] Town of East Bloomfield and Village of Bloomfield (formerly the Village of East Bloomfield) 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.

[11] City and Town of Geneva 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.

[12] Town and Village of Naples 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.

[13] Town and Village of Phelps 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.

JURISDICTION	NUMBER of EVENTS	MAX MAGNITUDE (Inches)	INJURIES	DEATHS	PROPERTY DAMAGE	CROP DAMAGE
Town and Village of Victor	4	1.75	0	0	$39,463	$0
Town of West Bloomfield	1	0.75	0	0	$9,063	$0
TOTAL LOSSES	**46**	**(Max Extent)**	**0**	**0**	**$537,928**	**$1,757,609**

The City and Town of Geneva has had the greatest number of events (11) over the reporting period followed by widespread Ontario County area (9). The event with the most significant damage reported occurred on June 16, 2008, across Ontario County, with an estimated $1.69 million in damages and hailstones as large as 1.5 inches in diameter. There have been 5 hail events reported since the 2018 plan.

SIGNIFICANT EVENTS

May 21, 2013 – Town of Seneca

Thunderstorms developed across the Finger Lakes, specifically along the Lake Ontario breeze boundary, which resulted in downed trees and powerlines. The strongest thunderstorms produced 1-to-2-inch hailstones. Specific hail reports were received from the City of Geneva and the Town of Seneca. It was reported that several automobiles were damaged by the hail stones. Countywide, $82,641 in property and crop damages were reported for this hail event.

June 16, 2008 – Ontario County

Western and central New York experienced a rare widespread, large, and damaging hail event on June 16, 2008. Thunderstorms initially formed on the main lake convergence boundary between the Lake Erie and Lake Ontario breezes. The first cells exploded over Niagara and Orleans counties shortly before 1 p.m. and reports of hail came in almost immediately. For the next two hours, storms rolled along a similar path across western state counties, many of which had hail of up to 1.5 inches in diameter. The activity waned for the next few hours but after some additional heating due to clearing skies, more hail-filled storm cells developed. Reports of hail damage occurred to thousands of automobiles as well as windows, roofs and awnings on homes. While property damage was significant, the damage to agricultural land and crops was devastating. The hailstones pummeled fruits leaving divots and cracks, and vegetable plants were stripped of their leaves. The U.S. Department of Agriculture issued a Disaster Declaration for Ontario County in addition to Erie, Genesee, Monroe, Orleans and Wayne counties. This event caused $1,624,227 in crop damages and another $67,676 in structural damages in the Ontario County planning area.

April 18, 2004 – Ontario County

Thunderstorm winds brought down numerous trees, utility poles, power lines and caused structural damage as a derecho crossed the region. An estimated 10,000 residents were temporarily left without power by the storm. There were numerous reports of dime to nickel sized hail with isolated reports of 1-to-1.5-inch hail across the planning area. Hail damage during this storm resulted in nearly $158,000 in structural damages.

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 point and time. Based on available

records of historic events, 46 events in a 67.5-year reporting period for Ontario County results in an average annual occurrence of approximately one event occurring each year. This frequency supports a “Highly Likely” probability of future events for the Ontario County planning area. Future conditions, specifically climate change, could impact the probability of future hail events. See additional information on climate change at the end of this section.

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, and vehicles are also commonly damaged by hail.

Utility systems on the roofs of county-wide buildings and critical facilities 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 Ontario 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. Census data indicates a total of 3,601 (6.9 percent of total housing stock) manufactured homes located in the Ontario County planning area. In addition, 57.05 percent (approximately 29,775 structures) of the housing structures in the Ontario 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 10-4. Structures at Greater Risk by Participating Jurisdiction[14]

JURISDICTION	MANUFACTURED HOMES	PERCENT OF TOTAL HOUSING STOCK	SFR STRUCTURES BUILT BEFORE 1980	PERCENT OF TOTAL HOUSING STOCK
Ontario County	3,601	6.90	29,775	57.05
Village of Bloomfield	22	3.32	506	76.32
Town of Bristol	83	7.47	486	43.74
Town of Canadice	209	17.13	713	58.44
City of Canandaigua	62	1.11	3,931	70.64
Town of Canandaigua	161	3.15	1,490	29.11
Village of Clifton Springs	18	2.18	700	84.85
Town of East Bloomfield	38	2.34	1,191	73.29
Town of Farmington	334	5.75	2,600	44.73
City of Geneva	5	0.10	4,767	91.81

[14] U.S. Census Bureau, American Community Survey, 2021

JURISDICTION	MANUFACTURED HOMES	PERCENT OF TOTAL HOUSING STOCK	SFR STRUCTURES BUILT BEFORE 1980	PERCENT OF TOTAL HOUSING STOCK
Town of Geneva	59	3.28	1,340	74.40
Town of Gorham	61	2.83	1,305	60.58
Town of Hopewell	341	21.66	760	48.28
Town of Manchester	1,063	25.69	2,744	66.33
Village of Manchester	164	23.33	525	74.68
Town of Naples	150	12.32	819	67.24
Village of Naples	18	3.95	422	92.54
Town of Phelps	133	4.54	2,304	78.66
Village of Phelps	0	0.00	830	89.44
Town of Richmond	0	0.00	1,223	62.78
Village of Rushville	32	12.21	193	73.66
Town of Seneca	58	5.00	804	69.25
Village of Shortsville	73	10.21	599	83.78
Town of South Bristol	29	2.10	701	50.76
Town of Victor	430	6.19	1,937	27.90
Village of Victor	0	0.00	696	59.85
Town of West Bloomfield	385	29.55	660	50.65

While all citizens are at risk of the impacts of hail, forced relocation and disaster recovery drastically impact 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 8.5 percent of the planning area's population live below the poverty level (Table 10-5).

Table 10-5. Populations at Greatest Risk by Jurisdiction[15]

JURISDICTION	POPULATION BELOW POVERTY LEVEL
Ontario County	9,525
Village of Bloomfield	102
Town of Bristol	156
Town of Canadice	118
City of Canandaigua	845
Town of Canandaigua	902
Village of Clifton Springs	221

[15] US Census Bureau 2021 data for Ontario County.

JURISDICTION	POPULATION BELOW POVERTY LEVEL
Town of East Bloomfield	223
Town of Farmington	1,298
City of Geneva	2,339
Town of Geneva	322
Town of Gorham	211
Town of Hopewell	318
Town of Manchester	996
Village of Manchester	133
Town of Naples	491
Village of Naples	175
Town of Phelps	572
Village of Phelps	348
Town of Richmond	64
Village of Rushville	30
Town of Seneca	142
Village of Shortsville	103
Town of South Bristol	124
Town of Victor	410
Village of Victor	148
Town of West Bloomfield	278

The Ontario 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 Ontario County planning areas. For a comprehensive list by participating entity please see Appendix C.

Table 10-6. Critical Facilities Vulnerable to Hail

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Departments (EOC, Fire, Police, EMS), Hospitals	o Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications. o Emergency vehicles can be damaged by hailstones. o Power outages could disrupt communications, delaying emergency response times. o Accumulated hail on the streets may impede emergency response vehicle access to areas. o Extended power outages and evacuations may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.

CRITICAL FACILITIES	POTENTIAL IMPACTS
Airport, Academic Institutions, Community Residential Facilities, Day Care Facilities, Evacuation Centers and Shelters, Governmental Facilities	o Structures can be damaged by hailstones. o Power outages could disrupt critical care. o Backup power sources could be damaged. o Evacuations may be necessary due to extended power outages, gas line ruptures, or structural damage to facilities. o Power outages and infrastructure damage may prevent larger airports from acting as temporary command centers for logistics, communications, and emergency operations. o Temporary break in operations may significantly inhibit post event evacuations. o Damaged or destroyed highway infrastructure may substantially increase the need for airport operations.
Commercial Suppliers (food, gas, etc.)	o Facilities or infrastructure may be damaged, destroyed or otherwise inaccessible. o Essential supplies like medicines, water, food, and equipment deliveries may be significantly delayed.
Utility Services and Infrastructure (electric, water, wastewater, communications)	o Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications. o Power outages could disrupt communications, delaying emergency response times. o Accumulated hail on the streets may impede service response vehicle access to areas. o Extended power outages and evacuations may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.

Hail has been known to cause injury to humans and occasionally has been fatal. Overall, the estimated losses to property and crops due to hail in the planning area is estimated at $2,295,537 with an average annualized loss of $34,008. Based on historic records, the impact severity of hail damages on the Ontario County planning area can be considered “Limited”, meaning minor quality of life lost, critical facilities and services shut down for 24 hours or less, and less than 10 percent of property destroyed or with major damage.

Table 10-7. Estimated Annualized Losses by Jurisdiction

JURISDICTION	TOTAL PROPERTY and CROP LOSS	ANNUAL LOSS ESTIMATE
Ontario County	$12,888	$191
Village of Bloomfield and Town of East Bloomfield	$0	$0
Town of Bristol	$0	$0
Town of Canadice	$0	$0
City and Town of Canandaigua	$45,886	$680
Village of Clifton Springs	$0	$0
Town of Farmington	$48,818	$723
City and Town of Geneva	$226,034	$3,373
Town of Gorham	$0	$0
Town of Hopewell	$2,420	$36

JURISDICTION	TOTAL PROPERTY and CROP LOSS	ANNUAL LOSS ESTIMATE
Town and Village of Manchester	$1,691,903	$25,065
Town and Village of Naples	$0	$0
Town and Village of Phelps	$0	$0
Town of Richmond	$0	$0
Village of Rushville	$0	$0
Town of Seneca	$206,177	$3,077
Village of Shortsville	$0	$0
Town of South Bristol	$12,888	$191
Town and Village of Victor	$39,463	$585
Town of West Bloomfield	$9,063	$134
Planning Area Totals	**$2,295,537**	**$34,008**

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.
- 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 is a total of 74 buildings, districts, and sites listed on the National Register of Historic Places in Ontario County and are each structure is placed at a higher risk of impact.

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.[16]

[16] Yale Climate Connections, Hailstorms and Climate Change, March 17, 2022.



SECTION 11
ICE STORM

SECTION 11: ICE STORM

Hazard Description 1
Location 2
Extent 2
Historical Occurrences 3
Significant Events 3
Probability of Future Events 4
Vulnerability and Impact 4
Assessment of Impacts 8
Climate Change Considerations 9

HAZARD DESCRIPTION

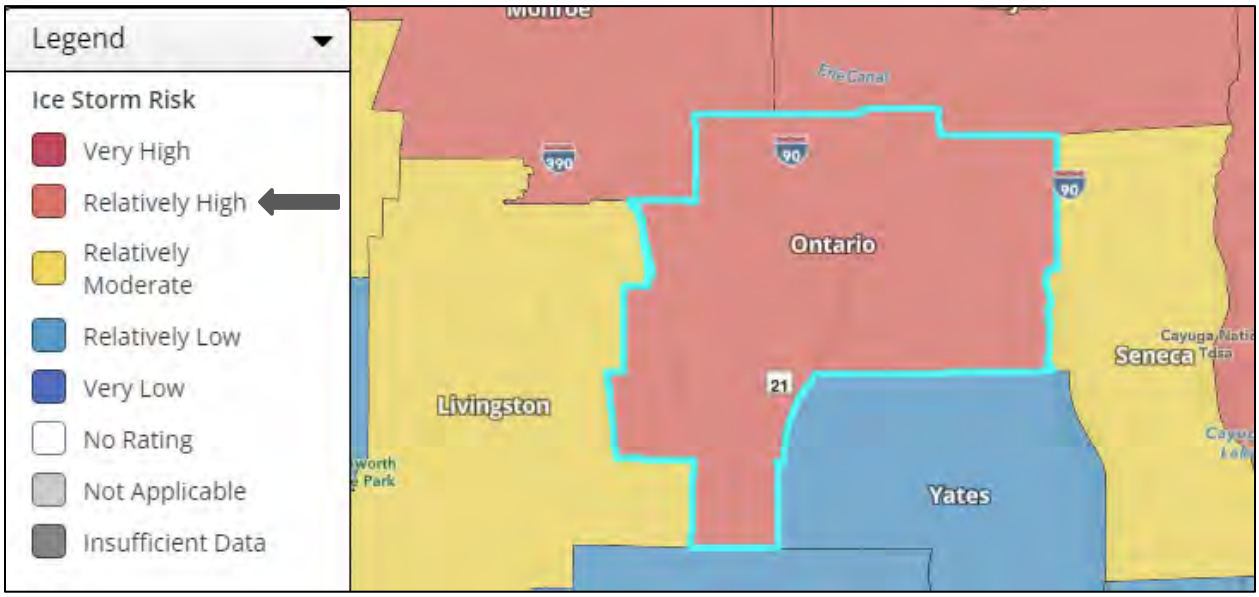


An ice storm is when rain freezes on surface contact with significant ice accumulations of 0.25 inches or greater. Ice accumulations on roads can greatly impact travel and are especially hazardous to pedestrians and motorists. Bridges and overpasses are particularly dangerous because they freeze before other surfaces. Heavy accumulations of ice can bring down trees and topple utility poles, causing power outages and disrupting critical facility operations. In the Ontario 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 for ice storm and rating represent a community's relative risk for ice storms when compared to the rest of the United States. As indicated in Figure 11-1, the Ontario County planning area has a “relatively high” ice storm risk score. This means the Ontario 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.[1]

[1] FEMA, National Risk Index, Ice Storm

Figure 11-1. Ontario County Ice Storm Risk, National Risk Index, December 2023



LOCATION

Ice storm events are not confined to specific geographic boundaries. Therefore, all existing and future buildings, facilities, and populations in the Ontario 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 11-1. Based on historical occurrences, the Ontario County planning area has experienced every level of the WSSI. The planning area can anticipate future “extreme” WSSI level events, based on historical occurrences.

Table 11-1. 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 4 recorded ice storm events in the Ontario County planning area. Historical ice storm information, as provided by the 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 11-2 shows historical incident information for the planning area.

Table 11-2. Historical Ice Storm Events, 1996-2023[2]

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Ontario County	1/31/2002	0	0	$418,084	$0
Ontario County	11/17/2002	0	0	$81,680	$0
Ontario County	4/5/2003	0	0	$4,834,129	$966,826
Ontario County	4/14/2018	0	0	$17,732	$0
TOTALS		**0**	**0**	**$6,318,451**	

Table 11-3. Historical Ice Storm Events Summary, 1996-2023

JURISDICTION	NUMBER OF EVENTS	DEATHS	INJURIES	PROPERTY DAMAGES	CROP DAMAGES
Ontario County	4	0	0	$5,351,625	$966,826

Based on the list of historical ice storm events for the Ontario County planning area, no events have been reported since the 2018 Plan Update.

SIGNIFICANT EVENTS[3]

April 14, 2018 – Ontario County

Two rounds of mixed winter precipitation moved over the Ontario Count planning area. This resulted in sleet that transitioned to freezing rain before temperatures eventually increased above freezing again. Several areas saw nearly an inch of sleet combined with one half of an inch of freezing rain. This resulted in significant power outages and substantial tree damage.

April 5, 2003 – Ontario County (DR-1467)

A low-pressure system brought a mix of wintry weather to parts of the Genesee Valley, the Finger Lakes, and the North Country. Up to an inch of ice accumulation was measured across the Ontario County planning area. A Federal Disaster Declaration (DR-1467) included Livingston, Monroe, northern Cayuga, Ontario, Orleans, Oswego, and Wayne counties. The heavy ice accumulation damaged trees, power, and telephone lines. More than 175,000 residents lost power during this

[2] Values are in 2023 dollars. Database was searched for events between January 1996 and August 2023. No events were reported for the Ontario County planning area in the database after April 14, 2018.

[3] Impacts from a 1991 ice storm were provided by the planning team. This storm was not included in the historical event table as it falls outside of the available reporting period provided in the NCEI database. County reports indicated municipal and school closures for approximately one week as a result of the storm. Portions of the planning area were without electricity for up to three weeks. Damage estimates were not available.

storm, and in some cases, power outages lasted for up to one week. Several shelters were opened across the region for those without utilities. Schools and businesses closed for several days and shelters were opened to house people without utilities. Ontario County suffered a huge agricultural loss during this ice storm and reported nearly $967,000 (2023 dollars) in crop damages.

November 17, 2002 – Ontario County
A low-pressure system brought a mixture of rain, freezing rain and snow to the southern and western Finger Lakes region. The weight of the ice and snow brought down tree limbs and power lines. Power outages were reported in Livingston, Allegany, and Ontario counties. There were reports of numerous automobile accidents, some with injuries, which were blamed on the icy conditions.

January 31, 2002 – Ontario County
A three-to-five-inch snowfall overnight turned into freezing rain during the morning hours. Ice accumulations of one-half to three-quarters of an inch occurred. Hundreds of thousands of residents were left without power as heavy ice accumulated which caused downed trees and damaged power lines. Some areas were without power for up to 72 hours.

PROBABILITY OF FUTURE EVENTS

According to historical records, the Ontario County planning area has an approximately 15 percent chance of experiencing an ice storm in any given year. The probability of a future ice storm event affecting the Ontario 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 7 and 14, respectively. The end of this section addresses climate change and its impacts on future ice storms in the planning area.

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. A rise in the water level or a thaw breaks the ice into large chunks, which become jammed at manmade and natural obstructions. Ice jams can act as a dam, resulting in severe flooding after an ice storm.

Ontario County is a rich and diverse agricultural area and features more than 800 farms including dairy, beef, sheep, poultry, swine, vegetables, vineyards, orchards, fruit, and greenhouse farms. These farms are a vital part of the food and agricultural industry in the planning area. Ontario

County's annual market value of agricultural products sold is over $200,000,000.[4] 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 Ontario County Planning Team identified the following critical facilities (Table 11-4) 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 11-4. Critical Facilities Vulnerable to Ice Storm Events

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Departments (EOC, Fire, Police, EMS), Hospitals and Medical Centers	o Emergency operations, services and response times may be significantly impacted due to power outages, and/or loss of communications. o Exposure to extreme cold can cause illnesses in first responders if exposed for a period of time. o Roads may become impassable due to ice, impacting response times by emergency services. o Extended power outages may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.
Airport, Academic Institutions, Animal Shelter, Evacuation Centers & Shelters, Governmental Facilities, Residential/ Assisted Living Facilities	o Power outages could disrupt critical care. o Backup power sources could be damaged. o Increased number of patients due to exposure to cold temperatures could lead to a strain on staff. o Water pipes can freeze and burst leading to flooding within facilities. o Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable. o Essential supplies like medicines, water, food, and equipment deliveries may be delayed. o Economic disruption due to power outages negatively impact airport services as well as area businesses reliant on airport operations. o Exposure risks to outdoor workers.
Commercial Supplier (food, gas/fuel, etc.)	o Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable. o Essential supplies like medicines, water, food, and equipment deliveries may be delayed.
Utility Services and Infrastructure (electric, water, wastewater, communications)	o Emergency operations, services and response times may be significantly impacted due to power outages, and/or loss of communications. o Roads may become impassable due to ice, impacting response times by emergency services. o Power outages due to increased usage could disrupt critical care. o Backup power sources could be damaged. o Water pipes can freeze and burst leading to flooding within facilities.

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

[4] Cornell University, Cornell Cooperative Extension, Ontario County, January 1, 2023

fewer resources to prepare for and recover from ice storms. They may lack access to adequate heating and emergency supplies.

The population over 65 and under the age of 5 in the Ontario County planning area is estimated at 25 percent of the total population or an estimated total of 27,936 potentially vulnerable residents in the planning area based on age. An estimated 8.5 percent of the planning area population live below the poverty level (Table 11-5).

Another segment of the population at risk is those who are experiencing homelessness. Data regarding the local population experiencing homelessness is limited to county estimates and is not available for each jurisdiction. Ontario County follows the NYS Code Blue policy. On winter nights when the temperature drops to 32 degrees or below, including wind-chill, between 4:00 PM and 8:00 AM. Accommodations will be provided to anyone who is homeless and seeking shelter in the planning area during a Code Blue to ensure everyone is warm and safe.

Table 11-5. Populations at Greater Risk of Ice Storm Events[5]

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5	POPULATION BELOW POVERTY LEVEL	HOMELESS POPULATION[6]
Ontario County	22,554	5,382	9,525	176
Village of Bloomfield	265	44	102	-
Town of Bristol	490	60	156	-
Town of Canadice	369	68	118	-
City of Canandaigua	2,234	431	845	-
Town of Canandaigua	2,241	353	902	-
Village of Clifton Springs	475	65	221	-
Town of East Bloomfield	804	178	223	-
Town of Farmington	2,092	978	1,298	-
City of Geneva	1,856	781	2,339	-
Town of Geneva	1,035	138	322	-
Town of Gorham	1,068	267	211	-
Town of Hopewell	820	76	318	-
Town of Manchester	1,908	399	996	-
Village of Manchester	318	67	133	-
Town of Naples	510	63	491	-
Village of Naples	174	32	175	-
Town of Phelps	1,203	445	572	-

[5] U.S. Census Bureau, American Community Survey, 2021
[6] 2023 Average weekly homeless population for Ontario County.

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5	POPULATION BELOW POVERTY LEVEL	HOMELESS POPULATION[6]
Village of Phelps	332	206	348	-
Town of Richmond	925	52	64	-
Village of Rushville	111	17	30	-
Town of Seneca	482	151	142	-
Village of Shortsville	297	56	103	-
Town of South Bristol	539	38	124	-
Town of Victor	3,198	783	410	-
Village of Victor	545	126	148	-
Town of West Bloomfield	780	121	278	-

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 29,775 housing units (57.05 percent) in the planning area were built before 1980 (Table 11-6).

Table 11-6. Structures at Greater Risk of Ice Storm Events[7]

JURISDICTION	SFR STRUCTURES BUILT BEFORE 1980	PERCENT of TOTAL HOUSING UNITS (%)
Ontario County	29,775	57.05
Village of Bloomfield	506	76.32
Town of Bristol	486	43.74
Town of Canadice	713	58.44
City of Canandaigua	3,931	70.64
Town of Canandaigua	1,490	29.11
Village of Clifton Springs	700	84.85
Town of East Bloomfield	1,191	73.29
Town of Farmington	2,600	44.73
City of Geneva	4,767	91.81
Town of Geneva	1,340	74.40
Town of Gorham	1,305	60.58
Town of Hopewell	760	48.28

[7] U.S. Census Bureau, American Community Survey, 2021

JURISDICTION	SFR STRUCTURES BUILT BEFORE 1980	PERCENT of TOTAL HOUSING UNITS (%)
Town of Manchester	2,744	66.33
Village of Manchester	525	74.68
Town of Naples	819	67.24
Village of Naples	422	92.54
Town of Phelps	2,304	78.66
Village of Phelps	830	89.44
Town of Richmond	1,223	62.78
Village of Rushville	193	73.66
Town of Seneca	804	69.25
Village of Shortsville	599	83.78
Town of South Bristol	701	50.76
Town of Victor	1,937	27.90
Village of Victor	696	59.85
Town of West Bloomfield	660	50.65

Overall, the average loss estimate of property and crops in the planning area is estimated at $6,318,451 with an average annualized loss of $229,762. Based on historic loss and damages, the impact of hail damages on the Ontario County planning area, including participating jurisdictions, can be considered “Limited” severity of impact, meaning minor quality of life lost, critical facilities and services shut down for 24 hours or less, and less than 10 percent of property destroyed or with major damage.

Table 11-7. Ice Storm Event Damage Totals, 1996-2023

JURISDICTION	PROPERTY AND CROP LOSS	ANNUAL LOSS ESTIMATES
Ontario County	$6,318,451	$229,762

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 (20 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. 57 percent of homes in the County were built before 1980. Within Ontario County, 74 buildings, districts, and sites are on the National Register of Historic Places, many of which pre-date modern building codes.
- 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.

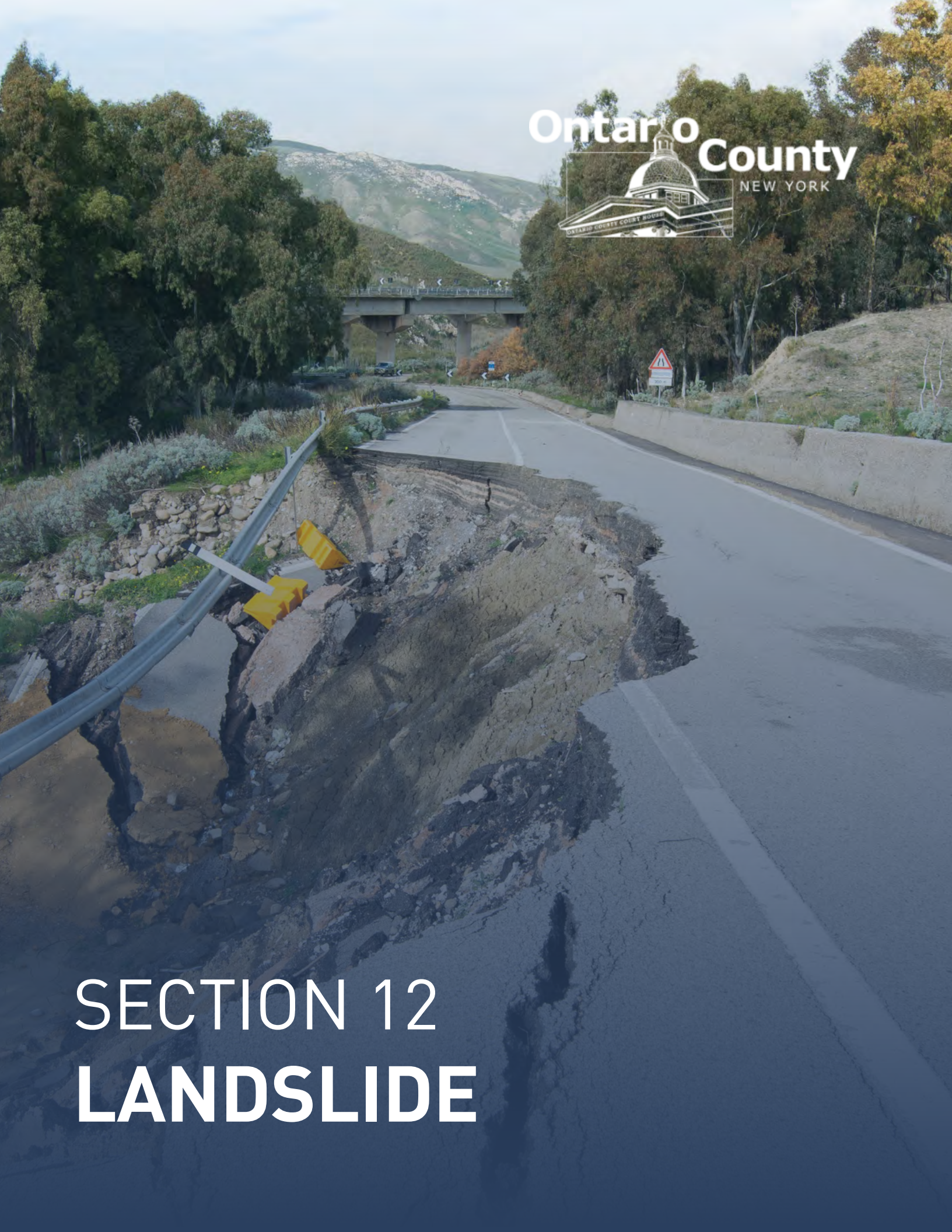
CLIMATE CHANGE CONSIDERATIONS

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.[8]

It can be inferred with milder winters and fewer cold extremes in the Northeaster U.S. that Ontario 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.

[8] U.S. Global Change Research Program, Fourth National Climate Assessment, Chapter 18: Northeast



SECTION 12
LANDSLIDE

SECTION 12: LANDSLIDE

Hazard Description 1
Location 2
Extent 2
Historical Occurrences 4
Significant Events 5
Probability of Future Events 5
Vulnerability and Impact 5
Climate Change Considerations 6

HAZARD DESCRIPTION



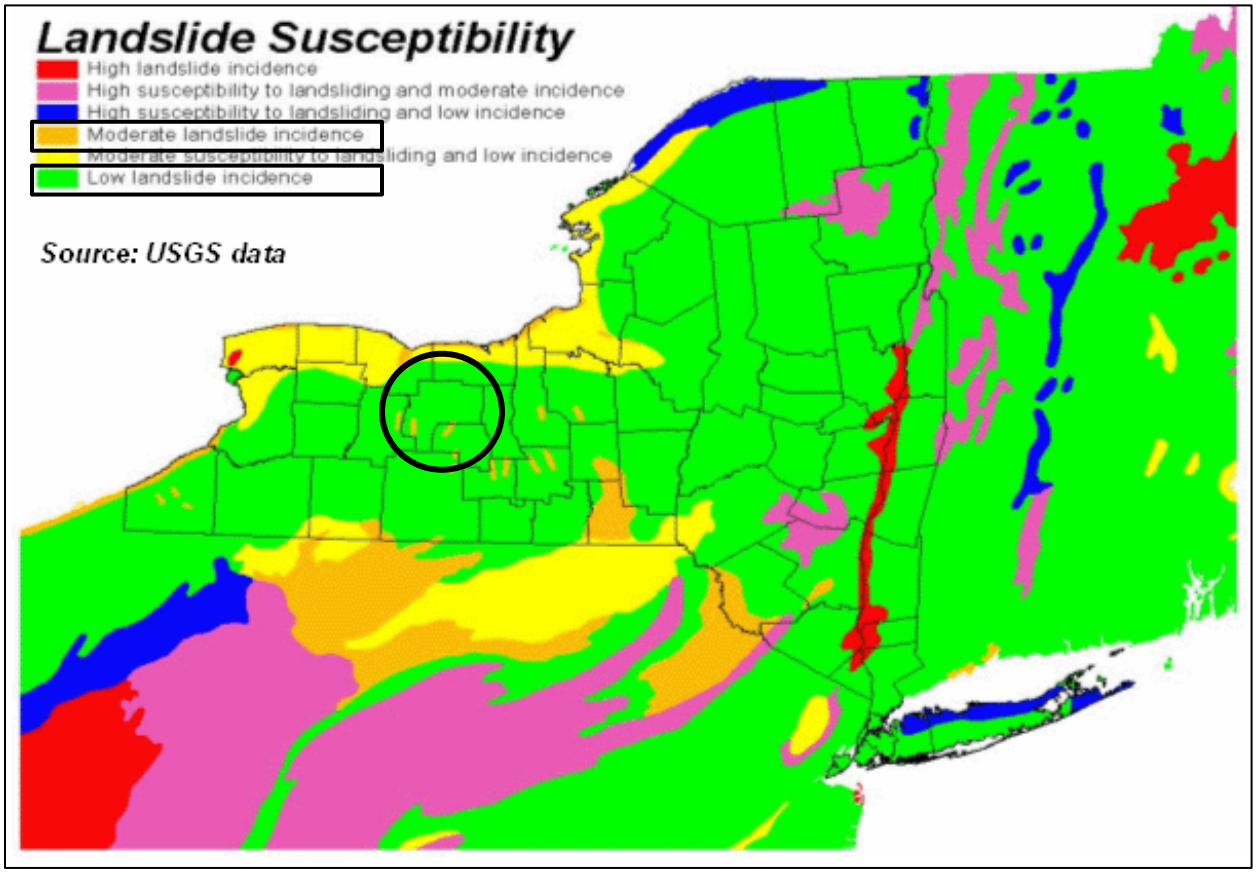
Landslides are defined as the downward movement of a sloped land mass under the force of gravity. Based upon historic information, minor landslides have occurred in the Ontario County planning area on a localized basis. In a landslide, large rock, earth, or debris moves along a downward slope. Mudflow 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.

LOCATION

Ontario County is located in an area of the state that is classified as having a low susceptibility for landslides with a small area near Honeoye Lake classified as having a moderate susceptibility (Figure 12-1). 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 Ontario County planning area has several areas that exhibit conditions favorable for landslides. The Town of Richmond, Town of South Bristol, and the Town of Canadice have areas prone to landslides around Honeoye and Canandaigua Lakes. These areas are noted for having steep rocky or forested banks along the lakes' shoreline. In addition, according to the Ontario County Soil and Water Conservation District, all jurisdictions in the county have a low risk of landslides where steep slopes exist along streams and creeks and rural roadways, or around area lakes. Figure 12-1 shows the landslide susceptibility map for the Ontario County planning area.

Figure 12-1. Landslide Susceptibility[1]



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 variables that contribute to the overall extent of potential landslide activity in any particular area

[1] Source: USGS. Ontario County Planning Area indicated by black circle.

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.

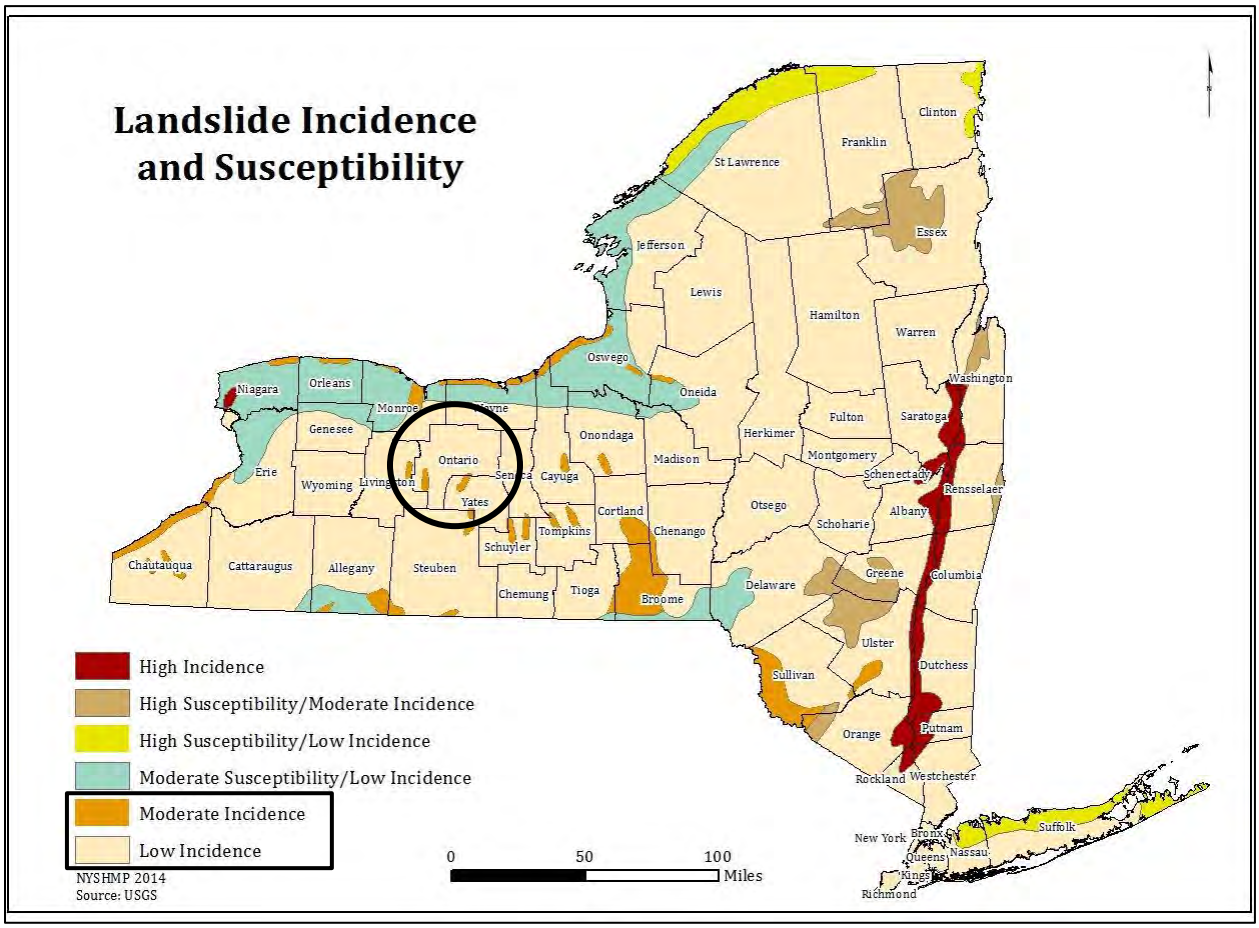
Landslide susceptibility is defined as the degree of response of geologic formations to natural or artificial cutting, to loading of slopes, or to unusually high precipitation. It can be assumed that unusually high precipitation or changes in existing conditions can initiate landslides in areas where 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 Ontario 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 12-2 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 entire population in the Ontario County planning area is at a low risk of incidence and low risk for landslide susceptibility (0-1.5%), as shown in Figure 12-2 with a small portion of the planning area around Honeoye Lake at moderate risk of incident but low risk for susceptibility.

Figure 12-2. Landslide Incidence[2]



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 Ontario County planning area in the future.

HISTORICAL OCCURRENCES

The 2019 New York State Hazard Mitigation Plan indicates no previous landslide events or reported damages due to landslides in the Ontario County planning area. However, the USGS Landslide Inventory indicates two documented landslides in the planning area (Table 12-1). In addition, during the planning process for this plan update, members of the public noted having experienced issues with landslides on their property in the Town of Naples.

[2] Source: USGS. Ontario County Planning Area indicated by black circle.

Table 12-1. Historical Landslide Events, 1996-2023[3]

JURISDICTION	DATE	INJURIES	FATALITIES	PROPERTY DAMAGE	CROP DAMAGE
Town of Richmond	7/13/2010	0	0	$0	$0
Town of Canandaigua	6/28/2010	0	0	$0	$0
TOTAL LOSSES		**0**	**0**	**$0**	

SIGNIFICANT EVENTS

Town of Richmond – 7/13/2010

Two days after a storm system moved across the Honeoye Lake area, a small landslide washed mud and debris into yards and onto several roads, closing West Lake Road in Honeoye temporarily. Damages were limited to debris removal and no injuries were reported.

Town of Canandaigua – 6/28/2010

A brief torrential rainstorm swept into the planning area on Monday afternoon and triggered the small mudslide that sent dirt and debris flowing across a portion of West Lake Road, south of Wells Curtice Road, in the Town of Canandaigua. Residents and county crews spent the better part of the afternoon cleaning the muck from the road and patios on homes next to Canandaigua Lake. William Wright, head of the Ontario County Public Works Department, said that a private culvert along the road became clogged or otherwise failed to carry the water to a cross pipe. With nowhere else to go, the water and mud cascaded across the road. The southbound lane of West Lake Road was closed for a period. Damages were limited to debris removal and no injuries were reported.

PROBABILITY OF FUTURE EVENTS

Based on available records of historic events, 2 known historic events in a 27.5-year reporting period for the Ontario County Planning Area supports an “Unlikely” probability, or an event probable in the next ten years for the Ontario 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 Ontario 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 2019 New York State Hazard Mitigation Plan, the entire population in the Ontario County

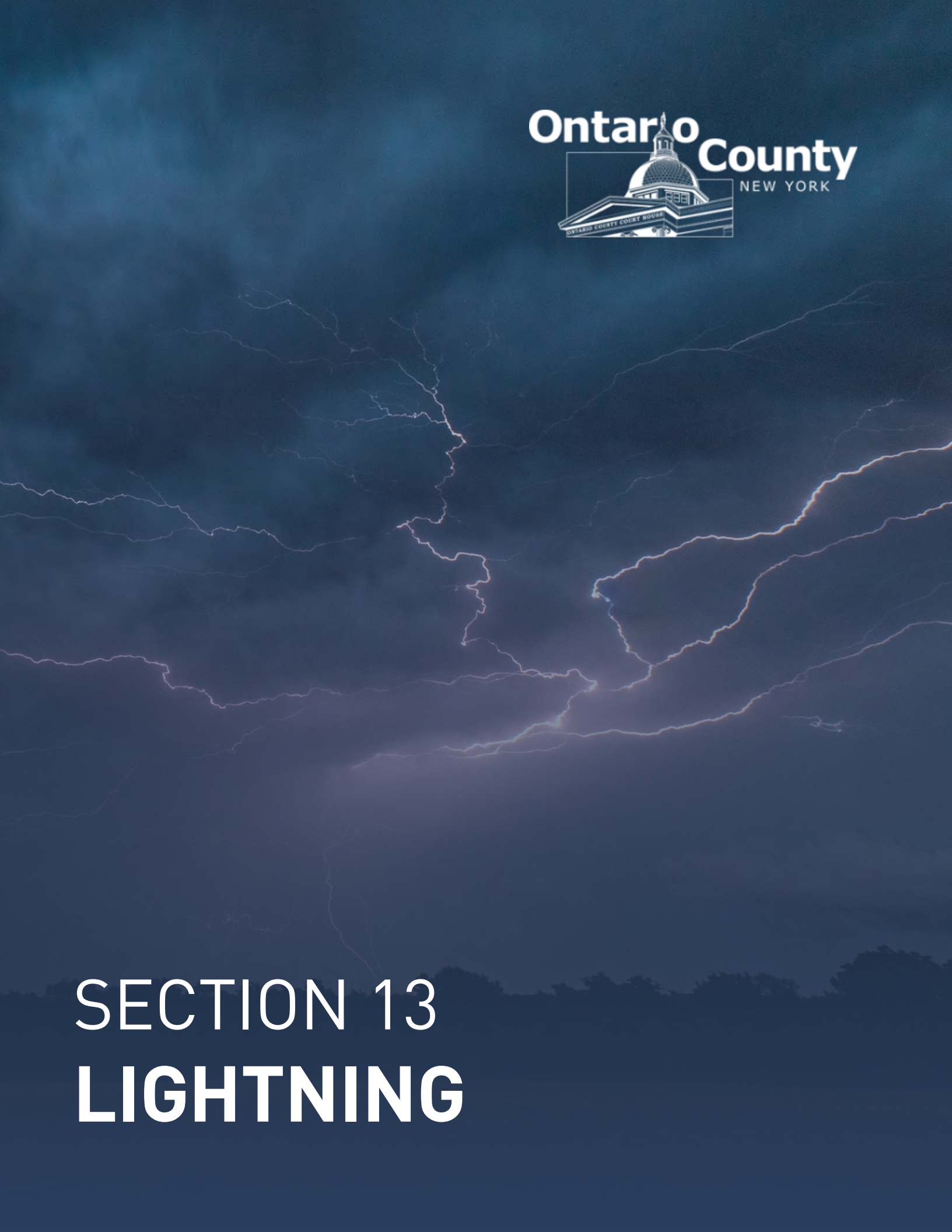
[3] Damages are reported from January 1996 through June 2023.

planning area is at a low risk of incidence, except for a small area around Honeoye Lake, which is at moderate risk of incident but low risk for susceptibility, as shown in Figure 12-2 above.

No known critical facilities were considered vulnerable to landslide events in the Ontario County planning area. The impact of landslides in the Ontario County planning area are considered minor based on historical events. The Ontario 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. The impact of landslides experienced in the Ontario 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 Ontario 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.



SECTION 13
LIGHTNING

SECTION 13: LIGHTNING

Hazard Description 1
Location 1
Extent 1
Historical Occurrences 2
Significant Events 4
Probability of Future Events 4
Vulnerability and Impact 4
Assessment of Impacts 8
Climate Change Considerations 9

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 Ontario County planning area is in a region of the country that is marginally 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 Ontario County planning area, including participating jurisdictions, is uniformly exposed to the threat of lightning.

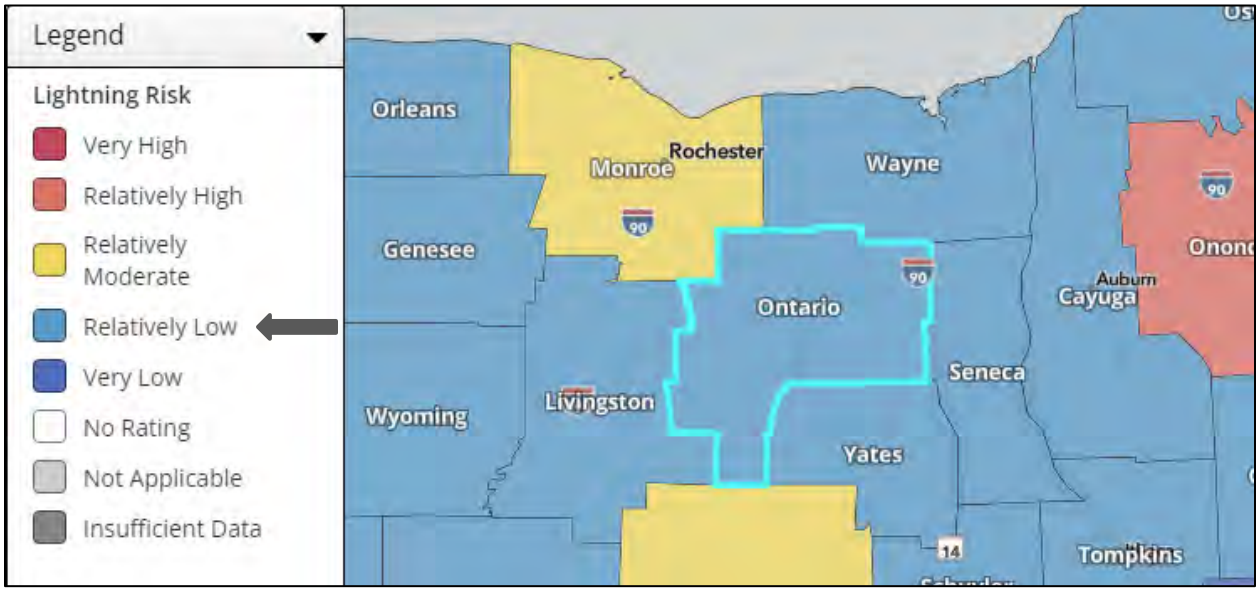
EXTENT

According to the 2022 Annual Lightning Report by Vaisala, New York State ranks number 34 in the U.S. for strikes with an average of 19.0 flashes per square mile. Vaisala's U.S. National Lightning Detection Network lightning flash density map shows a range of 20.7 to 41.4 cloud-to-ground lightning flashes per square mile for the entire Ontario County planning area. This rate equates to approximately 13,724 to 27,448 flashes per year for the entire planning area.

SECTION 13: LIGHTNING

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. Ontario County is located in an area where the extent is classified as relatively low (Figure 13-1).

Figure 13-1. Ontario County Lightning Risk, National Risk Index, November 2023



HISTORICAL OCCURRENCES

According to the NCEI, there have been only five recorded events for the Ontario County planning area since January 1996. 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 under reported, 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 13-1 includes the NCEI reported lightning events from January 1996 through August 2023. There have been no additional reported events since the 2018 plan.

Table 13-1. Historical Lightning Events, 1996-2023[1]

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town and Village of Phelps[2]	7/4/2001	0	3	$0	$0
Town of Seneca	8/3/2003	0	0	$24,066	$0

[1] Events reported from January 1996 through August 2023.
[2] Town and Village of Phelps 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.

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town and Village of Naples[3]	8/8/2005	0	0	$75,400	$0
City and Town of Canandaigua[4]	8/25/2011	0	0	$32,683	$0
City and Town of Canandaigua	5/29/2016	0	0	$43,150	$0
TOTALS		**0**	**3**	**$175,299**	**$0**

Table 13-2. Summary of Historical Lightning Events, 1996-2023[5]

JURISDICTION	NUMBER OF EVENTS	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Ontario County	0	-	-	-	-
Town of Bristol	0	-	-	-	-
Town of Canadice	0	-	-	-	-
City and Town of Canandaigua[6]	2	0	0	$75,833	$0
Village of Clifton Springs	0	-	-	-	-
Town of East Bloomfield and Village of Bloomfield[7]	0	-	-	-	-
Town of Farmington	0	-	-	-	-
City and Town of Geneva[8]	0	-	-	-	-
Town of Gorham	0	-	-	-	-
Town of Hopewell	0	-	-	-	-
Town and Village of Manchester[9]	0	-	-	-	-
Town and Village of Naples[10]	1	0	0	$75,400	$0

[3] Town and Village of Naples 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.
[4] City and Town of Canandaigua 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
[5] Participating jurisdictions with no reported events show a "-" in table columns where damages, deaths or injuries would otherwise be reported.
[6] City and Town of Canandaigua 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
[7] Town of East Bloomfield and Village of Bloomfield 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.
[8] City and Town of Genva 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.
[9] Town and Village of Naples 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.
[10] Town and Village of Naples 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.

JURISDICTION	NUMBER OF EVENTS	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town and Village of Phelps[11]	1	0	3	$0	$0
Town of Richmond	0	-	-	-	-
Village of Rushville	0	-	-	-	-
Town of Seneca	1	0	0	$24,066	$0
Village of Shortsville	0	-	-	-	-
Town of South Bristol	0	-	-	-	-
Town and Village of Victor[12]	0	-	-	-	-
Town of West Bloomfield	0	-	-	-	-
TOTALS	**5**	**0**	**3**	**$175,299**	**$0**

SIGNIFICANT EVENTS

Naples – August 8, 2008

Thunderstorms developed along a lake breeze over Ontario County during the afternoon hours. The thunderstorms downed trees and power lines. An impressive lightning display caused a fire which destroyed a house in Naples.

Phelps – July 4, 2001

A Boy Scout leader and 15-year-old scout were struck by lightning while target shooting. Both suffered burns and the young scout had to be resuscitated when he stopped breathing. A third person, a 14-year-old scout standing nearby, was also injured by the lightning strike.

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 Ontario County planning area 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 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. See additional information on climate change at the end of this section.

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 Ontario

[11] Town and Village of Phelps 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.

[12] Town and Village of Victor 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

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 Ontario 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 Ontario County planning area, are 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 8.5 percent of the planning area population live below the poverty level (Table 13-3).

Table 13-3. Populations at Greatest Risk by Jurisdiction[13]

JURISDICTION	POPULATION BELOW POVERTY LEVEL
Ontario County	9,525
Village of Bloomfield	102
Town of Bristol	155
Town of Canadice	118
City of Canandaigua	845
Town of Canandaigua	902
Village of Clifton Springs	221
Town of East Bloomfield	223
Town of Farmington	1,298
City of Geneva	2,339
Town of Geneva	322
Town of Gorham	211
Town of Hopewell	318
Town of Manchester	996
Village of Manchester	133

[13] US Census Bureau, American Community Survey, 2021

JURISDICTION	POPULATION BELOW POVERTY LEVEL
Town of Naples	491
Village of Naples	175
Town of Phelps	572
Village of Phelps	348
Town of Richmond	64
Village of Rushville	30
Town of Seneca	142
Village of Shortsville	103
Town of South Bristol	124
Town of Victor	410
Village of Victor	148
Town of West Bloomfield	278

The Ontario 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 Ontario County planning area, including all participating jurisdictions. For a comprehensive list by participating jurisdiction please see Appendix C.

Table 13-4. Critical Facilities Vulnerable to Lightning Events

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Services (EOC, Fire, Police, EMS, Hospitals and Medical Centers)	o 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. o Emergency vehicles, including critical equipment, can be damaged by lightning strikes or by falling trees damaged by lightning. o Power outages could disrupt communications, delaying emergency response times. o Downed trees due to lightning strikes can impede emergency response vehicle access to areas. o Lightning strikes can be associated with structure fires and wildfires, further straining the capacity and resources of emergency personnel. o Extended power outages may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.
Airport, Academic Institutions, Animal Shelters, Evacuation Centers & Shelters, Governmental Facilities, Residential/	o Structures can be damaged by falling trees damaged by lightning. o Power outages could disrupt critical care. o Backup power sources could be damaged. o Evacuations may be necessary due to extended power outages, fires, or other associated damages to facilities. o Economic disruption due to power outages and fires negatively impact airport services as well as area businesses reliant on airport operations.

CRITICAL FACILITIES	POTENTIAL IMPACTS
Assisted Living Facilities	
Commercial Suppliers (food, gas, etc.)	o Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable. o Essential supplies like medicines, water, food, and equipment deliveries may be delayed.
Utility Services and Infrastructure (electric, water, wastewater, communications)	o 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. o Emergency vehicles, including critical equipment, can be damaged by lightning strikes or by falling trees damaged by lightning. o Power outages could disrupt communications, delaying emergency response times. o Downed trees due to lightning strikes can impede emergency response vehicle access to areas. o Lightning strikes can be associated with structure fires and wildfires, further straining the capacity and resources of emergency personnel. o Extended power outages may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.

The impact of lightning experienced in the Ontario County planning area has resulted in limited damages, three injuries and no fatalities. 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 injuries, however, indicate a “Major” impact with multiple significant injuries possible depending on the force and location of the strike. Overall, the average loss estimate for the planning area (in 2023 dollars) is $175,299 with annualized losses of $6,375 (Table 13-5).

Table 13-5. Potential Annualized Losses by Jurisdiction[14]

JURISDICTION	PROPERTY DAMAGE	ANNUAL LOSS ESTIMATES
Ontario County	$0	$0
Town of Bristol	$0	$0
Town of Canadice	$0	$0
City and Town of Canandaigua	$75,833	$2,758
Village of Clifton Springs	$0	$0
Town of East Bloomfield and Village of Bloomfield	$0	$0
Town of Farmington	$0	$0
City and Town of Geneva	$0	$0
Town of Gorham	$0	$0
Town of Hopewell	$0	$0

[14] Damage values are in 2023 dollars.

JURISDICTION	PROPERTY DAMAGE	ANNUAL LOSS ESTIMATES
Town and Village of Manchester	$0	$0
Town and Village of Naples	$75,400	$2,742
Town and Village of Phelps	$0	$0
Town of Richmond	$0	$0
Village of Rushville	$0	$0
Town of Seneca	$24,066	$875
Village of Shortsville	$0	$0
Town of South Bristol	$0	$0
Town and Village of Victor	$0	$0
Town of West Bloomfield	$0	$0
TOTALS	**$175,299**	**$6,375**

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 Ontario 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. 57 percent of homes in the county were built before 1980. Within Ontario County, 74 buildings, districts, and sites are 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_2 increases and the land surface warms, stronger updrafts are more likely to produce lightning. In a climate with double the amount of CO_2, we may see fewer lightning storms overall, 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.[15]

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.

[15] Environmental Journal, Nathan Neal, January 11, 2021.



SECTION 14
SNOW STORM

SECTION 14: SNOW STORM

Hazard Description 1
Location 2
Extent 2
Historical Occurrences 3
Significant Events 5
Probability of Future Events 6
Vulnerability and Impact 7
Assessment of Impacts 11
Climate Change Considerations 11

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, Ontario County is also subject to experience lake effect snow. Lake effect snow is common across the Great Lakes region during the late fall and winter. Lake effect snow occurs when cold air, often originating from Canada, moves across the open waters of the Great Lakes. As the cold air passes over the warm waters of the Great Lakes, warmth and moisture are transferred into the lowest portion of the atmosphere. The air rises, clouds form and grow into narrow bands that produce 2 to 3 inches of snow per hour or more. Wind direction is a key component in determining which areas will receive lake effect snow. Heavy snow may be falling in one location, while the sun may be shining just a mile or two away in either direction. The physical geography of the land and water is also important.

The National Weather Service defines several types of snow storms, which are described in Table 14-1, and each may impact the entire Ontario County planning area.

Table 14-1. 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.

TYPE OF WINTER WEATHER	DESCRIPTION
Snow Squalls	Brief, intense snow showers accompanied by strong, gusty winds. Accumulation may be significant.
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 Ontario 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 14-2. NESIS is an index developed by the National Centers for Environmental Information. 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.

Table 14-2. 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 Ontario County

planning area could be under any of these warning types in advance of a winter storm event. Table 14-3 describes when each warning type would be issued.

Table 14-3. 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 64 recorded snow storm events in the Ontario County planning area. 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 14-4 shows historical incident information for the planning area.

Table 14-4. Historical Snow Storm Events, 1996-2023[1]

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Ontario County	1/3/1996	0	0	$191,821	$0
Ontario County	11/26/1996	0	0	$18,674	$0

[1] Values are in 2023 dollars. Database was search for events between 1996 and August 2023. Only those events with reported damages, injuries or fatalities have been included in the table.

SECTION 14: SNOW STORM

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Ontario County	3/14/1997	0	0	$18,511	$0
Ontario County	3/6/1997	0	0	$14,809	$0
Ontario County	12/10/1997	0	0	$27,542	$0
Ontario County	11/14/1997	0	0	$36,678	$0
Ontario County	12/30/1997	0	0	$27,542	$0
Ontario County	3/21/1998	0	0	$27,389	$0
Ontario County	3/4/1999	0	0	$448,744	$0
Ontario County	1/16/1999	0	0	$135,197	$0
Ontario County	3/6/1999	0	0	$269,246	$0
Ontario County	1/9/1999	0	0	$27,039	$0
Ontario County	1/3/1999	0	0	$27,039	$0
Ontario County	1/15/1999	0	0	$36,052	$0
Ontario County	1/26/2000	0	0	$26,319	$0
Ontario County	2/14/2000	0	0	$34,885	$0
Ontario County	2/19/2000	0	0	$17,442	$0
Ontario County	3/5/2001	0	0	$252,132	$0
Ontario County	3/22/2001	0	0	$20,171	$0
Ontario County	12/25/2002	0	0	$24,558	$0
Ontario County	12/14/2003	0	0	$24,105	$0
Ontario County	3/16/2004	0	0	$474,126	$0
Ontario County	1/6/2005	0	0	$31,061	$0
Ontario County	1/22/2005	0	0	$77,654	$0
Ontario County	3/1/2005	0	0	$15,322	$0
Ontario County	12/16/2005	0	0	$15,049	$0
Ontario County	3/2/2006	0	0	$7,412	$0
Ontario County	12/4/2007	0	0	$14,101	$0
Ontario County	12/13/2007	0	0	$14,101	$0
Ontario County	12/15/2007	0	0	$21,151	$0
Ontario County	1/14/2007	0	0	$146,318	$0
Ontario County	3/16/2007	0	0	$14,423	$0
Ontario County	4/15/2007	0	0	$21,494	$0
Ontario County	2/13/2007	0	0	$29,108	$0
Ontario County	12/31/2008	0	0	$14,088	$0
Ontario County	12/19/2008	0	0	$28,176	$0

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Ontario County	2/26/2008	0	0	$13,991	$0
Ontario County	3/7/2008	0	0	$34,676	$0
Ontario County	3/4/2008	0	0	$13,870	$0
Ontario County	1/28/2009	0	0	$28,054	$0
Ontario County	12/13/2010	0	0	$20,269	$0
Ontario County	2/25/2010	0	0	$27,329	$0
Ontario County	2/25/2011	0	0	$26,765	$0
Ontario County	12/26/2012	0	0	$12,899	$0
Ontario County	11/26/2013	0	0	$19,061	$0
Ontario County	12/10/2014	0	0	$37,839	$0
Ontario County	2/4/2014	0	0	$25,230	$0
Ontario County	1/1/2014	0	0	$17,726	$0
Ontario County	3/12/2014	0	0	$45,123	$0
Ontario County	2/1/2015	0	0	$25,236	$0
Ontario County	2/8/2015	0	0	$18,927	$0
Ontario County	2/15/2016	0	0	$18,736	$0
Ontario County	11/20/2016	0	0	$42,949	$0
Ontario County	3/13/2017	0	0	$48,592	$0
Ontario County	1/12/2018	0	0	$35,846	$0
Ontario County	3/1/2018	0	0	$29,670	$0
TOTALS		**0**	**0**	**$3,172,267**	

Table 14-5. Historical Snow Storm Events Summary, 1996-2023

JURISDICTION	NUMBER OF EVENTS	DEATHS	INJURIES	PROPERTY DAMAGES	CROP DAMAGES
Ontario County	64	0	0	$3,172,267	$0

Based on the list of historical winter storm events for the Ontario County planning area, 10 of the events have occurred since the 2018 Plan.

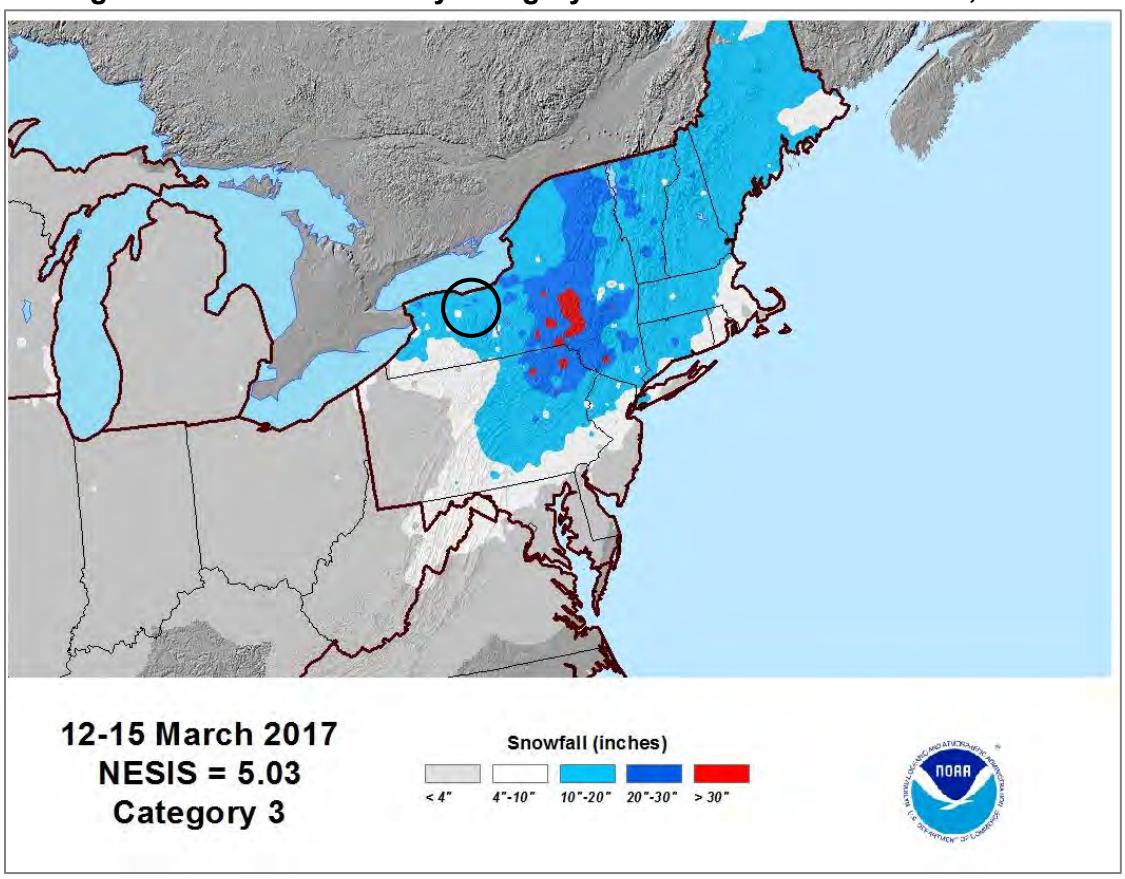
SIGNIFICANT EVENTS

March 13, 2017 – Ontario County

A snow storm impacted the Ontario County planning area, which lasted for two days. Many schools and businesses closed, and several flights in and out of surrounding areas such as Buffalo and Rochester were cancelled. New York State enacted a travel ban on tractor trailers on major interstates and the National Guard was called in to assist in snow removal for some locations. Reported snowfall amounts ranged from 14 to 21 inches across Ontario County. This

event was given a Category 3 rating with a “major” level of impact according to NESIS, as detailed in Figure 14-1 below.

Figure 14-1. Ontario County Category 3 Snow Storm on March 13, 2017[2]



March 16, 2004 – Ontario County
A low-pressure storm system produced 10 to 20 inches of heavy, wet snow across much of the northeastern region. The snow continued, heavy at times, throughout the day and then began to taper off at midnight. Many schools and businesses were closed due to hazardous driving conditions. The storm was blamed for numerous automobile accidents and caused $474,126 (2023 dollars) in property damage. This event has the highest report of monetary loss for the planning area.

PROBABILITY OF FUTURE EVENTS

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

[2] The circle indicates the Ontario County planning area.

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 a snowmelt flood.

Ontario County is a rich and diverse agricultural area. With more than 800 farms, dairy, beef, sheep, poultry, swine, vegetables, vineyards, orchards, fruit, and greenhouse farms are all a vital part of the food and agricultural industry in the planning area. Ontario County's annual market value of agricultural products sold is over $200,000,000.[3] 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 Ontario County Planning Team identified the following critical facilities (Table 14-6) as assets that are considered the most important to the planning area and are susceptible to a range of impacts caused by winter storm events. For a comprehensive list by participating jurisdiction see Appendix C.

Table 14-6. Critical Facilities Vulnerable to Snow Storm Events

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Departments (EOC, Fire, Police, EMS), Hospitals and Medical Centers	o Emergency operations, services and response times may be significantly impacted due to power outages, and/or loss of communications. o Exposure to extreme cold can cause illnesses in first responders if exposed for a period of time. o Roads may become impassable due to snow impacting response times by emergency services. o Extended power outages due to increased usage may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.
Airport, Academic Institutions, Animal Shelter, Evacuation Centers & Shelters, Governmental Facilities, Residential/ Assisted Living Facilities	o Power outages due to increased usage could disrupt critical care. o Backup power sources could be damaged. o Increased number of patients due to exposure to cold temperatures could lead to a strain on staff. o Water pipes can freeze and burst leading to flooding within facilities. o Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable. o Essential supplies like medicines, water, food, and equipment deliveries may be delayed.

[3] Cornell University, Cornell Cooperative Extension, Ontario County, January 1, 2023

CRITICAL FACILITIES	POTENTIAL IMPACTS
	o Economic disruption due to power outages negatively impact airport services as well as area businesses reliant on airport operations. o Exposure risks to outdoor workers.
Commercial Supplier (food, gas/fuel, etc.)	o Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable. o Essential supplies like medicines, water, food, and equipment deliveries may be delayed as snow causes hazardous travel conditions.
Utility Services and Infrastructure (electric, water, wastewater, communications)	o Emergency operations, services and response times may be significantly impacted due to power outages, and/or loss of communications. o Roads may become impassable due to snow impacting response times by emergency services. o Power outages due to increased usage could disrupt critical care. o Backup power sources could be damaged.

Elderly individuals and children are more vulnerable to the cold and face greater health related risks during snow storm events. Lower income individuals and communities may have less access to resources such as proper winter clothing, adequate heating systems, and reliable transportation The population over 65 and under the age of 5 in the Ontario County planning area is estimated at 25 percent of the total population or an estimated total of 27,936 potentially vulnerable residents in the planning area based on age. An estimated 8.5 percent of the planning area population live below the poverty level.

Another segment of the population at risk is those who are experiencing homelessness. Data regarding the local population experiencing homelessness is limited to county estimates and is not available for each jurisdiction. Ontario County follows the NYS Code Blue policy. On winter nights when the temperature drops to 32 degrees or below, including wind-chill, between 4:00 PM and 8:00 AM. Accommodations will be provided to anyone who is homeless and seeking shelter in the planning area during a Code Blue to ensure everyone is warm and safe.

Table 14-7. Populations at Greater Risk of Snow Storm Events[4]

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5	POPULATION BELOW POVERTY LEVEL	HOMELESS POPULATION[5]
Ontario County	22,554	5,382	9,525	176
Village of Bloomfield	265	44	102	-
Town of Bristol	490	60	156	-
Town of Canadice	369	68	118	-
City of Canandaigua	2,234	431	845	-
Town of Canandaigua	2,241	353	902	-
Village of Clifton Springs	475	65	221	-
Town of East Bloomfield	804	178	223	-

[4] U.S. Census Bureau, American Community Survey, 2021
[5] 2023 Average weekly homeless population for Ontario County.

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5	POPULATION BELOW POVERTY LEVEL	HOMELESS POPULATION[5]
Town of Farmington	2,092	978	1,298	-
City of Geneva	1,856	781	2,339	-
Town of Geneva	1,035	138	322	-
Town of Gorham	1,068	267	211	-
Town of Hopewell	820	76	318	-
Town of Manchester	1,908	399	996	-
Village of Manchester	318	67	133	-
Town of Naples	510	63	491	-
Village of Naples	174	32	175	-
Town of Phelps	1,203	445	572	-
Village of Phelps	332	206	348	-
Town of Richmond	925	52	64	-
Village of Rushville	111	17	30	-
Town of Seneca	482	151	142	-
Village of Shortsville	297	56	103	-
Town of South Bristol	539	38	124	-
Town of Victor	3,198	783	410	-
Village of Victor	545	126	148	-
Town of West Bloomfield	780	121	278	-

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 29,775 housing units (57.05 percent) in the planning area were built before 1980 (Table 14-7).

Table 14-8. Structures at Greater Risk of Snow Storm Events[6]

JURISDICTION	SFR STRUCTURES BUILT BEFORE 1980	PERCENT OF TOTAL HOUSING UNITS (%)
Ontario County	29,775	57.05
Village of Bloomfield	506	76.32
Town of Bristol	486	43.74
Town of Canadice	713	58.44
City of Canandaigua	3,931	70.64

[6] U.S. Census Bureau, American Community Survey, 2021

JURISDICTION	SFR STRUCTURES BUILT BEFORE 1980	PERCENT OF TOTAL HOUSING UNITS (%)
Town of Canandaigua	1,490	29.11
Village of Clifton Springs	700	84.85
Town of East Bloomfield	1,191	73.29
Town of Farmington	2,600	44.73
City of Geneva	4,767	91.81
Town of Geneva	1,340	74.40
Town of Gorham	1,305	60.58
Town of Hopewell	760	48.28
Town of Manchester	2,744	66.33
Village of Manchester	525	74.68
Town of Naples	819	67.24
Village of Naples	422	92.54
Town of Phelps	2,304	78.66
Village of Phelps	830	89.44
Town of Richmond	1,223	62.78
Village of Rushville	193	73.66
Town of Seneca	804	69.25
Village of Shortsville	599	83.78
Town of South Bristol	701	50.76
Town of Victor	1,937	27.90
Village of Victor	696	59.85
Town of West Bloomfield	660	50.65

Overall, the estimated losses of property and crops in the planning area due to snow storms is $3,172,267 with an average annualized loss of $115,355. Based on historic loss and damages, the impact of snow storm damages in the Ontario County planning area, including participating jurisdictions, can be considered “Limited” severity of impact, meaning minor quality of life lost, critical facilities and services shut down for 24 hours or less, and less than 10 percent of property destroyed or with major damage.

Table 14-9. Snow Storm Event Damage Totals, 1996-2023

JURISDICTION	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATES
Ontario County	$3,172,267	$115,355

SECTION 14: SNOW STORM

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 (20 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.
- 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.

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.

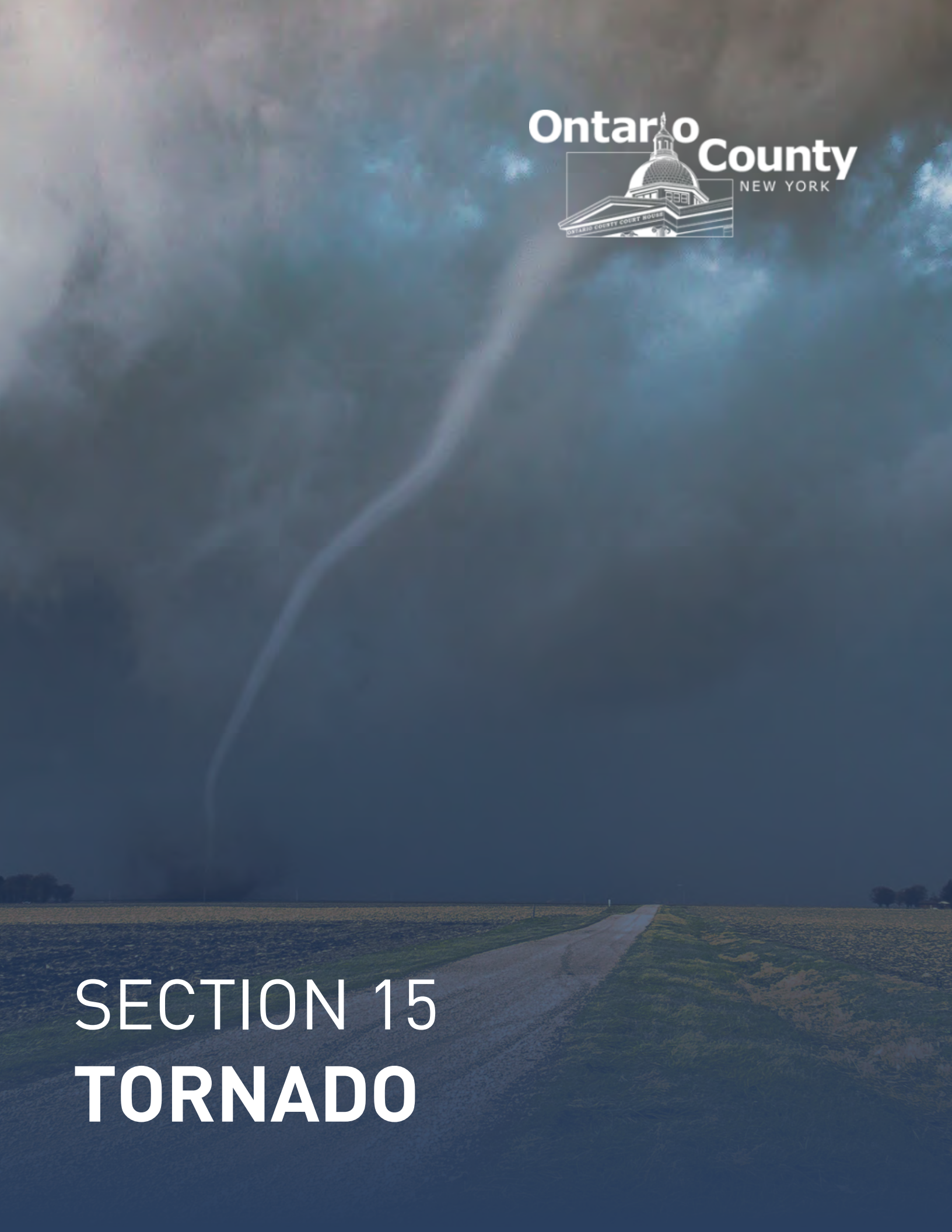
CLIMATE CHANGE CONSIDERATIONS

Climate change may slightly decrease the risk of 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.[7]

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.

[7] U.S. Global Change Research Program, Fourth National Climate Assessment, Chapter 18: Northeast



SECTION 15
TORNADO

SECTION 15: TORNADO

Hazard Description 1
Location 1
Extent 3
Historical Occurrences 5
Significant Events 7
Probability of Future Events 8
Vulnerability and Impact 8
Assessment of Impacts 13
Climate Change Considerations 15

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 15-1. Variations among Tornadoes

WEAK TORNADOES	STRONG TORNADOES	VIOLENT TORNADOES
o 69% of all tornadoes	o 29% of all tornadoes	o 2% of all tornadoes
o Less than 5% of tornado deaths	o Nearly 30% of all tornado deaths	o 70% of all tornado deaths
o Lifetime 1-10+ minutes	o May last 20 minutes or longer	o Lifetime can exceed one hour
o Winds less than 110 mph	o Winds 110 – 205 mph	o Winds greater than 205 mph

LOCATION

Tornadoes do not have any specific geographic boundary and can occur throughout the County uniformly. It is assumed that the entire Ontario County planning area, including participating jurisdictions, are uniformly exposed to tornado activity. The entire Ontario County planning area is located in Wind Zone III (Figure 15-1), where tornado winds can be as high as 200 mph.

Figure 15-1. FEMA Wind Zones in the United States[1]

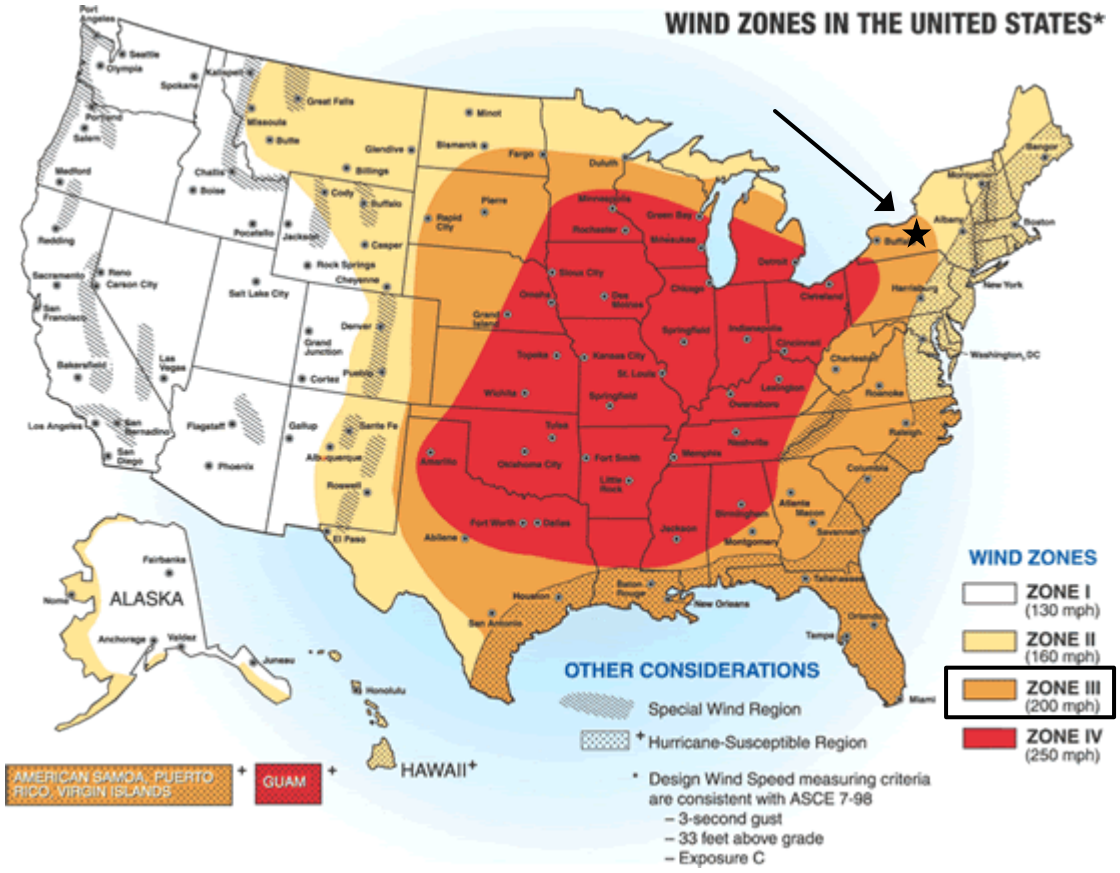
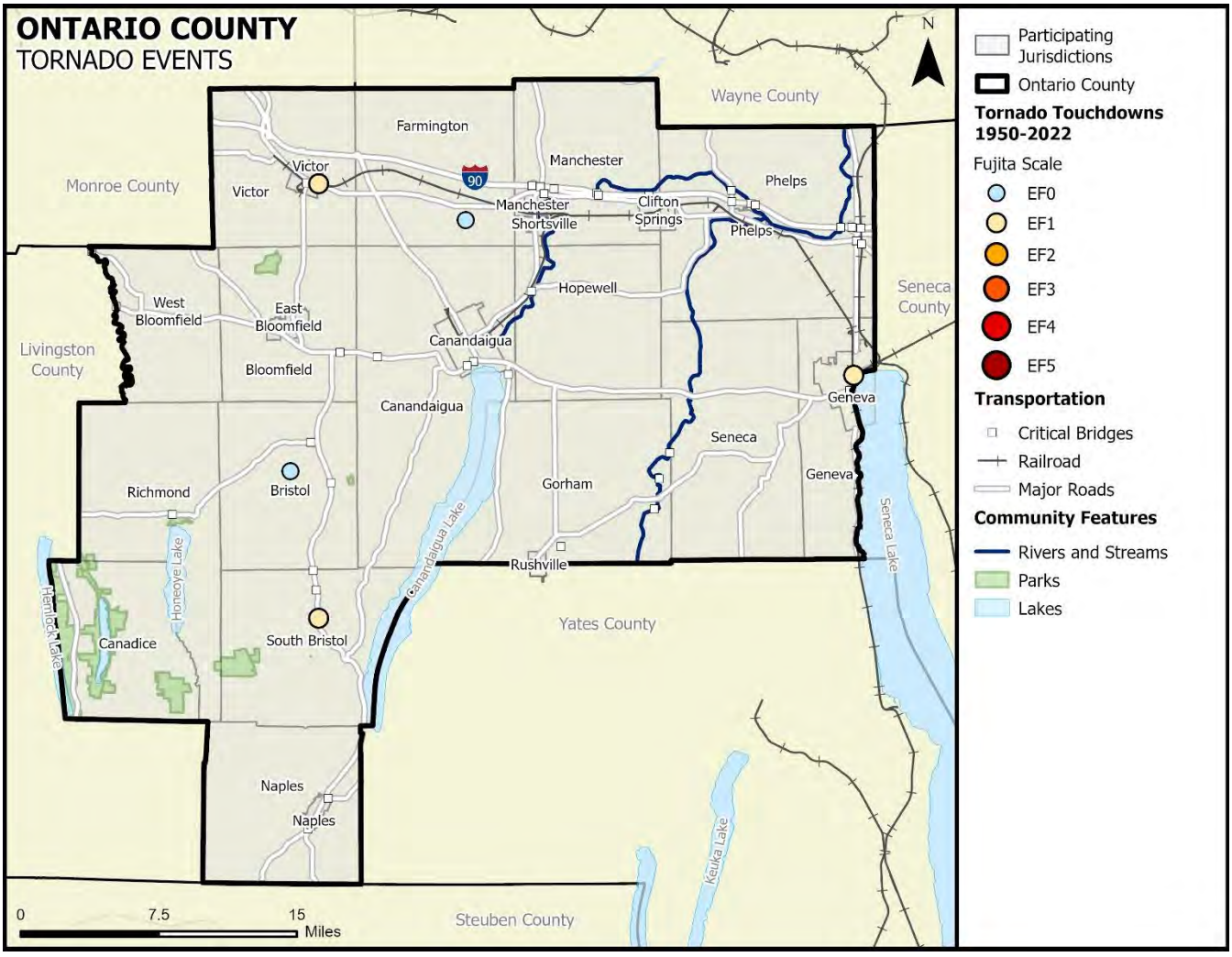


Figure 15-2 shows the locations of historic tornado events in the Ontario County planning area between 1994 and 2023. Notes, only those events with latitude and longitude coordinates are included in the figure below.

[1] Ontario County is indicated by the star.

Figure 15-2. Historical Tornado Events in Ontario County[2]



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

[2] Map sources: ESRI OpenStreetMap (Custom: no labels), Census TIGER/LINE (2022), Ontario County Information Technology Department (2023), NOAA Storm Events Database (2023)

damage consideration to a wider range of structures. Table 15-2 includes both scales for reference when analyzing historical tornados since tornado events prior to 2007 will follow the original Fujita Scale.

Table 15-2. The Fujita Tornado Scale[3]

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.

[3] Source: http://www.tornadoproject.com/fscale/fscale.htm

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 F1 on the Fujita Scale, a "Moderate Tornado." Based on the planning area's location in Wind Zone III, all participating jurisdictions have the potential to experience anywhere from an EF0 to an EF4 depending on the wind speed. Previous tornado events in the Ontario County planning area (converted from the Fujita Scale) have been between EF0 and EF2 (Table 15-3). Communications

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 29 years.

Figure 15-2 identifies the locations of previous occurrences in the Ontario County planning area from January 1950 through August 2023. It is noted that the first tornado reported for the planning area did not occur until August 1994, providing a 29-year reporting period for the purpose of this analysis. A total of 5 events have been recorded by NOAA's Storm Prediction Center and National Centers for Environmental Information (NCEI) databases for the Ontario County planning area during that time. The strongest events reported in the planning area were F1 tornadoes which touched down in the Town of South Bristol, Village of Victor, and City of Geneva. In terms of storm scale and estimated damages, the most significant event in Ontario County, in terms of property damages, occurred in the City of Geneva on August 21, 1994. This tornado was classified as an F1 magnitude and resulted in $993,862 (2023 dollars) in property damage.

Table 15-4. Historical Tornado Events, 1994-2023[4]

JURISDICTION	DATE	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
City of Geneva	8/21/1994	F1	0	0	$993,862	$0
Town of South Bristol	6/22/1996	F1	0	0	$94,503	$28,351
Town of Victor	7/15/1996	F1	0	0	$56,593	$0
Town of Bristol	8/29/2009	EF0	0	0	$686,108	$0
Town of Farmington	6/10/2015	EF0	0	0	$43,438	$0
TOTALS		**(MAX EXTENT)**			**$1,874,504**	**$28,351**

[4] Events reported from August 1994 and August 2023. Only recorded events with damages are listed. No reports of injuries or fatalities were recorded in the NCEI database. Magnitude is listed when available. Damage values are in 2023 dollars.

Table 15-5. Summary of Historical Tornado Events, 1994-2023

JURISDICTION	NUMBER OF EVENTS	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Ontario County	0	-	-	-	-	-
Town of Bristol	1	EF0	0	0	$686,108	$0
Town of Canadice	0	-	-	-	-	-
City and Town of Canandaigua[5]	0	-	-	-	-	-
Village of Clifton Springs	0	-	-	-	-	-
Town of East Bloomfield and Village of Bloomfield[6]	0	-	-	-	-	-
Town of Farmington	1	EF0	0	0	$43,438	$0
City and Town of Geneva[7]	1	F1	0	0	$993,862	$0
Town of Gorham	0	-	-	-	-	-
Town of Hopewell	0	-	-	-	-	-
Town and Village of Manchester[8]	0	-	-	-	-	-
Town and Village of Naples[9]	0	-	-	-	-	-
Town and Village of Phelps[10]	0	-	-	-	-	-
Town of Richmond	0	-	-	-	-	-
Village of Rushville	0	-	-	-	-	-
Town of Seneca	0	-	-	-	-	-
Village of Shortsville	0	-	-	-	-	-
Town of South Bristol	1	F1	0	0	$94,503	$28,351
Town and Village of Victor[11]	1	F1	0	0	$56,593	$0

[5] City and Town of Canandaigua 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.
[6] Town of East Bloomfield and Village of Bloomfield (formerly the Village of East Bloomfield) 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.
[7] City and Town of Genva 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.
[8] Town and Village of Manchester 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.
[9] Town and Village of Naples 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.
[10] Town and Village of Phelps 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.
[11] Town and Village of Victor 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.

JURISDICTION	NUMBER OF EVENTS	MAGNITUDE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town of West Bloomfield	0	-	-	-	-	-
TOTALS	**5**	**F1**	**0**	**0**	**$1,902,855**	

Based on the list of historical tornado events for the Ontario County planning area including all participating jurisdictions, there have been no additional recorded events since the 2018 Plan.

SIGNIFICANT EVENTS

June 10, 2015

An EF0 tornado which was confirmed by the National Weather Service near the Town of Farmington on June 10, 2015. The tornado was about 50 yards wide with a path of a half-mile. Initial damages were to a stand of trees near Shortsville Road in Farmington. The tornado then traveled southeast where, in addition to tree damage, a garage and barn were destroyed. A grain silo from this location was lifted and displaced about 200 yards to the South Farmington Cemetery. The silo caused damage to a cemetery fence as well as a couple dozen headstones. Roughly 12,000 Rochester Gas and Electric Corporation customers were without power. A total of $43,438 (2023 dollars) in property damage was reported.

August 29, 2009

A thunderstorm accompanying the front produced an EF0 tornado in Ontario County. The tornado initially touched down in the Town of Bristol before moving to the City of Canandaigua. Along West Ridge Run several homes suffered damage to soffits and siding. There was some additional structural damage along the west shore of Canandaigua Lake at the Canandaigua Yacht Club. Widespread tree damage was observed at that location with several trees snapped off well above ground. Numerous boats were heavily damaged including a 6500-pound boat, housed in a hoist along a dock, which was thrown about 40 yards into the lake where it sunk. Several houses along the lakeshore in the vicinity of Lakeview Lane also sustained minor damage to siding and roof as well as broken windows from falling trees. In total $686,108 (2023 dollars) in property damages were reported as a result of the event.

July 15, 1996

A F1 tornado touched down during the early afternoon of July 15th in the Village of Victor off Proximity Lane, adjacent to a golf course. It ended along Route 96 near Atwal Drive. The greatest structural damage was to the roof of a barn located on Brace Road. The roof was lifted from the barn and tossed not an adjacent home. In addition, an electric transformer estimated to weigh over 3,000 pounds was pushed off its cement pad and toppled over. This event occurred less than a month after the June 22nd tornado in South Bristol. In total the event resulted in $56,593 (2023 dollars) in property damages.

June 22, 1996

A severe thunderstorm spawned an F1 tornado around noon in Ontario County. The tornado first touched down on Hicks Road in the town of South Bristol. Several homes sustained minor structural damage including broken windows and torn roofs and siding. Several trees were uprooted or snapped. The tornado continued across Canandaigua Lake into Yates County to the southeast. In total the event resulted in $94,503 (2023 dollars) in property damages and $28,351 (2023 dollars) in crop damages, as reported in the NCEI Storm Events Database.

August 21, 1994
An isolated thunderstorm spawned an F1 tornado in the City of Genva near Packwood Road and Route 14. The initial touchdown occurred on the west side of Route 14 where trees were downed. As the storm crossed Route 14 it destroyed empty grain elevators. Pieces of the buildings were strewn across fields to the northeast. Further east on Packwood Road about a dozen trees were downed. On Town Line Road to the north of Packwood Road there was extensive damage to a stand of trees. Approximately 90 percent of mature trees in a two-acre area were totally destroyed. The event resulted in $993,862 (2023 dollars) in reported property damages.

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 5 historical events over a 29-year reporting period, Ontario County, including participating jurisdictions, can anticipate a tornado touchdown approximately once every five years. This frequency supports an “Occasional” probability of future events for the Ontario County planning area.

VULNERABILITY AND IMPACT

Because tornadoes often cross jurisdictional boundaries, all existing and future buildings, facilities, and populations in the entire Ontario 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 Ontario 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 3,601 (6.9 percent of total housing stock) manufactured homes located in the Ontario County planning area. In addition, 57 percent (approximately 29,775 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 15-6). Based on 2021 American Community Survey (ACS) five-year estimates, the City of Geneva and the City of Canandaigua 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 15-6. Structures at Greater Risk by Participating Jurisdiction[12]

JURISDICTION	MANUFACTURED HOMES	SFR STRUCTURES BUILT BEFORE 1980
Ontario County	3,601	29,775
Village of Bloomfield	22	506
Town of Bristol	83	486
Town of Canadice	209	713
City of Canandaigua	62	3,931
Town of Canandaigua	161	1,490
Village of Clifton Springs	18	700
Town of East Bloomfield	38	1,191
Town of Farmington	334	2,600
City of Geneva	5	4,767
Town of Geneva	59	1,340
Town of Gorham	61	1,305
Town of Hopewell	341	760
Town of Manchester	1,063	2,744
Village of Manchester	164	525
Town of Naples	150	819
Village of Naples	18	422
Town of Phelps	133	2,304
Village of Phelps	0	830
Town of Richmond	0	1,223
Village of Rushville	32	193
Town of Seneca	58	804
Village of Shortsville	73	599
Town of South Bristol	29	701
Town of Victor	430	1,937

[12] U.S. Census Bureau, American Community Survey, 2021

JURISDICTION	MANUFACTURED HOMES	SFR STRUCTURES BUILT BEFORE 1980
Village of Victor	0	696
Town of West Bloomfield	385	660

While all citizens are at risk to the impacts of a tornado, 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 8.5 percent of the planning area population live below the poverty level (Table 15-7), with the Village of Naples having the highest percentage of residents living below poverty level.

Table 15-7. Populations at Greatest Risk by Jurisdiction[13]

JURISDICTION	POPULATION BELOW POVERTY LEVEL
Ontario County	9,525
Village of Bloomfield	102
Town of Bristol	156
Town of Canadice	118
City of Canandaigua	845
Town of Canandaigua	902
Village of Clifton Springs	221
Town of East Bloomfield	223
Town of Farmington	1,298
City of Geneva	2,339
Town of Geneva	322
Town of Gorham	211
Town of Hopewell	318
Town of Manchester	996
Village of Manchester	133
Town of Naples	491
Village of Naples	175
Town of Phelps	572
Village of Phelps	348
Town of Richmond	64
Village of Rushville	30
Town of Seneca	142

[13] U.S. Census Bureau, American Community Survey, 2021

JURISDICTION	POPULATION BELOW POVERTY LEVEL
Village of Shortsville	103
Town of South Bristol	124
Town of Victor	410
Village of Victor	148
Town of West Bloomfield	278

The Ontario 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 15-8). 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 15-8. Critical Facilities Vulnerable to Tornado Event

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Services (EOC, Fire, Police, EMS, Hospitals and Medical Centers)	o Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications. o Emergency vehicles can be damaged by falling trees or flying debris. o Power outages could disrupt communications, delaying emergency response times. o Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities. o Debris/downed trees can impede emergency response vehicle access to areas. o Increased number of structure fires due to gas line ruptures and downed power lines, further straining the capacity and resources of emergency personnel. o First responders are exposed to downed power lines, unstable and unusual debris, hazardous materials, and generally unsafe conditions. o Extended power outages and evacuations may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.
Airport, Academic Institutions, Animal Shelters, Evacuation Centers & Shelters, Governmental Facilities, Residential/ Assisted Living Facilities	o Structures can be damaged by falling trees damaged by lightning. o Power outages could disrupt critical care. o Backup power sources could be damaged. o Evacuations may be necessary due to extended power outages, fires, or other associated damage to facilities. o Power outages and infrastructure damage may prevent larger airports from acting as temporary command centers for logistics, communications, and emergency operations. o Temporary break in operations may significantly inhibit post event evacuations. o Damaged or destroyed highway infrastructure may substantially increase the need for airport operations.
Commercial Suppliers (food, gas, etc.)	o Facilities or infrastructure may be damaged, destroyed or otherwise inaccessible.

CRITICAL FACILITIES	POTENTIAL IMPACTS
	o Essential supplies like medicines, water, food, and equipment deliveries may be significantly delayed. o Additional emergency responders and critical aid workers may not be able to reach the area for days.
Utility Services and Infrastructure (electric, water, wastewater, communications)	o Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications. o Emergency vehicles can be damaged by falling trees or flying debris. o Power outages could disrupt communications, delaying emergency response times. o Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities. o Debris/downed trees can impede emergency response vehicle access to areas. o Increased number of structure fires due to gas line ruptures and downed power lines, further straining the capacity and resources of emergency personnel. o First responders are exposed to downed power lines, unstable and unusual debris, hazardous materials, and generally unsafe conditions. o Extended power outages and evacuations may lead to possible looting, destruction of property, and theft, further burdening law enforcement resources.

The total loss estimate due to past tornado events is $1,902,855 (in 2023 dollars), having an approximate annual loss estimate of $65,615. Based on historic damages and best available data the impact of a tornado event on the Ontario County planning area, including participating jurisdictions, would be considered “Limited”, with injuries 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 15-9. Estimated Average Annual Losses by Jurisdiction

JURISDICTION	TOTAL PROPERTY AND CROP LOSS	AVERAGE ANNUAL LOSS ESTIMATES
Ontario County	$0	$0
Village of Bloomfield	$0	$0
Town of Bristol	$686,108	$23,659
Town of Canadice	$0	$0
City of Canandaigua	$0	$0
Town of Canandaigua	$0	$0
Village of Clifton Springs	$0	$0
Town of East Bloomfield	$0	$0
Town of Farmington	$43,438	$1,498
City and Town of Geneva	$993,862	$34,271
Town of Gorham	$0	$0
Town of Hopewell	$0	$0
Town of Manchester	$0	$0

JURISDICTION	TOTAL PROPERTY AND CROP LOSS	AVERAGE ANNUAL LOSS ESTIMATES
Village of Manchester	$0	$0
Town of Naples	$0	$0
Village of Naples	$0	$0
Town of Phelps	$0	$0
Village of Phelps	$0	$0
Town of Richmond	$0	$0
Village of Rushville	$0	$0
Town of Seneca	$0	$0
Village of Shortsville	$0	$0
Town of South Bristol	$122,854	$4,236
Town of Victor	$0	$0
Village of Victor	$56,593	$1,951
Town of West Bloomfield	$0	$0
Planning Area	**$1,902,855**	**$65,615**

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 large 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.
- 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 at locations such as Hemlock-Canadice State Park or the region's Wine Trails, 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 74 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

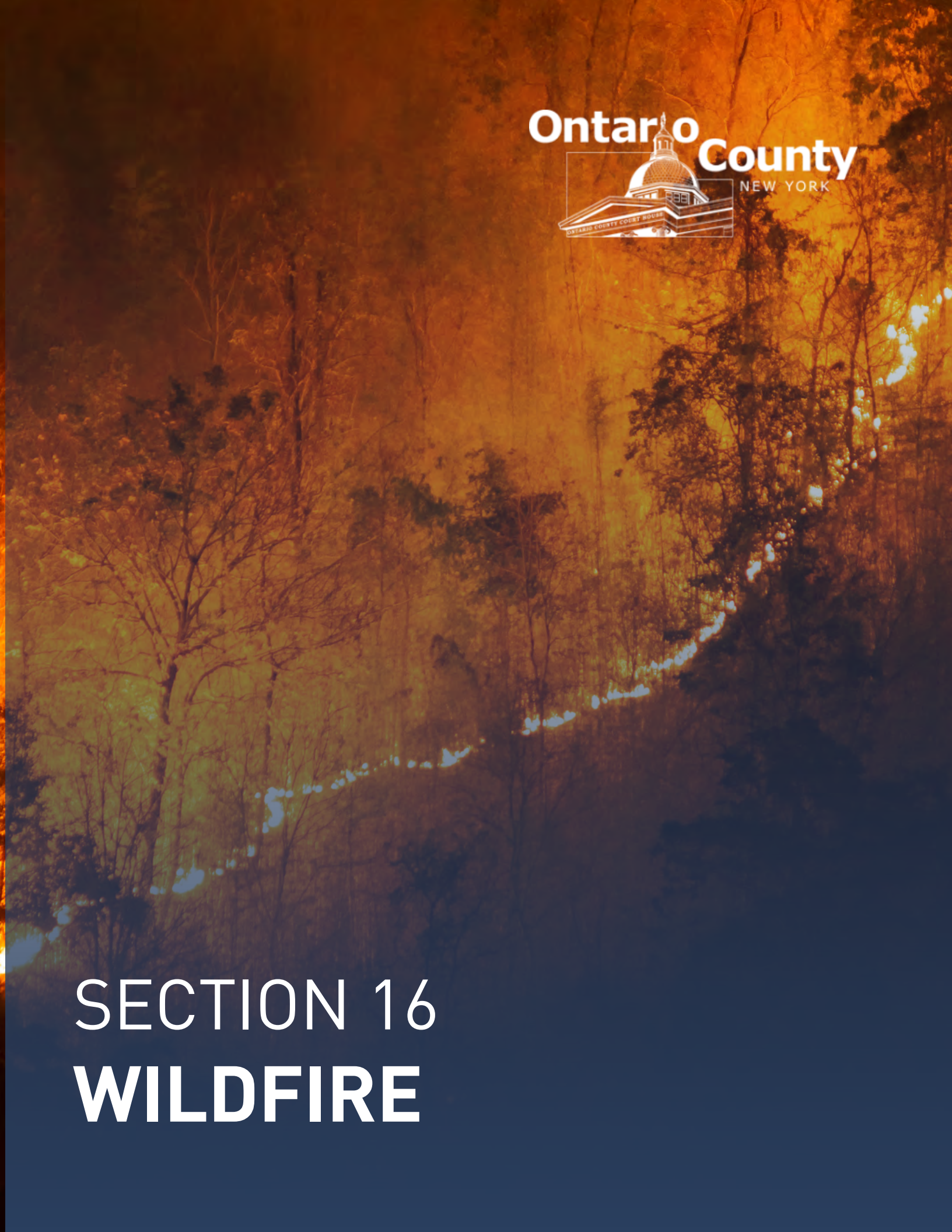
tornado event. Warning sirens/alert systems have been integrated into some participating communities to promote early warning and communication, reducing the potential economic and financial impacts of tornadic events.

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.[14] 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.[15] 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.

[14] 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

[15] 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)



SECTION 16
WILDFIRE

SECTION 16: WILDFIRE

Hazard Description 1
Location 1
Extent 2
Historical Occurrences 6
Probability of Future Events 9
Vulnerability and Impact 10
Assessment of Impacts 12
Climate Change Considerations 13

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 the 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 from human caused events. Three conditions determine how a wildfire will grow and spread, including fuel, weather, and topography.

LOCATION

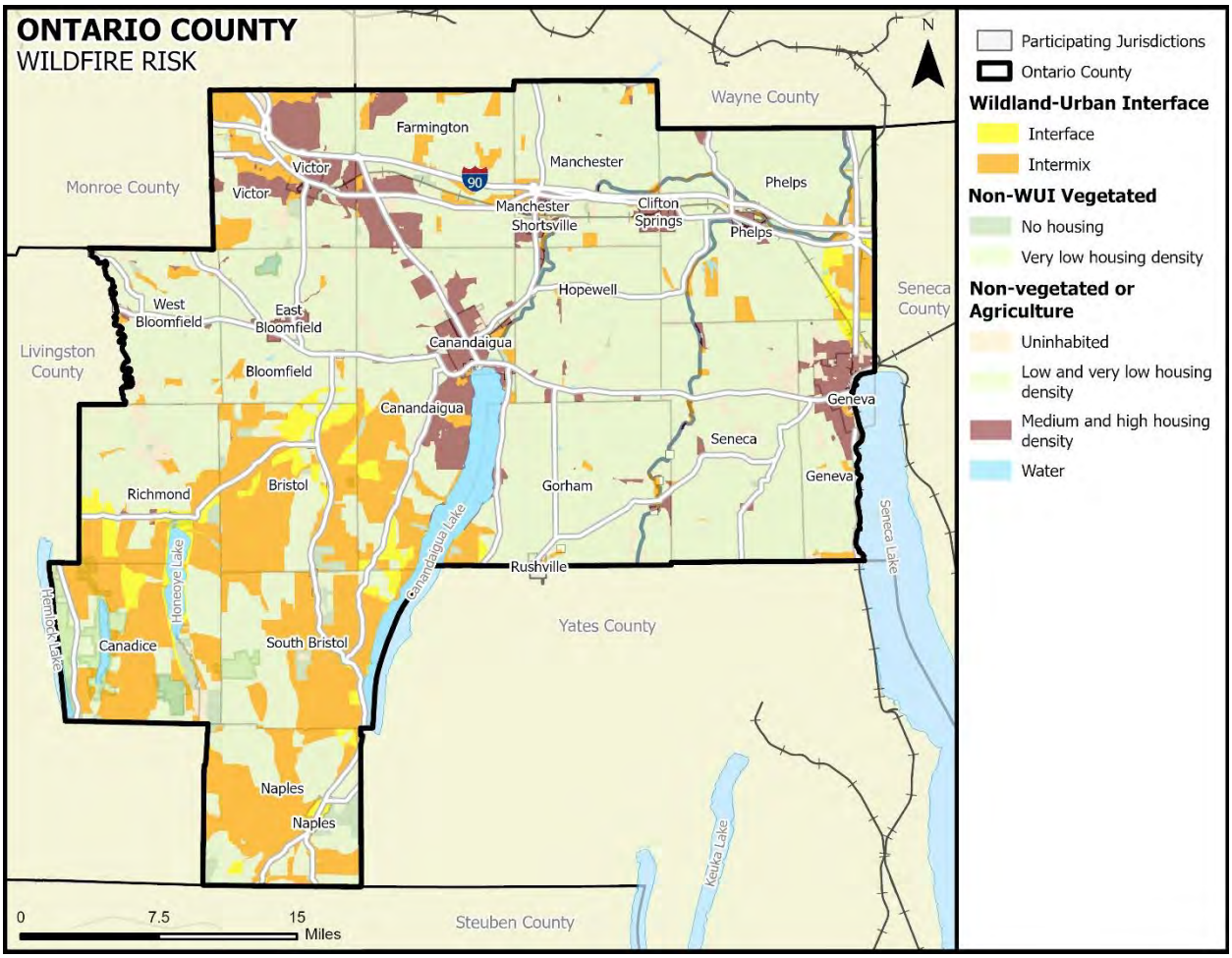
A wildfire event can be a potentially damaging consequence of drought conditions, lightning, or wind event, if the conditions allow. Wildfires can vary greatly in terms of size, location, intensity, and duration. While wildfires are not confined to any specific geographic location, they are most likely 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.[1] According to the 2019 New York State Hazard Mitigation Plan, Ontario County is noted as one of the counties that is more susceptible to wildfire events.

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 16-1). However, the entire planning area is at some risk for wildfires. Specific portions of the County that are heavily forested could be more susceptible to wildfire events. The most heavily forested municipalities are in the southwestern portion of the County and include the Towns of Canadice,

[1] New York State Hazard Mitigation Plan. Division of Homeland Security and Emergency Services – Mitigation Planning. https://mitigateny.availabs.org/hazards/wildfire

South Bristol, Naples, Richmond, and Bristol. In addition, the Towns of Canandaigua, Victor, and Phelps also have significant amounts of forested land. Boughton Park is 330 acres of open space in the Town of East Bloomfield and could also be a potential area at risk within the planning area.

Figure 16-1. Wildland Urban Interface Map – Ontario County[2]



EXTENT



The New York State Department of Environmental Conservation (DEC) Wildfire Predictive Services developed the Fire Danager 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

[2] Map sources: ESRI OpenStreetMap (Custom: no labels), Census TIGER/LINE (2022), Ontario County Information Technology Department (2023), USGS ScienceBase Catalog (2022)

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 16-1. Fire Danager Ratings[3]

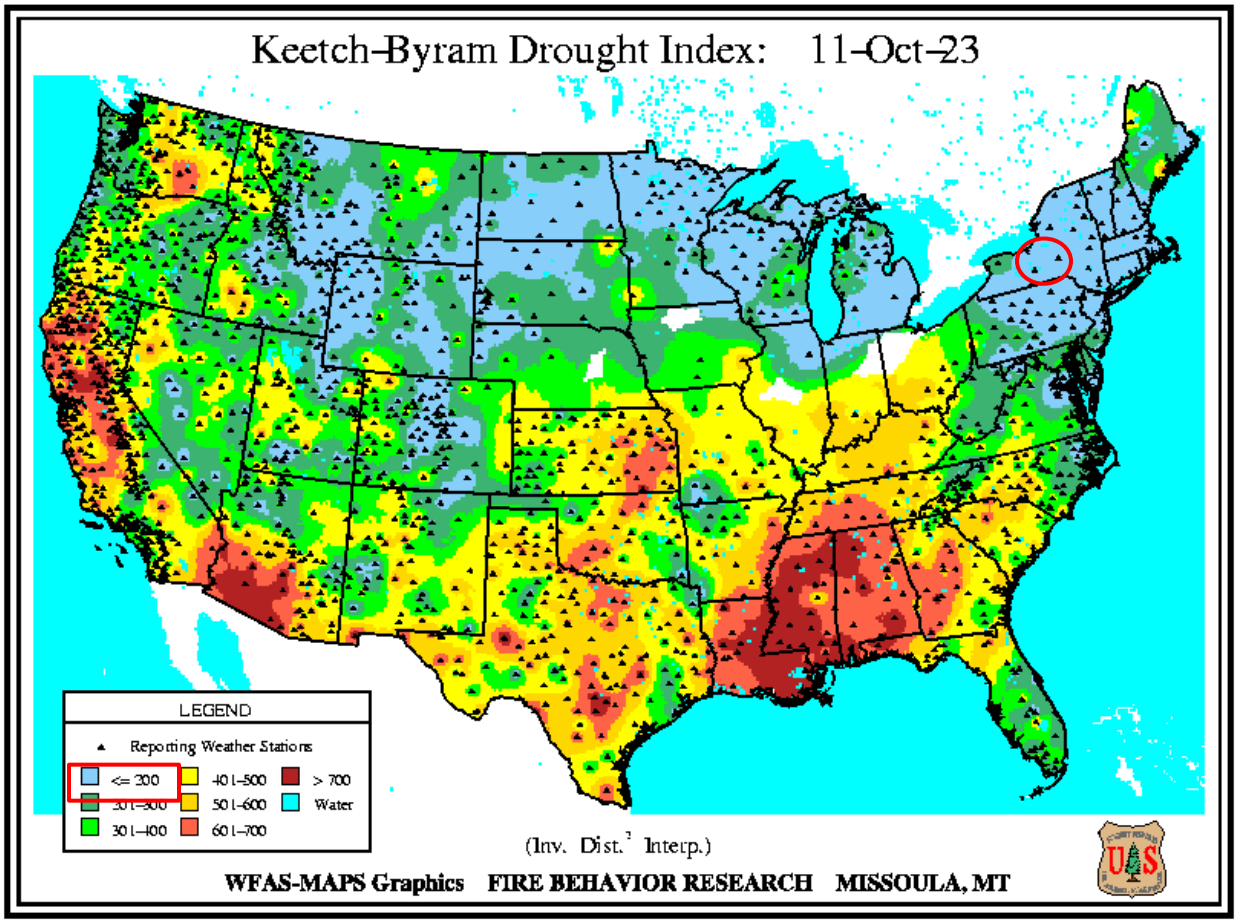
RATING AND COLOR CODE	RATING SEVERITY DESCRIPTION
Red Flag	A short-term, temporary warning, indicating the presence of a dangerous combination of temperature, wind, relative humidity, fuel, or drought conditions which can contribute to new fires or rapid spread of existing fires. A Red Flag Warning can 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.
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.

Risk for a wildfire event can 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.

[3] NYS Department of Environmental Conservation, Fire Danager Map. https://www.dec.ny.gov/lands/68329.html

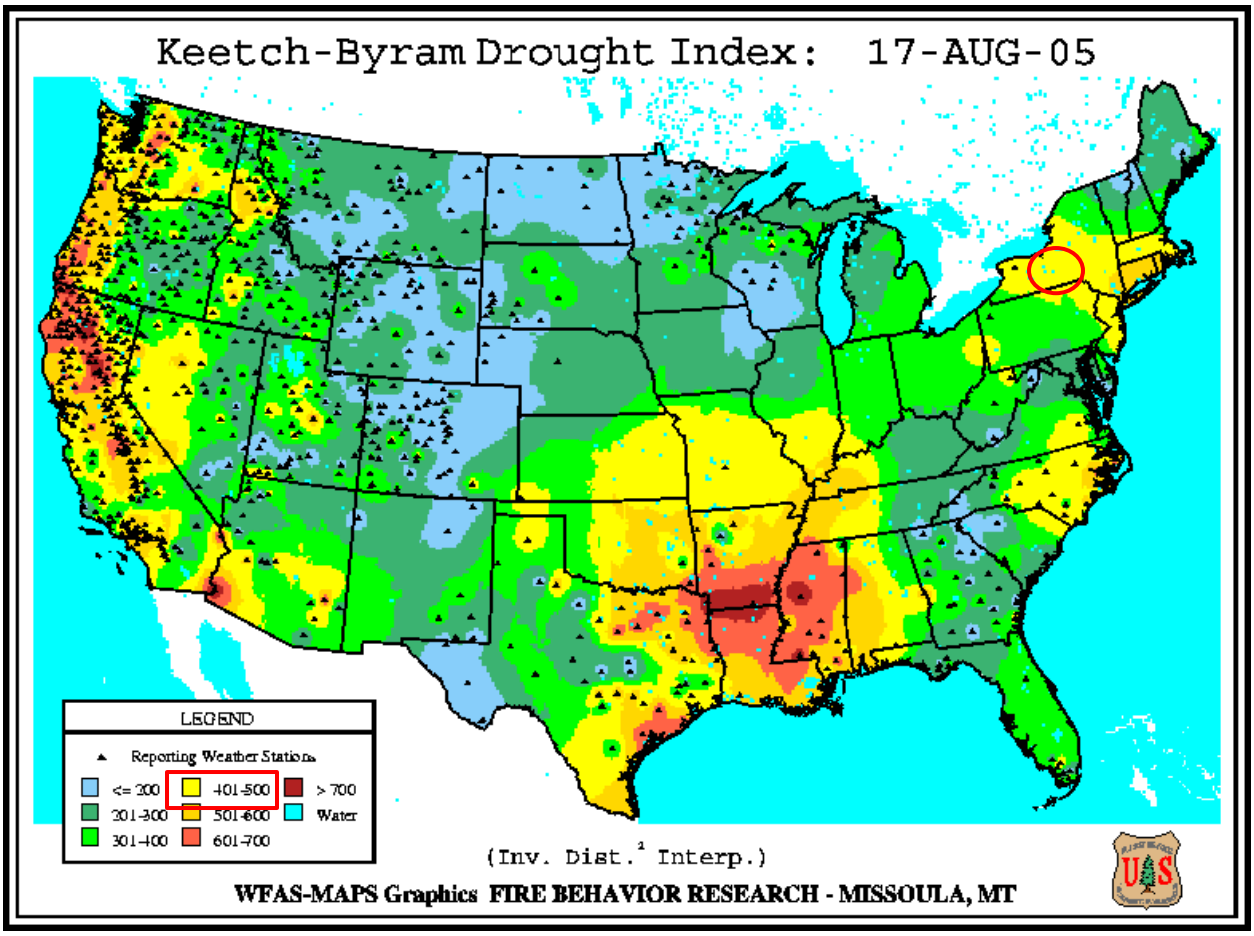
Each color in Figure 16-2 and 16-3 represents the drought index at that location. The drought index ranges from 0 to 800. A drought index of 0 represents no moisture depletion, and a drought index of 800 represents absolutely dry conditions. The most current available data shows the planning area is currently experiencing little to no moisture depletion with a KBDI below 300 (Figure 16-2). However, the planning area has been subject to drier conditions historically with a KBDI range of 401-500 in August 2005 (Figure 16-3).

Figure 16-2. Keetch-Byram Drought Index (KBDI), October 2023[4]



[4] Ontario County planning area is located within the red circle.

Figure 16-3. Keetch-Byram Drought Index (KBDI), August 2005[5]



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.

[5] Ontario County planning area is located within the red circle.

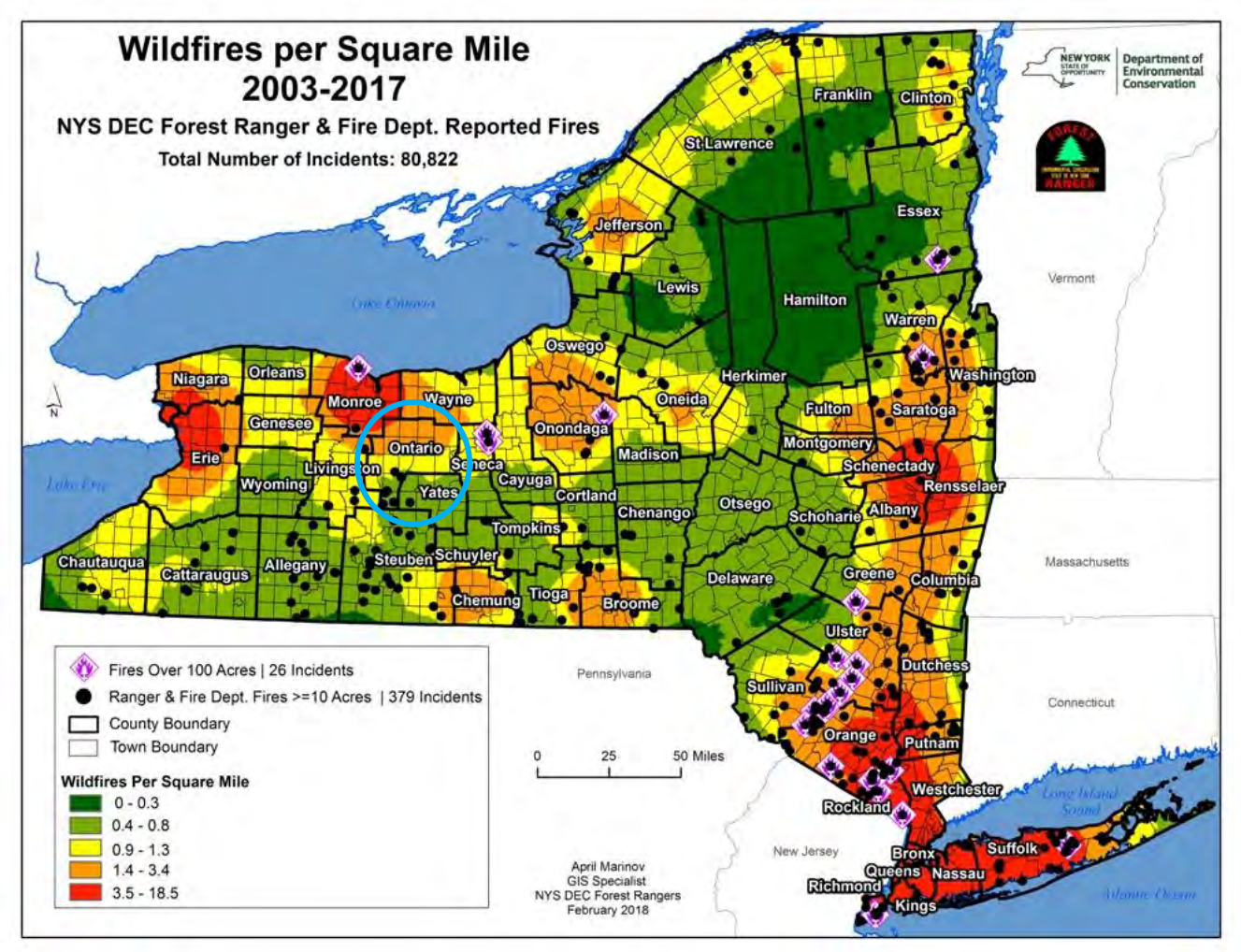
The KBDI is a good measure of the readiness of fuels for a wildfire event. It should be referenced as the area experiences changes in precipitation and soil moisture, while caution should be exercised in dryer, hotter conditions.

The range of intensity for the Ontario 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 300 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 the incidents 26 were wildfire over 100 acres and 379 were greater than 10 acres. No incidents over 100 acres were reported in Ontario County but the southern portions of County have experienced incidents greater than 10 acres.

Figure 16-4. Wildfire Incidents in New York State, 2003-2017[6]



Between 2003 and 2022 there were 1,553 wildfire events in Ontario County. Most of the incidents (877) were brush or brush and grass mixture fires followed by natural vegetation (309), and grass fires (240).

Table 16-2. Wildfire Events in Ontario County by Vegetation Type, 2003-2022[7]

YEAR	NATURAL VEGETATION FIRE, OTHER	FOREST, WOODS, OR WILDLAND FIRE	BRUSH, OR BRUSH AND GRASS MIXTURE FIRE	GRASS FIRE	TOTAL # OF EVENTS
	NUMBER OF EVENTS				
2003	8	8	60	11	87
2004	7	2	13	7	29

[6] New York State Department of Environmental Conservation, Forest Ranger Division. Ontario County is shown in the blue circle.
[7] Ontario County Emergency Management Office

YEAR	NATURAL VEGETATION FIRE, OTHER	FOREST, WOODS, OR WILDLAND FIRE	BRUSH, OR BRUSH AND GRASS MIXTURE FIRE	GRASS FIRE	TOTAL # OF EVENTS
	NUMBER OF EVENTS				
2005	12	1	57	16	86
2006	11	14	61	13	99
2007	26	11	39	16	92
2008	16	21	56	19	112
2009	18	4	66	18	106
2010	25	4	47	21	97
2011	10	4	30	14	58
2012	21	9	49	19	98
2013	14	8	43	5	70
2014	14	5	37	14	70
2015	14	3	36	10	63
2016	30	7	85	20	142
2017	15	1	24	4	44
2018	14	3	38	10	65
2019	5	4	9	4	22
2020	21	7	56	11	95
2021	13	5	31	2	51
2022	15	6	40	6	67
Grand Total	**309**	**127**	**877**	**240**	**1,553**

Based on the list of historical wildfire events for the Ontario County planning area (listed above), 235 events have occurred since the 2018 Plan.

Of the incidents in Ontario County, between 2008 and 2022, 20 wildfire incidents were located within the jurisdiction of the state forest service. Most incidents took place in South Bristol, Naples, and Canadice. Approximately 127 acres were lost due to wildfire events in that period of time. Human caused fires were related to all but one of the incidents which was caused by lightning. The most significant event was the Baker X Wind Fire in Naples. According to the NYS Forest Ranger Wildland Fire Reporting Database, the fire started from equipment on April 22, 2008, and lasted seven days. The wildfire threatened a reported 3 homes and burned a total of 40 acres.

Table 16-3. NYS Forest Service Reported Wildfire Events in Ontario County, 2008-2022[8]

JURISDICTION	INCIDENT NAME	FIRE START-OUT DATES	CAUSE	ACREAGE LOST	# OF FATALITIES / INJURIES	# OF HOMES LOST	# OF HOMES THREATENED
South Bristol	Hicks Road	4/3-4/2008	Debris Burning	11.8	0	0	0
Naples	Italy Valley Rd	4/19-20/2008	Debris Burning	4.2	0	0	1
Naples	Baker X Wind	4/22-29/2008	Equipment	40	0	0	3
Richmond	Honeoye Hill	4/27-30/2008	Lightning	1.5	0	0	0
South Bristol	Stemple Hill	4/4-5/2010	Debris Burning	3.5	0	0	0
Canadice	Pepper Hill Fire	4/29-30/2010	Smoking	3	0	0	0
South Bristol	Bopple Hill	5/25/2010	Smoking	0.1	0	0	0
Bristol	Stid Hill Fire	11/13-14/2011	Smoking	11.5	0	0	0
Canadice	Lawrence Hill Fire	11/13-14/2011	Debris Burning	4	0	0	0
Naples	Edson Rd	11/27/2011	Campfire	0.3	0	0	0
Naples	Hall Pass	4/18-20/2013	Smoking	11	0	0	0
Naples	French Hill	4/18/2015	Power line	1.5	0	0	0
Victor	Cork Road	2/27/2018	Equipment	3	0	0	0
South Bristol	Gordon Beach Fire	7/11-14/2018	Debris Burning	0.5	0	0	0
Manchester	Koeberle Fire	7/20-22/2018	Equipment	23.2	0	0	0
South Bristol	Stid Hill	5/21-22/2020	Debris Burning	3	0	0	0
Canadice	McDonald's Fire	4/10/2021	Debris Burning	1	0	0	0
South Bristol	Bristol Springs Fire	11/2-4/2022	Debris Burning	1.5	0	0	0
Canadice	Ross Road Fire	11/6-7/2022	Power line	0.5	0	0	0
Naples	Pettit Fire	11/7-8/2022	Campfire	1.5	0	0	0
			Total	**126.6**	**0**	**0**	**4**

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 1,553 events in a 19-year period, a wildfire event within the Ontario 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

[8] 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

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. See additional information on climate change at the end of this section.

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 16-1 illustrates the areas that are historically the most vulnerable to wildfire throughout the Ontario County planning area, including all participating jurisdictions. Specific portions of the County, including the southwestern portion that are heavily forested could be more susceptible to wildfire events. The most heavily forested municipalities include the Towns of Canadice, South Bristol, Naples, Richmond, and Bristol. In addition, the Towns of Canandaigua, Victor, and Phelps also have significant amounts of forested land.

The Ontario 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 would be vulnerable to wildfire events in the Ontario County planning area, including participating jurisdictions. For a comprehensive list by participating jurisdiction please see Appendix C.

Table 16-4. Critical Facilities Vulnerable to Wildfire Events

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Departments (EOC, Fire, EMS, Hospitals)	o Emergency services may be disrupted during a wildfire if facilities are impacted, roadways are inaccessible, or personnel are unable to report for duty. o 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. o Critical 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. o 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. o Fire suppression costs can be substantial, exhausting the financial resources of the community. o First responders can experience heart disease, respiratory problems, and other long-term related illnesses from prolonged exposure to smoke, chemicals, and heat. o Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications. o Power outages could disrupt communications, delaying emergency response times.

CRITICAL FACILITIES	POTENTIAL IMPACTS
	o Structures can be damaged or destroyed in the path of the wildfire. o Power outages could disrupt critical care. o Backup power sources could be damaged or destroyed. o Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities.
Airport, Academic Institutions, Community Residential Facilities, Day Care Facilities, Evacuation Centers & Shelters, Governmental Facilities	o Facilities or infrastructure may be damaged, destroyed or otherwise inaccessible. o Essential supplies like medicines, water, food, and equipment deliveries may be significantly delayed. o Additional emergency responders and critical aid workers may not be able to reach the area for days. o Power outages and infrastructure damage may prevent larger airports from acting as temporary command centers for logistics, communications, and emergency operations.
Commercial Suppliers (food, gas, etc.)	o Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable. o Essential supplies like medicines, water, food, and equipment deliveries may be delayed. o Economic disruption due to power outages and fires negatively impact services as well as area businesses reliant on commercial suppliers.
Utility Services and Infrastructure (electric, water, wastewater, communications) Water/Wastewater Facilities)	o Wastewater and drinking water facilities and infrastructure may be damaged or destroyed resulting in service disruption or outage for multiple days or weeks. o Disruptions and outages impact public welfare as safe drinking water is critical. o A break in essential and effective wastewater collection and treatment is a health concern, potentially spreading disease. o Exposure to untreated wastewater is harmful to people and the environment. o Any service disruptions can negatively impact or delay emergency management operations. o Power losses

Within the Ontario County planning area, a total of 1,553 fire events were reported from 2003 through 2022. The average frequency is approximately 78 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.

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. In 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.

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.

SECTION 16: WILDFIRE

The severity of impact from major wildfire events can be substantial. Such events can cause multiple deaths, shut down facilities for 30 days or more, and cause more than 50 percent of affected properties to be destroyed or suffer major damage. Severity of impact is gauged by acreage burned, homes and structures lost, and the number of resulting injuries and fatalities.

For the Ontario 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. Severity of impact is gauged by acreage burned, homes and structures lost, injuries and fatalities.

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 limited to the direct damages. Significant wildfire events can be frequently associated with a variety of impacts, including:

- The Ontario County planning area contains public parks and open space areas. Community assets including places like Boughton Park, one of the largest municipal parks in the planning area at 330 acres in the Town of East Bloomfield, and Gannett Hill Park, a 410 acre Ontario County park, are vulnerable to the impacts of wildfire events. 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 High Tor (6,000 acres), Honeoye Creek (717 acres), Honeoye Inlet (2,637 acres), Stid Hill (1,035 acres), Hemlock/Canadice State Forest (6,850 acres), Hollister Spencer Recreation area (1,500 acres), NFP Wesley Hill Preserve (389 acres), Taylor Marsh (423 acres) and West Hill Preserve (450 acres). These areas 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. 57 percent of homes in the planning area were built before 1980. Within Ontario County, 74 buildings, districts, and sites are 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.
- 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.

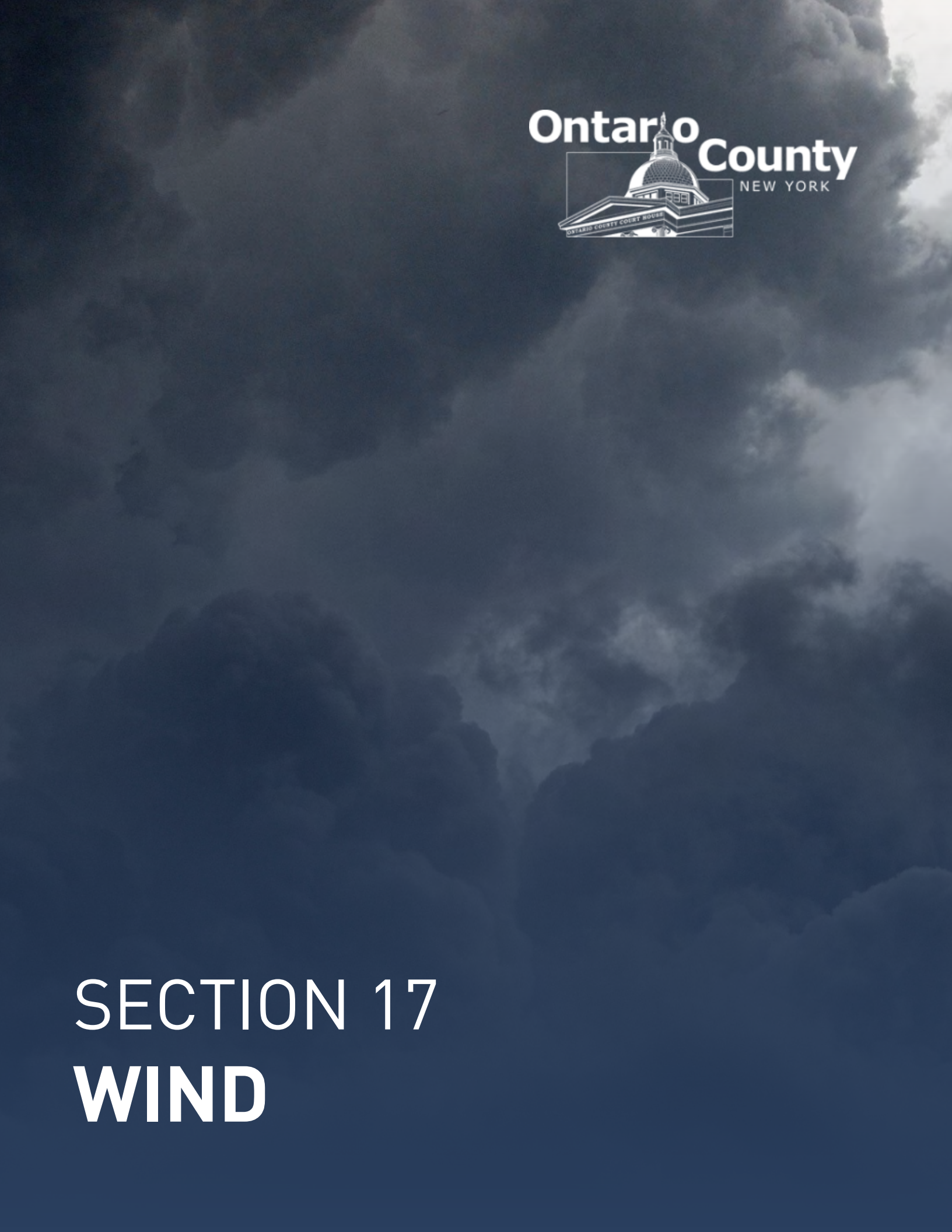
CLIMATE CHANGE CONSIDERATIONS

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.[9]

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 8 of this Plan. The projected increases in favorable wildfire

[9] NOAA Wildfire Climate Connection, August 2022: wildfire-climate-connection.

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.



SECTION 17
WIND

SECTION 17: WIND

Hazard Description 1
Location 1
Extent 2
Historical Occurrences 3
Significant Events 13
Probability of Future Events 14
Vulnerability and Impact 14
Assessment of Impacts 19
Climate Change Considerations 20

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 Ontario 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 Ontario County planning area is uniformly exposed to the threat of damaging winds.

EXTENT

The extent or magnitude of a wind event is measured by the Beaufort Wind Scale. Table 17-1 describes the different intensities of wind in terms of speed and effects, from calm to violent and destructive.

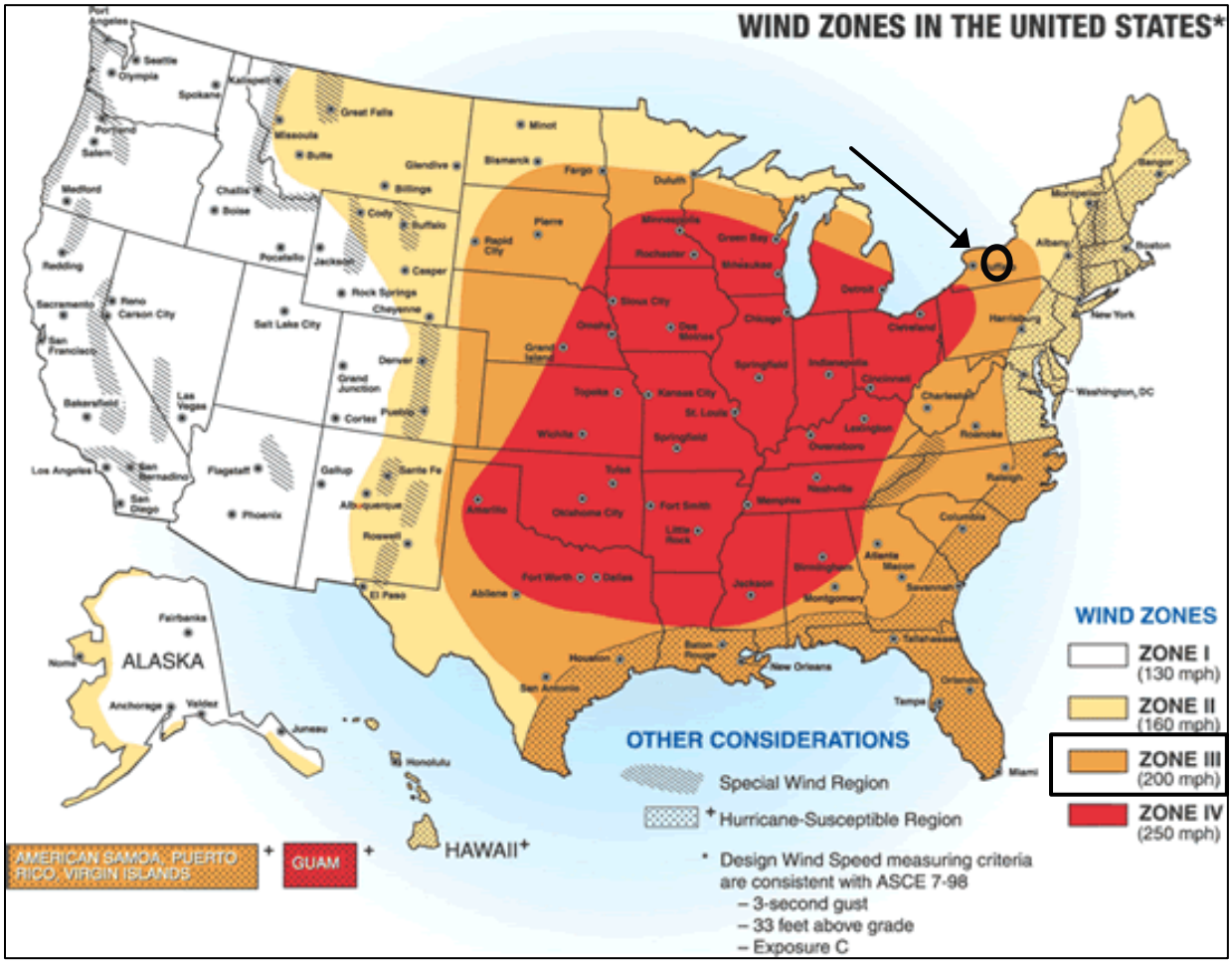
Table 17-1. Beaufort Wind Scale[1]

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 17-1 displays the wind zones as derived from NOAA.

[1] Source: World Meteorological Organization

Figure 17-1. Wind Zones in the United States[2]



On average, the planning area experiences 3 to 4 wind events every year. The Ontario County planning area is located within Wind Zone III, meaning it can experience winds up to 200 mph. The Ontario 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 84 knots, or 64 mph. The highest-level extent can be anticipated across the entire planning area.

Based on a search of past events between January 1956 through August 2023, the greatest magnitude wind event was recorded in the Town of East Bloomfield on June 16, 2022, with wind speeds of 87 knots, or 100 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 67.5

[2] Ontario County planning area is indicated by the black circle.

years. Tables 17-2 and 17-3 depict historical occurrences of thunderstorm wind events for the Ontario County planning area according to the NCEI database.

Since 1956, 268 total wind events are known to have occurred in the Ontario County planning area. Based upon NCEI records, 224 of these events were recorded with associated property damages. Table 17-3 presents information on known historical events impacting the Ontario 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 2023 dollars.

Table 17-2. Historical Wind Events, 1956-2023

MAXIMUM WIND SPEED RECORDED (KNOTS)	NUMBER OF REPORTED EVENTS
0-30	44
31-40	0
41-50	129
51-60	73
61-70	2
71-80	1
81-90	1
91-100+	0
Unknown	18

Table 17-3. Damaging Historical Wind Events, 1956-2023[3]

JURISDICTION	DATE	MAGNITUDE (Knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town and Village of Victor	8/31/1993	Unknown	0	0	$102,269	$0
Town and Village of Phelps	7/26/1994	Unknown	0	0	$9,979	$0
Village of Clifton Springs	8/28/1994	Unknown	0	0	$99,386	$0
Town and Village of Phelps	7/6/1995	Unknown	0	0	$38,842	$0
Town of Bristol	7/15/1995	Unknown	0	0	$29,132	$0
Town of Gorham	7/15/1995	Unknown	0	0	$29,132	$0
Ontario County	1/27/1996	Unknown	0	0	$47,955	$0
Town of Gorham	5/10/1996	Unknown	0	0	$18,913	$0

[3] Only recorded events with fatalities, injuries or damages are listed. Magnitude is listed when available. Events reported from January 1968 through August 2023. Damage values are in 2023 dollars.

SECTION 17: WIND

JURISDICTION	DATE	MAGNITUDE (Knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
City and Town of Canandaigua[4]	6/22/1996	Unknown	0	3	$170,105	$0
Ontario County	2/27/1997	Unknown	0	0	$92,785	$0
Ontario County	3/28/1998	Unknown	0	0	$27,389	$0
Town and Village of Victor[5]	5/31/1998	Unknown	0	0	$54,577	$0
Village of Clifton Springs	6/2/1998	Unknown	0	0	$36,340	$0
City and Town of Canandaigua	6/25/1998	Unknown	0	0	$21,804	$0
City and Town of Canandaigua	6/30/1998	Unknown	0	0	$21,804	$0
Town and Village of Phelps[6]	6/30/1998	Unknown	0	0	$18,170	$0
Town of Farmington	8/24/1998	Unknown	0	0	$27,188	$0
Town and Village of Victor	9/7/1998	Unknown	0	0	$1,810,336	$0
Ontario County	11/10/1998	Unknown	0	0	$45,148	$0
Town of Gorham	7/3/1999	Unknown	0	0	$17,767	$0
Ontario County	1/4/2000	Unknown	0	0	$17,546	$0
City and Town of Canandaigua	7/9/2000	Unknown	0	0	$25,709	$0
Ontario County	12/12/2000	Unknown	0	0	$127,660	$0
Ontario County	2/10/2001	Unknown	0	0	$168,470	$0
City and Town of Canandaigua	7/10/2001	50	0	0	$13,349	$0
City and Town of Canandaigua	7/10/2001	50	0	0	$25,029	$0
Ontario County	10/14/2001	50	0	0	$16,667	$0
Ontario County	2/1/2002	52	0	0	$832,877	$0
Ontario County	3/9/2002	52	0	0	$165,644	$0
Town and Village of Naples[7]	7/22/2002	50	0	0	$16,445	$0
Town and Village of Victor	7/22/2002	55	0	1	$74,002	$0
City and Town of Canandaigua	7/28/2002	55	0	0	$65,779	$0
Ontario County	10/15/2003	50	0	0	$240,139	$0

[4] City and Town of Canandaigua 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.
[5] Town and Village of Victor 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.
[6] Town and Village of Phelps 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.
[7] Town and Village of Naples 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 17: WIND

JURISDICTION	DATE	MAGNITUDE (Knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Ontario County	11/13/2003	52	1	0	$0	$0
City and Town of Canandaigua	5/13/2004	50	0	0	$12,530	$0
City and Town of Canandaigua	5/22/2004	50	0	0	$23,493	$0
Town and Village of Victor	7/26/2005	50	0	0	$53,050	$0
Town of Seneca	8/8/2005	10	0	0	$15,080	$0
Town of Gorham	9/29/2005	50	0	0	$22,347	$0
Town and Village of Phelps	11/6/2005	50	0	0	$22,483	$0
Ontario County	2/17/2006	55	0	0	$223,582	$0
Village of Clifton Springs	6/28/2006	50	0	0	$11,678	$0
City and Town of Geneva[8]	7/20/2006	70	0	0	$291,077	$145,539
Ontario County	12/1/2006	50	0	0	$29,353	$0
Town and Village of Manchester[9]	6/8/2007	50	0	0	$14,215	$0
City and Town of Geneva	6/21/2007	50	0	0	$21,322	$0
Town and Village of Phelps	6/21/2007	50	0	0	$17,058	$0
Town and Village of Naples	7/8/2007	50	0	0	$14,219	$0
Town of Bristol	8/16/2007	50	0	0	$11,396	$0
City and Town of Canandaigua	8/16/2007	50	0	0	$11,396	$0
Town of Gorham	8/16/2007	50	0	0	$7,122	$0
Town and Village of Victor	8/24/2007	50	0	0	$17,094	$0
City and Town of Canandaigua	9/11/2007	50	0	0	$14,206	$0
Town of East Bloomfield and Village of Bloomfield [10]	1/9/2008	56	0	0	$21,047	$0
Town and Village of Naples	1/9/2008	50	0	0	$14,031	$0
Town and Village of Phelps	1/9/2008	50	0	0	$11,225	$0
Ontario County	1/30/2008	52	0	0	$140,312	$0
Town and Village of Phelps	4/26/2008	50	0	0	$13,787	$0
Town of Bristol	6/13/2008	50	0	0	$20,303	$0

[8] City and Town of Geneva 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.
[9] Town and Village of Manchester 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.
[10] Town of East Bloomfield and Village of Bloomfield (formerly the Village of East Bloomfield) 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 17: WIND

JURISDICTION	DATE	MAGNITUDE (Knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town of Richmond	6/29/2008	50	0	0	$20,303	$0
Town and Village of Naples	7/17/2008	52	0	0	$33,661	$0
City and Town of Geneva	7/19/2008	50	0	0	$47,126	$0
Town and Village of Phelps	7/21/2008	50	0	0	$20,197	$0
Ontario County	9/14/2008	50	0	0	$135,372	$0
Ontario County	12/28/2008	52	0	0	$140,881	$0
Ontario County	2/12/2009	52	0	0	$41,873	$0
City and Town of Canandaigua	6/26/2009	51	0	0	$20,597	$0
City and Town of Geneva	7/26/2009	51	0	0	$20,629	$0
Town and Village of Phelps	7/26/2009	51	0	0	$24,755	$0
Ontario County	5/8/2010	50	0	0	$135,747	$0
Town of Farmington	8/16/2010	50	0	0	$13,566	$0
Town and Village of Phelps	8/16/2010	50	0	0	$13,566	$0
Town and Village of Victor	8/16/2010	50	0	0	$13,566	$0
City and Town of Canandaigua	4/27/2011	51	0	0	$19,753	$0
City and Town of Canandaigua	5/29/2011	50	0	0	$13,107	$0
City and Town of Geneva	5/29/2011	50	0	0	$10,486	$0
Town and Village of Phelps	5/29/2011	51	0	0	$10,486	$0
Ontario County	8/28/2011	50	0	0	$19,610	$0
City and Town of Canandaigua	9/11/2011	50	0	0	$19,580	$0
Ontario County	1/17/2012	52	0	0	$65,332	$0
Town of Bristol	5/3/2012	50	0	0	$19,331	$0
Town of East Bloomfield and Village of Bloomfield	5/3/2012	50	0	0	$19,331	$0
Town of Farmington	5/3/2012	50	0	0	$19,331	$0
Town and Village of Victor	5/3/2012	50	0	0	$19,331	$0
Town of South Bristol	5/29/2012	50	0	0	$12,887	$12,887
Town of Farmington	5/29/2012	50	0	0	$12,887	$12,887
Town of Gorham	5/29/2012	50	0	0	$10,310	$10,310
Town and Village of Phelps	5/29/2012	50	0	0	$12,887	$12,887
Town and Village of Victor	5/29/2012	50	0	0	$12,887	$12,887
Town of Hopewell	9/8/2012	50	0	0	$12,799	$0
Ontario County	10/29/2012	50	0	0	$128,037	$0

SECTION 17: WIND

JURISDICTION	DATE	MAGNITUDE (Knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Ontario County	1/20/2013	50	0	0	$19,292	$0
City and Town of Geneva	5/21/2013	50	0	0	$12,714	$0
Town and Village of Manchester	5/21/2013	50	0	0	$6,357	$0
Town of Bristol	6/23/2013	50	0	0	$12,684	$0
Ontario County	11/1/2013	50	0	0	$25,415	$0
Village of Clifton Springs	5/13/2014	50	0	0	$12,449	$0
Town and Village of Manchester	5/13/2014	50	0	0	$12,449	$0
Town and Village of Phelps	5/13/2014	50	0	0	$12,449	$0
Town of Farmington	6/3/2014	50	0	0	$18,639	$0
Town and Village of Phelps	6/24/2014	50	0	0	$18,639	$0
Town and Village of Phelps	6/24/2014	60	2	0	$43,492	$0
Town of Farmington	7/8/2014	55	0	0	$62,156	$0
Town and Village of Naples	7/8/2014	55	0	0	$12,431	$0
Town of Richmond	7/8/2014	55	0	0	$12,431	$0
Town and Village of Victor	7/8/2014	55	0	0	$12,431	$0
Town of Hopewell	7/14/2014	52	0	0	$18,647	$0
City and Town of Canandaigua	6/8/2015	50	0	0	$18,616	$0
Village of Clifton Springs	6/10/2015	52	0	0	$18,616	$0
Town and Village of Manchester	6/10/2015	52	0	0	$18,616	$0
Town and Village of Phelps	6/10/2015	52	0	0	$31,027	$0
Town and Village of Victor	6/10/2015	52	0	0	$18,616	$0
Town of Bristol	6/12/2015	50	0	0	$18,616	$0
Town of East Bloomfield and Village of Bloomfield	6/12/2015	50	0	0	$12,411	$0
City and Town of Geneva	6/12/2015	50	0	0	$18,616	$0
Town of Farmington	6/23/2015	50	0	0	$12,411	$0
Town and Village of Manchester	6/23/2015	50	0	0	$12,411	$0
Town and Village of Phelps	6/23/2015	50	0	0	$12,411	$0
Town and Village of Victor	6/23/2015	50	0	0	$12,411	$0
Town of West Bloomfield	6/23/2015	50	0	0	$12,411	$0
Town and Village of Victor	8/10/2015	50	0	0	$18,641	$0
Ontario County	1/10/2016	52	0	0	$37,503	$0
Town of Bristol	5/29/2016	50	0	0	$22,192	$0

SECTION 17: WIND

JURISDICTION	DATE	MAGNITUDE (Knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town of Bristol	5/29/2016	50	0	0	$18,493	$0
City and Town of Geneva	7/18/2016	50	0	0	$18,462	$0
Town and Village of Naples	7/25/2016	50	0	0	$18,462	$0
Town and Village of Phelps	8/13/2016	50	0	0	$12,297	$0
Town and Village of Phelps	8/13/2016	50	0	0	$12,297	$0
Town and Village of Victor	8/13/2016	50	0	0	$12,297	$0
Ontario County	3/8/2017	50	0	0	$182,221	$0
City and Town of Canandaigua	5/1/2017	56	0	0	$30,255	$0
City and Town of Canandaigua	5/1/2017	52	0	0	$14,522	$0
City and Town of Geneva	5/18/2017	52	0	0	$14,522	$0
Town of Seneca	6/16/2017	50	0	0	$12,091	$0
Town of Seneca	6/16/2017	50	0	0	$14,509	$0
Town and Village of Manchester	6/18/2017	50	0	0	$14,509	$0
City and Town of Canandaigua	7/23/2017	50	0	0	$14,519	$0
City and Town of Geneva	8/15/2017	50	0	0	$14,476	$0
Town of Farmington	8/22/2017	50	0	0	$12,063	$0
City and Town of Geneva	9/4/2017	50	0	0	$12,000	$0
Town and Village of Manchester	9/4/2017	50	0	0	$12,000	$0
Town of Bristol	10/15/2017	50	0	0	$14,409	$0
Town of Canadice	10/15/2017	50	0	0	$7,204	$0
City and Town of Canandaigua	10/15/2017	50	0	0	$12,007	$0
City and Town of Canandaigua	10/15/2017	50	0	0	$12,007	$0
Town of East Bloomfield and Village of Bloomfield	10/15/2017	50	0	0	$9,606	$0
Town of Farmington	10/15/2017	50	0	0	$9,606	$0
City and Town of Geneva	10/15/2017	50	0	0	$9,606	$0
Town of Gorham	10/15/2017	50	0	0	$12,007	$0
Town of Gorham	10/15/2017	50	0	0	$12,007	$0
Town and Village of Manchester	10/15/2017	50	0	0	$9,606	$0
Town and Village of Manchester	10/15/2017	50	0	0	$9,606	$0
Town and Village of Phelps	10/15/2017	50	0	0	$18,011	$0
Town and Village of Victor	10/15/2017	50	0	0	$9,606	$0

SECTION 17: WIND

JURISDICTION	DATE	MAGNITUDE (Knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town and Village of Victor	10/15/2017	50	0	0	$14,409	$0
City and Town of Geneva	1/23/2018	43	0	2	$47,795	$0
Ontario County	4/4/2018	56	0	0	$23,642	$0
Town of Farmington	8/8/2018	52	0	0	$1,175	$0
Town and Village of Manchester	8/14/2018	52	0	0	$2,349	$0
Town of East Bloomfield and Village of Bloomfield	9/21/2018	50	0	0	$1,173	$0
Town of East Bloomfield and Village of Bloomfield	9/21/2018	50	0	0	$587	$0
Town of East Bloomfield and Village of Bloomfield	9/21/2018	50	0	0	$9,386	$0
Ontario County	1/1/2019	53	0	0	$14,120	$0
Ontario County	2/25/2019	50	0	0	$11,717	$0
City and Town of Geneva	5/25/2019	50	0	0	$2,313	$0
Town of Richmond	5/25/2019	50	0	0	$1,157	$0
Town of Gorham	7/30/2019	50	0	0	$1,154	$0
Town of Canadice	8/8/2019	50	0	0	$2,309	$0
Town and Village of Phelps	8/8/2019	50	0	0	$577	$0
Town of Richmond	8/8/2019	50	0	0	$1,154	$0
Town of West Bloomfield	8/8/2019	50	0	0	$577	$0
Town of West Bloomfield	8/8/2019	50	0	0	$577	$0
Town of Farmington	8/16/2019	50	0	0	$1,154	$0
Town and Village of Victor	8/16/2019	50	0	0	$1,154	$0
City and Town of Geneva	8/18/2019	50	0	0	$2,309	$0
Town and Village of Phelps	8/18/2019	50	0	0	$2,309	$0
Ontario County	10/31/2019	52	0	0	$115,085	$0
Ontario County	11/1/2019	52	0	0	$23,030	$0
Ontario County	4/13/2020	50	0	0	$11,552	$0
Town of Gorham	5/15/2020	50	0	0	$2,310	$0
Town of Seneca	5/15/2020	50	0	0	$2,310	$0
City and Town of Canandaigua	7/19/2020	51	0	0	$28,577	$0
Village of Shortsville	7/19/2020	51	0	0	$6,858	$0
Town and Village of Victor	7/19/2020	51	0	0	$11,431	$0
Town and Village of Victor	7/19/2020	51	0	0	$1,143	$0
Ontario County	7/29/2020	51	0	0	$1,143	$0

SECTION 17: WIND

JURISDICTION	DATE	MAGNITUDE (Knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
City and Town of Canandaigua	7/29/2020	51	0	0	$5,715	$0
City and Town of Canandaigua	7/29/2020	51	0	0	$5,715	$0
Town and Village of Phelps	7/29/2020	51	0	0	$2,286	$0
City and Town of Canandaigua	8/27/2020	51	0	0	$1,139	$0
Town of Richmond	8/27/2020	51	0	0	$570	$0
Town of East Bloomfield and Village of Bloomfield	6/21/2021	50	0	0	$2,180	$0
City and Town of Geneva	6/21/2021	50	0	0	$2,180	$0
Town of Gorham	6/21/2021	50	0	0	$2,180	$0
Town and Village of Victor	6/21/2021	50	0	0	$2,180	$0
Town and Village of Victor	6/21/2021	50	0	0	$1,090	$0
Town of West Bloomfield	6/21/2021	50	0	0	$1,090	$0
Town of West Bloomfield	6/21/2021	50	0	0	$5,450	$0
Town of Bristol	7/6/2021	51	0	0	$2,170	$0
Village of Clifton Springs	7/20/2021	51	0	0	$1,085	$0
Town and Village of Phelps	7/20/2021	51	0	0	$542	$0
Village of Shortsville	8/11/2021	51	0	0	$1,083	$0
City and Town of Geneva	8/29/2021	51	0	0	$2,165	$0
City and Town of Geneva	8/29/2021	51	0	0	$2,165	$0
Ontario County	12/5/2021	50	0	0	$2,125	$0
Ontario County	12/11/2021	56	0	0	$53,115	$0
Town of East Bloomfield and Village of Bloomfield	6/16/2022	87	0	0	$54,716	$0
City and Town of Canandaigua	6/16/2022	51	0	0	$2,188	$0
Town and Village of Victor	8/16/2022	51	0	0	$514	$0
Village of Shortsville	8/16/2022	51	0	0	$514	$0
Town of South Bristol	8/16/2022	51	0	0	$514	$0
Town of South Bristol	8/29/2022	51	0	0	$2,188	$0
Town and Village of Naples	8/29/2022	51	0	0	$2,188	$0
Town and Village of Phelps	8/29/2022	51	0	0	$2,188	$0
Town and Village of Phelps	9/22/2022	51	0	0	$2,188	$0
Town and Village of Naples	4/1/2023	51	0	0	$2,056	$0
Town of Richmond	4/1/2023	51	0	0	$514	$0
Town and Village of Victor	4/1/2023	51	0	0	$2,056	$0

JURISDICTION	DATE	MAGNITUDE (Knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
City and Town of Geneva	4/1/2023	51	0	0	$2,056	$0
City and Town of Geneva	6/26/2023	51	0	0	$2,056	$0
City and Town of Geneva	6/26/2023	51	0	0	$2,056	$0
Town and Village of Naples	7/20/2023	51	0	0	$514	$0
Town and Village of Manchester	7/20/2023	51	0	0	$2,056	$0
Town and Village of Manchester	8/7/2023	51	0	0	$10,000	$0
TOTALS		**(Max Extent)**	**3**	**6**	**$8,409,274**	**$207,397**

Table 17-4. Summary of Historical Wind Events, 1956-2023

JURISDICTION	NUMBER OF EVENTS	MAGNITUDE (Knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Ontario County	75	78	1	0	$3,362,853	$0
Town of Bristol	10	51	0	0	$168,726	$0
City and Town of Canadice	2	50	0	0	$9,513	$0
City and Town of Canandaigua	26	56	0	3	$623,501	$0
Village of Clifton Springs	6	52	0	0	$179,554	$0
Town of East Bloomfield and Village of Bloomfield	9	87	0	0	$130,437	$0
Town of Farmington	11	55	0	0	$190,176	$12,887
City and Town of Geneva	21	70	0	2	$556,131	$145,539
Town of Gorham	11	50	0	0	$135,249	$10,310
Town of Hopewell	2	52	0	0	$31,446	$0
Town and Village of Manchester	15	55	0	0	$124,174	$0
Town and Village of Naples	10	55	0	0	$114,007	$0
Town and Village of Phelps	26	60	2	0	$384,148	$12,887
Town of Richmond	6	55	0	0	$36,129	$0
Village of Rushville	0	-	-	-	-	-
Town of Seneca	4	50	0	0	$43,990	$0
Village of Shortsville	3	51	0	0	$8,455	$0
Town of South Bristol	3	51	0	0	$15,589	$12,887
Town and Village of Victor	23	55	0	1	$2,275,091	$12,887
Town of West Bloomfield	5	50	0	0	$20,105	$0
TOTALS	**268**	**(Max Extent)**	**3**	**6**	**$8,409,274**	**$207,397**

Based on the list of historical thunderstorm wind events for the Ontario County planning area (listed above), including participating jurisdictions, 72 of the events have occurred since the 2018 Plan that have caused impacts to the planning area.

SIGNIFICANT EVENTS

January 23, 2018 – Ontario County
A cold front crossed the region during early afternoon hours and a rather ill-defined line of convection developed along this front. In the City of Geneva, a building under construction collapsed with six people inside, and two of these people were injured. The building was fully framed with a completed roof and witnesses reported that the wind lifted and shifted the building, which caused the building to fall and collapse. An estimated $48,000 (2023 dollars) in property damage was reported for this event.

June 24, 2014 – Town of Phelps
Showers and thunderstorms developed across the region during the afternoon hours as a cold front approached from the west. Several thunderstorms produced strong and damaging winds which tore down trees and powerlines. In the Town of Phelps, a large tree was downed by the strong winds, which was reported to be eight to nine feet in diameter around the tree base. One of the two main branches of the tree, about four feet in diameter and originally about fifteen feet off the ground, fell onto a car which caused two fatalities.

July 20, 2006 – Town of Seneca
A cold front during the late afternoon hours brought thunderstorms to the Ontario County planning area. In the Town of Seneca, thunderstorm winds damaged several buildings, including blowing down a silo, demolishing a historic barn and uprooting numerous trees. A funnel was seen with the storm however a damage survey determined the damage was a result of downburst winds. Over a thousand were left without power from the storm which caused $436,616 (2023 dollars) in property and crop damages.

September 7, 1998 – Town and Village of Victor (DR-1244)
Severe thunderstorms moved across Ontario County and neighboring counties. Across the area the damage path was nearly one hundred miles long and five to ten miles wide. Winds were between 80 and 100 mph throughout the two-hour event. Along the entire path, damage and debris all laid in an easterly direction consistent with the damage from straight-line winds. Most of the damage consisted of downed trees and limbs. The falling trees and limbs downed power and telephone lines which resulted in damage to buildings and automobiles. The strong winds themselves also caused structural damage to homes, barns, and buildings. Ontario County was included in a federal disaster declaration (DR-1244) for the severe thunderstorm event. It is reported that this event caused more than $1,800,000 (2023 dollars) in damages for the Ontario County planning area.

June 22, 1996 – Ontario County
A strong downburst of winds blew a mobile home from its foundation where it rolled and collapsed. The two residents of the home were severely injured and were airlifted to nearby hospitals. The winds also picked up a nearby automobile and the driver of the car suffered back injuries as the car was tossed about by the wind. An estimated $170,105 (2023 dollars) in property damage was reported for this event.

PROBABILITY OF FUTURE EVENTS

Thunderstorm 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 268 events in a 67.5-year reporting period, which provides an estimated annual occurrence of 3 to 4 events every year. Even though the intensity of wind events is not always damaging for the Ontario 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 Ontario County planning area. See additional information on climate change at the end of this section.

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 Ontario 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 recepticles, brick facades, and vehicles, unless reinforced, are vulnerable to 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 manufactered, homes are especially at risk for damage, injury, and death. Even anchored mobile homes are at an increased risk and can be severly damage when wind gusts reach 80 mph or higher. According to the American Community Survey, five-year estimates for 2021, a total of 3,601 manufactured homes are located in the Ontario County planning area. In addition, 57.05 percent (approximately 29,775 structures) of the housing structures in the Ontario 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 2021 American Community Survey (ACS) five-year estimates, the City of Geneva, Village of Naples, and Village of Phelps have a greater vulnerability to wind events due to 90 percent or more of their housing stock was built before 1980.

Table 17-5. Structures at Greater Risk by Participating Jurisdiction[11]

JURISDICTION	MANUFACTURED HOMES	PERCENT OF TOTAL HOUSING STOCK	SFR STRUCTURES BUILT BEFORE 1980	PERCENT OF TOTAL HOUSING STOCK
Ontario County	3,601	6.90	29,775	57.05
Village of Bloomfield	22	3.32	506	76.32

[11] U.S. Census Bureau, American Community Survey, 2021

JURISDICTION	MANUFACTURED HOMES	PERCENT OF TOTAL HOUSING STOCK	SFR STRUCTURES BUILT BEFORE 1980	PERCENT OF TOTAL HOUSING STOCK
Town of Bristol	83	7.47	486	43.74
Town of Canadice	209	17.13	713	58.44
City of Canandaigua	62	1.11	3,931	70.64
Town of Canandaigua	161	3.15	1,490	29.11
Village of Clifton Springs	18	2.18	700	84.85
Town of East Bloomfield	38	2.34	1,191	73.29
Town of Farmington	334	5.75	2,600	44.73
City of Geneva	5	0.10	4,767	91.81
Town of Geneva	59	3.28	1,340	74.40
Town of Gorham	61	2.83	1,305	60.58
Town of Hopewell	341	21.66	760	48.28
Town of Manchester	1,063	25.69	2,744	66.33
Village of Manchester	164	23.33	525	74.68
Town of Naples	150	12.32	819	67.24
Village of Naples	18	3.95	422	92.54
Town of Phelps	133	4.54	2,304	78.66
Village of Phelps	0	0.00	830	89.44
Town of Richmond	0	0.00	1,223	62.78
Village of Rushville	32	12.21	193	73.66
Town of Seneca	58	5.00	804	69.25
Village of Shortsville	73	10.21	599	83.78
Town of South Bristol	29	2.10	701	50.76
Town of Victor	430	6.19	1,937	27.90
Village of Victor	0	0.00	696	59.85
Town of West Bloomfield	385	29.55	660	50.65

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 8.5 percent of the planning area population lives below the poverty level (Table 17-6).

Table 17-6. Populations at Greatest Risk by Jurisdiction[12]

JURISDICTION	POPULATION BELOW POVERTY LEVEL
Ontario County	9,525
Village of Bloomfield	102
Town of Bristol	156
Town of Canadice	118
City of Canandaigua	845
Town of Canandaigua	902
Village of Clifton Springs	221
Town of East Bloomfield	223
Town of Farmington	1,298
City of Geneva	2,339
Town of Geneva	322
Town of Gorham	211
Town of Hopewell	318
Town of Manchester	996
Village of Manchester	133
Town of Naples	491
Village of Naples	175
Town of Phelps	572
Village of Phelps	348
Town of Richmond	64
Village of Rushville	30
Town of Seneca	142
Village of Shortsville	103
Town of South Bristol	124
Town of Victor	410
Village of Victor	148
Town of West Bloomfield	278

The Ontario 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

[12] US Census Bureau, American Community Survey, 2021

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.

Table 17-7. Critical Facilities Vulnerable to Wind Events

CRITICAL FACILITIES	POTENTIAL IMPACTS
Emergency Response Departments (EOC, Fire, Police, EMS), Hospitals and Medical Centers	o Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications. o Emergency vehicles can be damaged by falling trees or flying debris. o Power outages could disrupt communications, delaying emergency response times. o Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities. o Debris/downed trees can impede emergency response vehicle access to areas. o Increased number of structure fires due to gas line ruptures and downed power lines, further straining the capacity and resources of emergency personnel. o First responders are exposed to downed power lines, unstable and unusual debris, hazardous materials, and generally unsafe conditions.
Airport, Academic Institutions, Animal Shelters, Evacuation Centers & Shelters, Governmental Facilities, Residential/ Assisted Living Facilities	o Structures can be damaged by falling trees or flying debris. o Power outages could disrupt critical care. o Backup power sources could be damaged. o Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities. o Evacuations may be necessary due to extended power outages, gas line ruptures, or structural damage to facilities. o Power outages and infrastructure damage may prevent larger airports from acting as temporary command centers for logistics, communications, and emergency operations. o Temporary break in operations may significantly inhibit post event evacuations. o Damaged or destroyed highway infrastructure may substantially increase the need for airport operations.
Commercial Suppliers (food, gas, etc.)	o Facilities, infrastructure, or critical equipment including communications may be damaged, destroyed or otherwise inoperable. o Essential supplies like medicines, water, food, and equipment deliveries may be delayed. o Economic disruption due to power outages and fires negatively impact airport services as well as area businesses reliant on airport operations.
Utility Services and Infrastructure (electric, water, wastewater, communications)	o Emergency operations and services may be significantly impacted due to damaged facilities and/or loss of communications. o Emergency vehicles can be damaged by falling trees or flying debris. o Power outages could disrupt communications, delaying emergency response times. o Critical staff may be injured or otherwise unable to report for duty, limiting response capabilities. o Debris/downed trees can impede emergency response vehicle access to areas. o Increased number of structure fires due to gas line ruptures and downed power lines, further straining the capacity and resources of emergency personnel.

SECTION 17: WIND

A wind event can also result in traffic disruptions, injuries and in rare cases, fatalities. Impact of thunderstorms winds experienced in the Ontario County planning area has resulted in six injuries and three fatalities. Impact of wind events experienced in the Ontario County planning area in terms of structural damages 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 six injuries and three fatalities, the impact is considered "Substantial" with multiple injuries and fatalities possible depending on the severity of the event. Overall, in the past 67.5 years there has been an estimated total of $8,616,671 damages (in 2023 dollars) in the Ontario County planning area due to damaging wind events. The estimated average annual loss from a damaging wind event is $127,654.

Table 17-8 Estimated Annualized Losses by Participating Jurisdiction

JURISDICTION	TOTAL PROPERTY AND CROP LOSS	ANNUAL LOSS ESTIMATES
Ontario County	$3,362,853	$49,820
Town of Bristol	$168,726	$2,500
Town of Canadice	$9,513	$141
City and Town of Canandaigua	$623,501	$9,237
Village of Clifton Springs	$179,554	$2,660
Town of East Bloomfield and Village of Bloomfield	$130,437	$1,932
Town of Farmington	$203,063	$3,008
City and Town of Geneva	$701,670	$10,395
Town of Gorham	$145,559	$2,156
Town of Hopewell	$31,446	$466
Town and Village of Manchester	$124,174	$1,840
Town and Village of Naples	$114,007	$1,689
Town and Village of Phelps	$397,035	$5,882
Town of Richmond	$36,129	$535
Village of Rushville	$0	$0
Town of Seneca	$43,990	$652
Village of Shortsville	$8,455	$125
Town of South Bristol	$28,476	$422
Town and Village of Victor	$2,287,978	$33,896
Town of West Bloomfield	$20,105	$298
TOTALS	**$8,616,671**	**$127,654**

SECTION 17: 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:

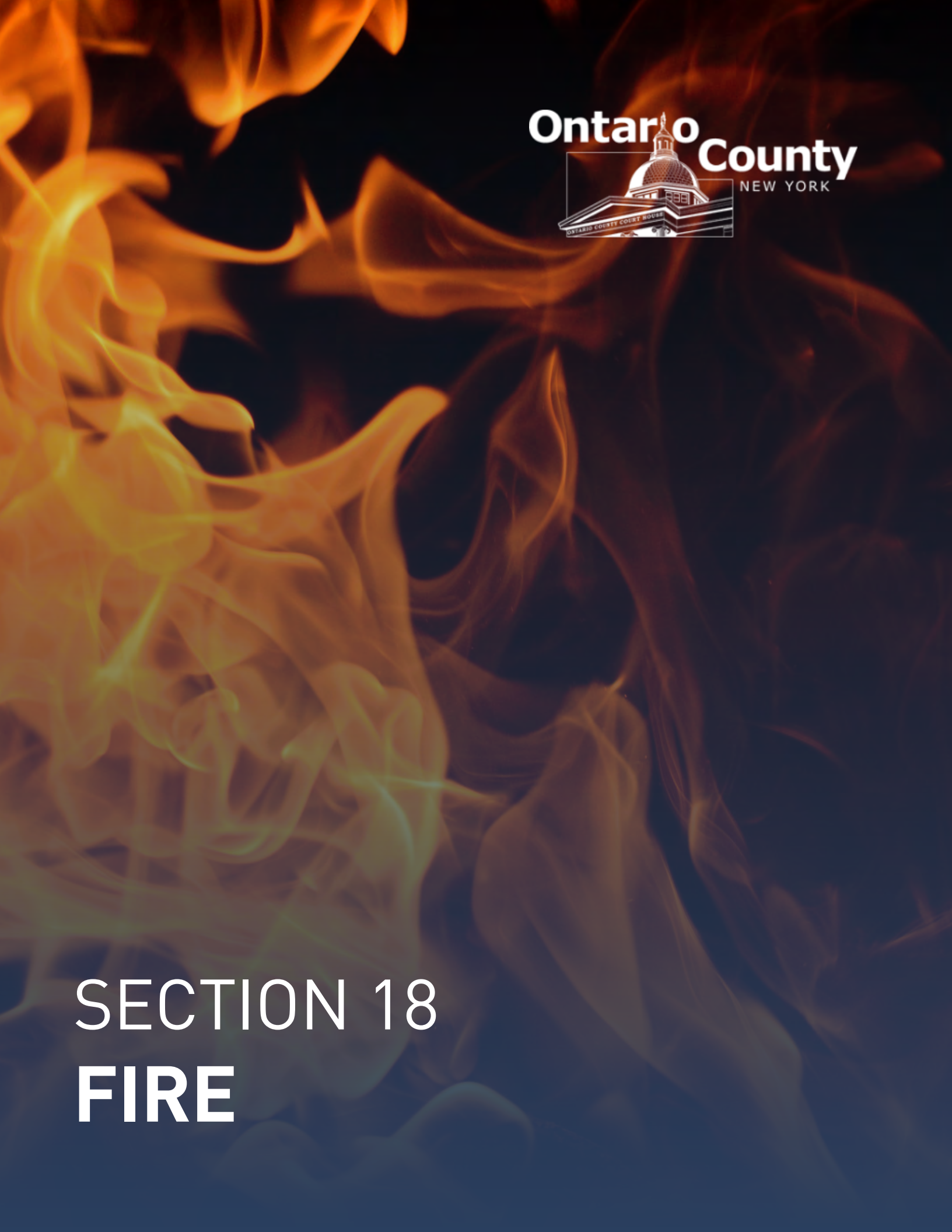
- Individuals exposed to the storm can be struck by flying debris, falling limbs, or downed trees causing serious injury or death.
- Structures can be damaged or crushed by falling trees, which can result in physical harm to the occupants.
- Significant debris and downed trees can result in emergency 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 (57 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 such as the Hemlock-Canadice State Park or the region's Wine Trails may be damaged or inaccessible due to downed trees or debris, causing temporary impacts to area businesses.

- Historical sites and properties, a total of 74 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.



SECTION 18
FIRE

SECTION 18: FIRE

Hazard Description 1
Location 1
Extent 2
Historical Occurrences 2
Probability of Future Events 3
Vulnerability and Impact 3
Assessment of Impacts 6
Climate Change Considerations 6

HAZARD DESCRIPTION



A fire, also referred to as an urban fire or urban conflagration, involves the burning of buildings and infrastructure within an urban or developed area. These fires can be contained to a single structure or spread across multiple buildings and properties. Fires are sometimes classified as residential, meaning the fire occurs in a home, or nonresidential, meaning the fire occurred in a business, factory, or building used for purposes other than living.

Most fires are human caused, examples include burning garbage and debris, discarding cigarettes, knocking over candles inside a home, and leaving a stovetop or cooking appliance unattended. Fires are also caused by technological error which includes defective equipment installation, aging or outdated electrical equipment, and overloaded power surges. Natural disasters and other hazards may also cause fires, for example, lightning strikes, or dry weather and drought. It is also possible for a wildland fire to spread into an urban area, causing an urban fire, as was seen in Colorado in 2021 with the Marshall Fire and in Hawaii with the 2023 Maui Fire, both of which started as wildland fires and ended as urban conflagration of thousands of homes and commercial properties.

Despite the cause, fires that occur in an urban or developed area have the potential to greatly impact public health and safety, as well as cause significant infrastructure damage and economic loss. People are subject to respiratory illness due to smoke inhalation and may even become trapped inside burning structures. Fires can also damage and destroy homes, schools, businesses, commercial buildings, and even vehicles. County and local fire departments are responsible for the containment and response to all fire events.

LOCATION

Fires occur in all developed areas of Ontario County planning area and are not contained to any geographic boundaries. Wildland Urban Interface (WUI) areas are at greater risk from spreading wildland fires, see Section 16 for more information related to the WUI areas within Ontario County. Similarly, areas adjacent to hazardous materials facilities and major transportation routes (such as rail lines) may be at greater risk of fires started from a hazardous material incident. This includes the New York State Thruway (I-90), Route 96, Route 5, US-20, Route 332, Route 14, and Route 21. Areas along the Finger Lakes Railroad may also be at a greater risk of fire.

EXTENT

The extent of the damage caused by a fire varies significantly and is dependent on several factors including fuel type, the size and intensity of the fire, the type of buildings impacted, and local fire suppression capabilities. In some cases, fires can be relatively small and contained, causing minor damage. However, larger fires can quickly spread out of control, engulfing additional buildings, and becoming multi-structure fires. Larger fires can impact multiple buildings or structures at once, even damaging critical infrastructure like power lines and transportation systems. The extent of a fire is also dependent on the environmental impact. Sometimes, the burning of structures and materials results in the release of chemicals and pollutants into the air which may impact public health. Fires can create a significant risk of injuries and fatalities to the public and firefighters. According to the U.S. Fire Administration, the New York fire mortality rate is 10.3 deaths per million population which is less than the national fire morality rate of 13 deaths per million population. The extent of a fire ranges from minor to severe, and the planning area could experience all levels of severity.

HISTORICAL OCCURRENCES

The historical fire events listed are based on local and state reports. This data is provided on a countywide basis. Comprehensive event data at the municipality level was not available. Since 2013, 2,739 structural fires are known to have occurred in the Ontario County planning area. These fires have caused a total of 35 civilian injuries and 11 civilian fatalities. An additional 24 injuries have been reported from fire service personnel. It is reported that 650 fires required mutual aid and additional response assistance. Over the 11-year span, structural fires have caused $13,093,551(2023 dollars) in damages. Table 18-1 presents information on known historical events impacting the Ontario County planning area, including all participating jurisdictions, resulting in damages, injuries, or fatalities.

Table 18-1. Historical Fire Events, 2013-2023

YEAR	NUMBER OF STRUCTURAL FIRES	CIVILIAN INJURIES	CIVILIAN FATALITIES	FIRE SERVICE INJURIES	FIRE SERVICE FATALITIES	MUTUAL AID RECIEVED	FIRE DOLLAR LOSS
2013	234	5	0	3	0	67	$65,353
2014	256	5	2	0	0	70	$176,728
2015	236	2	1	3	0	59	$664,523
2016	286	5	0	4	0	53	$740,042
2017	271	5	1	0	0	70	$1,091,163
2018	270	2	2	5	0	68	$932,562
2019	281	2	4	5	0	70	$2,337,697
2020	280	2	0	1	0	62	$1,870,061
2021	246	6	1	1	0	58	$2,979,585
2022	289	1	0	0	0	49	$1,916,977
2023	90	0	0	2	0	24	$318,860
TOTALS	**2,739**	**35**	**11**	**24**	**0**	**650**	**$13,093,551**

Table 18-2. Summary of Historical Fire Events, 2013-2023

JURISDICTION	NUMBER OF EVENTS	TOTAL FATALITIES	TOTAL INJURIES	ESTIMATED DAMAGES
Ontario County	2,739	11	59	$13,093,551

PROBABILITY OF FUTURE EVENTS

Urban fires are an annual occurrence in the Ontario County planning area and some jurisdictions have several large and multi-agency events each year. Based on historical data, fire events are "Highly Likely" meaning an event is probable within the next year.

VULNERABILITY AND IMPACT

Fires cause significant property damage. According to the U.S. Fire Administration, between 2012 and 2021 nonresidential fires caused more than $3 billion in losses and residential fires caused more than $8 billion in losses, across the United States. In the Ontario County planning area, fires have caused $13,093,551(2023 Dollars) in loss between 2013 and 2023, which results in an annualized loss of $1,190,323.

Table 18-3. Fire Event Damage Totals, 2013-2023

JURISDICTION	REPORTED LOSS	ANNUAL LOSS ESTIMATES
Ontario County	$13,093,551	$1,190,323

All buildings and infrastructure have some vulnerability to a structure fire, especially areas with older buildings or buildings built closer together, which have a higher risk for fire ignition and fire spread. 57 percent of homes in the Ontario County planning area were built before 1980 and are more vulnerable to fires. Older homes often used flammable building materials such as wood. They may also have outdated wiring, inadequate or non-working smoke alarms, limited fire barriers, and faulty heating and electrical systems. According to the USFA, 80 percent of all U.S. fire deaths occur in the home.

Critical facilities are vulnerable to a range of impacts caused by urban fires. The impacts to critical facilities identified by the Ontario County Planning Team are similar to the impacts listed in Section 16 Wildfire. For a comprehensive list by participating jurisdiction see Appendix C.

Fires also cause health concerns, especially to vulnerable populations. Most fire fatalities are not caused by burns, but by smoke inhalation. Smoke is made of components that are toxic, causing lung illness and even fatalities. The USFA reports that young children have a greater risk of dying in a fire compared to older children. Elderly people also have a greater risk of dying in a fire compared to the general population. Those who are 65 and older have at least 2.2 times the risk of dying in a fire, and this risk has increased by 36 percent between 2012 and 2021. Low-income communities and those living in poverty are also more vulnerable to fires. They may live in older, substandard, and overcrowded housing which typically has outdated electrical wiring, heating, and ventilation, increasing the risk of fires. See table 18-5 for more information regarding Ontario County's most vulnerable populations.

Each year, from 2018 to 2020, an estimated average of 1,900 fatal fires occurred in residential buildings across the U.S. These fires resulted in an annual estimated average of 2,745 deaths,

625 injuries, and $230 million in property damages. The USFA also reports 205 fire related deaths in New York State during the year of 2021 alone. Between 2013 and 2023 the state reports 59 total injuries and 11 fatalities across the Ontario County planning area.

The structural impact of fires in the planning area is considered Limited with less than 10 percent of the property destroyed, and critical facilities shut down for 24 hours or less. However, due to the number of reported fatalities, the impact of fires in the Ontario County planning area is considered "Substantial" with the possibility of multiple fatalities depending on the size of the event.

Table 18-4. Structures at Greater Risk by Participating Jurisdiction[1]

JURISDICTION	MANUFACTURED HOMES	PERCENT OF TOTAL HOUSING STOCK	SFR STRUCTURES BUILT BEFORE 1980	PERCENT OF TOTAL HOUSING STOCK
Ontario County	3,601	6.90	29,775	57.05
Village of Bloomfield	22	3.32	506	76.32
Town of Bristol	83	7.47	486	43.74
Town of Canadice	209	17.13	713	58.44
City of Canandaigua	62	1.11	3,931	70.64
Town of Canandaigua	161	3.15	1,490	29.11
Village of Clifton Springs	18	2.18	700	84.85
Town of East Bloomfield	38	2.34	1,191	73.29
Town of Farmington	334	5.75	2,600	44.73
City of Geneva	5	0.10	4,767	91.81
Town of Geneva	59	3.28	1,340	74.40
Town of Gorham	61	2.83	1,305	60.58
Town of Hopewell	341	21.66	760	48.28
Town of Manchester	1,063	25.69	2,744	66.33
Village of Manchester	164	23.33	525	74.68
Town of Naples	150	12.32	819	67.24
Village of Naples	18	3.95	422	92.54
Town of Phelps	133	4.54	2,304	78.66
Village of Phelps	0	0.00	830	89.44
Town of Richmond	0	0.00	1,223	62.78
Village of Rushville	32	12.21	193	73.66
Town of Seneca	58	5.00	804	69.25

[1] U.S. Census Bureau, American Community Survey, 2021

JURISDICTION	MANUFACTURED HOMES	PERCENT OF TOTAL HOUSING STOCK	SFR STRUCTURES BUILT BEFORE 1980	PERCENT OF TOTAL HOUSING STOCK
Village of Shortsville	73	10.21	599	83.78
Town of South Bristol	29	2.10	701	50.76
Town of Victor	430	6.19	1,937	27.90
Village of Victor	0	0.00	696	59.85
Town of West Bloomfield	385	29.55	660	50.65

Table 18-5. Populations at Greatest Risk by Jurisdiction[2]

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5	POPULATION BELOW POVERTY LEVEL
Ontario County	22,554	5,382	9,525
Village of Bloomfield	265	44	102
Town of Bristol	490	60	156
Town of Canadice	369	68	118
City of Canandaigua	2,234	431	845
Town of Canandaigua	2,241	353	902
Village of Clifton Springs	475	65	221
Town of East Bloomfield	804	178	223
Town of Farmington	2,092	978	1,298
City of Geneva	1,856	781	2,339
Town of Geneva	1,035	138	322
Town of Gorham	1,068	267	211
Town of Hopewell	820	76	318
Town of Manchester	1,908	399	996
Village of Manchester	318	67	133
Town of Naples	510	63	491
Village of Naples	174	32	175
Town of Phelps	1,203	445	572
Village of Phelps	332	206	348
Town of Richmond	925	52	64
Village of Rushville	111	17	30
Town of Seneca	482	151	142

[2] U.S. Census Bureau, American Community Survey, 2021

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5	POPULATION BELOW POVERTY LEVEL
Village of Shortsville	297	56	103
Town of South Bristol	539	38	124
Town of Victor	3,198	783	410
Village of Victor	545	126	148
Town of West Bloomfield	780	121	278

ASSESSMENT OF IMPACTS

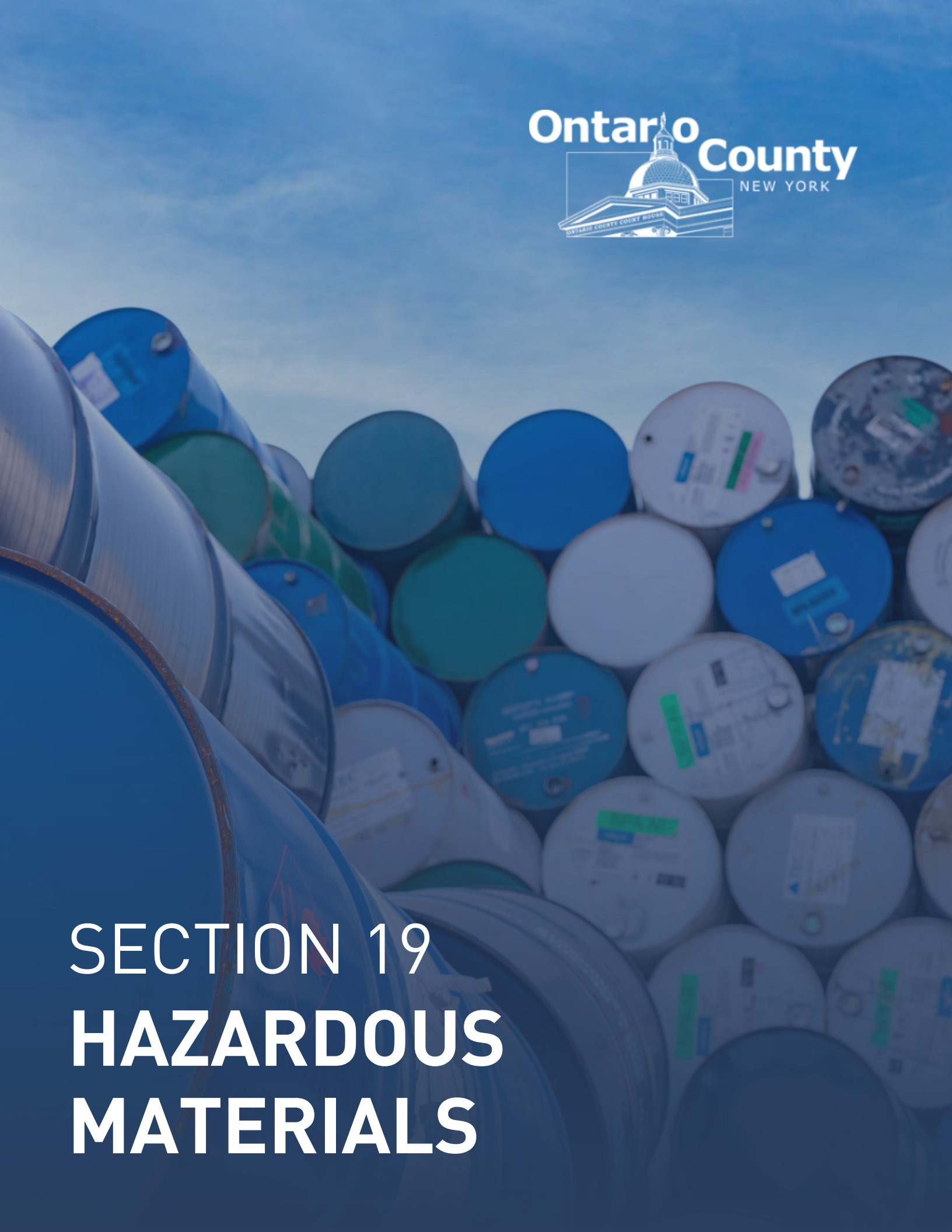
A fire event poses a potentially significant risk to public health and safety, particularly if the fire spreads quickly. Significant fire events can be frequently associated with a variety of impacts, including:

- 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 near 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.
- Displaced residents may not be able to immediately return to work, further slowing economic recovery.
- Older homes are generally exempt from modern building code requirements, which may require fire suppression equipment in the structure. 57 percent of homes in the planning area were built before 1980. Within Ontario County, 74 buildings, districts, and sites are on the National Register of Historic Places.
- 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.
- Historical or cultural resources may be damaged or destroyed.
- 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.

The economic and financial impacts of a fire 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 government, businesses, and citizens will contribute to the overall economic and financial conditions in the aftermath of a fire event.

CLIMATE CHANGE CONSIDERATIONS

While the effects of climate change on wildfires have been studied extensively (see Section 16), there has been less research on its impact on urban and structural fires. However, it is known that increased temperatures and drought will remove moisture from vegetation which could create more fire fuel. With the right combination of abundant vegetation, drought, and high wind, fires could also spread rapidly among developed areas. Climate change is increasing the risk for these conditions.



SECTION 19

HAZARDOUS MATERIALS

SECTION 19: HAZARDOUS MATERIALS

Hazard Description 1
Location 2
Extent 3
Historical Occurrences 4
Probability of Future Events 4
Vulnerability and Impact 4
Assessment of Impacts 6
Climate Change Considerations 7

HAZARD DESCRIPTION



Hazardous materials come in the form of explosives, flammable and combustible substances, poisons, and radioactive materials. A hazardous material (HAZMAT) incident involves a substance outside normal safe containment in sufficient concentration to pose a threat to life, property, or the environment.

Chemicals are found everywhere. They purify drinking water, increase crop production, and simplify household chores. But chemicals also can be hazardous to humans or the environment if used or released improperly. Hazards can occur during production, storage, transportation, use, or disposal. You and your community are at risk if a chemical is used unsafely or released in harmful amounts into the environment where you live, work, or play.

In a hazardous materials incident, solid, liquid, and/or gaseous contaminants may be released from fixed or mobile containers. This profile focuses on fixed sites. Weather conditions will directly affect how the hazard develops.

The Toxics Release Inventory (TRI) is a publicly available database from the federal Environmental Protection Agency (EPA) which contains information on toxic chemical releases and other waste management activities that are reported annually by certain covered industry groups federal facilities. This inventory was established under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) and expanded by the Pollution Prevention Act of 1990. Each year, facilities that meet certain activity thresholds must report their releases and other waste management activities for listed toxic chemicals to the EPA and their state or tribal entity. A facility must report if it meets the following three criteria:

- The facility falls within one of the following industrial categories: manufacturing; metal mining; coal mining; electric generating facilities that combust coal and/or oil; chemical wholesale distributors; petroleum terminals and bulk storage facilities; Resource Conservation and Recovery Act (RCRA) Subtitle C Treatment, Storage and Disposal (TSD) facilities; and solvent recovery services.
- Have ten or more full-time employee equivalents.
- Manufactures or processes more than 25,000 pounds or otherwise uses more than 10,000 pounds of any listed chemical during the calendar year. Persistent, Bio-accumulative and

Toxic (PBT) chemicals are subject to different thresholds of ten pounds, 100 pounds or 0.1 grams depending on the chemical.

Tier II reporting is required under Section 312 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA). The purpose of this form is to provide state, tribal, and local officials, and the public with specific information on potential hazards. This includes the location, as well as the amount, of hazardous chemicals present at facilities during the previous calendar year. Some states may have specific requirements for reporting and submission of the Tier II inventory form and/or the state reporting form or format. Tier II reporting requirements for the New York State can be viewed at https://www.dhses.ny.gov/tier-ii-reporting.

The Ontario County Local Emergency Planning Committee (LEPC) is the group that promotes hazardous materials safety awareness and planning and response efforts within the planning area. The Ontario County LEPC consists of representatives from the community, local government, and Ontario County industries. The principle duty of the LEPC is to continue the development and annual review of the Hazardous Material Emergency Response Plan for the county and its included municipalities.

LOCATION

A hazardous material spill occurring along railroad tracks and major highways near populated areas in the Ontario County planning area is of concern. Trains and trucks can carry a variety of materials that would, in large quantity, threaten the health and safety of people and the natural environment in the vicinity of a spill.

Ontario County has a highly concentrated network of transportation. The New York State Thruway (I-90), Route 96 and Routes 5 & 20 traverse the northern and central portions of the County, connecting the area with Syracuse to the East and Rochester to the West. Ontario County is uniquely positioned relative to I-90 with four interchanges across the northern tier of the County at the City and Towns of Victor, Canandaigua, Manchester, and Geneva.

There are several other major highways in the planning area. Route 64 connects the northern and southern regions of the County to adjacent Monroe County and the Greater Rochester Metropolitan area. Newly expanded Route 332 connects the New York State Thruway to the center of the County. Route 14 connects the City of Geneva and the eastern side of the County with the New York State Thruway. Scenic Route 21 runs from the northeast portion of the County to its southernmost communities.

Ontario County is also home to the Finger Lakes Railroad (FLRR), a short-line rail service, which provides freight and excursion services into six counties in the Finger Lakes and Central regions of New York State. All major highways, railroads, and the surrounding areas are at risk of a HAZMAT incident.

Under the Community Right-to-Know program, all facilities which store significant quantities of hazardous chemicals must share this information with state and local emergency responders and planners. Table 19-1 shows the locations of available TRI and Tier II toxic sites in and around the Ontario County planning area. These 19 sites are also at risk of a HAZMAT incident.

Table 19-1. EPA 2022 Toxic Release Inventory (TRI) for Ontario County

TRI FACILITY NAME	LOCATION	ASSOCIATED CHEMICALS
Pactiv LLC.	City of Canandaigua	Zinc compounds
Crosman Corp.	Village of Bloomfield	Lead
Elderlee Inc.	Town of Phelps (Oaks Corners)	Lead and Lead Compounds
Northrup Farmington	Town of Farmington	Lead
Manchester Facility	Village of Clifton Springs	Polycyclic aromatic compounds
Crosman Corp.	Village of Bloomfield	Nickel
Univar Solutions USA Inc. - Geneva Branch	City of Geneva	Nitric acid
Northrup Farmington	Town of Farmington	Nitrate compounds (water dissociable; reportable only when in aqueous solution)
Elderlee Inc.	Town of Phelps (Oaks Corners)	Zinc compounds
Guardian Industries - Geneva	City of Geneva	Ammonia
Oldcastle Apg. New England	Town of Victor	Lead And Lead Compounds
Gw Lisk Co Inc.	Village of Clifton Springs	1-Bromopropane
Gw Lisk Co Inc.	Village of Clifton Springs	Lead compounds
Crosman Corp.	Village of Bloomfield	Copper
Crosman Corp.	Village of Bloomfield	Chromium
Crosman Corp.	Village of Bloomfield	Manganese
Guardian Industries - Geneva	City of Geneva	Lead compounds
Crosman Corp.	Village of Bloomfield	Mercury
Redcom Laboratories Inc.	Town of Victor	Lead

EXTENT

The extent of a hazardous material release will depend on whether it is from a mobile or fixed site and the size of impact. The range of intensity will vary greatly depending on the circumstances. These factors and conditions include the material, toxicity, duration of the release, and environmental conditions such as the wind and precipitation.

Hazardous materials or toxic releases can have substantial impact on communities. Such events can cause multiple deaths, completely shut down facilities for 30 days or more, and cause more than 50 percent of affected properties to be destroyed or suffer major damage. In a hazardous materials incident, solid, liquid and/or gaseous contaminants may be released from fixed or mobile containers. Weather conditions would directly affect how the hazard develops. The micro-meteorological effects on buildings and terrain can alter travel patterns and duration of agents. Shielding in the form of permanent shelter can protect people from harmful effects. Non-compliance with fire and building codes, as well as failure to maintain existing fire and containment

features can substantially increase damage from a hazardous materials release. The duration of a hazardous materials incident can range from hours to days. Warning time is minimal to none.

HISTORICAL OCCURRENCES

Hazardous materials are substances that if released or misused can cause death, serious injury, long-lasting health effects, and damage to infrastructure and the environment. Many products containing hazardous chemicals are used and stored in homes routinely. These products are also shipped daily on the nation's highways, railroads, waterways, and pipelines.

A total of 561 spill incidents have been reported in Ontario County between 2018 and 2023 according to the New York State Department of Environmental Conservation Spill Incidents database. This includes chemical spills larger than 1 liter, chemicals that have a hazard rating of 2 or above, and for spills of unknown chemicals. Damages, injuries, and fatalities are not reported in this database. However, the frequency of these events does indicate a significant level of risk for the planning area.

PROBABILITY OF FUTURE EVENTS

Hazardous material spills are usually the result of human error and/or accidents, which cannot be predicted. However, given the amount of traffic through the planning area and its large network of transportation, it is probable that an incident will occur in any given year. Most spills will not lead to negative health or safety impacts and will not cause substantial negative impacts on the air, soil, or groundwater. The probability of a spill threatening the health of thousands and of having long-term negative environmental consequences is, based on previous experience, low.

Based on the historic incident records and team input, the frequency of occurrence for typical hazardous material incidents is considered Highly Likely. However, many of the previous spill incidents were minor and related to vehicle accidents resulting in fuel and oil spills. Based on the best available data the frequency of occurrence for more significant hazardous material incidents is considered "Occasional", meaning an event is probable in the next five years for the Ontario County planning area.

VULNERABILITY AND IMPACT

Based on the prevalence and geographic proximity of hazardous materials transportation routes and fixed locations across 7 different jurisdictions, most of the Ontario County planning area is vulnerable to the impacts of a HAZMAT incident.

Public health and environmental impacts are the most common during a hazardous materials incident. The release of toxic chemicals can pose immediate health effects including respiratory problems, chemical burns, poisoning, and long-term illnesses such as cancer. Vulnerable populations including children and the elderly may be more susceptible to health impacts. The population over 65 and under the age of 5 in the Ontario County planning area is estimated at 25 percent of the total population or an estimated total of 27,936 potentially vulnerable residents in the planning area based on age.

In extreme cases, an evacuation may be ordered to remove people from the hazardous area. Evacuating areas affected by HAZMAT incidents can be difficult, especially for those who live

below the poverty level and lack transportation and financial resources. An estimated 8.5 percent of the planning area population live below the poverty level.

Table 19-2. Populations at Greater Risk of HAZMAT Incidents[1]

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5	POPULATION BELOW POVERTY LEVEL
Ontario County	22,554	5,382	9,525
Village of Bloomfield	265	44	102
Town of Bristol	490	60	156
Town of Canadice	369	68	118
City of Canandaigua	2,234	431	845
Town of Canandaigua	2,241	353	902
Village of Clifton Springs	475	65	221
Town of East Bloomfield	804	178	223
Town of Farmington	2,092	978	1,298
City of Geneva	1,856	781	2,339
Town of Geneva	1,035	138	322
Town of Gorham	1,068	267	211
Town of Hopewell	820	76	318
Town of Manchester	1,908	399	996
Village of Manchester	318	67	133
Town of Naples	510	63	491
Village of Naples	174	32	175
Town of Phelps	1,203	445	572
Village of Phelps	332	206	348
Town of Richmond	925	52	64
Village of Rushville	111	17	30
Town of Seneca	482	151	142
Village of Shortsville	297	56	103
Town of South Bristol	539	38	124
Town of Victor	3,198	783	410
Village of Victor	545	126	148
Town of West Bloomfield	780	121	278

[1] U.S. Census Bureau, American Community Survey, 2021

SECTION 19: HAZARDOUS MATERIALS

Hazardous materials can have significant and long-term environmental impacts due to the release of toxic chemicals into the environment. Spills or leaks of chemicals may contaminate the soil, making it unsuitable for agriculture, which is prominent in the Ontario County planning area. Hazardous material incidents can also cause water pollution. The toxic substances can be carried by rainwater or runoff into nearby water bodies, which can harm aquatic life, disrupt ecosystems, and pose a public health risk if contamination occurs to drinking water sources. Gaseous releases can lead to air pollution, which can become widespread. HAZMAT incidents can also disrupt the local ecosystem, harming animals, and insects, leading to the displacement of native species.

While the best available data does not provide historical dollar loss amounts, hazardous material incidents can also be costly and impact the local economy. Emergency containment, clean up, and disposal may strain local resources and budgets. HAZMAT incidents can also lead to property damage, most commonly to industrial facilities and transportation networks. Based on best available data, the impact of hazardous materials incidents in Ontario County planning area is considered “Major” with the possibility of complete shutdown of critical facilities between one and four weeks.

Critical facilities in the planning area are vulnerable to a range of direct and indirect impacts caused by HAZMAT incidents. Many of the impacts to critical facilities identified by the Ontario County Planning Team are similar to the impacts listed in Sections 5 through 17. For a comprehensive list by participating jurisdiction see Appendix C.

ASSESSMENT OF IMPACTS

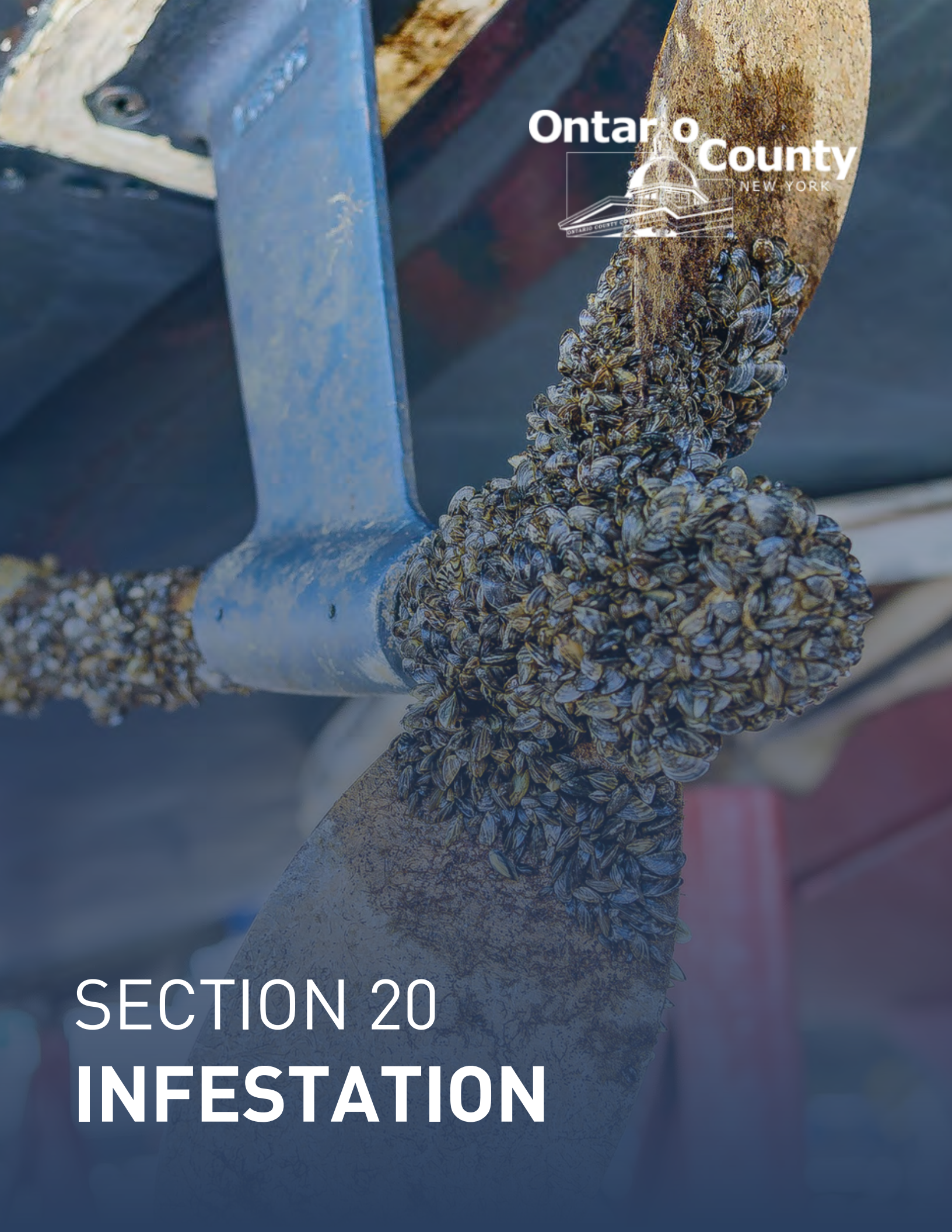
HAZMAT incidents have the potential to pose a significant risk to people and can create dangerous and difficult situations for public health and safety officials. HAZMAT incidents can be frequently associated with a variety of impacts, including:

- Vulnerable populations, particularly the elderly (20 percent of total population) and children under 5 (5 percent of total population), can face serious or life-threatening health problems from exposure to toxic chemicals.
- Transportation disruptions and road closures can result in emergency response vehicles being unable to access areas of the community.
- First responders are exposed to toxic chemicals, hazardous materials, and generally unsafe conditions, which could result in sickness and long-term health impacts.
- Economic disruption negatively impacts the programs and services provided by the community due to short- and long-term loss in revenue.
- Evacuations, shelter in place orders, or the closure of transportation routes can lead to the disruption of critical facilities, businesses, and schools.
- The environment may experience significant damage leading to air and water contamination, loss of wildfire, agriculture, and tourism.

The economic and financial impacts of hazardous material 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 HAZMAT incident.

CLIMATE CHANGE CONSIDERATIONS

As a non-natural hazard, climate change really has no direct impact on the future occurrences of hazardous material incidents. However, climate change is associated with an increase in severe weather. Severe weather events may cause damage to the storage of hazardous materials and can lead to an increase in chemical spills, leaks, or fires. Research and data regarding the impact of climate change on non-natural events is minimal and limited.



SECTION 20
INFESTATION

SECTION 20: INFESTATION

Hazard Description 1
Location 2
Extent 3
Historical Occurrences 6
Probability of Future Events 6
Vulnerability and Impact 7
Assessment of Impacts 9
Climate Change Considerations 10

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. 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 Ontario 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.[1] 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.[2]

[1] Source: https://www.invasivespeciesinfo.gov/what-are-invasive-species
[2] Source: https://www.arcgis.com/apps/MapJournal/index.html?appid=177bdd39e7d14be4b1ddce1bce925cad

SECTION 20: INFESTATION

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 Ontario 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.

Ontario County's large area of rural and forested land make the county especially susceptible to certain types of infestations. With over 184,000 acres of farmland[3], large swathes of Ontario County could be greatly impacted by agricultural pests, such as the spotted wing drosophilia or the swede midge, which have the capability to destroy crops.

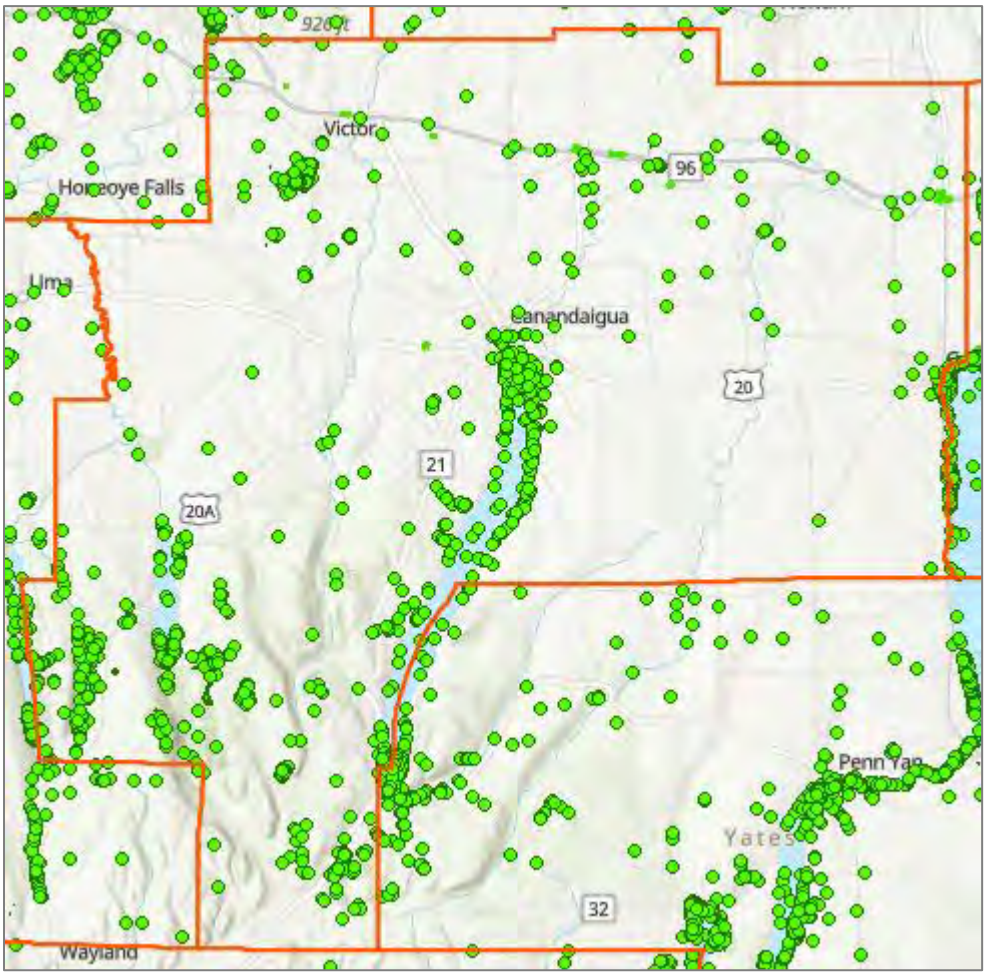
A multitude of large lakes and waterways are within the Ontario County planning area, notably Seneca Lake, Canandaigua Lake, Hemlock Lake, Canadice Lake, Honeoye Lake, Flint Creek, and Canandaigua Outlet. In total, 18 square miles in the county are comprised of water. These bodies of water are important 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 Ontario 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 Ontario 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.[4]

[3] Source: https://ontariocountyny.gov/1607/Agricultural-Districts
[4] Source: https://www.nyimapinvasives.org/data-and-maps

Figure 20-1. Confirmed Invasive Species Sightings in Ontario County



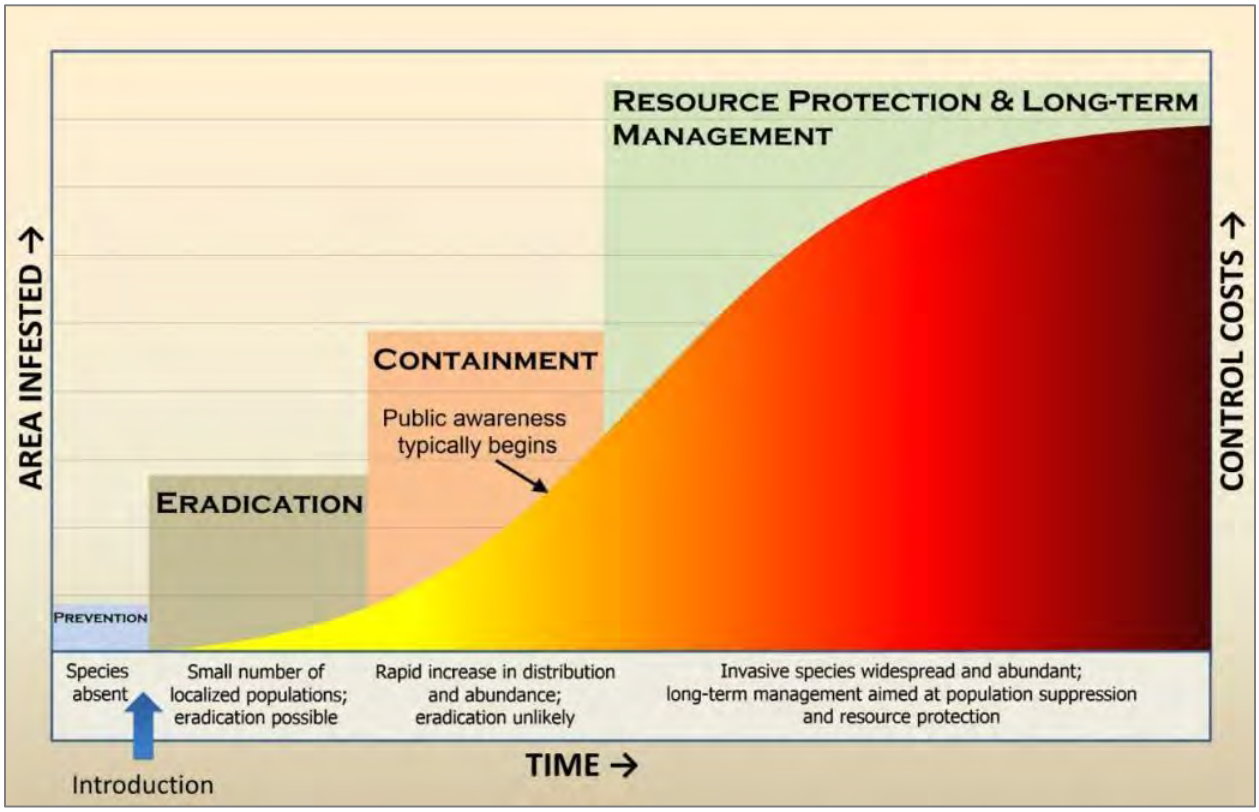
EXTENT

The extent of an infestation or 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 Ontario 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 Finger Lakes PRISM, hosted by the Finger Lakes Institute (FLI), covers a 17-county area including the Ontario 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 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. Finger Lake PRISM tiers and data were implemented in assessing the risk of infestation in Ontario 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	**Early Detection/Prevention**: 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	**Eradication**: 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

SECTION 20: INFESTATION

TIER	POPULATION STATUS	DESCRIPTION	IMPACT (Current or Future)
Tier 3	Medium; strategic management to contain infestations and slow spread	**Containment**: 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	**Local Control**: 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	**Monitor**: 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	**Evaluate**: 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 Finger Lakes PRISM, which includes Ontario County, the region contains many species in Tier 1 (55 species), Tier 2 (24), Tier 3 (42), and Tier 4 (106).

Of the 55 Tier 1 species the Finger Lakes PRISM has identified in the Finger Lakes region, 53 are graded as having “high” or “very high” invasiveness rankings. Additionally, nine 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 Ontario 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, Ontario 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.

HISTORICAL OCCURRENCES

Infestations and invasive species have occurred in Ontario 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 Ontario 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 Ontario County planning area today are detailed below.

Asian Long-Horned Beetle: Native to Asia, the Asian long-horned beetle was first intercepted in international trade in 1992, where it was found in wood packing materials. The beetle was first discovered in New York in 1996. Adult beetles lay eggs in many varieties of hardwood trees. From the eggs, larvae tunnel through the tree and disrupt the flow water and nutrients, killing the tree. Finger Lakes PRISM categorizes Asian long-horned beetles has having “high” invasiveness and “very high negative” socio-economic impact.

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.

Gypsy Moth: In the spring and summer of 2020, elevated gypsy moth populations were observed in the Bristol Mountain area of Ontario County. Noticeable defoliation occurred across central and western New York as the moths stripped trees and covered homes in caterpillar droppings and cocoons. While the effects of gypsy moths alone may not be enough to kill trees, the weakened trees become more susceptible to other pests like the emerald ash borer or hemlock woolly adelgid. Gypsy moths were first introduced to the U.S. in 1869 in attempts to breed them with silkworms for the silk industry; U.S. populations of gypsy moths were established after moths escaped in Massachusetts.[5]

PROBABILITY OF FUTURE EVENTS

Historical trends show increased incidents of infestation across New York and in the Ontario 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 Ontario 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 infestation or invasive species event affects Ontario County is dependent on circumstances like the type of species, how quickly that species can spread its population, and the types of

[5] Source: https://www.democratandchronicle.com/story/news/2020/07/13/gypsy-moth-damage-swells-across-central-western-ny/5426340002/

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 significant infestation events is considered “Highly Likely” with events probable within the next year.

VULNERABILITY AND IMPACT

Due to the varying nature of infestations and invasive species, the majority of Ontario County is vulnerable to infestation 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. Ontario County planning area includes 14,896 acres of 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 184,000 acres of farmland and roughly two percent of the planning area population working in agriculture, Ontario 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 Ontario 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 the Finger Lakes Region hundreds of millions of dollars. According to New York State Integrated Pest Management (NYSIPM), the spotted lanternfly has been sighted in Ontario County, but the presence of a full infestation is not confirmed. However, in neighboring Monroe County, a spotted lanternfly infestation has already been declared.[6]

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 established in Ontario 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 Ontario County planning area is estimated at 25 percent of the total population or an estimated total of 27,936 potentially vulnerable residents

[6] Source: https://lookerstudio.google.com/reporting/b0bae43d-c65f-4f88-bc9a-323f3189cd35/page/QUCkC

in the planning area based on age. An estimated 8.5 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[7]

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5	POPULATION BELOW POVERTY LEVEL
Ontario County	22,554	5,382	9525
Village of Bloomfield	265	44	102
Town of Bristol	490	60	156
Town of Canadice	369	68	118
City of Canandaigua	2,234	431	845
Town of Canandaigua	2,241	353	902
Village of Clifton Springs	475	65	221
Town of East Bloomfield	804	178	223
Town of Farmington	2,092	978	1298
City of Geneva	1,856	781	2339
Town of Geneva	1,035	138	322
Town of Gorham	1,068	267	211
Town of Hopewell	820	76	318
Town of Manchester	1,908	399	996
Village of Manchester	318	67	133
Town of Naples	510	63	491
Village of Naples	174	32	175
Town of Phelps	1,203	445	572
Village of Phelps	332	206	348
Town of Richmond	925	52	64
Village of Rushville	111	17	30
Town of Seneca	482	151	142
Village of Shortsville	297	56	103
Town of South Bristol	539	38	124
Town of Victor	3,198	783	410
Village of Victor	545	126	148

[7] U.S. Census Bureau, American Community Survey, 2021

SECTION 20: INFESTATION

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5	POPULATION BELOW POVERTY LEVEL
Town of West Bloomfield	780	121	278

The critical facilities identified by the Ontario 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 Ontario County Planning Team are similar to the impacts listed in Sections 5 through Section 17. For a comprehensive list by participating jurisdiction see Appendix C.

Impacts of infestations and invasive species experienced in the Ontario County planning area, including participating jurisdictions, have not resulted in reported injuries or fatalities, 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:

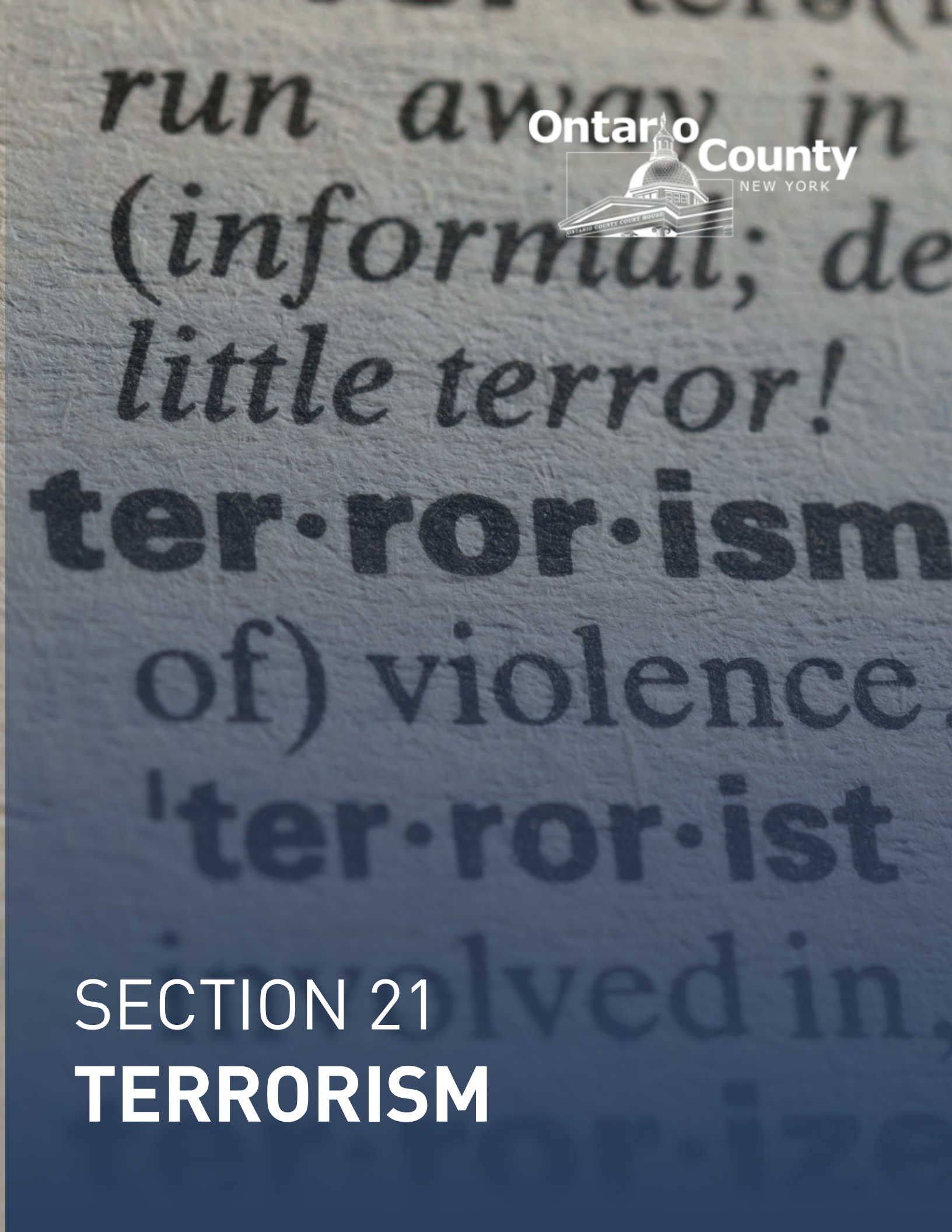
- Human health can be negatively impacted due to invasive species carrying new diseases, serving as vectors for existing diseases, or causing wounds through bites, stings, allergens, or other toxins.
- Agricultural production and food security may decrease from pest-caused damage to crops.
- Aquatic 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.

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.[8] Changes in the frequency of occurrence and severity of infestation events in the planning area should be reevaluated in the next planning cycle.

[8] 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.



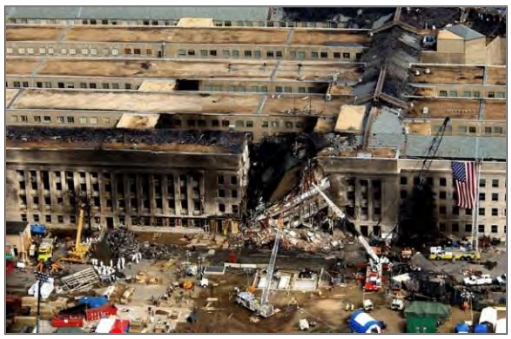
Ontario County
NEW YORK

SECTION 21
TERRORISM

SECTION 21: TERRORISM

Hazard Description 1
Location 2
Extent 2
Historical Occurrences 3
Probability of Future Events 4
Vulnerability and Impact 4
Assessment of Impacts 5
Climate Change Considerations 5

HAZARD DESCRIPTION



Terrorism is defined in the Code of Federal Regulations as "The unlawful use of force and violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives."

The Federal Bureau of Investigation (FBI) categorizes terrorism in the United States as one of two types—domestic terrorism or international terrorism. Domestic terrorism involves violent, criminal acts committed by individuals and/or groups to further ideological goals stemming from domestic influences, such as those of a political, religious, social, racial, or environmental nature. International terrorism involves violent, criminal acts committed by individuals and/or groups who are inspired by, or associated with, designated foreign terrorist organizations or nations (state-sponsored).

A terrorist attack can take several forms, depending on the technological means available to the terrorist, the nature of issue motivating the attack, and the points of weakness of the terrorist's target. Acts of terrorism include threats of terrorism, assassinations, kidnappings, hijackings, bomb scares and bombings, cyber-attacks (computer-based), and the use of chemical, biological, nuclear, and radiological weapons.

Bombings and explosive devices are one of the most common forms of attack. A terrorist using a chemical or biological weapon is of particular concern to officials because special training and equipment is needed to safely manage a Weapons of Mass Destruction incident. In addition, nuclear devices have the potential to cause the most destruction, and radioactive fallout can have widespread impacts.

Biological agents are infectious microbes or toxins used to produce illness or death in people, animals, or plants. Biological agents can be dispersed as aerosols or airborne particles. Terrorists may use biological agents to contaminate food or water, as they are extremely difficult to detect.

Chemical agents kill or incapacitate people, destroy livestock, or ravage crops. Some chemical agents are odorless and tasteless and are therefore difficult to detect. These chemical agents can have an immediate effect (a few seconds to a few minutes) or a delayed effect (several hours to several days). The Department of Defense estimates that as many as 26 nations may possess chemical agents and/or weapons, and an additional 12 may be seeking to develop them. The

Central Intelligence Agency reports that at least 10 countries are believed to possess or are currently conducting research on biological agents for weaponization.

Terrorism in the form of a cyber-attack, or cyber-terrorism, is defined as unlawful attacks and threats of attack against computers, networks, and the information stored therein when done to intimidate or coerce a government or its people in furtherance of political or social objectives. Cyber-attacks may be used to access classified information, attack or shut down critical facilities, utilities, and communication systems.

Terrorist incidents – as with other natural and technological disasters – involve the application of one or more modes of harmful force to the built environment. These modes include contamination (as in the case of chemical, biological radiological or nuclear hazards), energy (explosives, arson, and even electromagnetic waves), or denial of service (sabotage, infrastructure breakdown, and transportation service disruption).

LOCATION

There is no distinct geographic boundary to the threat of terrorism. An event is possible throughout the Ontario County planning area. However, it is important to note that high-risk targets for acts of terrorism include military and civilian government facilities, international airports, large cities, and high-profile landmarks. Terrorists might also target large public gatherings, water and food supplies, utilities, and corporate centers. Further, terrorists can spread fear by sending explosives or chemical and biological agents through the mail.

EXTENT

The Homeland Security Advisory System, issued by the U. S. Department of Homeland Security, previously used a color-coded terrorism warning system that identified five threat levels. In 2011, the Department of Homeland Security (DHS) replaced the color-coded alerts of the Homeland Security Advisory System (HSAS) with the National Terrorism Advisory System (NTAS), designed to communicate information more effectively about terrorist threats by providing timely, detailed information to the American public.

NTAS now consists of two types of advisories: Bulletins and Alerts. DHS has added Bulletins to the advisory system to be able to communicate current developments or general trends regarding threats of terrorism. NTAS Bulletins permit the Secretary to communicate critical terrorism information that, while not necessarily indicative of a specific threat against the United States, can reach homeland security partners or the public quickly, thereby allowing recipients to implement necessary protective measures. Because DHS may issue NTAS Bulletins in circumstances not warranting a more specific warning, NTAS Bulletins provide the Secretary with greater flexibility to provide timely information to stakeholders and members of the public.

When there is specific, credible information about a terrorist threat against the United States, DHS will share an NTAS Alert with the American public when circumstances warrant doing so. The Alert may include specific information, if available, about the nature of the threat, including the geographic region, mode of transportation, or critical infrastructure potentially affected by the threat, as well as steps that individuals and communities can take to protect themselves and help prevent, mitigate or respond to the threat. The Alert may take one of two forms: Elevated, if there is credible threat information, but only general information about timing and target such that it is

reasonable to recommend implementation of protective measures to thwart or mitigate against an attack; or Imminent, if the threat is believed credible, specific, and impending in the very near term. Terrorism Advisory System Alerts are described in Figure 21-1.[1]

Figure 21-1. National Terrorism Advisory



HISTORICAL OCCURRENCES

The history of terrorism on United States soil includes the attacks of September 11, 2001, on the World Trade Center in New York and the Pentagon in Washington, D.C. and the ensuing anthrax attacks; the 1995 bombing of the Murrah Federal Building in Oklahoma City; the bombing of the World Trade Center in 1993; and the Boston Marathon Bombings in 2013.

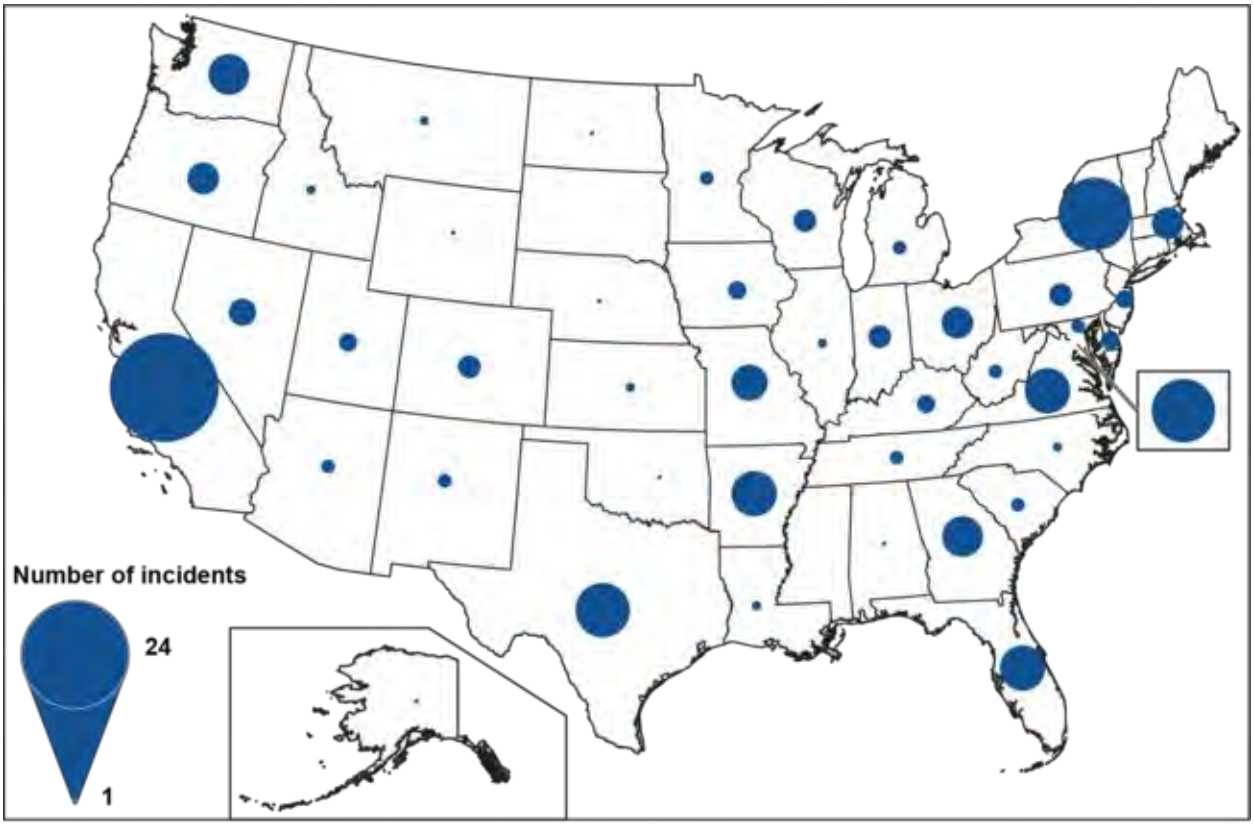
There are no reports of terrorism in Ontario County. However, New York State has experienced a significant number of domestic terrorism events as shown in Figure 21-2. The United States Department of Homeland Security reported 231 domestic terrorism incidents between 2010 and

[1] Source: Department of Homeland Security, https://www.dhs.gov/national-terrorism-advisory-system

2021. These incidents occurred across the Unites States, but the greatest number of events occurred in states with major metropolitan areas such as California, New York, and Washington D.C.

None of these incidents occurred within the planning area, but surrounding communities have been impacted, and some of the nation's worst attacks have occurred within the state.

Figure 21-2. Domestic Terrorism Incidents in the U.S. Between 2010 and 2021



Source: GAO analysis of Department of Homeland Security Counterterrorism Mission Center data. | GAO-23-104720

PROBABILITY OF FUTURE EVENTS

The types, frequencies, and locations of many natural hazards are identifiable and, even in some cases, predictable, as the laws of physics and nature govern them. Terrorism, however, cannot be forecast with any accuracy. There is some potential for most, if not all, types of intentional terrorist acts to occur anywhere and at any time. Reports also show that domestic terrorist incidents are on the rise in the Unites States, which indicates the slight possibility of an increased risk in the future. Based on best available data, it is "Unlikely" for a terrorist event to occur in the planning area in the next five years.

VULNERABILITY AND IMPACT

There is no defined geographic boundary for a terrorist event. All the population, buildings, critical facilities, infrastructure and lifelines and hazardous materials facilities are considered exposed to the hazards of terrorism and could potentially be impacted.

SECTION 21: TERRORISM

There are no past local events. Therefore, all assets and facilities are potentially at risk of damage that may, for the most part, be secondary. For a comprehensive list of critical facilities identified in the planning area by participating jurisdiction see Appendix C.

Terrorist events can have a “Substantial” severity of impact. They can cause multiple deaths, completely shut down facilities for 30 days or more, and cause more than 50 percent of affected properties to be destroyed or suffer major damage.

ASSESSMENT OF IMPACTS

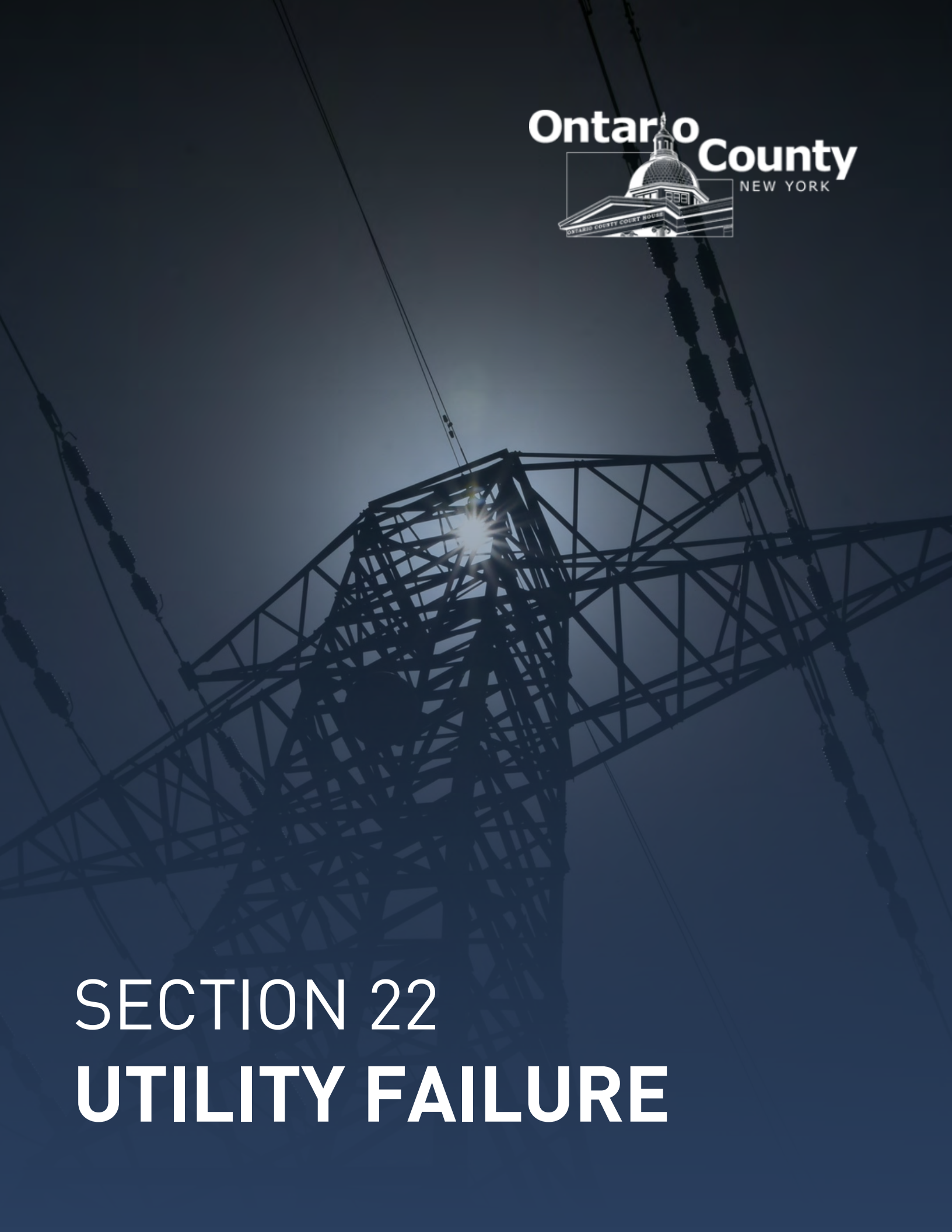
Terrorism poses a significant risk to the population and can create dangerous situations. Often, providing and preserving public health and safety is difficult, especially for events that are hard to predict and are unpredictable in nature. Terrorism can be associated with a variety of impacts, including:

- Structures can be specifically targeted and may be subject to extensive damage, which can result in physical harm to the occupants.
- Terrorist events usually occur in highly populated areas resulting in the injuries and fatalities of many civilians, residents, and even first responders.
- Significant debris can result in emergency response vehicles being unable to access areas of the community.
- First responders must begin rescue operations. Therefore, they are exposed to 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.
- Local and County 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 have been targeted.
- 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.
- The public and all those involved may experience PTSD (Post Traumatic Stress Disorder) which affects the community as a whole and can last for years. People may be displaced and decide to never return to the area.

The economic and financial impacts of a terrorism 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 an event.

CLIMATE CHANGE CONSIDERATIONS

There is limited data-driven evidence of climate change’s impacts on terrorism. For the Ontario County planning area there are no climate change conditions that are anticipated to affect the future probability or risk of terrorist incidents.



SECTION 22
UTILITY FAILURE

SECTION 22: UTILITY FAILURE

Hazard Description 1
Location 3
Extent 3
Historical Occurrences 4
Significant Events 5
Probability of Future Events 5
Vulnerability and Impact 6
Assessment of Impacts 7
Climate Change Considerations 8

HAZARD DESCRIPTION



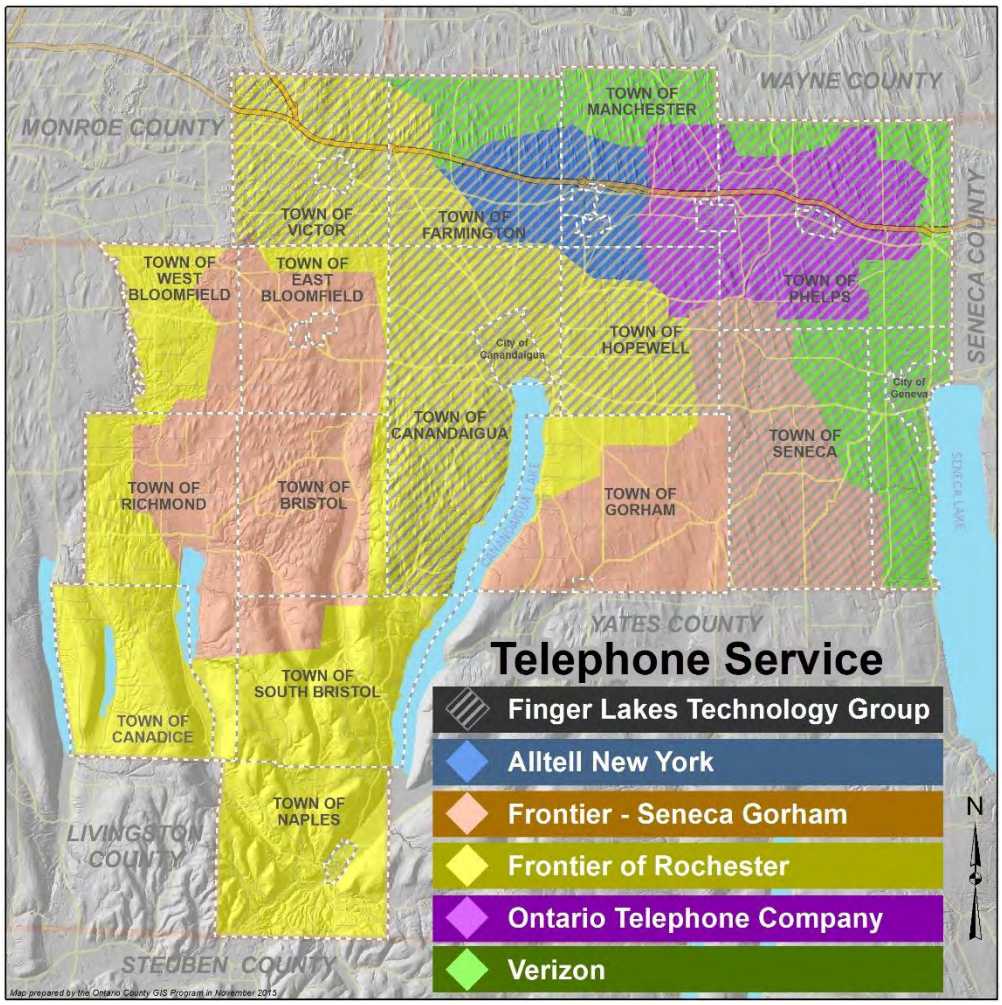
A utility failure is the disruption in the services necessary for the operation of critical facilities and services. Utility failures include power outages, water system failures, fuel shortages, and internet or communication failures. Sometimes utility failures are localized or confined to a small area, and sometimes they can be widespread, impacting entire regions. Utility failure is usually the result of natural disasters, technological disasters, or cyber-attack and sabotage.

The most common type of utility failure is a power outage. Often the electricity supply is interrupted due to storms, equipment malfunction, and even grid overloads. Water utility failures occur when water becomes contaminated or inaccessible. This is usually the result of broken water pipes or inadequate water supply. Fuel or natural gas shortages occur when supply exceeds demand. Fuel shortages can be due to factors such as growing populations, higher rates of consumption, outdated infrastructure, natural disasters, and current economic and socio-political conditions. Internet and telecommunication failure happens when network outages disrupt communication, data transmission, and internet access. This greatly impacts all essential services and businesses.

The County's main water sources include the Great Lakes, which makes up 84 percent of North America's fresh surface water, and the five Finger Lakes (Cayuga Lake, Seneca Lake, Keuka Lake, Canandaigua Lake, and Honeoye Lake).

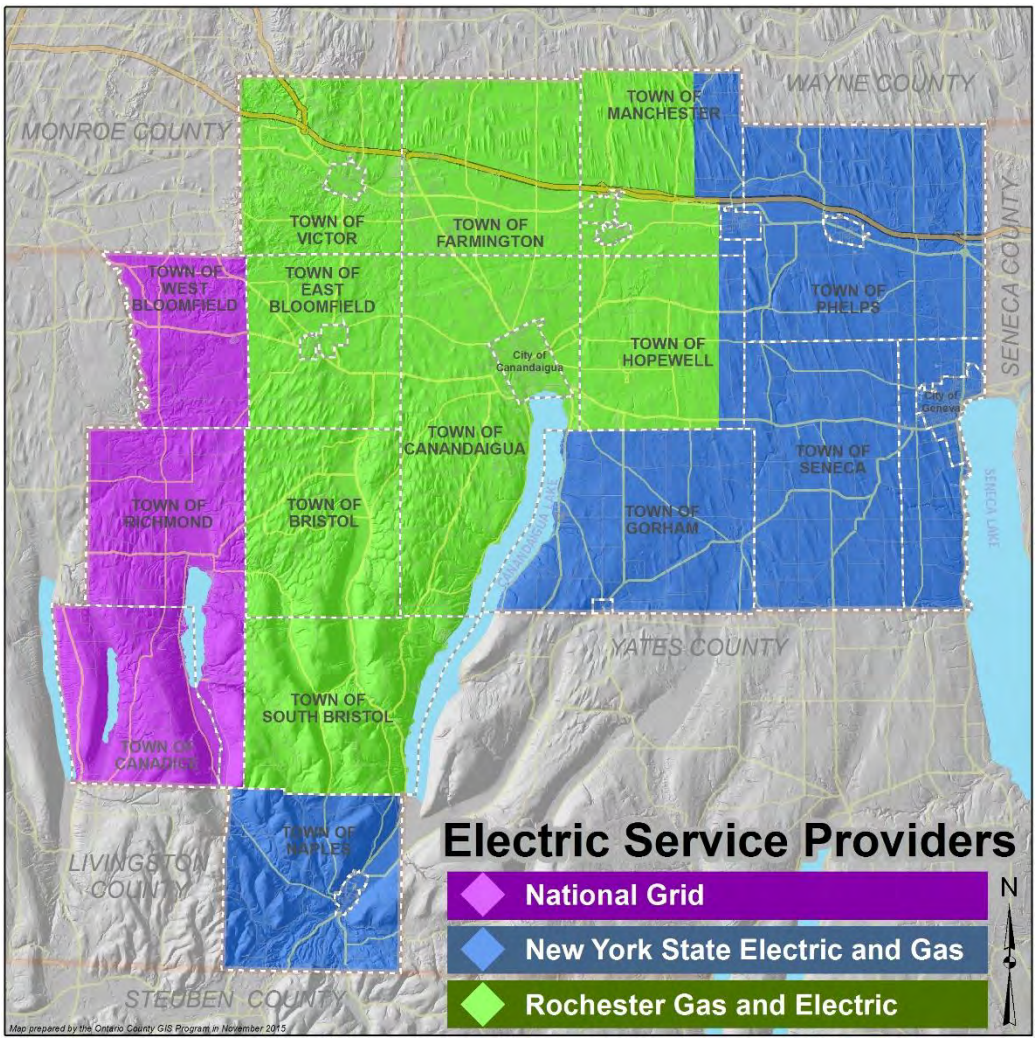
Ontario County is served by several internet and communication providers. Figure 22-1 provides an overview of these service providers across the planning area.

Figure 22-1. Telephone Service Map for Ontario County



Rochester Gas and Electric (RG&E) and the New York State Gas and Electric Corporation (NYSEG) are the leading electric service providers for Ontario County, as shown in Figure 22-2. The Towns of West Bloomfield, Richmond, and Candice are serviced by the national grid. These are the providers who will be responsible for responding to and repairing power outages.

Figure 22-2. Electric Providers and Districts for Ontario County



LOCATION

Utility failure can occur throughout the entirety of the Ontario County planning area. This event type is not confined to any geographic boundary and is possible anywhere utility service is provided. These events are usually localized and last for a short duration.

EXTENT

A utility outage's extent and severity are determined by the cause or disruption, location, duration, and weather. An incident can be something minor and isolated or something that affects the entire planning area.

Power outages may exacerbate other emergency situations, such as extreme weather and flooding, and can be caused by or combined with other emergency or disasters events. Electric equipment, including lighting, HVAC (heating, ventilation, and air conditioning) systems, communication devices (computers, phones, etc.), fire and security systems, small appliances (fridges, sterilizers, etc.), and medical equipment, cannot be used when there is a power outage.

Any of these appliances experiencing a service interruption can lead to a variety of problems, such as food spoiling, loss of air conditioning and heating, loss of communication and more. Similarly, telecommunication and internet failures, as well as water utility outages, also vary depending on the nature of the outage and the infrastructure involved. It is possible that the planning area experiences the full extent of a utility failure.

The electric providers in the planning area use three classifications to categorize the level of damage an event may cause, and the level of response required to restore electric services. An event's classification is based on the extent of damage, available resources, and the estimated time needed to restore service. It is anticipated that the planning area could experience a Class III electrical Emergency depending on the cause of the failure.

Table 22-1. NYSEG and RG&E Event Classifications and Extent[1]

CLASSIFICATION	EXTENT
Class I Emergency	Class I emergencies are events which affect specific isolated parts of an electrical division, and which cause damage that can be repaired in 24 hours or less. The Incident Command System structure is activated, as necessary, to coordinate all activities. For a Class I event, additional resources are brought in, as necessary, to complete response activities.
Class II Emergency	Emergencies that cause extensive damage throughout a division are classified as Class II events. Service interrupted by a Class II emergency is anticipated to be restored within 72 hours. Repairs may require assistance from other resources within the division. Class II events may span multiple divisions; however, each area generally has sufficient resources to support response activities or is able to obtain resources from another Company location.
Class III Emergency	This classification refers to severe events that cause widespread damage within a division and/or affects multiple divisions. Damage caused by Class III events are anticipated to take more than 72 hours to restore. To restore service in affected areas, it is necessary to enlist support from divisions outside the affected area. Often mutual aid from other utilities, municipalities and/or contracting companies or specialized services (such as aerial patrols) is required. In a Class III emergency, the NYS DPS Director of Office of Resilience and Emergency Preparedness will be informed of the specific date and time of the start of restoration immediately after it begins.

HISTORICAL OCCURRENCES

Utility failure and power outages are recurrent events and occur more than once each year in Ontario County. The planning area deals with an unpredictable cycle of utility failure events due to severe weather conditions. Since communication systems and other utilities are supplied by different providers, data on all historical occurrences is limited. These events are also very frequent; therefore, it can be difficult to document all events and maintain a historical record. However, a summary of significant disruptions since the last plan update is provided below. Most events are caused by damaging wind events and other natural hazards.

[1] NYSEG & RG&E Electric Utility Emergency Plan, April 13, 2023

SECTION 22: UTILITY FAILURE

SIGNIFICANT EVENTS

July 10, 2023 – City of Canandaigua
During a flooding event in the City of Canandaigua, both natural gas and electrical services were turned off to prevent unsafe conditions. Once flood waters receded utility infrastructure was inspected and repaired, and eventually full services were restored.

December 23, 2022 - Ontario County
Winter Storm Elliot disrupted services across all RG&E divisions. Strong wind gusts from the winter storm damaged equipment and left more than 6,000 utility customers without power on the first day, during the extreme cold. This storm was a multi-day event and thousands more people were left without power in the following days. Boil water notices were issued as the water utility infrastructure was also impacted.

March 8, 2022 - Ontario County
A strong wind event caused outages in Monroe, Wayne, and Ontario counties. Nearly 37,000 utility customers were impacted, and 479 customers were completely without electricity.

December 11, 2021- Ontario County
Strong winds caused power outages in the western New York region. Ontario, Monroe, Cayuga, and Wayne counties experienced the worst impacts with damaged utility infrastructure and fallen tree debris. The City of Canandaigua has 980 reported outages.

March 26, 2021 - Ontario County
A strong wind event caused power outages in Ontario County, the City and Town of Geneva were hit the hardest with a total of 4,090 outages. Nearly 40,000 outages were reported statewide. The damage was particularly severe with downed wires, fallen trees, and lots of debris. As the high winds continued, NYSEG and RG&E warned that outages may exceed 24 hours during this event.

November 2, 2020 - Ontario County
A storm with combined high winds and snow caused scattered power outages across the state. More than 28,000 people experienced outages during this event. This event occurred right before the presidential election and NYSEG and RG&E prioritized restoring and responding to polling locations.

February 24, 2019 – Ontario County
Extreme winds caused outages across western and upstate New York. There were reports of sustained winds of 32 mph at Rochester Airport, sustained winds of 46 mph at Niagara County Airport, and sustained winds of 38 mph at Buffalo Airport. These wind conditions resulted in flying debris, trees uprooting and significant damage to NYSEG and RG&E equipment. More than 30,000 utility customers were without power. More than 2,500 service and support personnel responded to this event. In addition to NYSEG and RG&E company and contract resources, the companies obtained resources from Canada, Pennsylvania, Massachusetts, and New Jersey for the response of this outage.

PROBABILITY OF FUTURE EVENTS

Utility failures occur frequently, and it is “Highly Likely” that an event will occur in the future, meaning that a utility failure is probable within the next year. Most disruptions will be localized and contained to one area and widespread utility failures will occur less frequently, and usually as a cascading impact to other disaster events.

VULNERABILITY AND IMPACT

Utility failures, such as power and water outages, can have significant impacts on individuals, communities, businesses, and critical facilities. Outages can disrupt daily life, preventing the normal operation of essential services, communication, and even public safety.

Power outages may compromise the operation of medical equipment and impede critical hospital operations. Many pieces of emergency response equipment require electricity such as radios and computers. Power outages may also affect streetlights, creating hazardous conditions for emergency vehicles.

Schools and businesses may need to close and will be unable to function as normal. Power supply affects lighting, heating and cooling systems, security systems, and technology. Businesses may suffer financial losses due to the interruption of operations, damage to equipment, and loss of perishable goods.

Communication outages have similar impacts. The disruption of internet or phone service can hinder the access and dissemination of crisis information. Many organizations rely heavily on communication systems and may experience disruptions to normal procedures.

Water is required for daily activities including cooking, cleaning, and hydration. The disruption of water services or a lack of access to clean water poses significant health and safety risks. Without water for hygiene and sanitation, the likelihood of disease increases. Hospitals and healthcare facilities may struggle to provide essential services. Water is also needed for emergency response, such as firefighting. Water utility failure can directly impact the response of fires and other hazards.

Power outages during severe weather events, such as a winter storm, may leave people vulnerable to cold temperatures. Children and the elderly are especially vulnerable to extreme cold related illnesses. The elderly are also sometimes dependent on medical equipment which typically requires electricity. Table 22-2 provides vulnerable populations for each jurisdiction.

Utility failure typically can have a “Minor” level of impact meaning more than 10 percent of property may be impacted at one time and critical facilities may be affected for up to one week at a time.

Table 22-2. Populations at Greatest Risk by Jurisdiction[2]

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5
Ontario County	22,554	5,382
Village of Bloomfield	265	44
Town of Bristol	490	60
Town of Canadice	369	68
City of Canandaigua	2,234	431
Town of Canandaigua	2,241	353
Village of Clifton Springs	475	65

[2] U.S. Census Bureau, American Community Survey, 2021

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5
Town of East Bloomfield	804	178
Town of Farmington	2,092	978
City of Geneva	1,856	781
Town of Geneva	1,035	138
Town of Gorham	1,068	267
Town of Hopewell	820	76
Town of Manchester	1,908	399
Village of Manchester	318	67
Town of Naples	510	63
Village of Naples	174	32
Town of Phelps	1,203	445
Village of Phelps	332	206
Town of Richmond	925	52
Village of Rushville	111	17
Town of Seneca	482	151
Village of Shortsville	297	56
Town of South Bristol	539	38
Town of Victor	3,198	783
Village of Victor	545	126
Town of West Bloomfield	780	121

ASSESSMENT OF IMPACTS

A utility failure poses a significant risk to public health and safety, particularly if the outage is widespread or long-lasting. Utility failure events can be frequently associated with a variety of impacts, including:

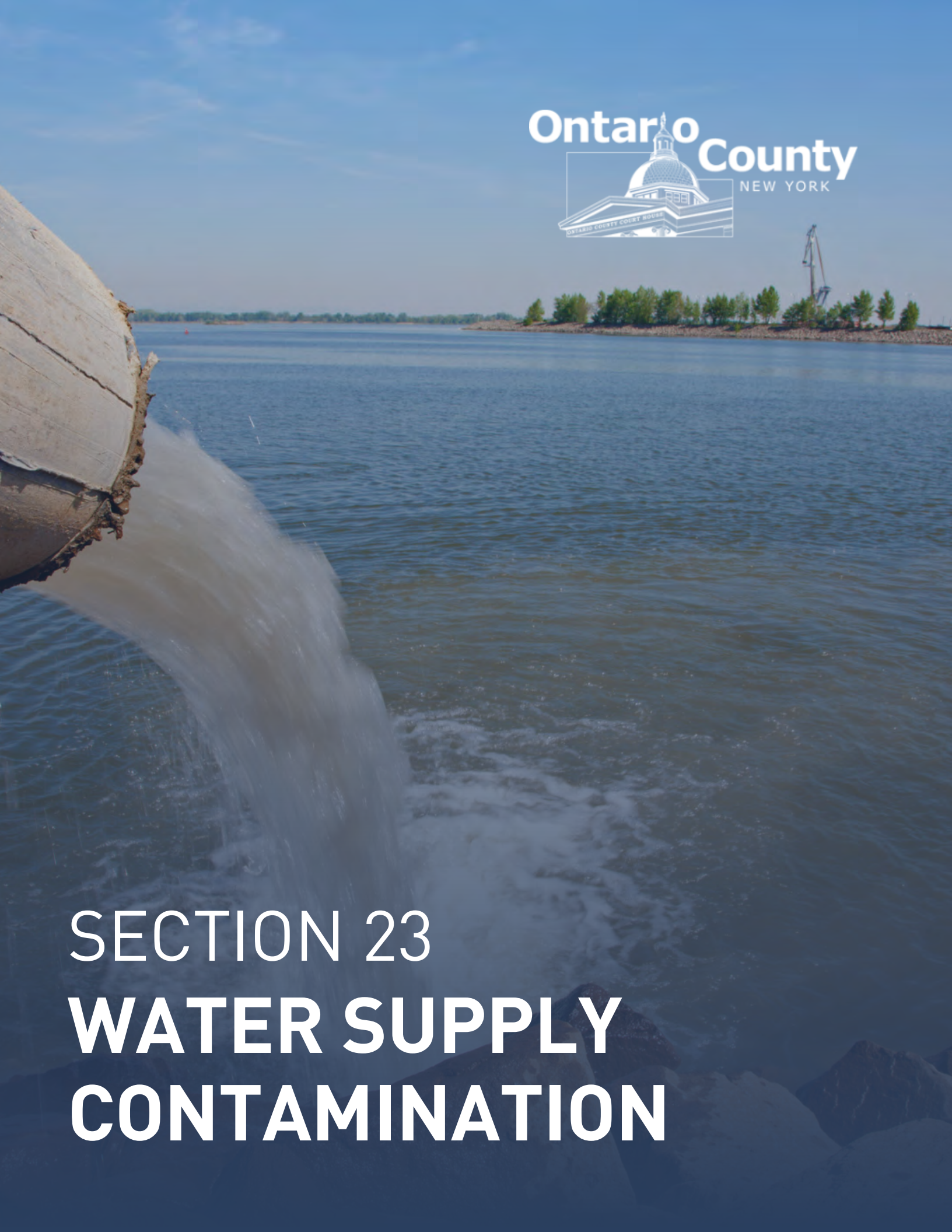
- Vulnerable populations, particularly the elderly (20 percent of total population) and children under 5 (5 percent of total population), can face serious or life-threatening health problems from exposure to unregulated temperatures during power outages.
- Anyone using medical equipment connected to power (and no generator) may experience health problems.
- 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.

- Response personnel, including utility workers, public works personnel, debris removal staff, and other first responders, must restore services quickly and have to operate in unsafe weather conditions.
- Response personnel would be required to travel in potentially hazardous conditions, elevating the life safety risk due to accidents, especially if power outages impact streetlights.
- Critical facilities without emergency backup power may not be operational during power outages.
- Lack of access to water and proper sanitization increases the risk of disease.
- Hospitals, schools, businesses, day care centers, and all public spaces may experience reduced operations.
- Power interruptions can cause economic impacts stemming from lost income, spoiled food and other goods, costs to the owners/operators of the utility facilities, and costs to government and community service groups.

The economic and financial impacts of utility failure 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 utility failure event.

CLIMATE CHANGE CONSIDERATIONS

Climate change is generally increasing the frequency and severity of natural hazards, including but not limited to severe storms, winter weather, flooding, and wildfire. Since utility failure is most often a secondary cause or cascading impact of natural disasters, it is safe to assume that utility failure events will also become more frequent. As natural hazard events increase and the planning area's utility infrastructure ages, there will be an increase in future utility disruptions.



SECTION 23

WATER SUPPLY CONTAMINATION

SECTION 23: WATER SUPPLY CONTAMINATION

Hazard Description 1
Harmful Algal Bloom (HAB) 2
Location 3
Extent 3
Historical Occurrences 5
Significant Events 5
Probability of Future Events 6
Vulnerability and Impact 6
Assessment of Impacts 8
Climate Change Considerations 8

HAZARD DESCRIPTION



Water supply contamination occurs when harmful substances, often chemicals or microorganisms, pollute water sources which make the water unusable for drinking, cooking, cleaning, swimming, and other activities. Safe and readily available water is important for public health, whether it is used for drinking, domestic use, food production or recreational purposes. Water contamination is usually human caused but sometimes floods and other natural hazards can damage water infrastructure and lead to water supply contamination.

The County's main water sources include the Great Lakes, which makes up 84 percent of North America's fresh surface water, and the five Finger Lakes (Cayuga Lake, Seneca Lake, Keuka Lake, Canandaigua Lake, and Honeoye Lake). These water sources are displayed in Figure 23-1. The U.S. Environmental Protection Agency (EPA) regulates drinking water quality in public water systems and sets limits for germs and chemicals in water. However, sometimes unsafe levels of harmful germs and chemicals contaminate public drinking water. The germs and chemicals can get in the water at its source (for example, ground water or water from lakes or rivers) or while water is traveling through the distribution system, after the water treatment plant has already removed germs and chemicals from source water.

The EPA requires water utilities to test for and address many germs and chemicals in their drinking water systems. Water utilities are required to report contaminant types and levels to determine when unsafe levels of chemicals or germs are present in the water supply. Water utilities must also provide an annual drinking water quality report called the Consumer Confidence Report. Unlike public drinking water supplies, private wells are not regulated by EPA. Owners of private wells are responsible for testing their water to make sure it is safe to drink.

The EPA cites common sources of water contamination including[1]:

[1] EPA, Report on Environment, Drinking Water, July 14, 2023

- **Industry and Agriculture** - Organic solvents, petroleum products, and heavy metals from disposal sites or storage facilities can migrate into aquifers. Pesticides and fertilizers can be carried into lakes and streams by rainfall runoff or snowmelt or can percolate into aquifers.
- **Human and Animal Waste** - Human waste from sewage and septic systems can carry harmful microbes into drinking water sources, as can waste from animal feedlots and wildlife. Major contaminants include Giardia, Cryptosporidium, and E. coli.
- **Treatment and Distribution** - While treatment can remove many contaminants, it can also leave behind byproducts (such as trihalomethanes) that may themselves be harmful. Water can also become contaminated after it enters the distribution system, from a breach in the piping system or from corrosion of plumbing materials made from lead or copper.
- **Natural Sources** - Some ground water is unsuitable for drinking because the local underground conditions include high levels of certain contaminants. For example, as ground water travels through rock and soil, it can pick up naturally occurring arsenic, other heavy metals, or radionuclides.

Flooding and stormwater can also cause contamination of the water supply. During a flood or storm, water may pick up pollutants from industrial sites, agricultural fields, and even the urban streets. Oil, heavy metals, pesticides, and bacteria can be carried into bodies of water. This runoff is often untreated and can contaminate rivers, lakes, and groundwater.

Figure 23-1. Ontario County's Water Resources



HARMFUL ALGAL BLOOM (HAB)

In recent years, all 11 Finger Lakes have been struck by outbreaks of cyanobacteria, commonly called toxic algae or harmful algal blooms (HABs). More than one million people depend on the

lakes for their drinking water in Upstate New York.[2] 'Toxic algae' and 'harmful algal bloom' (HAB) are terms for cyanobacteria, a naturally occurring organism which can cause serious human and animal health effects when outbreaks occur in drinking water supplies and swimming areas. Some species of cyanobacteria produce toxins while others do not, and risks vary depending on the species of bacteria and the type of toxin. Cyanobacteria release toxins as their cells grow and break down, and the toxins can persist even after a bloom has disappeared. Some of the most common cyanotoxins in the United States are microcystins, cylindrospermopsin, anatoxins and saxitoxins. Microcystins are a liver toxin, and can also affect kidneys and reproductive systems, and can irritate the skin, eyes, and throat. Cylindrospermopsin is toxic to the liver and kidneys. Anatoxins are neurotoxins and affect the central nervous system.[3] Toxic algae pose risks to people and pets who come into contact with the water either through recreation or household use such as drinking and bathing.

LOCATION

Water supply contamination is not confined to geographic barriers and can occur anywhere within the Ontario County planning area. Water contamination can occur in freshwater sources, private wells, and in water treatment facilities.

EXTENT

National Primary Drinking Water Regulations (NPDWRs) are legally enforcing standards that apply to public water systems as set by the EPA. Primary standards and treatment techniques protect public health by limiting the levels of contaminants in drinking water. These regulations include more than 80 contaminants, made up of microorganisms, disinfectants, disinfection byproducts, inorganic chemicals, organic chemicals, and radionuclides. The EPA provides a full list of contaminants with regulated containment levels, and potential health effects from long term exposure. If contaminants go beyond the regulated level, then public health and safety is at risk. Table 23-1 provides a sample of the most commonly known contaminants. The full list can be found here: https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations.

Table 23-1. EPA Drinking Water Regulations

CONTAMINANT	MAXIMUM CONTAMINAN LEVEL (mg/L)	POTENTIAL HEALTH EFFECTS FROM LONG TERM EXPOSURE	SOURCES OF CONTAMINANT
Arsenic	0.010	Skin damage or problems with circulatory systems, and may have increased risk of getting cancer	Erosion of natural deposits; runoff from orchards; runoff from glass & electronics production wastes
Asbestos	7 million fibers per Liter (MFL)	Increased risk of developing benign intestinal polyps	Decay of asbestos cement in water mains; erosion of natural deposits
Chlorine	MRDL=4.01	Eye/nose irritation; stomach discomfort	Water additive used to control microbes

[2] Finger Lakes Land Trust, Toxic Algae in the Finger Lakes: https://www.fllt.org/toxic-algae-in-the-finger-lakes/
[3] Source: https://www.fllt.org/toxic-algae-facts

CONTAMINANT	MAXIMUM CONTAMINAN LEVEL (mg/L)	POTENTIAL HEALTH EFFECTS FROM LONG TERM EXPOSURE	SOURCES OF CONTAMINANT
Chlorine Dioxide	MRDL=0.8	Anemia; infants, young children, and fetuses of pregnant women: nervous system effects	Water additive used to control microbes
Copper	TT5; Action Level=1.3	Short-term exposure: Gastrointestinal distress. Long-term exposure: Liver or kidney damage. People with Wilson's Disease should consult their personal doctor if the amount of copper in their water exceeds the action level	Corrosion of household plumbing systems; erosion of natural deposits
E. coli	MCL6	Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes may cause short term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.	Human and animal fecal waste
Fluoride	4.0	Bone disease (pain and tenderness of the bones); children may get mottled teeth	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
Lead	TT5; Action Level=0.015	Infants and children: Delays in physical or mental development; children could show slight deficits in attention span and learning abilities; Adults: Kidney problems; high blood pressure	Corrosion of household plumbing systems; erosion of natural deposits
Mercury	0.02	Kidney damage	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and croplands

There are three general categories of water in relation to contamination (Table 23-2). Although they are not official designations, many refer to these categories as Clean, Grey, and Black Water. The different categories of water refer to the source of the water damage and other potential contaminants, including what the water may come in contact with such as flood infiltration. The planning area can anticipate a maximum extent of category III, depending on the size and type of contaminating event.

Table 23-2. Categories of Water

CATEGORY I (CLEAN WATER)	CATEGORY II (GREY WATER)	CATEGORY III (BLACK WATER)
o Water originates from a sanitary water source. o Exposure does not pose a risk. o Suitable for drinking.	o Water contains significant contamination. o May cause discomfort or illness upon exposure. o May contain unsafe levels of bacteria, viruses, mold,	o Water is grossly contaminated. o May contain toxins or pathogens that cause significant adverse reactions after human exposure. o NOT suitable for drinking

CATEGORY I (CLEAN WATER)	CATEGORY II (GREY WATER)	CATEGORY III (BLACK WATER)
	nutrients for microorganisms and other contaminants. o NOT Suitable for drinking	

HISTORICAL OCCURRENCES

There are numerous records of water supply contamination events within the Ontario County planning area. Ontario County jurisdictions manage several public water supply sources and some privately owned residential water wells are also in use. Private well owners are responsible for the testing and maintenance of their own wells, therefore data regarding all historical occurrences of water supply contamination in the planning area is limited.

Some jurisdictions experience isolated water contamination events while others report ongoing issues. Most water supply contamination events in Ontario County are caused by outdated water supply equipment, hazardous materials release, harmful algae, and stormwater or flooding. There are no reports of illness or fatalities due to water contamination in the planning area. A description of events is provided below.

SIGNIFICANT EVENTS

November 3, 2023 – Towns of Canandaigua / Farmington

Water quality tests conducted by the Canandaigua-Farmington Water District found contamination in the district's water. The tests indicated the presence of trihalomethanes at 86 micrograms per liter (ug/l) which is above the maximum contaminant level allowed in a public water supply according to the New York State Sanitary Code. Trihalomethanes are a group of chemicals formed in drinking water during treatment with chlorine, which is the most used disinfectant in New York State. Citizens were notified and the district worked to resolve the issue.

July 13, 2023 – City of Canandaigua

After a heavy rain and flooding event that washed contaminated stormwater into the Canandaigua Lake, Ontario County's public health department closed three lake beaches (Kershaw Park, Deep Run Park, and Onanda Park) due to elevated levels of E. coli and other coliform bacteria. The waters were unsafe for recreational use, but the municipal water supply was not affected.

August 23, 2019 – Village of Victor

A water sample collected in the Village of Victor as part of its routine monitoring program was reported to contain coliform bacteria. Follow-up samples also were positive, and one was found to contain E. coli, a type of bacteria associated with human and animal waste. The origin of the bacteria remains unknown. The Village was under a boil notice for three days.

October 11, 2018 – Village of Rushville

Samples collected by the Village of Rushville Public Water Supply showed a blue-green algae toxin, microcystin, present in the municipal drinking water. Microcystin entered the supply due to blue-green algae blooms occurring in Canandaigua Lake, which is the source water for the Village of Rushville's Public Water Supply.

Testing returned results of 0.66 micrograms per liter of microcystin in finished water. This level is higher than the U.S. Environmental Protection Agency's 10-day Health Advisory level of 0.3 micrograms per liter of microcystin for bottle fed infants and children under 6 years old. Residents

were instructed not to use the water and the NYS Department of Health supplied water bottles. This event lasted three to four weeks for the Village of Rushville.

July 26, 2012 - City of Canandaigua
In the 1930s, the area of Kershaw Park used to be a landfill. A variety of materials were disposed of to fill in the existing wetland, including building materials such as bricks and concrete, and old petroleum storage drums, most of which were empty or nearly empty. In the summer of 2012 small amounts of tar-like substances were found in the Kershaw Beach swimming area. Extensive chemical testing of this material determined that it was a form of hydrocarbon originating from the 1930s and most likely migrated to the surface from buried storage drums. Due to concern for human health, the entire Kershaw beach area was closed for the remainder of the summer and an extensive remediation project removed the contaminated materials.

PROBABILITY OF FUTURE EVENTS

Based on historical occurrences, it is “Likely” that a water contamination event will occur in the planning area, meaning the event is probable in the next three years. Ontario County lakes and water sources are experiencing an increase in harmful algal blooms (HABs), specifically blue-green algae. HABs are toxic and can cause severe illness. The algae are most prominent in Canandaigua Lake, and as it continues to grow, there is a potential for increases in water contamination events. Efforts to manage stormwater, control pollution sources, and improve water treatment will impact future probability.

VULNERABILITY AND IMPACT

The greatest impact of unsafe and contaminated water is on human health. If drinking water contains unsafe levels of contaminants, it can lead to a variety of short- and long-term health effects. Exposure to high doses of chemicals can lead to skin discoloration or more severe problems such as nervous system or organ damage and developmental or reproductive effects. Exposure to lower doses over long periods of time can lead to chronic, longer-term conditions such as cancer. The effects of some drinking water contaminants are not yet well understood.

Most life-threatening waterborne diseases caused by microbes (such as typhoid fever or cholera) are rare in the United States today. The more common illnesses caused by viruses, bacteria, and parasites can result in stomach pain, vomiting, diarrhea, headache, fever, and kidney failure. Infectious diseases such as hepatitis can also occur. Hepatitis may be severe in people with weakened immune systems (e.g., infants and the elderly) and sometimes fatal in people with severely compromised immune systems (e.g., cancer patients).

Factors that can influence whether a contaminant will lead to health effects include the type of contaminant, its concentration in the water, individual susceptibility, the amount of water consumed, and the duration of exposure. Some people are more likely to get sick from germs and chemicals in water and may be more vulnerable to its health impacts. This includes infants, young children, people who are pregnant, older adults and elderly, and people who have weakened immune systems.

Table 23-3. Populations at Greatest Risk by Jurisdiction[4]

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5
Ontario County	22,554	5,382
Village of Bloomfield	265	44
Town of Bristol	490	60
Town of Canadice	369	68
City of Canandaigua	2,234	431
Town of Canandaigua	2,241	353
Village of Clifton Springs	475	65
Town of East Bloomfield	804	178
Town of Farmington	2,092	978
City of Geneva	1,856	781
Town of Geneva	1,035	138
Town of Gorham	1,068	267
Town of Hopewell	820	76
Town of Manchester	1,908	399
Village of Manchester	318	67
Town of Naples	510	63
Village of Naples	174	32
Town of Phelps	1,203	445
Village of Phelps	332	206
Town of Richmond	925	52
Village of Rushville	111	17
Town of Seneca	482	151
Village of Shortsville	297	56
Town of South Bristol	539	38
Town of Victor	3,198	783
Village of Victor	545	126
Town of West Bloomfield	780	121

Contaminated water also impacts the environment. Toxins, bacteria, and chemical pollutants can harm the balance of the planning area's ecosystem. Pollutants can be consumed or absorbed by fish and wildlife, which is harmful and can even be fatal. In addition, when water pollution causes

[4] U.S. Census Bureau, American Community Survey, 2021

an algal bloom in a lake, the proliferation of newly introduced nutrients stimulates plant and algae growth, which in turn reduces oxygen levels in the water. This reduction in oxygen suffocates plants and animals and can create “dead zones,” where waters are essentially devoid of life. In certain cases, these HABs can also produce neurotoxins that affect wildlife.

The impacts of a contaminated water supply could be “Major” because it can result in multiple injuries or illnesses that lead to permanent disability. A contaminated water supply can also have far reaching impacts and can affect an entire area if water testing is not regularly performed and distribution is not properly maintained.

ASSESSMENT OF IMPACTS

Contamination of the water supply poses a significant risk to public health, particularly if the contaminant is especially harmful or well above regulated levels. Water contamination events can be associated with a variety of impacts, including:

- Vulnerable populations, particularly the elderly (20 percent of total population) and children under 5 (5 percent of total population), can face serious or life-threatening health problems when consuming certain chemicals and bacteria.
- A lack of access to clean water and proper sanitization increases the risk of disease, and overall morbidity and mortality rates.
- If many people are affected there may be a strain on healthcare systems and limited medical resources. The costs of healthcare for treating waterborne illness can also be high.
- With a lack of access to clean water, jurisdictions may have to source water from somewhere else which can strain local resources and budgets.
- A disruption to the ecosystem can harm aquatic life and have a negative impact on the biodiversity in water bodies.
- Communities dependent on water-related activities such as fishing and agriculture may experience economic loss and hardship.
- Residents and community members may experience anxiety and stress related to uncertainty about water safety.
- People who have been exposed to toxic algae can exhibit symptoms such as headaches, skin irritation, allergic reactions, stomach cramps, and vomiting.
- Pets exposed to toxic algae, especially dogs that play in blooms, can be fatally sickened very quickly.
- Toxic HABs pose significant economic impacts as beaches and shorelines may be closed for significant portions of the outdoor season, limiting recreational and tourism opportunities like boating, fishing, and swimming.

The economic and financial impacts of a water contamination event on the community will depend on the scale of the event, source of pollutant, and how quickly the water source is repaired. 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 a water contamination event.

CLIMATE CHANGE CONSIDERATIONS

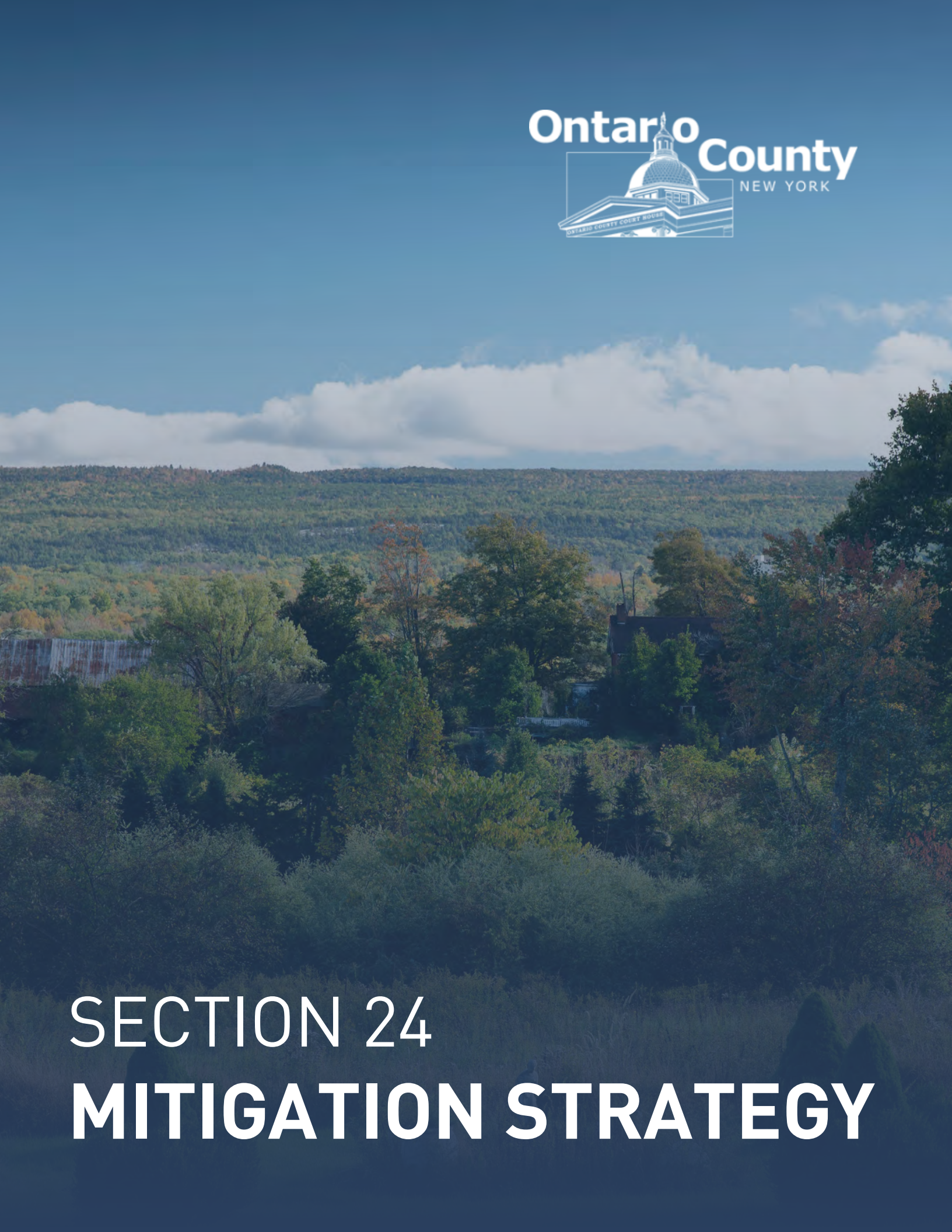
Climate change has been linked to an increased risk of the formation of HABs in water. These toxic algae blooms are causing environmental degradation in lakes, rivers, streams, and coasts.

SECTION 23: WATER SUPPLY CONTAMINATION

Warming temperatures from climate change promote the growth of HABs which can increase the risk of water supply contamination, and overall public health and safety.

More frequent and intense storms cause changes in the patterns and amount of rainfall, which impacts water quality through runoff of pollutants and chemicals. Wastewater treatment facilities are also subject to overflow during heavy rain fall events, which are increasing with climate change, and causing water pollution. Additionally, changes in precipitation patterns can affect water availability and quality.[5]

[5] United States Environmental Protection Agency, Water Quality and Climate Change Research, December 14, 2022



SECTION 24
MITIGATION STRATEGY

SECTION 24: MITIGATION STRATEGY

Mitigation Goals 1
Goal 1 1
Goal 2 1
Goal 3 2
Goal 4 2
Goal 5 2
Goal 6 2

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 2018 Plan. At the Mitigation Workshop in October 2023, Planning Team members reviewed the mitigation strategy from the previous 2018 Plan. The consensus among all members present was that the strategy developed for the 2018 Plan did require some changes including adding two new goals (Goals 4 and 5) and objectives, and generally reorganizing the order and priority of the goals and objectives.

GOAL 1

Protect life and property.

OBJECTIVE 1.1

Advise the public about health and safety precautions to guard against injury and loss of life from hazards.

OBJECTIVE 1.2

Maximize utilization of the latest technology to provide adequate warning, communication, and mitigation of hazard events.

OBJECTIVE 1.3

Reduce the danger to, and enhance protection of, high risk areas during hazard events.

OBJECTIVE 1.4

Protect critical facilities and services.

GOAL 2

Build partnerships and promote collaborative efforts to implement activities intended to reduce risks from hazard events.

OBJECTIVE 2.1

Build and support local partnerships to continuously become less vulnerable to hazards.

OBJECTIVE 2.2

Build a cadre of committed volunteers to safeguard the community before, during, and after a disaster.



OBJECTIVE 2.3
Build hazard mitigation concerns into county, city, town, and village planning and budgeting processes.

GOAL 3
Increase public awareness and education of natural and human-caused hazards and risks associated with them.

OBJECTIVE 3.1
Heighten public awareness regarding the full range of natural and human-caused hazards the public may face.

OBJECTIVE 3.2
Educate the public on actions they can take to prevent or reduce the loss of life or property from all hazards and increase individual efforts to respond to potential hazards.

OBJECTIVE 3.3
Publicize and encourage the adoption of appropriate hazard mitigation measures.

GOAL 4
Protect new and existing properties.

OBJECTIVE 4.1
Reduce repetitive losses to the National Flood Insurance Program (NFIP).

OBJECTIVE 4.2
Use the most cost-effective approach to protect existing buildings and public infrastructure from hazards.

OBJECTIVE 4.3
Enact and enforce regulatory measures to ensure that future development will not put people in harm's way or increase threats to existing properties.

GOAL 5
Maximize the resources for investment in hazard mitigation.

OBJECTIVE 5.1
Maximize the use of outside sources of funding.

OBJECTIVE 5.2
Maximize participation of property owners in protecting their properties.

OBJECTIVE 5.3
Maximize insurance coverage to provide financial protection against hazard events.

OBJECTIVE 5.4
Prioritize mitigation projects, based on cost-effectiveness and sites facing the greatest threat to life, health, and property.

GOAL 6
Protect and enhance natural resources and the environment.

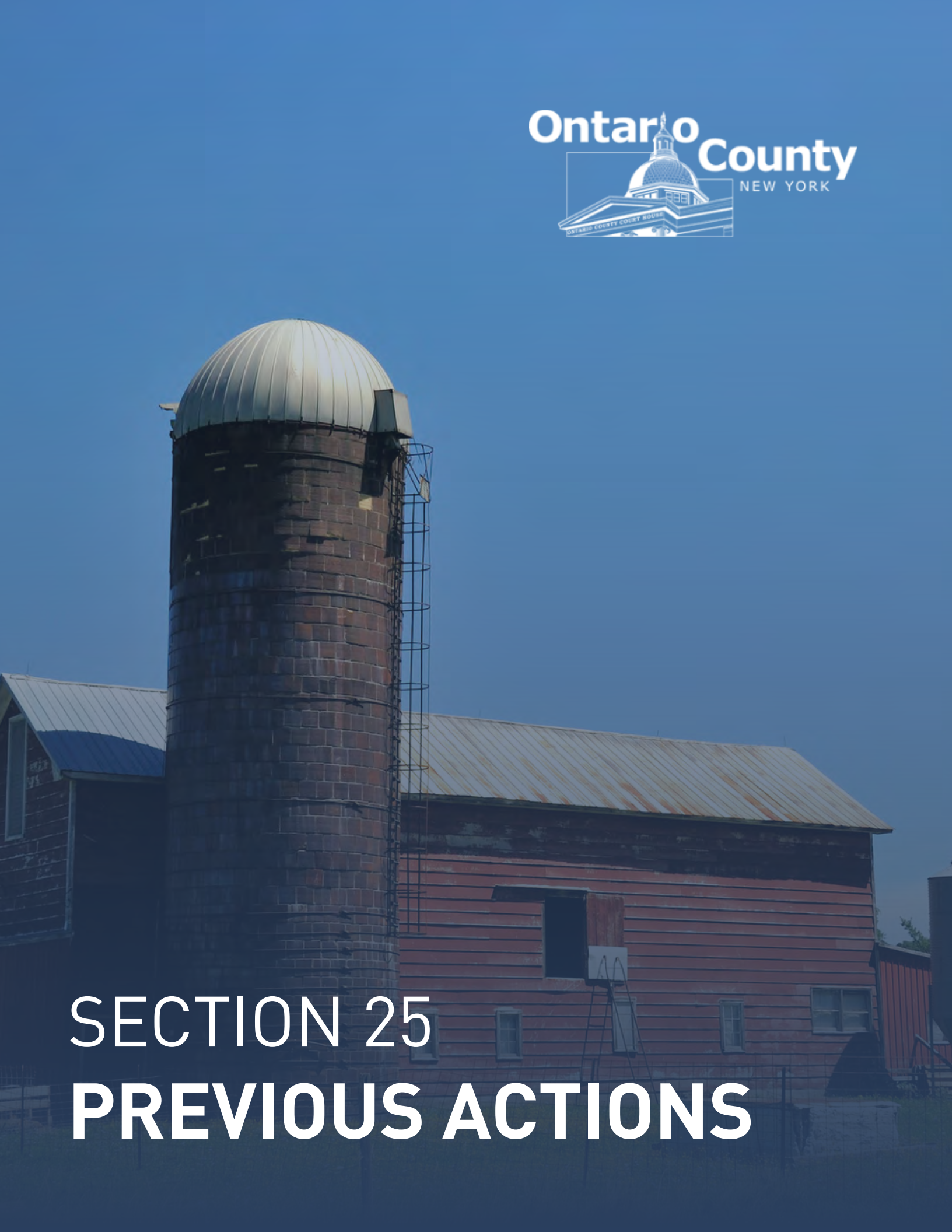
OBJECTIVE 6.1
Incorporate hazard mitigation activities into long-range planning and development activities.

OBJECTIVE 6.2

Promote beneficial uses of hazardous areas while expanding open space and recreational opportunities.

OBJECTIVE 6.3

Utilize regulatory approaches to prevent the creation of future hazards to life and property.



Ontario County
NEW YORK

SECTION 25
PREVIOUS ACTIONS

SECTION 25: PREVIOUS ACTIONS

Summary 1
Ontario County 2
Village of Bloomfield 10
Town of Bristol 14
Town of Canadice 17
City of Canandaigua 21
Town of Canandaigua 24
Village of Clifton Springs 27
Town of East Bloomfield 31
Town of Farmington 33
City of Geneva 36
Town of Geneva 39
Town of Gorham 42
Town of Hopewell 45
Town of Manchester 47
Village of Manchester 49
Town of Naples 53
Village of Naples 56
Town of Phelps 59
Village of Phelps 64
Town of Richmond 65
Village of Rushville 71
Town of Seneca 73
Town of South Bristol 76
Town of Victor 80
Village of Victor 83
Town of West Bloomfield 86

SUMMARY

Planning Team members were given copies of the previous mitigation actions submitted in the 2018 Plan at the mitigation workshop. Representatives from participating jurisdictions within Ontario County 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 2018 Plan are included in this section as they were written in that plan. Note, while the Village of Shortsville was a participant in the 2018 Plan, no mitigation actions were proposed for the Village in the previous plan.

ONTARIO COUNTY

Previous Action Worksheet OC-1: Special Needs Shelters	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	The County needs to provide assistance to the Red Cross to ensure special needs clients are directed to appropriate facilities in the event of a natural disaster or other similar emergency.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	1. Examine the existing plan for emergency shelter assistance and amend as needed. The County plan would benefit from further development so that in the event of a disaster, the Ontario County Office of Emergency Management and the Office of Public Health can provide the assistance needed to ensure special needs individuals are placed in appropriate shelters.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	OC-1
Action or Project Description:	Establish a small planning committee of key stakeholders (County Planning, Sheriff, Emergency Management, and Public Health) to examine the existing plan and amend as needed.
Summary of Evaluation **Benefits (losses avoided):** **Estimated Cost:** **Other Factors Considered:**	Benefits - Having a plan in place will ensure that disaster response shelters are utilized as intended and minimize the potential for harm to special needs individuals in the event of a disaster. Cost – Primarily in kind from County staff, otherwise TBD
Plan for Implementation	
Responsible Organization:	Ontario County, Sheriff, Emergency Management and Public Health, Local Enforcement Officials, Committees: Health & Medical, Public Safety
Action/Project Priority:	Medium
Timeline for Completion:	2020
Potential Fund Sources:	County staffing (Planning, Sherriff Emergency Management, Public Health) and budgets
Local Planning Mechanisms to be Used in Implementation, if any:	Emergency Management Plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update. No progress has been made on this activity. Working on RFP for consultant to work with County on update to Emergency Management Plan. Due to shortage of volunteers, Red Cross has limited ability to provide emergency shelter support for general or special needs emergency shelters.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet OC-2: Landfill Inventory	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Lack of information regarding closed municipal landfills and the potential for environmental impacts from flooding or other natural disaster.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Develop and maintain a database with comprehensive information regarding all existing and closed landfills in Ontario County
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	OC-2
Action or Project Description:	Locate and collect information about current and former landfills in Ontario County including location, condition, size, proximity to sensitive natural features, etc.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	The database will allow decision makers to understand the potential for impacts and develop a strategy for mitigation. The existing EPA database does not include information on the numerous smaller municipal landfills that are now closed. Estimated Cost is $50,000 plus County staff time
Plan for Implementation	
Responsible Organization:	Ontario County Planning
Action/Project Priority:	Medium
Timeline for Completion:	2020
Potential Fund Sources:	DEC Grants, in kind from county staff
Local Planning Mechanisms to be Used in Implementation, if any:	None; Ontario County does not have a Comprehensive Plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed. There is a GIS map of former municipal landfills across the entire county. No related information collected. The County added the former western end of the Seneca-Cayuga Canal north of Seneca Lake to its inventory. The property involved is currently a City of Geneva Park and part of the US 20 and State Rt 5 right-of-way north of Seneca Lake. There is no information on private commercial-licensed or pre-license requirement former landfills or non-commercial disposal area that have been closed. Licensed landfill data can be accessed from the NYS DEC website. The only other known active landfill permit in Ontario County is at Victor Insulators.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet OC-3: Flood Hazards at Public Works Facilities	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Certain public works facilities and utilities experience frequent flooding.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Protection of critical public works facilities from flooding with resiliency to withstand a 500yr flood event
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	OC-3
Action or Project Description:	1) Protect or elevate ground-mounted transformers. 2) Elevate vulnerable equipment, electrical controls, and other equipment at wastewater treatment plants, potable water treatment plants, and pump stations. 3) For sewer lines in the floodplain, fasten and seal manhole covers to prevent floodwater infiltration. 4) Protect wells and other utilities
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	These actions will protect critical facilities from flood damage and allow them to function during hazard events
Plan for Implementation	
Responsible Organization:	County Public Works
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	Municipal budgets, grants
Local Planning Mechanisms to be Used in Implementation, if any:	Annual budgeting process.
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update. A. County park facilities within floodplain include seasonal bathroom at Deep Run, Ontario Beach, and Grimes Glen. DPW unaware of vulnerable equipment that would need to be protected or elevated. Most of Three Mills Park is within the floodplain, but there is no significant equipment at the park. DPW noted the park is a passive use facility with little infrastructure and no need for mitigation projects at this location.

	B. The Honeoye Lake Waste Water Treatment Plant is within a floodplain. Recently completed plant improvements include constructing new structures/equipment 2' above the existing estimated 100 year floodplain elevation and floodproofing of other existing structures/equipment to the same elevation using flood planks. The proposed new flood map for the Town of Richmond proposed by FEMA will raise the 100 year flood elevation significantly at the plant. C. 18 pump stations associated with Honeoye Lake County Sewer District or Canandaigua Lake County Sewer District are within a floodplain. Floodproofing pump stations well be considered when pump stations are renovated or reconstructed. D. Sewer districts encompass 2 flow meters and 152 manholes within a current floodplain. Inspecting which of these have floodproof manhole covers. Public Works will provide results of manhole cover inspections when complete. E. The County identified that the Electric Switchgear serving the County's Hopewell Campus is prone to flooding (it is located just adjacent to a drainage way that FEMA has studied with the proposed revision to the flood maps for Ontario County, but upland of the termination of the FEMA study. It has flooded in 2023 and needs to be elevated to protect critical infrastructure and services provided by the County at its Hopewell Campus.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet OC-4: Emergency Evacuation Routes	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Designated routes to be used for emergency evacuation is needed to ensure county wide emergency evacuation is safe and efficient.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Develop a County emergency evacuation plan
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	OC-4
Action or Project Description:	As part of the next Emergency Management Plan update, identify emergency evacuation routes and develop an emergency evacuation plan. Identify any other measures needed to make the plan viable.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	For minimal cost, the establishment of emergency evacuation routes can ensure safe and efficient evacuation in the event of a large-scale emergency. Cost – staff time
Plan for Implementation	
Responsible Organization:	Ontario County Office of Emergency Management
Action/Project Priority:	Medium
Timeline for Completion:	2017-18
Potential Fund Sources:	County staff and budget
Local Planning Mechanisms to be Used in Implementation, if any:	OC Emergency Management Plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet OC-5: Renewable Energy	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Production and use of energy from non-renewable sources is more expensive and not sustainable over the long term
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Continued development of renewable energy sources for County facilities.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	OC-5
Action or Project Description:	Perform a comprehensive analysis of County energy usage, quantify the financial and environmental cost and benefits, and make specific recommendations for investing in renewable energy for County buildings and other facilities.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Minimize chance of power outages during severe weather event. Maintain government continuity of operations. $25,000 engineer consulting
Plan for Implementation	
Responsible Organization:	Ontario County Buildings & Grounds
Action/Project Priority:	Medium
Timeline for Completion:	2020
Potential Fund Sources:	NYSERDA, NYS DEC Grants
Local Planning Mechanisms to be Used in Implementation, if any:	County facilities plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update. Update to reflect “Feasibility Analysis for Switching County Buildings and Other Facilities to Renewable Energy”. Consultant currently completing energy use analysis of County Buildings. The study will also estimate investment needed to transition buildings/facilities to renewable energy and make recommendations for phased transition. Consultant currently completing feasibility analyses and recommendations regarding fleet electrification.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet OC- 6: Erosion & Sediment Control – Emergency Response Toolkit	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Need for emergency erosion & sediment control response materials to deal with water quality concerns caused by storm events or infrastructure failures.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	1) Create an Emergency Erosion & Sediment Control Response Toolkit 2) Provide training to County and municipalities on how to use resources in the toolkit 3) Update toolkit as needed to meet local needs
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	Emergency Erosion & Sediment Control Response Toolkit
Action or Project Description:	Develop an Emergency Erosion & Sediment Control Response Toolkit for use by the municipalities
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	The action will address the growing need for items such as turbidity curtains, dewatering devices and other BMPs to reduce nonpoint source pollutants from entering waterbodies. $50,000 plus staff time
Plan for Implementation	
Responsible Organization:	Ontario County Soil & Water Conservation District
Action/Project Priority:	Medium
Timeline for Completion:	End of 2019
Potential Fund Sources:	Local funding, state and federal grants
Local Planning Mechanisms to be Used in Implementation, if any:	None
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed. County has a turbidity curtain, 3 dewatering pumps, and mulch filter socks on hand to assist with reducing non-point source run off to lakes. Ontario County Soil and Water Conservation District provides training to County and local municipal personnel on emergency erosion and sediment control best management practices.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet OC-7: Countywide Resiliency Plan	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	A plan is needed to address how communities in Ontario County can more directly address the impacts from climate change.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Development of a Countywide Community Resiliency Plan. This will be done in keeping with the standards and intent of the NYS Countywide Resiliency Planning Grant program.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	Development of a Countywide Community Resiliency Plan
Action or Project Description:	Ontario County would like to develop a broad-based plan that makes it more resilient to the impacts of climate change and other ad verse impacts. The plan needs to address protection of critical infrastructure and facilities as well as how communities can become better able to respond adversity created by the changing climate, economy, etc.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Communities will be better prepared to withstand, respond to and recover from adversity more effectively. This will reduce negative impacts initially and minimize the length and cost of recovery.
Plan for Implementation	
Responsible Organization:	Ontario County Planning Department
Action/Project Priority:	Medium
Timeline for Completion:	2020
Potential Fund Sources:	NYS Countywide Resiliency Planning Grant https://www.dos.ny.gov/funding/rfa-16-lwrp-33/index.html
Local Planning Mechanisms to be Used in Implementation, if any:	NYS GML 239-d. Ontario County does not currently have a County long-range or comprehensive plans
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update. Update to reflect: “improve capacity for a community and its ecosystem to withstand extreme events and quickly recover the interconnected social, economic, and ecological systems structure and function in the aftermath of a disasters.” Ontario County is participating in a Genesee/Finger Lakes project to draft a regional Resiliency Plan. The project has just begun in 2023 and will have sections to address the special needs and considerations for each county.

SECTION 25: PREVIOUS ACTIONS

VILLAGE OF BLOOMFIELD

Previous Action Worksheet VB-1: Critical Facility Flood Risk	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Village of Bloomfield Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Flood risk to some critical facilities - Sewage Treatment Plant Structure - Flood History - flooded in the past, frequent flooded area, electric has failed interrupting service in the past (plant upgrade in progress)
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Multi-phase upgrades to the existing treatment plant and associated property to provide capacity to handle flows from 500yr flood events.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	VB-1
Action or Project Description:	An engineering firm was retained by the Village to evaluate the existing treatment plant and propose recommendations for necessary upgrades. The work will be completed in multiple phases.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Phase I – upgrades currently pending include new pumps, new pumps to storm tanks, new piping, and new filters. These improvements will increase the efficiency of the plant and make it more capable of handling stormwater inflow during a severe weather event. Estimated cost of project is 2.3 million dollars. Phase II – upgrades proposed include operational upgrades. Work has yet to be awarded.
Plan for Implementation	
Responsible Organization:	Village Board
Action/Project Priority:	High
Timeline for Completion:	2020
Potential Fund Sources:	Tax Levy
Local Planning Mechanisms to be Used in Implementation, if any:	Public Works Long-Term Plan, Floodplain Management Plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed and Defer to Plan Update. Phase I was completed in 2018. Phase II had bids opening in late September of 2023.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet VB-2: Storm Water Management	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Village of Bloomfield Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Stormwater concerns/risk of severe storms - address existing drainage problem on Maple Street; Identify and address sources of stormwater infiltration into the sanitary sewer system. Issues with damaged pipes in some places. Seek funding for implementation.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Maintenance to existing railroad bed to facilitate proper stormwater flow.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	VB-2
Action or Project Description:	Maintenance to existing railroad bed to facilitate proper stormwater flow.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Maintenance of the existing/ abandoned railroad bed is required to facilitate proper drainage and stormwater flow around Maple Street. Work can be completed by Village DPW staff. Landowners will need to be contacted to get the appropriate approvals since much of the necessary work would occur outside of the right of way.
Plan for Implementation	
Responsible Organization:	Village DPW
Action/Project Priority:	Medium
Timeline for Completion:	Ongoing – within the next year
Potential Fund Sources:	Tax Levy
Local Planning Mechanisms to be Used in Implementation, if any:	Work scope is included in the Village DPW budget and associated workload.
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update. On-going project.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet VB-3: Water Supply Protection	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Village of Bloomfield Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Protect public water supply - wells and springs could be better regulated and protected; prevention of cross-connections to the public water system; Well head protection is a priority.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Review of wellhead protection areas in compliance with the Village's Zoning Ordinance and Comprehensive Plan.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	VB-3
Action or Project Description:	Review of wellhead protection areas in compliance with the Village's Zoning Ordinance and Comprehensive Plan.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Two wellhead protection areas are identified within the context of the Village's zoning regulations and comprehensive plan. Evaluation of proposed uses within these areas are reviewed by the zoning officer to determine compatibility. Allowed uses are strictly regulated to protect water quality within the area. Continued project revaluation will occur as projects arise.
Plan for Implementation	
Responsible Organization:	Village Board
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	The salary of the zoning officer and municipal boards are included in the municipal budget. Project review is within the scope of zoning officer's responsibilities.
Local Planning Mechanisms to be Used in Implementation, if any:	Zoning Ordinance and Comprehensive Plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update. On-going project.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet VB-4: Stream/Stream Bank Protection	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Village of Bloomfield Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Flooding/severe storm concerns and risk - stream/stream bank improvements - coordinated efforts to clear streams of debris and alleviate flooding.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Identification of areas of concern.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	VB-4
Action or Project Description:	The Village will work to identify specific areas of concern in a Phase 1 study.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	The Village will work to identify specific areas of concern and coordinate the clearing of debris to help alleviate flood risk. Property owners within the identified areas of concern will need to be contacted for access permission as some of the necessary work may occur outside of the existing right of ways. $20,000 for study
Plan for Implementation	
Responsible Organization:	Village DPW
Action/Project Priority:	Low
Timeline for Completion:	Ongoing
Potential Fund Sources:	Tax Levy and/or Homeowner Contribution
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain Management Plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed. The Village provides continual steam bank maintenance.

SECTION 25: PREVIOUS ACTIONS

TOWN OF BRISTOL

Previous Action Worksheet TB-1: Storm Water Management – culvert replacement and ditch cleaning	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Bristol Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Flooding/severe storm concerns and risk - significant flooding in the past. Drainage Issues - May/2014 Flooding stormwater concerns; roads have flooded; needed culvert replacement, ditch cleaning, removal of tree and brush debris.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Culvert Replacement Ditching Tree and Brush Removal
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TB-1: Stormwater management – culvert replacement and ditch cleaning
Action or Project Description:	Culvert replacement with larger culverts Ditch cleaning and tree and brush removal by culverts o help them accommodate flows from a 500yr flood event.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Road and culvert damage avoided. Potential cost associated with culvert replacement= $8K-10K Other factors include outreach to impacted property owners.
Plan for Implementation	
Responsible Organization:	Highway Department
Action/Project Priority:	High / Ongoing
Timeline for Completion:	Ongoing
Potential Fund Sources:	Highway budget and FHWA grants if available
Local Planning Mechanisms to be Used in Implementation, if any:	Highway Maintenance Schedule.
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TB-2: Flood Damage Prevention Law Review/Update	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Bristol Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Flooding - old flood prevention law (1987), not recently updated
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Flood Prevention
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TB-2: Flood prevention law review/update
Action or Project Description:	Review and update Flood Prevention Law (1987)
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Erosion and Property Loss Potential Town Attorney involvement = $175/hour Outside legal review = cost unknown
Plan for Implementation	
Responsible Organization:	Town Board
Action/Project Priority:	Low
Timeline for Completion:	2020
Potential Fund Sources:	Town staffing
Local Planning Mechanisms to be Used in Implementation, if any:	Town Board legislative process
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TB-3: Stormwater controls with sediment and erosion control measures	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Bristol Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Severe storm problems - Sediment and erosion control measures are needed
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Stormwater controls with sediment and erosion control measures
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TB-3: Stormwater controls with sediment and erosion control measures
Action or Project Description:	Engineered sediment and erosion plans required. Investigate existing requirements for measures as part of municipal project review. Could be done in conjunction with Task TB-3 and TB-4.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Provided stormwater control helps prevent property and road damage. N/A will need to be engineered. Possible Town Attorney involvement = $175/hour
Plan for Implementation	
Responsible Organization:	Town Board
Action/Project Priority:	Medium
Timeline for Completion:	2020
Potential Fund Sources:	Town Budget and grants if available
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain Management Plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update.

SECTION 25: PREVIOUS ACTIONS

TOWN OF CANADICE

Previous Action Worksheet TCanad-1: Stormwater management and erosion control improvements	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Canadice Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Concerns with flooding, stormwater management and erosion control. Issues with stormwater management facilities not being effective or needing maintenance. Roadside culverts plug up causing flooding on Lawrence Hill Road (primarily the north/south leg, but also on the east/west leg although somewhat less severe. Rip rap is also frequently displaced by excess water flow.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Information not reflected in 2018 Plan
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TCanad-1: Stormwater management and erosion control improvements
Action or Project Description:	Investigate other approaches to rip rap, such as cable concrete, etc. which may prove to remain in place better than the rock that is currently being used.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Benefits: preservation of road surface, shoulders, and drainage ditches Estimated Cost: $45,000
Plan for Implementation	
Responsible Organization:	Town of Canadice Highway Dept.
Action/Project Priority:	Medium
Timeline for Completion:	2019
Potential Fund Sources:	FEMA HMGP Funding and Public Works Department
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain Management Program
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update. Town has received WQIP grant for ditch stabilization to happen in 2024 along with Capitol Improvement Road Project.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TCanad-2: Fire hydrant inventory, assessment & installation	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Canadice Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Fire hydrants - some areas are underserved and could use hydrants.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Install additional dry hydrants at area water sources
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TCanad-2: Fire hydrant inventory, assessment & installation
Action or Project Description:	Survey potential areas that can be served by additional dry hydrant locations. Install additional dry hydrants at area water sources
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Benefits: adequate water supplies for firefighting purposes $10,000 est.
Plan for Implementation	
Responsible Organization:	Local Fire Departments
Action/Project Priority:	Low
Timeline for Completion:	2020
Potential Fund Sources:	Town Budget
Local Planning Mechanisms to be Used in Implementation, if any:	Emergency Response Plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed and Defer to Plan Update. Hemlock Fire Dept. is looking into grant funding to install a new dry hydrant in 2024 on Coykendall Hill Road. The Installation of public water serviced by the Canadice Water District along the southern end of Honeoye Lake has provided fire hydrants to the residents along County. Rd. 36 and associated private roads.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TCanad-3: Aquatic invasive species prevention on Canadice and Hemlock Lakes	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Canadice Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Need aquatic invasive species prevention on Canadice and Hemlock Lakes. Vegetative invasive species can also disrupt drainage ditches.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Establish a program for public education for invasive species Also develop a strategy for eradication of invasive species
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TCanad-3: Aquatic invasive species prevention on Canadice and Hemlock Lakes
Action or Project Description:	Make literature available at boat launches on Canadice Lake in DEC kiosks. Vegetative invasive species spraying program.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Water intake for City of Rochester remain clear Improved fishery $50,000 Drainage ditches remain clear of vegetation
Plan for Implementation	
Responsible Organization:	Town Highway Department with support from Finger Lakes PRISM
Action/Project Priority:	Medium
Timeline for Completion:	2019
Potential Fund Sources:	DEC Grants if available otherwise Town Budget
Local Planning Mechanisms to be Used in Implementation, if any:	Honeoye Lake Watershed Management Plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TCanad-4: Install erosion control measures/structures	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Canadice Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Severe erosion of drainage ditch and damage/loss of roadway and shoulder on Curtis Road.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Replace current rip rap with other material that will withstand force of water and prevent displacement.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TCanad-4: Install erosion control measures/structures
Action or Project Description:	Install cable concrete or other erosion control structure to mitigate issue, especially on Curtis Rd. Replace current rip rap with other material that will withstand force of water and prevent displacement.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Benefit: Protect road surface and shoulder from loss $80,000- $100,000
Plan for Implementation	
Responsible Organization:	Highway Department
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	OCSWCD, Town staff
Local Planning Mechanisms to be Used in Implementation, if any:	Honeoye Lake Watershed Management Plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed. The Town lost the round 16 WQIP grant funding which the engineered project was counting on for funding. A cross culvert in the area of question was upsized in 2022, diverting a larger volume of water half way down the hill. Cutting the total ditch volume seems to slow the velocity.

SECTION 25: PREVIOUS ACTIONS

CITY OF CANANDAIGUA

Previous Action Worksheet CC-1: Invasive Aquatic Species	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	City of Canandaigua Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Canandaigua Lake is a risk of being infested with invasive aquatic species which could cause great economic hardship and storm water management issues.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	1) Information/education programs. 2) Watercraft stewards/inspection and organism removal. 3) Boat washing stations or other methods of washing boats.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	CC-2: Invasive Species Plan
Action or Project Description:	Develop public education and boat inspection programs to minimize introduction of invasive species into Canandaigua Lake.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Public health concerns. Minimize potential damage to resources on which the recreation and tourism industry depend. $10,000 education materials. $100,000 – hire boat inspectors (if need be) $40,000 – set up boat washing stations (if need be)
Plan for Implementation	
Responsible Organization:	City of Canandaigua Parks and Recreation with support from Finger Lakes PRISM (Partnership for Regional Invasive Species Management)
Action/Project Priority:	High
Timeline for Completion:	Ongoing
Potential Fund Sources:	Parks and Recreation, Canandaigua Lake Watershed Council
Local Planning Mechanisms to be Used in Implementation, if any:	Canandaigua Lake Watershed Management Plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update. On-going. Since 2016 the City has been actively implementing a watercraft steward inspection program in partnership with multiple state and local entities. The City has an active educational campaign with both printed materials and billboards, and has also implemented a boat washing station for 2 seasons and are planning to implement the boat washing station for a 3rd year in 2024 with the goal of creating a permanent boat washing station.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet CC-2: Sucker Brook Flooding	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	City of Canandaigua Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	The floodplain and flooding risk along Sucker Brook includes approximately 220 homes and some critical facilities such as the Primary/Elementary School and an Electric and Gas Facility Structure (Rochester Gas & Electric). Some heavily traveled intersections (e.g., North Pearl and West Gibson) are also potentially located in the floodplain. The official floodplain has what is believed to be inaccuracies that could prevent properties from preparing for flood or causes other properties unnecessary additional expenses for flood preparation.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Upstream detention to mitigate the flooding that occurs within the City. Stabilization of the banks along Sucker Brook to prevent sediment and erosion. The overall goal is
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	CC-3: Update Sucker Brook Flood Maps
Action or Project Description:	Assess bank stabilization needs and develop maps that correctly identify risk to critical facilities, residents, schools and businesses located in the Sucker Brook floodway and provide protection of same from flooding with resiliency to withstand a 500yr flood event.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Better communicate the risk to those in harm's way and develop risk management plan. $50,000 for H&H study Consult with the Oneida County SWCD, which has a strong and successful bank stabilization program
Plan for Implementation	
Responsible Organization:	City of Canandaigua Department of Public Works
Action/Project Priority:	High
Timeline for Completion:	2021
Potential Fund Sources:	Initial consultation with partner SWCD agency willing to share subject matter B expertise
Local Planning Mechanisms to be Used in Implementation, if any:	Canandaigua Lake Watershed Management Plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update: For the upstream detention, additional sites are being pursued, but there is no way of predicting if, or when, additional detention can be constructed. Bank stabilization is being looked at in multiple locations. No specific work is currently planned. Update action/project consideration summary to include "The overall goal is to lower the

	flood event peak flow as much as practical." Update "Action or Project Intended for Implementation", "Summary of Evaluation", to reflect Ontario County SWCD, not Oneida County. As for progress and effectiveness, the City implemented 2 large scale flood and water quality retention projects in 2017 and 2018 that can provide over 100 acre feet of storage.

SECTION 25: PREVIOUS ACTIONS

TOWN OF CANANDAIGUA

Previous Action Worksheet T Canandaigua – 1: County Road 46 Electric Substation	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Canandaigua Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Flooding. Critical facilities at risk include the RGE electric substation in a flood zone. Some roads are susceptible to flooding and closures. There is potential flood risk if future development is located near (or within) flood zones as predicted. Flood zone regulations and enforcement are important to providing protection from 500yr flooding events.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Information not reflected in 2018 Plan
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	1) Communicate and coordinate with RG&E on emergency response plan and hazard mitigation measures. 2) Amend code to prevent damage to new or improved building structures in flood zones. 3) Develop town staff capacity through certification in floodplain management.
Action or Project Description:	1) The RG&E substation on County Road 46 (Tax Map # 84.00-1-18.000) is shown to be in a flood plain. Action to be considered includes contacting RG&E to find out if they have an emergency response plan in the event the facility is compromised due to flooding or other hazard. Communication will also include determining RG&E's interests in assessing and protecting the facility from flood risk, securing grants, etc. Rochester Gas and Electric 70; Farm View Drive; New Gloucester, ME 04260 2) Update and adopt code. 3) Add a Certified Floodplain Manager to town staff.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Ensure that the company and jurisdiction can operate in sync in the event of an emergency to maintain continuity of service and continuity of operations.
Plan for Implementation	
Responsible Organization:	Town of Canandaigua
Action/Project Priority:	Medium
Timeline for Completion:	Contact RG&E in 2019
Potential Fund Sources:	None
Local Planning Mechanisms to be Used in Implementation, if any:	None
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of**	Defer to Plan Update. There is still significant flooding at the CR 46 station. The challenge is that this sits near the border of the city of Canandaigua, the Town of Canandaigua, Town of Hopewell and an

Effectiveness:	Ontario County road. Residents and the roadway floods. County engineers have been looking at this. This should continue.

Previous Action Worksheet **T Canandaigua – 2: Inventory and flushing of fire hydrants**	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Canandaigua Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Fire/Wildfire
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Information not reflected in 2018 Plan
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	Inventory and flushing of fire hydrants
Action or Project Description:	T Canandaigua – 2
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Inventory and flushing are completed by water department staff supervised by the Town of Canandaigua Highway Water Superintendent
Plan for Implementation	
Responsible Organization:	Town of Canandaigua Water
Action/Project Priority:	Priority
Timeline for Completion:	Ongoing
Potential Fund Sources:	Town Budget
Local Planning Mechanisms to be Used in Implementation, if any:	Annual Budgeting Plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed. The Town has a plan in place to regularly flush and maintain hydrants and is now part of annual maintenance.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet T Canandaigua – 3: Invasive Aquatic Species	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Canandaigua Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Infestation or spread of aquatic invasive species - Canandaigua Lake.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Information not reflected in 2018 Plan
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	1) Work with the Canandaigua Lake Watershed Association, Canandaigua Lake Watershed Council, and Town of Canandaigua Environmental Conservation Board to inform residents about aquatic invasive species. 2) Support watercraft inspections through a watercraft stewards' program and installation of boat washing stations at major public boat launches on Canandaigua Lake outside town boundaries and at Town's Onanda Park boat launch.
Action or Project Description:	Public Information / Education
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Benefit- protection of Canandaigua Lake which is the source of drinking water for more than 60,000 residents
Plan for Implementation	
Responsible Organization:	Town Board
Action/Project Priority:	Medium
Timeline for Completion:	Ongoing
Potential Fund Sources:	DEC grant, Canandaigua Watershed Council
Local Planning Mechanisms to be Used in Implementation, if any:	Coordinated by the Canandaigua Lake Watershed Manager Canandaigua Lake Watershed Management Plan with support from Finger Lakes PRISM
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed. The Town continues monitor invasive species. Education messaging, boat wash station, signage at parks. NYS has funding to monitor and eradicate invasive species. Additional mitigation efforts include Giant Hogweed Control Team based in Avon; NYS-funded Terrestrial and Aquatic Strike Teams through Finger Lakes PRISM; Watercraft Stewardship Program to combat invasive aquatic species.

SECTION 25: PREVIOUS ACTIONS

VILLAGE OF CLIFTON SPRINGS

Previous Action Worksheet VCS-1: Re-build Kendall and Silver Streets and Improve Drainage	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Village of Clifton Springs Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Sediment and erosion control measures are needed especially in high drainage areas. Upgrading and improving drainage is important (storm drains are cleaned annually and rebuilt on a regular basis to avoid problems).
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Re-build Kendall Street and Silver Street in the future and improve drainage. This will not happen until Broad Street borrowing is paid off.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	VCS-1: Re-build Kendall Street and Silver Street and improve drainage
Action or Project Description:	Re-build Kendall Street and Silver Street and improve drainage. We will continue to install concrete gutters in areas, providing we can do this within our budget.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Approximately four years ago Broad Street was rebuilt. New storm drains were installed. This has really helped manage drainage on that street. On several streets the Village has installed concrete gutters which have also helped with drainage. $20,000
Plan for Implementation	
Responsible Organization:	Village Board/Street Department
Action/Project Priority:	Medium
Timeline for Completion:	2023
Potential Fund Sources:	Village savings and borrowing, hopefully some grant funding
Local Planning Mechanisms to be Used in Implementation, if any:	Stormwater Management Program
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet VCS-2: Permanent generator at sewer lift station and/or larger generator for sewer plant	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Village of Clifton Springs Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Generators are important need to maintain and enhance.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Consider a permanent generator at the sewer lift station. Would need to evaluate if this is even feasible. Also, a larger generator that could operate all of the sewer plant would be very beneficial\ and provide service during 500yr flood events.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	VCS-2: Permanent generator at sewer lift station and/or larger generator for sewer plant
Action or Project Description:	The Village has one sewer lift station. When the power goes out the Village has to take a portable generator to the site to keep the pump station operating. Having a generator in place (if possible) would provide continual operation.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	The Village has purchased – installed generators at the Village Hall, /Police Department. Also, extra portable generators have been purchased. This has helped to keep essential services going during power outages. The Village has a number of generators, and all are serviced professionally on a regular basis, and all are permanent generators are automatically tested weekly.
Plan for Implementation	
Responsible Organization:	Village Board
Action/Project Priority:	Low
Timeline for Completion:	2023 – A larger generator at the sewer plant and a permanent generator at the lift station would require engineering.
Potential Fund Sources:	Sewer Fund Revenue, possible grant opportunity for a generator to operate all the sewer plant. Goal would be a very large generator that is trailer mounted that could be used by other municipalities if needed.
Local Planning Mechanisms to be Used in Implementation, if any:	Stormwater Management Plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet VCS-3: Water infrastructure improvements	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Village of Clifton Springs Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Hydrant maintenance and inventory is important. Currently maintained and flushed annually and replaced when needed.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	The water infrastructure remains a concern as it is approximately 100 years old. Any opportunity to replace old main, water valves, or hydrants is addressed as needed.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	VCS-3: Evaluate cost of water infrastructure improvements - replacement of old water mains, water valves and hydrants especially on Kendall St and Silver St
Action or Project Description:	As needed, we have replaced numerous hydrants throughout the water system. It is important to continue with this. Also hoping soon to replace a portion of the water line on Kendall Street and we will replace any hydrants along that line at the same time. Should all of Kendall Street or Silver Street get re- built around 2023, we are hopeful water line and hydrants along that line would be replaced at that time.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	It is important to continue with the annual maintenance and replacement of hydrants. This is proactive for the water department. Cost to purchase and install each hydrant $400 Cost of main lines to be estimated.
Plan for Implementation	
Responsible Organization:	Village Water Department
Action/Project Priority:	Medium
Timeline for Completion:	Continual on the maintenance, around 2023 on Kendall Street or Silver Street
Potential Fund Sources:	Water Fund Revenue, borrowing for the Kendall Street or Silver Street project.
Local Planning Mechanisms to be Used in Implementation, if any:	Stormwater Management Plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed and Defer to Plan Update. On-going maintenance as needed.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet VCS-4: Drainage improvements near Kendall St and monitoring of Sulphur Brook	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Village of Clifton Springs Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Flooding is a major concern, significant flooding in the past - Kendall Street ditch needs improvements (widening and deepening ditch to increase flow on North side of Village); Sulphur Brook could pose a flood risk. Need to clean, deepen, and straighten Sulphur Brook to mitigate flooding and improve drainage. Installing rip rap (rocking) has helped improve the flow. Flood damage prevention needs include promotion/outreach.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Possible rebuild of Kendall Street around 2023. Portions of the creek wall on private property are deteriorating and cracking and could cause problems in the future.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	VCS-4: Drainage improvements near Kendall St and monitoring of Sulphur Brook
Action or Project Description:	Continue to improve drainage where we are able when we can. Should Kendall Street be selected as the next street for major improvements (to be determined around 2023) we will address better drainage on that street at that time. Continue to monitor the Sulphur Brook.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	The Village crew maintains the ditch on Kendall Street (not the property owner) and this has helped with keeping the ditch open and flowing when needed. The rip rap continues to help with the flow of Sulphur Creek. Cost to maintain banks of Sulphur Creek: $50,000 Drainage improvements: $25,000
Plan for Implementation	
Responsible Organization:	Village Board/Street Department
Action/Project Priority:	High
Timeline for Completion:	Continual with possible major work in 2023
Potential Fund Sources:	Village savings and borrowing for re-build of Kendall Street, if this happens around 2023. Hopefully grant money as well.
Local Planning Mechanisms to be Used in Implementation, if any:	Not Applicable
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update.

SECTION 25: PREVIOUS ACTIONS

TOWN OF EAST BLOOMFIELD

Previous Action Worksheet TEB-1: Culvert Inspection/ Replacement	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of East Bloomfield Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Flooding is a concern, significant flooding in the past; town experiences issues such as washouts due to heavy rain and flooding - Mud Creek & Fish Creek clearing and sediment control could help in order to mitigate regular flooding; Fish Creek floods regularly; pipe under road at corner of Cherry and Brace is a problem for flooding, needs to be repaired or replaced. This project will provide resiliency for critical facilities from a 500yr flood event.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Culvert Inspection/ Replacement along areas of Mud Creek Culvert Inspection/ Replacement along areas of Fish Creek.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TEB-1: Culvert Inspection/Clean Out & Replacement
Action or Project Description:	Culvert Inspection and/or replacement along flood prone creeks within the Town.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Mud Creek – Town has begun the necessary identification of areas of concern. Culverts are being replaced under Whalen and Oakmount Streets. Work is being performed by the Town Highway Department and is being funded through their existing budget. Estimated cost of the work being performed is approximately $100,000. Fish Creek –Flooding associated with this creek is less of a priority to the Town. The Creek is classified as a trout stream which will necessitate correspondence with DEC and USACE prior to any work being done. Work along this Creek will also require buy in by property owners and adjacent municipality as much of the drainage issues lie outside of the Town's right of way. The Town will begin reaching out to these stake holders to determine what, if any, work can be done.
Plan for Implementation	
Responsible Organization:	Town Board
Action/Project Priority:	Mud Creek – High / Fish Creek – Low
Timeline for Completion:	2020
Potential Fund Sources:	Mud Creek work funded through the tax Levy. No funding currently exists to complete work along Fish Creek.
Local Planning Mechanisms to be Used in Implementation, if any:	Information not reflected in 2018 Plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed and Defer to Plan Update. Culvert at Mud Creek has been completed. Will need to address Fish Creek.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TEB-2: Town-wide Flood Risk Study	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of East Bloomfield Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Lack of correct and current information regarding flood risk makes it difficult to guide development in a manner that minimizes flood risk.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	1) Identify areas susceptible to flooding due to storm water in the Town. 2) Produce a plan to correct the storm water flooding within the Town that is putting undue risk on businesses and residents.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TEB-2: Town-wide Flood Risk Study
Action or Project Description:	Utilize the County's updated aerial elevation data (LIDAR) and a community engagement process to update maps and other information regarding flood risks throughout the Town.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Updated flood information will allow the Town to minimize risk of flood damage for new and existing development 1) Identification of flood risks - $50,000 2) Implementation plan - $30,000
Plan for Implementation	
Responsible Organization:	East Bloomfield Town Board
Action/Project Priority:	High
Timeline for Completion:	2021
Potential Fund Sources:	DEC, FEMA, Local Budget Process
Local Planning Mechanisms to be Used in Implementation, if any:	Not Applicable
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update. Town will need to explore if study was done at a county-wide level and look to implement recommended improvements based on study.

SECTION 25: PREVIOUS ACTIONS

TOWN OF FARMINGTON

Previous Action Worksheet TF-1: Drainage Management – Regional Study	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Farmington Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Drainage is a concern - Examine extending the drainage district to town-wide. (Easements obtained as part of the Town's MS 4 Program Administration) (Town has amended its Stormwater Management chapter of local law). Continue periodic maintenance of stream corridors. Identify and upgrade/replace targeted culverts - example: culvert underneath Mertensia Road is currently being replaced. Severe storms have caused issues- downed trees from a storm blocked the flow of Mud Creek which cause flooding.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Encourage Ontario County to conduct regional drainage studies of water sheds to realize a comprehensive solution to drainage concerns.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TF-1: Drainage management – regional study
Action or Project Description:	Ganargua, Beaver and Black Brook Creeks Inter-Municipal Drainage Report. Towns of Canandaigua, East Bloomfield, Farmington, Manchester, and Victor.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Conducting inter-municipal study of these water sheds is the only truly comprehensive approach to correcting drainage concerns. Estimated cost of such a document would approach $150,000.00 including details mapping, surveying, and committee coordination.
Plan for Implementation	
Responsible Organization:	Ontario County Planning
Action/Project Priority:	Priority Number 1 of 2
Timeline for Completion:	2021
Potential Fund Sources:	FEMA grant award, EPA grant award and partial cost sharing by all municipalities involved.
Local Planning Mechanisms to be Used in Implementation, if any:	Lead Municipality coordinates meeting minutes, hosts meetings, and posts meeting minutes on website. County coordinates consultant's scope of service and deliverables.
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update. In August 2023 an application for grant funding assistance, under the State's Consolidated Funding Application (CFA) Program, was prepared by staff at the Ontario County Planning Department with assistance provided by the Ontario County Soil & Water Conservation District. The grant, if awarded, would provide funds to study a portion of the Black Creek – Black Brook Drainage Divides in the County. The current

	application would provide for a study of the downstream portions of this extensive drainage divide in the County. Currently, the towns of Canandaigua, Manchester and Farmington have been identified as participants in this drainage study. The following municipalities have portions of this drainage divide included within their boundaries – town of South Bristol, Bristol, East Bloomfield and Victor, and the Village of Victor, located within Ontario County. In addition, the developing portion of the Town of Macedon, Wayne County, is located within the drainage divide area and should be studied. Funding for this current project, if approved, would come from the New York State Department of Environmental Conservation Nonpoint Source Planning Grant Program. If funded, the project would commence in February 2024 and end July 1, 2025. This is a $93,000.00 project involving state CFA funds of $75,000, with $18,000.00 being matched with County and towns funds.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TF-2: Town Court Facility Back-up Generator	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Farmington Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Town Court building on Hook Road could benefit from a natural gas generator to enable a place of public shelter during prolonged energy outages.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Purchase and installation of natural gas generator sized to meet the needs of the Town Court Facility during prolonged energy outages in the community. Action also benefits temporary power outages and ensures continuous security of the facility and site.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TF-2: Town Court Facility Back-up Generator
Action or Project Description:	Farmington Town Court, with the back-up power source, could become a facility to house persons during prolonged periods of power outages and/or major weather events.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Loss of power threatens the Court's security system, the public safety of Court operations and would provide safe haven during major weather events. $30,000.00 Proximity of Court Facility to Interstate 90
Plan for Implementation	
Responsible Organization:	Farmington Town Board
Action/Project Priority:	High
Timeline for Completion:	2019
Potential Fund Sources:	Homeland Security Funds, VLT Funds, CFA Funds, Local Taxes
Local Planning Mechanisms to be Used in Implementation, if any:	Not Applicable
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed. In 2018, the Town of Farmington installed a backup generator for the Town Court Building located at 1023 Hook Road. This project provides a long-term solution to previous power outages.

SECTION 25: PREVIOUS ACTIONS

CITY OF GENEVA

Previous Action Worksheet CG-1: Cemetery Creek Drainage	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	City of Geneva Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Improper and insufficient drainage along Cemetery Creek.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Implementation of the recommendations detailed in the January 2018 engineering study for the existing Cemetery Creek Storm Sewer
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	CG-1: Cemetery Creek Drainage
Action or Project Description:	In the 19th century much of Cemetery Creek was directed through underground pipes. The areas above were later developed making replacement/enlargement of most of the system impractical. Runoff from continued development and recent storm events have exceeded system capacity and resulted in regular flooding of downtown properties. An engineering study was completed in January of 2018 and includes recommendations to mitigate flooding. This project would implement those recommendations which include: o Diversion of a portion of the drainage (study needed) o Creation of flood storage on individual sites o Disconnecting properties from the Cemetery Creek drainage system and creating on site drainage/infiltration Improving access to the drainage system for more regular monitoring and repair.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Future flood damage along Cemetery Creek TBD after completion of diversion study and individual site assessments for system disconnect and on-site drainage. It was determined that replacement /enlargement of pipes is impractical because of extensive high-density development immediately above.
Plan for Implementation	
Responsible Organization:	Geneva City Council
Action/Project Priority:	High
Timeline for Completion:	2023
Potential Fund Sources:	FEMA Grant, City Budget, individual property owners.
Local Planning Mechanisms to be Used in Implementation, if any:	None
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update. Flood damage continues to occur along cemetery creek. In 2023, staff implemented strategies to clean the system removing debris from the creek. The diversion study was not completed. A grant has been submitted to NYS to continue this process. The City is in the process of exploring ways to mitigate the challenges within the creek with an engineering firm to be put into place in 2024 and beyond.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet CG-2: Castle Creek Intermunicipal Drainage Study	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	City of Geneva Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Periodic flooding and erosion along Castle Creek. The Castle Creek watershed includes portions of the Town and City of Geneva. Through the City, Castle Creek runs east to west through a dense mix of residential and downtown commercial uses. It outlets into Seneca Lake near a lakefront park and swimming area. Some of it runs through underground culverts. An overall look at this complex watershed is needed to assess conditions and develop solutions to minimize flooding, erosion, and negative impacts to Seneca Lake.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Coordinate with the Town of Geneva to develop a plan to properly manage runoff, drainage, and erosion throughout the Castle Creek Watershed.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	CG-2: Castle Creek Intermunicipal Drainage Study
Action or Project Description:	Work with the Town of Geneva to develop an intermunicipal watershed plan that culminates in workable strategies to minimize future flooding and erosion along Castle Creek and limit potential negative impacts to the environment, public health, and property.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Limit future negative impacts to public health and the environment as well as property damage caused by erosion and flooding along Castle Creek $100,000
Plan for Implementation	
Responsible Organization:	Ontario County Planning will facilitate the intermunicipal effort
Action/Project Priority:	Medium to high
Timeline for Completion:	2023
Potential Fund Sources:	FEMA Grant, City Budget, individual property owners.
Local Planning Mechanisms to be Used in Implementation, if any:	None
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed and Defer to Plan Update. The city annually reviews the creek to clean debris, especially following large weather events. Partial cleaning of the system at Genesse Street and Geneva streets has occurred and three catch screens have been placed in the creek in 2023. An intermunicipal watershed plan that culminates in workable strategies to minimize future flooding and erosion along Castle Creek and limit potential negative impacts to the environment, public health, and property has not been created.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet CG-3: Marsh Creek Intermunicipal Drainage Study	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	City of Geneva Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Periodic flooding and erosion along Marsh Creek. The Marsh Creek watershed includes portions of the Town and City of Geneva. Through the City, Marsh Creek runs north to south through a dense pattern of mixed development, and outlets into Seneca Lake near a lakefront park and swimming area. Some of it runs through underground culverts. The City of Geneva Sewage Treatment Plan also outlets into Marsh Creek about 0.6 miles north of the inlet to Seneca Lake. A watershed wide approach is needed to address longstanding problems with, erosion, flooding, and negative impacts to water quality.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Coordinate with the Town of Geneva to develop a plan to properly manage runoff, drainage, and erosion throughout the Marsh Creek Watershed.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	CG-3: Marsh Creek Intermunicipal Drainage Study
Action or Project Description:	Work with the Town of Geneva to develop an intermunicipal watershed plan that culminates in workable strategies to minimize future flooding and erosion along Marsh Creek and limit negative impacts to the environment, public health, and property.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Limit future negative impacts to public health and the environment as well as property damage caused by erosion and flooding along Marsh Creek $100,000
Plan for Implementation	
Responsible Organization:	Ontario County Planning will facilitate the intermunicipal effort
Action/Project Priority:	Medium
Timeline for Completion:	2023
Potential Fund Sources:	FEMA Grant, City Budget, individual property owners.
Local Planning Mechanisms to be Used in Implementation, if any:	None
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed and Defer to Plan Update. The City is working with Soil and Water as stream retention has been increased within Marsh Creek. The Wastewater Treatment Plant is located on the creek and they annually support creek clean up in these areas. An intermunicipal watershed plan that culminates in workable strategies to minimize future flooding and erosion along Castle Creek and limit potential negative impacts to the environment, public health, and property has not been created.

SECTION 25: PREVIOUS ACTIONS

TOWN OF GENEVA

Previous Action Worksheet TGe-1: Stormwater/Flood Management	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Geneva Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Drainage is a concern - Town-wide storm water management and drainage plan are needed with primary focus will on future development, including special drainage districts; town needs regulations to secure drainage easements to improve stormwater management and protect critical facilities from a 500yr flood event.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Adoption of conservation easements
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TGe-1: Stormwater/flood management - review/update townwide stormwater study; public education/outreach
Action or Project Description:	Review of 2004 Town Wide Storm water Study for impacts and updates. Public education and outreach
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Mitigation of storm water impact from intense storm events; lessen potential of flooding of neighboring homes; as well as decreasing nutrient and sediment loading into Seneca Lake
Plan for Implementation	
Responsible Organization:	Town Board
Action/Project Priority:	High
Timeline for Completion:	Near term (2020)
Potential Fund Sources:	CFA
Local Planning Mechanisms to be Used in Implementation, if any:	Outreach to property owners with streams and floodways located on their lands.
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed and Defer to Plan Update. The Town has added relevant code sections and design standards and installed stormwater control facilities in criterial areas with more planned, however the Town would still like to enhance their current procedures.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TGe-2: Stormwater Management – MS4 Program	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Geneva Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Stormwater management concerns - participate in MS4 program
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Information not reflected in 2018 Plan
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TGe-2: Stormwater Management and erosion control - adoption of an MS4 Stormwater Management Program
Action or Project Description:	Adoption of an MS4 Stormwater Management Program
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Less sediment and nutrient loading in Seneca Lake $25,000 for system upgrades to bring it into compliance
Plan for Implementation	
Responsible Organization:	Superintendent of Water and Sewer
Action/Project Priority:	Moderate
Timeline for Completion:	2023
Potential Fund Sources:	CFA
Local Planning Mechanisms to be Used in Implementation, if any:	Public Works Program, Floodplain Management Program
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Delete Action. After review of the options in consultation with town's engineering firm, the town decided not to adopt MS4.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TGe-3: Kashong Creek Bank Stabilization and Monitoring	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Geneva Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Streambank stabilization - Kashong Creek Bank Stabilization Project - large rock boulders (rip rap) protect main water line from well head. Need to maintain.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Information not reflected in 2018 Plan
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TGe-3: Kashong Creek bank stabilization and monitoring
Action or Project Description:	Monitoring Kashong Creek to insure protection of Town's 3 well heads
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Avoid contamination of public water supply to over 7,000 customers $25,000 for bank stabilization Water Department Staffing – monitoring stage
Plan for Implementation	
Responsible Organization:	Town Water Dept.
Action/Project Priority:	Moderate
Timeline for Completion:	2023
Potential Fund Sources:	Water Department - monitoring stage
Local Planning Mechanisms to be Used in Implementation, if any:	Quarterly inspections
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed and Defer to Plan Update. The Town has completed some work, but further analysis is required to determine if project is completed or if additional action is needed.

SECTION 25: PREVIOUS ACTIONS

TOWN OF GORHAM

Previous Action Worksheet TGorham-1: County Road 11 Area Flood Mitigation	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Gorham Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Flood hazard from stream and culvert blockages in steep slope areas near County Road 11.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Development of a plan for mitigation of potential flood hazards in step slop areas in the southwest corner of the Town.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TGorham – 1: County Road 11 Area Flood Mitigation
Action or Project Description:	1) Conduct an inventory and analysis of steep slope (>15%) areas in the southwest corner of the Town to assess existing conditions and identify where mitigation measures are needed. 2) Develop an implementation strategy for mitigation that includes prioritization, schedule and funding. 3) Implement as prescribed.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Addressing stream blockages as well as other issues in the subject area will minimize the risk of future flooding and resulting property and environmental damage. Costs will be determined after completion of the initial plan.
Plan for Implementation	
Responsible Organization:	Town of Gorham Town Board
Action/Project Priority:	Medium
Timeline for Completion:	2020
Potential Fund Sources:	Grants, Town Budget, In kind technical assistance (Ontario County Planning, SWCD)
Local Planning Mechanisms to be Used in Implementation, if any:	Not Applicable
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TGorham-2: Crystal Beach/Deep Run Drainage	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Gorham Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Lack of proper drainage in the area of Crystal Beach and Deep Run Cove.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Analysis of current grading and drainage improvements in the area of Crystal Beach and Deep Run. There is concern that inadequate drainage leaves this area vulnerable to flooding.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TGorham – 2: Crystal Beach/Deep Run Drainage
Action or Project Description:	1) Collect available information about flooding history in the subject area. 2) Perform an inventory and analysis of the existing grading and drainage improvements. 3) Assess potential for flooding 4) Create a strategy that includes prioritized steps for mitigation and a plan for implementation
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	The goal is to create a logical plan to minimize flood risk in this densely developed area. Costs: TBD
Plan for Implementation	
Responsible Organization:	Town Board
Action/Project Priority:	Medium
Timeline for Completion:	2019
Potential Fund Sources:	Grants, Town Budget, In kind technical assistance (Ontario County Planning, SWCD)
Local Planning Mechanisms to be Used in Implementation, if any:	Not Applicable
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TGorham-3: Manure Storage and Water Quality	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Gorham Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Flood susceptibility and potential water quality impacts from large scale manure storage facilities.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	1) Inventory the location, size, and design of manure storage facilities in the Town. 2) Assess potential risks to ground and surface waters during both typical and flood conditions. 3) Establish a strategy for minimizing this risk.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TGorham - 3 Manure Storage and Water Quality
Action or Project Description:	The Town needs to inventory the location, size, and design of manure storage facilities to assess and minimize the potential for surface and ground water impacts
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	This project will enable the Town to make informed decisions about how to minimize the potential for negative water quality impacts from manure storage facilities. Cost: TBD
Plan for Implementation	
Responsible Organization:	Town of Gorham Town Board
Action/Project Priority:	Medium
Timeline for Completion:	2020
Potential Fund Sources:	Grants, Town Budget, In kind technical assistance (Ontario County Planning, SWCD)
Local Planning Mechanisms to be Used in Implementation, if any:	Not Applicable
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update.

SECTION 25: PREVIOUS ACTIONS

TOWN OF HOPEWELL

Previous Action Worksheet TH-1: Ditch Clearing	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Hopewell Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Stormwater management concerns as well as sediment and erosion control - tree trimming; review and update Sediment and Erosion Control Plan periodically.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Information not reflected in 2018 Plan
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TH-1
Action or Project Description:	Town Highway Department evaluates road ditches and right-a-ways for erosion and sediments. Also, trees and brush along town roads are evaluated to determine any obstructions.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Lessen Town liability for storm-related damage. Staff time.
Plan for Implementation	
Responsible Organization:	Town Highway Department
Action/Project Priority:	Clear road ditch by excavation, trim trees, mow roadsides
Timeline for Completion:	Completed annually when weather permits
Potential Fund Sources:	Annual Highway Budget
Local Planning Mechanisms to be Used in Implementation, if any:	Information not reflected in 2018 Plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TH-2: Water Department Pump Station Generator	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Hopewell Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Electricity failure risk - review and update inventory of generators and needs.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Information not reflected in 2018 Plan
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TH-2: Hopewell Water Department Inventory and Purchase of Generators
Action or Project Description:	Purchase and installation of generator at Hopewell Water Department Pump Station to ensure continued operation and provide added resiliency to a 500yr flood event.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Continuity of Operations $100,000
Plan for Implementation	
Responsible Organization:	Hopewell Water Department
Action/Project Priority:	High
Timeline for Completion:	2018-19
Potential Fund Sources:	Water Department Budget
Local Planning Mechanisms to be Used in Implementation, if any:	n/a
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update.

SECTION 25: PREVIOUS ACTIONS

TOWN OF MANCHESTER

Previous Action Worksheet TM-1: Water Street Bridge Repair/Replacement	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Manchester Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Bridge safety concern with water street bridge over Paddleford creek, needs a 20ft span replaced. This affects Red Jacket School and local emergency vehicles.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Needs a 20-foot span replaced.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TM-1: Bridge Repair/Replacement
Action or Project Description:	Replace 20-foot span of the Water Street Bridge.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Estimated Cost: $750,000.00 Other Factors Considered: If the bridge is out of service this would affect Red Jacket School traffic, pedestrian traffic and emergency vehicles.
Plan for Implementation	
Responsible Organization:	Town of Manchester Highway Department
Action/Project Priority:	Not a high priority at this time
Timeline for Completion:	2022
Potential Fund Sources:	Grants
Local Planning Mechanisms to be Used in Implementation, if any:	Local budget process and chips monies
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Delete Action. This action pertains to the Village of Shortsville as the Village received grant funding for 2024-2025.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TM-2: Storm Water and Erosion Control Regulations	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Manchester Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Updated regulations are needed to address impacts from 500yr flood events as well as incremental impacts from smaller storm events.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	This will be a coordinated effort between the Town and Villages of Clifton Springs, Manchester, and Shortsville. Standards and regulations will apply to all development.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TM-2: Storm Water and Erosion Control Regulations
Action or Project Description:	Prepare and adopt land use regulations that address the management of storm water, stream corridors, groundwater, erosion, and sedimentation. Updated standards and regulations will properly manage storm water and erosion for the Town of Manchester and the 3 Villages.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Storm water and erosion control to minimize the impacts to water quality, critical facilities and infrastructure from large and small storm events. $10,000 plus Town and County staff resources.
Plan for Implementation	
Responsible Organization:	Manchester Town Board
Action/Project Priority:	Medium
Timeline for Completion:	2020
Potential Fund Sources:	FEMA, Local Budget Process
Local Planning Mechanisms to be Used in Implementation, if any:	Local Law Amendment, Local Development Review, Town's adopted engineering standards for new development
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update.

SECTION 25: PREVIOUS ACTIONS

VILLAGE OF MANCHESTER

Previous Action Worksheet VM-1: Critical Facility Flood Protection	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Village of Manchester Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Flood risk to some critical facilities - Village of Manchester Highway Garage - In Flood Zone; Village of Manchester Police Dept. & Fire Hall - In Flood Zone; Sewage Treatment Plant Structure - Potential Flood Risk - on the edge of flood zone; flood issues during heavy rains in specified areas of the village, particularly Clifton Street, North Avenue, Merrick Avenue, and Westplex Drive. trees have been damaged
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Develop plan for protecting existing Village facilities located in a 500yr flood zone.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	VM-1: Flood Risk Management
Action or Project Description:	Develop plan for mitigating flood hazard to Village facilities located in a 500yr flood zone. Consider site amendments or new/shared facilities in a different location.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Saving facilities and equipment from potential loss. Phase 1 Study - $75,000 Phase 2 Implementation – TBD
Plan for Implementation	
Responsible Organization:	Village Board
Action/Project Priority:	Medium
Timeline for Completion:	2020
Potential Fund Sources:	FEMA, Local Budget Process
Local Planning Mechanisms to be Used in Implementation, if any:	Not Applicable
2024 ANALYSIS	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update. On-going project. Update program mitigated section to include “State Street” and remove “Village of Manchester Police Department”. Update Phase II implementation to be on-going at this time.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet VM-2: Storm Water and Erosion Control Infrastructure	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Village of Manchester Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Concerns with storm water runoff from roads concerns and sediment/erosion control - stream corridor restoration/streambank stabilization periodically; tree maintenance and inspection; need to prevent automotive run-off from entering the water system (regulate? curbing? drainage?)
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Inventory existing storm water infrastructure and develop a plan for installing/upgrading appropriate infrastructure to minimize erosion and uncontrolled runoff
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	VM-2
Action or Project Description:	VM-2: Storm Water and Erosion Control Infrastructure - Inventory and analysis and plan for implementation
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Prevent losses from spot location flooding. Phase 1: Initial Study $75,000 Phase 2: Implementation TBD
Plan for Implementation	
Responsible Organization:	Village Board
Action/Project Priority:	Medium
Timeline for Completion:	2021
Potential Fund Sources:	FEMA, Town Budget
Local Planning Mechanisms to be Used in Implementation, if any:	Not Applicable
2024 ANALYSIS	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update. On-going project. Update Phase II implementation and timeline for completion to reflect continuous.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet VM-3: Generator Inventory and Upgrade	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Village of Manchester Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Utility failure - update inventory of generators, determine where additional are needed (Sewage Treatment Plant, etc.); utility lines could be buried, or future lines could be buried
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Generator Inventory – purchase additional generators and modify/upgrade support facilities to protect from weather and flooding
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	VM-3
Action or Project Description:	Generator Inventory and Upgrade
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Reliable backup power will avoid significant losses that would occur in the event of failure of public sewer and other essential services. Generators are about $50,000/location
Plan for Implementation	
Responsible Organization:	Village Board
Action/Project Priority:	High
Timeline for Completion:	2019
Potential Fund Sources:	Village Budget Reserve Fund
Local Planning Mechanisms to be Used in Implementation, if any:	Risk Management
2024 ANALYSIS	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed and Defer to Plan Update. The Village has installed generators but will continue to assess critical facilities for installation and need.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet VM-4: Fire Protection – Pratt Road Water Main	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Village of Manchester Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Fire safety concern - upsize water mains and hydrants to improve fire protection.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Increase water main on Pratt Rd from 4” to 6”. Establish pit and connections to Village of Shortsville water lines. Establish hydrant inspections and replacement.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	VM-4: Fire Safety – Increasing Size of Water Mains
Action or Project Description:	Increase size of water main on Pratt Rd, replace old water lines with new, replace old hydrants with new.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Larger, upgraded water supply infrastructure will reduce losses from fires. $500,000
Plan for Implementation	
Responsible Organization:	Village of Manchester DPW
Action/Project Priority:	Medium
Timeline for Completion:	2023
Potential Fund Sources:	Grants, Village Reserve Fund
Local Planning Mechanisms to be Used in Implementation, if any:	Set up a water transmission grid by streets to target section of replacement each year.
2024 ANALYSIS	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update. Update action/projects considered to remove and action or project description to remove “increase water main on Pratt Rd from 4” to 6”. Update to remove Village of Shortsville from action as it pertains specifically to Village of Manchester.

SECTION 25: PREVIOUS ACTIONS

TOWN OF NAPLES

Previous Action Worksheet TN-1: Garlinghouse Road Re-construction	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Naples Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Flood and stormwater concerns, significant flooding in the past; Floods have washed out roads, covered roads with debris; Water Supply Structures have been affected by heavy rain events; flooding has caused damage to bridges, culverts, and road.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Garlinghouse Road re-construction – install larger culverts, perform stream bank stabilization. This is not actively being pursued due to lack of funds.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TN-1: Garlinghouse Road Re-construction – including culvert upgrades and bank stabilization
Action or Project Description:	Seek permission from NYS DEC, FEMA & Army Corps of Engineers to perform the needed stream bank stabilization and culvert replacements
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	$7 million to perform the desired improvements. A total loss of the roadway would cost 10 million to rebuild. Therefore a $3 million loss would be avoided.
Plan for Implementation	
Responsible Organization:	Town Highway Dept.
Action/Project Priority:	High
Timeline for Completion:	2023
Potential Fund Sources:	FEMA, NYS DEC, Army Corps of Engineers Grant Opportunities
Local Planning Mechanisms to be Used in Implementation, if any:	Added to the Highway Dept. annual Pre-Disaster Mitigation planning
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed. Garlinghouse Road Project was completed with assistance from Canandaigua Lake Watershed Council. Project has been very effective.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TN-2: Town Wide Roadway Stabilization Effort	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Naples Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Forest and vegetation management concerns, hillside, and road Stabilization.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Town Wide Roadway Stabilization Effort
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TN-2: Town Wide Roadway Stabilization Effort
Action or Project Description:	Acquire the services of a highway engineer to evaluate the existing roadways of the Town to provide recommendations and RFP'S for Mitigation Measures to preserve or improve the roadways – not currently being pursued sue to lack of funding.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Seek out FEMA, NYS DEC & Army Corps of Engineers Grant funds to perform the desired evaluations. Cost of Plan 60 million. Loss of Roadways town wide - 80 million. Net savings if future plan is implemented – 20 million.
Plan for Implementation	
Responsible Organization:	Town Board
Action/Project Priority:	High
Timeline for Completion:	2019
Potential Fund Sources:	FEMA, NYS DEC, Army Corps of Engineers grant opportunities
Local Planning Mechanisms to be Used in Implementation, if any:	Added to Highway Dept. Annual Pre-Disaster Mitigation Planning and Town Board annual Grant seeking.
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed and Defer to Plan Update. On-going. The Highway Department has done a large amount of roadway stabilization over the past 9 years. This has been incorporated into road maintenance and reconstruction projects. Project has been very effective.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TN-3: Flood zone outreach/education – brochure development and distribution	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Naples Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Flood Zone Development Losses
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Some recent development has occurred near flood zones and some future development is anticipated near or within flood zones - Flood regs and enforcement are important.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TN-3: Flood zone outreach/education – brochure development and distribution
Action or Project Description:	Create a flood zone brochure for homeowners within flood zones
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Would provide needed and helpful education to homeowners within flood zones on how to mitigate the effects of flooding. This would be completed once updated flood mapping is completed by FEMA for the Town of Naples.
Plan for Implementation	
Responsible Organization:	Town of Naples Planning Dept.
Action/Project Priority:	High
Timeline for Completion:	2020
Potential Fund Sources:	FEMA
Local Planning Mechanisms to be Used in Implementation, if any:	Added to the Planning Departments annual work plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update.

SECTION 25: PREVIOUS ACTIONS

VILLAGE OF NAPLES

Previous Action Worksheet VN-1: DPW Building Re-location	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Village of Naples Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Flood risk to some critical facilities - Village of Naples DPW - In 500 yr. Flood Zone; Water Supply Structure (Middlesex Rd.) - In Flood Zone; Water Supply Structure (Mount Pleasant St.) - Potential Flood Risk; Treatment plant is affected by heavy rain events; Spring boxes have potential for contamination, have been affected by heavy rain events.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Re-Location of the DPW Building Outside of the 500-year flood zone on other Village lands. Purchase lands surrounding the Village Spring Boxes.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	VN-1: DPW building re-location out of flood zone & bordering land purchases around spring box locations
Action or Project Description:	Budget funds to re-locate DPW building, and budget funds to purchase bordering lands around current spring box locations – not currently being pursued due to lack of funds.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Current Village Barn replacement cost including equipment in the event of a catastrophic flood event – 1.5 million. Cost to Construct a new DPW Building on lands currently owned by the Village outside of a flood zone – 750K. Loss prevention of approx... 750K. 500K to clean up contaminated spring box in the event of a catastrophic flood event -500K. Cost to purchase bordering lands around spring box locations to prevent the effects of erosion- less than 500K. Net savings of at least 10K.
Plan for Implementation	
Responsible Organization:	Village Board
Action/Project Priority:	High
Timeline for Completion:	By 2023 identification of location for new DPW building
Potential Fund Sources:	FEMA, NYS
Local Planning Mechanisms to be Used in Implementation, if any:	Added to the Pre-Disaster Mitigation planning of the DPW and Village Board
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update. In-progress. By 2030 identification of local for new DPW Building.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet VN-2: Naples Creek & Grimes Creek improvements	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Village of Naples Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Sediment and erosion control concerns - tree trimming; stream corridor restoration/streambank stabilization.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Naples Creek & Grimes Creek Stabilization, log jam removal & dredging.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	VN-2: Naples Creek & Grimes Creek improvements - stabilization, log jam removal & dredging
Action or Project Description:	Request permission and receive permits from NYS DEC, FEMA, and the Army Corps of Engineers to remove existing log jams, perform dredging in need areas (bridges) and add stream bank stabilization to mitigate the effects of flooding. These actions are currently not being attempted due to lack of funds and inability to receive permits form state and federal agencies to perform such activities, as both watercourses are protected due to the native trout population.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Log jam removal, stream bank stabilization, and dredging underneath bridges would mitigate the effects of flooding and greatly reduce losses incurred on residential properties and roadways throughout the Village. Cost: $75,000
Plan for Implementation	
Responsible Organization:	Village Board of Trustees, Ontario County SWCD
Action/Project Priority:	High
Timeline for Completion:	10 years for complete project, by 2023 have permits and action plan in place
Potential Fund Sources:	FEMA, NYS DEC, & Army Corps. Of Engineers grants
Local Planning Mechanisms to be Used in Implementation, if any:	Village long-term plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update. In-progress. Small areas of the stream have been continually addressed as required.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet VN-3: Flood risk awareness - flood zone brochure creation and distribution	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Village of Naples Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Some recent development has occurred near flood zones and some future development is anticipated near or within flood zones - Flood regs and enforcement are important.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Flood Zone Brochure
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	VN-3: Flood risk awareness - flood zone brochure creation and distribution
Action or Project Description:	Provide a Flood Plain Educational Brochure to Citizens.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Would provide needed and helpful education to homeowners within flood zones on how to mitigate the effects of flooding. This would be completed once updated flood mapping is completed by FEMA for the Village of Naples. $5,000 for production and distribution of brochure
Plan for Implementation	
Responsible Organization:	Village of Naples Planning Department
Action/Project Priority:	High
Timeline for Completion:	2023
Potential Fund Sources:	FEMA Grant Funding https://www.fema.gov/grants
Local Planning Mechanisms to be Used in Implementation, if any:	Added to the Planning Department work program
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update. In-progress. Waiting on new FEMA mapping to produce current Flood Risk Awareness Brochure.

SECTION 25: PREVIOUS ACTIONS

TOWN OF PHELPS

Previous Action Worksheet TP-1: Drainage improvements aimed at protecting critical facilities	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Phelps Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Flood risk to some critical facilities - Town of Phelps Highway Dept. - In Flood Zone; Sewage Treatment Plant Structure - In Flood Zone. Floods have damaged roads in the past (Fisher and Gifford Rds. for example)
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	The Village owns the Sewage plant. We would need to build up the roads and make better drainage and provide protection from a 500yr flood event
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TP-1: Drainage improvements aimed at protecting critical facilities
Action or Project Description:	Drainage improvements for The Town of Phelps. Improve roads and drainage.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Protection of roads and critical facilities from damage related to a 500-yr. flood event. Actual Cost TBD Minor road repairs (e.g.) culverts - $20,000 Major Projects requiring road replacement/realignment upwards of $1,000,000
Plan for Implementation	
Responsible Organization:	Town of Phelps Highway Dept.
Action/Project Priority:	Medium
Timeline for Completion:	2020
Potential Fund Sources:	USDA
Local Planning Mechanisms to be Used in Implementation, if any:	Town Comprehensive Plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed. A new Highway / Water Garage was built in 2015 and 2016.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TP-2: Increased drainage for new development areas near flood zone	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Phelps Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Some future development is anticipated near or within flood zones.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Continue to implement improvements to drainage facilities throughout the Town of Phelps
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TP-2: Increased drainage for new development areas near flood zone
Action or Project Description:	Flood Zone development - build up area of low wetland within means of the DEC and install drainage for and around areas.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Actual Cost TBD Minor drainage improvements (e.g., minor regrading) - $20,000 More significant projects requiring land acquisition, permitting and large-scale earthwork - $1,000,000
Plan for Implementation	
Responsible Organization:	Town Board
Action/Project Priority:	Medium
Timeline for Completion:	2020
Potential Fund Sources:	USDA
Local Planning Mechanisms to be Used in Implementation, if any:	Town Comprehensive Plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update. On-going. This will always be a work in process to continue to implement improvements to drainage facilities throughout the Town of Phelps. Update name of action to reflect: Increased drainage for new development areas near flood zone according to the rules and regulations in the 2020 IEC Residential and Building Codes and development must be approved. Update action description to reflect: Installation of drainage is done per project according to rules and regulations of all necessary departments involved (DEC, Code, Zoning, County, etc.). Update cost to reflect: Minor drainage improvements (e.g., minor regrading) - $50,000+; More significant projects requiring land acquisition, permitting and large-scale earthwork - $1,000,000+

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TP-3: Create a town drainage plan	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Phelps Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Concerned about drainage and runoff - drainage districts.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Creation of a Townwide drainage plan that assesses flood risks and establishes strategy to mitigate and provide 500yr flood events protection for critical facilities.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TP-3
Action or Project Description:	Create a town drainage plan
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	$100,000
Plan for Implementation	
Responsible Organization:	Town Board
Action/Project Priority:	Medium
Timeline for Completion:	2023
Potential Fund Sources:	USDA
Local Planning Mechanisms to be Used in Implementation, if any:	Town Comprehensive Plan Amendment
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed and Defer to Plan Update. On-going. Multiple Box Culverts have been installed in problem areas previously reported in Action Worksheets – Fisher Road, box culvert 2017/2018 and Gifford Rd is planned in the future. Other Box culverts were installed, and new drainage is installed during road repairs and road rebuilds. Update action summary to reflect: Drainage is to be considered and evaluated for every project, so flood risks related to 500yr flood events are considered for critical facilities. Drainage is evaluated in every project, involve all departments and agencies needed.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TP-4: Smoke detector plan	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Phelps Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Fire safety is a concern.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Ongoing programs to ensure there are adequate smoke detectors.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TP-4: Smoke detector plan/programs
Action or Project Description:	Smoke detector plan - The fire departments are currently doing smoke detector programs.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	$40-$5,000
Plan for Implementation	
Responsible Organization:	Phelps Fire Department
Action/Project Priority:	Low
Timeline for Completion:	2023
Potential Fund Sources:	FASNY http://www.fasny.com/
Local Planning Mechanisms to be Used in Implementation, if any:	Fire Protection Plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update. On-going. Update action titles to reflect: “Fire Safety”. Update action/project consideration to reflect: To expand water districts throughout the Town of Phelps for better fire coverage and better water for our residents. Update action description to reflect: Keep expanding water districts and a bulk water station at the corners of State Route 14 and Cross Road. Update summary of evaluation to reflect: Clean and safe water for the residents. Bulk water station benefits fire departments, residents with wells and nonresidents passing through with campers and water needs. Update responsible organizations to reflect: Phelps Fire Department, Clifton Springs Fire Department, Oaks Corners Fire Departments. Update funding sources to reflect: USDA grants and low interest loans.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TP-5: Create an erosion control plan for evaluation and regulation	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Phelps Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Concerned about sediment and erosion control for new development.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	The planning board put in the code that they would have to evaluate each site before, during and after to regulate clear cutting, and erosion control.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TP-5: Create an erosion control plan for evaluation and regulation
Action or Project Description:	Create an erosion control strategy for evaluating development proposal to minimize erosion and properly manage runoff post development.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	$50,000
Plan for Implementation	
Responsible Organization:	Planning Board with support from Ontario County SWCD
Action/Project Priority:	Medium
Timeline for Completion:	2023
Potential Fund Sources:	USDA
Local Planning Mechanisms to be Used in Implementation, if any:	NA
2024 ANALYSIS	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed. In 2014, Town's Code Book, Section 93.

SECTION 25: PREVIOUS ACTIONS

VILLAGE OF PHELPS

Previous Action Worksheet VP-1:	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Village of Phelps Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Shelter needs generator – Phelps Community Center; building is Village property.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	While generators are already installed at DPW shop and Fire Department; these facilities were deemed not applicable for a shelter due to quantity of use during an emergency situation.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	VP-1: PCC Generator
Action or Project Description:	Install a generator at the Phelps Community Center in order to use the facility as an emergency shelter when needed.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Currently obtaining “load studies” in order to accurately size a generator for the facility; until this is completed, we are unable to accurately estimate the cost. Due to the location, size, and accessibility of the building the benefits to the community are immeasurable.
Plan for Implementation	
Responsible Organization:	Department of Public Works
Action/Project Priority:	High
Timeline for Completion:	2015-2016 Budget Year
Potential Fund Sources:	This expense has been figured into the current year’s budget and will be funded by the Public Works Equipment Fund Reserve.
Local Planning Mechanisms to be Used in Implementation, if any:	As DPW schedule permits.
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed.

SECTION 25: PREVIOUS ACTIONS

TOWN OF RICHMOND

Previous Action Worksheet TR-1: Drainage improvements and flood damage repair and prevention	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Richmond Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Vulnerable to flooding and heavy rain, significant flooding in the past. Serious erosion problems have occurred on East Lake Road and Wesley Road originating from rain events that occurred in 2011. Some recent developments have occurred near flood zones and future development is anticipated near or within flood zones, (regulation/enforcement are important). Extensive flooding and damage in 2014. Did not meet FEMA threshold for reimbursement on damages. Experienced similar flood events in June 2015.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Information not reflected in 2018 Plan
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TR-1: Drainage improvements and flood damage repair and prevention – road, ditch and culvert repair and upgrades, stream channel improvement and stream bank stabilization. Provide protection for critical facilities from 500yr flood events.
Action or Project Description:	Roads ditches and culverts need repair or replacement. Over 3000 feet of ditches need repair. Wesley Rd needs repairs, 22 Roads in 52 areas sustained recent flood damage worst being Allens Hill, Canadice Lake Rd, East Lake Rd, Bell Rd (had one lane washed out).
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Wesley Rd repairs estimated at $250k. In 2014 over 100k damage to 22 Roads in 52 areas sustained damage worst being Allens Hill, Canadice Lake Rd, East Lake Rd, Bell Rd (had one lane washed out). Did not meet FEMA threshold for reimbursement on damages.
Plan for Implementation	
Responsible Organization:	Highway Superintendent
Action/Project Priority:	HIGH Priority
Timeline for Completion:	Ongoing
Potential Fund Sources:	USACE, Fish and Wildlife, Subject Matter Expertise from SWCD*
Local Planning Mechanisms to be Used in Implementation, if any:	Road repairs being made as Town Budget and resources allow.
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed. However, the Town continues to experience sediment accumulation and erosion on roads and ditches due to high rain events. Past improvements and upsizing of culverts has help to reduce the impacts from these heavy rains.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TR-2: Flood insurance study and map updates	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Richmond Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Flood risk to some critical facilities - Richmond Fire Department (Honeoye) - In Flood Zone; Sewage Treatment Plant Structure - In Flood Zone; Heavy rain has affected the water system in the past (4/2011). Water flowed out of the top of well number two for three straight days from the hydraulic pressure due to saturated ground. Experienced similar problems during the flood events of May and July 2015.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Information not reflected in 2018 Plan
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TR-2: Flood insurance study and map updates
Action or Project Description:	Seek funding to update the community's flood insurance study and mapping and develop a strategy to protect critical facilities from ongoing flood risk
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Be able to accurately communicate flood risk, protection of critical facilities from 500yr flood events. $50,000
Plan for Implementation	
Responsible Organization:	Town Board
Action/Project Priority:	HIGH Priority
Timeline for Completion:	2020
Potential Fund Sources:	FEMA
Local Planning Mechanisms to be Used in Implementation, if any:	Seek funding opportunities to update the community's flood insurance study and mapping.
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update. FEMA is currently in the process of a FIRM update. The Town of Richmond is challenging the new maps based on inaccurate data. The flooding that our community faces periodically is due to the inability to maintain stream bed flows, due to NYSDEC regulations.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TR-3: Continue and expand aquatic invasive species programs	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Richmond Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Aquatic invasive species problem on Honeoye Lakes.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Information not reflected in 2018 Plan
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TR-3: Continue and expand aquatic invasive species programs
Action or Project Description:	Programs could include information/education programs; watercraft stewards/inspection and organism removal; boat washing station
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Public health concerns. Minimize potential damage to resources on which the recreation and tourism industry depend. $10,000 education materials; $50,000 – hire boat inspectors (if need be) $40,000 – set up boat washing stations (if need be)
Plan for Implementation	
Responsible Organization:	Town Board,
Action/Project Priority:	HIGH Priority
Timeline for Completion:	Ongoing
Potential Fund Sources:	Communities bordering Honeoye Lake
Local Planning Mechanisms to be Used in Implementation, if any:	Honeoye Lake Watershed Task Force, Honeoye Valley Association with support from Finger Lakes (Partnership for Regional Invasive Species Management (PRISM).
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed and Defer to Plan Update. On-going. Programs have been implemented to help control invasive species from entering the Lake. This is an ongoing effort requiring constant lake monitoring and educating the public.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TR-4: Local law enforcement and maintenance – stormwater management, soil erosion, steep slopes and timber harvesting laws	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Richmond Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Landslide Hazard - erosion and sediment control is a concern - erosion related to Honeoye Lake is a concern; mudslide occurred due to heavy rain and flooding.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Information not reflected in 2018 Plan
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TR-4: Local law enforcement and maintenance – storm water management, soil erosion, steep slopes, and timber harvesting laws
Action or Project Description:	Enforce Storm Water Management, Soil Erosion, Steep Slopes, and Timber Harvesting Laws and review/update periodically
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Maintain natural and recreational resources. Staff time and resources
Plan for Implementation	
Responsible Organization:	Town Board,
Action/Project Priority:	HIGH Priority
Timeline for Completion:	Ongoing
Potential Fund Sources:	Communities bordering the lake
Local Planning Mechanisms to be Used in Implementation, if any:	Periodic review and update as necessary. Revise as appropriate to reflect community development changes and visions for future development. (HIGH Priority)
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed and Defer to Plan Update. Steeps slopes regulations have been implemented by the Town. This erosion concern continues to be monitored and corrective bank stabilization projects are continually being worked on.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TR-5: Honeoye Lake water quality protection	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Richmond Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Honeoye lake water quality needs to be protected - sediment, nitrogen/phosphorus.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Information not reflected in 2018 Plan
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TR-5: Honeoye Lake water quality protection
Action or Project Description:	Support the development of programs planned for the protection of Honeoye Lake.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Major one-year storm events are responsible for up to 70% of the sediment and nutrient loading. Focus on programs that will be the most effective and cost beneficial.
Plan for Implementation	
Responsible Organization:	Town Board
Action/Project Priority:	HIGH Priority
Timeline for Completion:	Ongoing
Potential Fund Sources:	NYS DEC
Local Planning Mechanisms to be Used in Implementation, if any:	Periodic review and update as necessary. Revise as appropriate to reflect community development changes and visions for future development. (HIGH Priority)
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed. The Town has enacted legislation to protect the lake quality. The Town also works closely with community groups, continuing to monitor lake quality and recommending programs to improve the quality of our lake.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TR-6: Back-up generators for municipal facilities	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Richmond Ontario County Multi-Jurisdictional Hazard Mitigation Plan - 2015
Risk / Vulnerability	
Problem being Mitigated:	Need expanded utility backup during hazard events
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Information not reflected in 2018 Plan
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TR-6: Back-up generators for municipal facilities at the Town Hall (8690 Main St, Honeoye) and Highway Garage (8935 Dugan Dr, Honeoye)
Action or Project Description:	Provide back-up generators for municipal facilities and operations, and for supporting community needs during a 500yr floods and other hazard events.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Maintain continuity of operations $100,000 to purchase and hardwire two generators
Plan for Implementation	
Responsible Organization:	Town Board
Action/Project Priority:	HIGH Priority
Timeline for Completion:	2023
Potential Fund Sources:	FEMA HMGP
Local Planning Mechanisms to be Used in Implementation, if any:	Determine the need for back-up generators for municipal facilities and operations, and for supporting community needs during a hazard event.
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update. Backup systems have not been installed yet, but the Town is currently pursuing a backup generator for the Town Hall at this time.

SECTION 25: PREVIOUS ACTIONS

VILLAGE OF RUSHVILLE

Previous Action Worksheet VR-1: Wastewater Treatment System Upgrades	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Village of Rushville Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Easements for storm sewer - reviewing issues with outstanding storm water collection system easements.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Information not reflected in 2018 Plan
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	VR-1: Upgrade water collection lines
Action or Project Description:	Improvement of storm water collection system through the purchase of easements and installation of collection lines and related facilities.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Improve the water collection system by upgrading collection system. This will result in improved stormwater management. Lessen chance of improper filtration at WWTP by regulating capacity. $75,000 for new collection lines once all easements have been obtained.
Plan for Implementation	
Responsible Organization:	Public Works Supervisor
Action/Project Priority:	Medium
Timeline for Completion:	2023
Potential Fund Sources:	NYS Department of State
Local Planning Mechanisms to be Used in Implementation, if any:	Public Works Operations Plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet VR-2: Stream Bank Stabilization – West River Tributary	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Village of Rushville Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Stream bank stabilization concerns - Creek Bank Restoration/stabilization - North Main Street by sanitary manhole S-7. Manhole is near creek bank, where continuous erosion exposes it.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Information not reflected in 2018 Plan
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	VR-2: Stabilize bank of the West River
Action or Project Description:	Monitor erosion progress and develop plan for streambank stabilization
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Eliminate possibility of river water intrusion into the stormwater collection system Staff time to monitor potential erosion near the manhole cover and develop cost estimate and timetable for bank stabilization based on encroachment observations
Plan for Implementation	
Responsible Organization:	Department of Public Works
Action/Project Priority:	Low
Timeline for Completion:	2023
Potential Fund Sources:	Annual Budget
Local Planning Mechanisms to be Used in Implementation, if any:	DPW Operations Plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update.

SECTION 25: PREVIOUS ACTIONS

TOWN OF SENECA

Previous Action Worksheet TS-1: Stormwater Drainage Survey Implementation	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Seneca Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Hamlet of Stanley has significant stormwater drainage issues on West Main Street near Short Rd and Washburn Ave. Significant rain events occur while the soil is saturated which results in area flooding. Culverts are undersized.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	The Ontario County Soil and Water District completed a storm water drainage survey in 2014. Deficiencies include: 1) Under sized road culverts 2) The combination of field drainage improvements and grade results in a rapid accumulation of storm water during a significant rain event
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TS-1: Stormwater Drainage Survey Implementation
Action or Project Description:	Full implementation of OCSWDs recommended improvements: 1) Replace/enlarge road culverts (especially NYS Route 14) 2) Two retention ponds 3) Redirect storm water along state highway
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	The full implementation of the OCSWDs recommendation is cost prohibitive. Redirecting and resizing the road culvert along State Route 14 will require coordination with NYSDOT. The placement of two retaining ponds on private property further complicates full implementation. Cost of $100,000 for all projects but would improve with storm water management.
Plan for Implementation	
Responsible Organization:	Town of Seneca
Action/Project Priority:	Medium
Timeline for Completion:	2023
Potential Fund Sources:	NYS DEC
Local Planning Mechanisms to be Used in Implementation, if any:	Not Applicable
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed. Town chose to reroute water around the village of Stanley through 2 retention ponds and storm system north of Stanley.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TS-2: Municipal solid waste transfer station operations	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Seneca Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Landfill is approaching maximum capacity; 13 years at the current intake rate. The county landfill currently receives approximately 100K tons of MSW from the Town and 1M tons of MSW county-wide. The future disposition of MSW will need to be determined before the cessation of landfill operations. The town MSW transfer station is currently managed by the landfill operator as a host benefit to the town.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Alternative methods of solid waste management; 1) Pay-to-throw, contracted, transfer station operations a. Summary; Tradition method of small municipal MSW disposition. Combine this effort with reduce/recycle/reuse efforts at the local level 2) Region wide composting, region wide digester, enhanced landfill gas to energy, reduction of solid waste, landfill expansion, etc. a. Summary; Would require a private-public effort for implementation and sustainment
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TS-2: Municipal solid waste transfer station operations
Action or Project Description:	The Town of Seneca MSW transfer station operations will be contracted with a private entity by Dec 2028.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	An evaluation is yet to be accomplished. The implied benefit includes the appropriate disposition of the Town's MSW in an efficient, environmentally responsible manner.
Plan for Implementation	
Responsible Organization:	Town of Seneca Town Board
Action/Project Priority:	Tier III
Timeline for Completion:	2020
Potential Fund Sources:	Constituent fees, town general fund, county landfill revenue distribution
Local Planning Mechanisms to be Used in Implementation, if any:	Town Board, augmentation from County Planning Directorate
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Delete Action. Landfill slated to close in 2029.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TS-3: Create a town-wide drainage district	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Seneca Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Improved agricultural field drainage and clearing has resulted in existing road drainage systems being inundated during significant rain events while the soil is saturated.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Information not reflected in 2018 Plan
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TS-3: Create a town-wide drainage district
Action or Project Description:	The establishment of a town-wide drainage district. The town possesses the necessary competencies for managing a town-wide drainage district.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Improved stormwater management. $25,000 for a Phase 1 study Complications: funding the improvements, additional equipment and labor, community buy-in and the fairness of prioritizing drainage improvements.
Plan for Implementation	
Responsible Organization:	Public Works Department
Action/Project Priority:	Medium
Timeline for Completion:	2023
Potential Fund Sources:	NYS DEC
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain management program
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update.

SECTION 25: PREVIOUS ACTIONS

TOWN OF SOUTH BRISTOL

Previous Action Worksheet TSB-1: Aquatic Invasive Species Mitigation	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of South Bristol Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Aquatic invasive species issue on Canandaigua Lake - funding is limited - need: information/education programs; watercraft stewards/inspection and organism removal; boat washing stations.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Aquatic invasive species on Canandaigua Lake.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TSB-1: Aquatic Invasive Species Mitigation
Action or Project Description:	Boat washing, education, inspection of organisms in lake and prevention
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Public health concerns. Minimize potential damage to resources on which the recreation and tourism industry depend. $10,000 education materials $100,000– hire boat inspectors (if need be) $40,000 – set up boat washing stations (if need be)
Plan for Implementation	
Responsible Organization:	Town Parks and Recreation Department,
Action/Project Priority:	High
Timeline for Completion:	2020
Potential Fund Sources:	NYS DEC
Local Planning Mechanisms to be Used in Implementation, if any:	Coordination with the Canandaigua Lake Watershed Council with support from Finger Lakes Partnership for Regional Invasive Species Management (PRISM)
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Delete Action. Town does not face this issue.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TSB-2: Flood Mitigation – regulations and stormwater management	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of South Bristol Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Drainage/flood issues - flooding has caused road closures, damage to homes and structures, etc.; lost a road last year – issues with drainage on Bulic Rd culverts; NY rte. 21 has been damaged; some future development is anticipated adjacent to the flood zone on Canandaigua Lake-ensure development adheres to flood regs.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Flood zone requirements, road damage including local, county and state also property damage.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TSB-2: Flood Mitigation – regulations and stormwater management
Action or Project Description:	Review flood impacts and assess need for culvert replacement and ditch and drainage improvements
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Reduction of road damage and property damage Phase 1 study of culvert resizing needs estimated $50,000 Impact on Emergency Response Time
Plan for Implementation	
Responsible Organization:	Highway Department
Action/Project Priority:	High
Timeline for Completion:	2023
Potential Fund Sources:	Town Budget, NYS DEC, Wildlife and Fisheries
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update. Culvert replacements are on-going and being addressed by the Highway Department.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TSB-3: Stormwater and erosion management	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of South Bristol Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Stormwater management and erosion concerns - need adequate equipment and to continue road ditch stabilization, culvert repair/replacement, tree trimming.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Stormwater and erosion management
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TSB-3: Stormwater and erosion management
Action or Project Description:	Purchase new equipment, ditch maintenance with culvert replacement.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Highway damage and road closures $100,000 Timely emergency response
Plan for Implementation	
Responsible Organization:	Highway Department
Action/Project Priority:	High
Timeline for Completion:	2023
Potential Fund Sources:	Highway Department, Bonds and Town Board
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain management plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed. Slope law is in place with Town.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TSB-4: Town Hall and Highway Dept. Generators	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of South Bristol Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Some critical facilities are vulnerable to utility failure (and associated hazards that can cause utility failure) - Town hall and town garage need generators.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Vulnerability of highway garage and town hall to utility failure.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TSB-4: Town Hall and Highway Dept. Generators
Action or Project Description:	Install two generators: one at Town Hall and one at Highway Dept.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	No down time for either Highway or Town Hall daily business. Backup generators will limit damage by ensuring that sump pumps and heaters work during 500yr flood events. $40,000-$50,000 per location Towns infrastructure can continue to run
Plan for Implementation	
Responsible Organization:	Town Board
Action/Project Priority:	High
Timeline for Completion:	2018
Potential Fund Sources:	Town Budget and Government Grants
Local Planning Mechanisms to be Used in Implementation, if any:	Annual Budgeting Process
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update.

SECTION 25: PREVIOUS ACTIONS

TOWN OF VICTOR

Previous Action Worksheet TV-1: Regional Watershed Study	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Victor Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Periodic flooding and subsequent property damage from Mud Creek.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Encourage Ontario County to conduct regional drainage studies of the creek watersheds to realize a comprehensive solution to drainage concerns.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TV-2: Regional Watershed Study
Action or Project Description:	Development of a drainage analysis and mitigation strategy for Ganargua (aka Mud), Beaver and Black Brook Creeks watersheds. The towns of Canandaigua, East Bloomfield, Farmington, Manchester, and Victor would coordinate in a comprehensive approach to correcting drainage concerns. The plan will include a detailed inventory and assessment of conditions as well as recommendations for mitigation.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Flood damage from periodic flooding of creeks and streams. $150,000
Plan for Implementation	
Responsible Organization:	Ontario County Planning
Action/Project Priority:	Medium
Timeline for Completion:	2021
Potential Fund Sources:	FEMA grant award, EPA grant award and partial cost sharing by all municipalities involved.
Local Planning Mechanisms to be Used in Implementation, if any:	Lead Municipality coordinates meeting minutes, hosts meetings, and posts meeting minutes on website. County coordinates consultant's scope of service and deliverables.
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update. However, Town has concerns that all municipalities involved may not participate in the study.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TV-2: Storm Water Facilities Maintenance Plan	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of Victor Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Potential flooding from improper maintenance of storm water management facilities.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Develop policies and plans for maintenance of storm water infrastructure, including detention ponds.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TV-2: Storm Water Facilities Maintenance Plan
Action or Project Description:	In the past few decades, the Town of Victor has experienced continued and significant development in residential, commercial, and industrial sectors. In compliance with NYS SPDES requirements many storm water management ponds and other facilities have been built to mitigate flooding and environmental damage caused by increased runoff. Policies and a plan for their maintenance are needed to ensure they continue to work as designed.
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Flood damage resulting from failure of storm water facilities that have not been properly maintained. $50,000-100,000 to develop the policies and plan
Plan for Implementation	
Responsible Organization:	Victor Town Board
Action/Project Priority:	High
Timeline for Completion:	2019
Potential Fund Sources:	Victor Town Budget
Local Planning Mechanisms to be Used in Implementation, if any:	n/a
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed. In 2020 the Town of Victor modified Chapter 211 of the Zoning Code, Article V Stormwater Control to require property owners that have a stormwater facility on their property to have the stormwater management facility inspected and certified once every three years by a professional licensed engineer. If the inspection finds any deficiencies in the stormwater facility the property owner is required to complete the maintenance. The combination of the Town of Victor completing stormwater facility maintenance within the Drainage Improvement Area and the property owners

	completing maintenance on the stormwater facilities outside of the Drainage Improvement Area has helped tremendously with drainage concerns during severe rain events.

SECTION 25: PREVIOUS ACTIONS

VILLAGE OF VICTOR

Previous Action Worksheet VV-1: Stream Corridor Restoration/Streambank Stabilization	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Village of Victor Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Stream corridor restoration/Streambank stabilization priorities – Degraded streambanks and drainage ways increase the risk of flooding and sedimentation.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Continuation of existing programs that restore and stabilize streambanks and stream corridors and ditches.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	VV-1: Stream corridor restoration/Streambank stabilization
Action or Project Description:	Continue program of hydro seeding of ditch lines and stream banks using County equipment, village materials and manpower
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Minimize bank erosion and water overflow Cost for seeding and staff time – Village budget
Plan for Implementation	
Responsible Organization:	Village of Victor
Action/Project Priority:	Medium
Timeline for Completion:	Ongoing
Potential Fund Sources:	Ontario County (equipment) Village of Victor (material & manpower)
Local Planning Mechanisms to be Used in Implementation, if any:	DPW Operations Plan, Floodplain Management Plan with support from Ontario County SWCD
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed. Have made at wastewater treatment plant; bermed the area near the creek to keep creek from breaching into the plant.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet VV-2: Erosion/Steep Slope Controls	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Village of Victor Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Erosion/steep slope concerns - new development requires a grading plan; have a sediment and erosion program and a tree trimming/planting program.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Continuation of existing programs that: 1) require new development to include proper site grading and erosion controls 2) Plant new and maintain existing trees
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	VV-2: Erosion/Steep Slope Controls
Action or Project Description:	Continuation of existing programs – tree trimming and planning, site review for new development
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Lessen erosion, property damage, potential loss of life Current staff and budget
Plan for Implementation	
Responsible Organization:	Village Board
Action/Project Priority:	Medium
Timeline for Completion:	Ongoing
Potential Fund Sources:	Village budget
Local Planning Mechanisms to be Used in Implementation, if any:	DPW Operations Plan, Floodplain Management Plan, Village Tree Board
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed and Defer to Plan Update. The Village has a tree board and code within the village. Annually there is an evaluation of trees within village right of way and marked for what needs to be trimmed or what needs to be taken down, versus those that are healthy. Village still would like to pursue developing an Erosion Plan / Sediment & Erosion program.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet VV-3: Wet Weather Pumps at Wastewater Treatment Plant	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Village of Victor Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Wastewater treatment issue during lower flow times, and storms - need to install a pump station at the Wastewater Treatment Plant.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Install a pump station at the Wastewater Treatment Plant to provide continued operation and protection of operations and facilities during 500yr flood events.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	VV-3: Wet weather pumps at wastewater treatment plant
Action or Project Description:	The Village will purchase wet weather pumps (if funding becomes available)
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	This would intercept high flows and divert to two lined ponds during storms to hold and treat during times of lower flows. This will eliminate the need to set up portable pumps during storms. $1,500 per horsepower required
Plan for Implementation	
Responsible Organization:	DPW Superintendent
Action/Project Priority:	Medium
Timeline for Completion:	2023
Potential Fund Sources:	Village budget
Local Planning Mechanisms to be Used in Implementation, if any:	DPW Operations Plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Completed and Defer to Plan Update. Village has made 2.2 million upgrades at plant. Purchased new emergency pumps. However unsure if pump stations were incorporated or if there is still a need.

TOWN OF WEST BLOOMFIELD

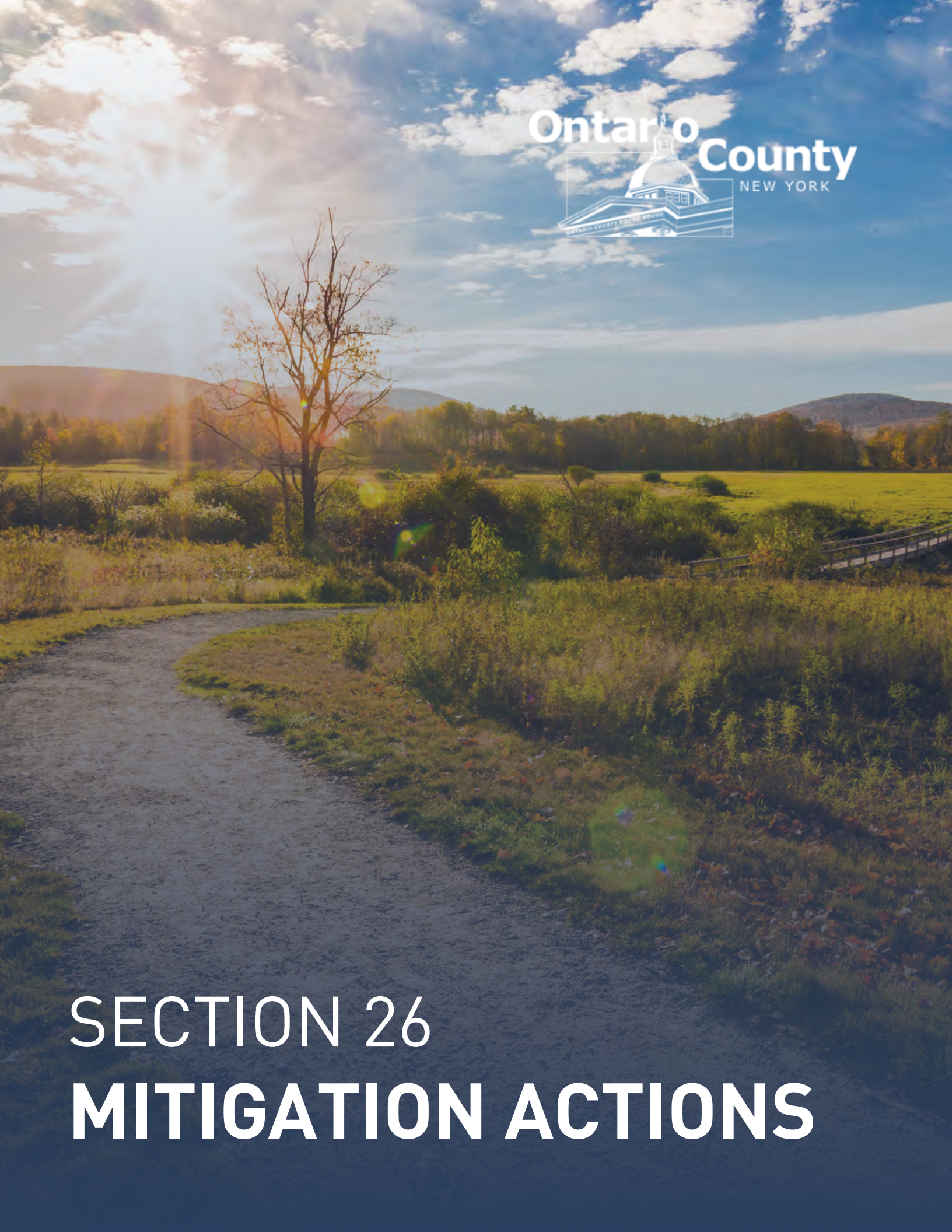
Previous Action Worksheet TWB-1: Utility Wire Tree Maintenance Program	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of West Bloomfield Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	tree maintenance is a priority - Highway Superintendent is working on plan but needs assistance, implementation of the plan will be needed.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Coordination with State and County for utilization of service providers. Annual maintenance plan. Maintenance in non-Town owned cemeteries—Preventative and to minimize possibility of Town having to take ownership.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TWB-1: Utility wire tree maintenance program
Action or Project Description:	Maintain clearing of overhead lines to minimize possibility of outage
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Cost is based on whether Town continues use of East Bloomfield bucket truck or purchases its own. Labor – staff time
Plan for Implementation	
Responsible Organization:	Town Highway Department
Action/Project Priority:	Medium
Timeline for Completion:	Ongoing
Potential Fund Sources:	Staff budget
Local Planning Mechanisms to be Used in Implementation, if any:	Highway Operations Plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update. In-progress.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TWB-2: Fire Department/EMS Radio Interoperability	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of West Bloomfield Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Fire risk - better coordination is needed between three departments that serve the town, as well as EMS coverage.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Migrate to same radio system? Migration to HFMVA as primary instead of FLA?
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TWB-2: Radio Interoperability
Action or Project Description:	Migrate two (Ionia and WB VFD's) to Ontario County system, integrate with HFMVA
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Better coordination during disaster response $20,000
Plan for Implementation	
Responsible Organization:	Ontario County Planning
Action/Project Priority:	Medium
Timeline for Completion:	2023
Potential Fund Sources:	SAFER
Local Planning Mechanisms to be Used in Implementation, if any:	N/A
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update.

SECTION 25: PREVIOUS ACTIONS

Previous Action Worksheet TWB-3: Town Hall Backup/Standby Power	
Name of Jurisdiction: **Name of Haz. Mit. Plan:**	Town of West Bloomfield Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
Risk / Vulnerability	
Problem being Mitigated:	Utility failure risk (including failure during other hazard events) - need to develop program to supply standby power for critical service areas during a hazard event.
Potential Actions/Projects (not being Implemented at this time)	
Actions/Projects Considered with Summary Evaluation of Each:	Provide standby power system at Town Hall/requires update to Town Hall.
Action or Project Intended for Implementation	
Action/Project Number: **Name of Action or Project:**	TWB-3
Action or Project Description:	New Town Hall w/adequate standby power, or creating adequate standby power at existing facility
Summary of Evaluation Benefits (losses avoided): **Estimated Cost:** **Other Factors Considered:**	Continuity of Operations, better response, and safety during disasters. Limit flood and other environmental damage by keeping sump pumps, heaters, etc. running during flood events. $750,000
Plan for Implementation	
Responsible Organization:	Town Board
Action/Project Priority:	Medium
Timeline for Completion:	2023
Potential Fund Sources:	Town bonds
Local Planning Mechanisms to be Used in Implementation, if any:	Town Comprehensive Plan
2024 Analysis	
Date of Status Report: **Report of Progress:** **Evaluation of Effectiveness:**	Defer to Plan Update.



SECTION 26
MITIGATION ACTIONS

SECTION 26: MITIGATION ACTIONS

Summary 1
Ontario County 5
Village of Bloomfield 18
Town of Bristol 26
Town of Canadice 36
City of Canandaigua 43
Town of Canandaigua 50
Village of Clifton Springs 60
Town of East Bloomfield 68
Town of Farmington 76
City of Geneva 83
Town of Geneva 99
Town of Gorham 106
Town of Hopewell 113
Town of Manchester 121
Village of Manchester 128
Town of Naples 140
Village of Naples 146
Town of Phelps 154
Village of Phelps 163
Town of Richmond 170
Village of Rushville 185
Town of Seneca 192
Village of Shortsville 198
Town of South Bristol 204
Town of Victor 211
Village of Victor 218
Town of West Bloomfield 225

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.

SECTION 26: MITIGATION ACTIONS

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 worksheet, 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 worksheets 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.

Table 26-1. Ontario 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	Extreme Cold	Extreme Heat	Flood	Hail	Ice Storms	Landslide	Lightning	Snow Storms	Tornado	Wildfire	Wind
Ontario County	XXX	XX	XXX	XXX	XX XX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Village of Bloomfield	N/A	XXX	XX	XX	XX	XX	XX	XX	XX	XXX	XXX	XXX	XXX
Town of Bristol	N/A	X	X	X	XX	XX	XX	XX	XX	XXX	XXX	XXX	XXX
Town of Canadice	XX	XX	X	X	XXX	X	X	XX	X	XX	XXX	XX	XXX
City of Canandaigua	N/A	X	X	X	X	X	X	X	X	X	X	X	X
Town of Canandaigua	N/A	XX	XX	XX	XXX	XX	XX	XX	XX	XXX	XXX	XXX	XXX

SECTION 26: MITIGATION ACTIONS

Jurisdiction	Dam Failure	Drought	Extreme Cold	Extreme Heat	Flood	Hail	Ice Storms	Landslide	Lightning	Snow Storms	Tornado	Wildfire	Wind
Village of Clifton Springs	N/A	XX	XX	XX	XXX	XX	XX	XX	XX	XXX	XXX	XXX	XXX
Town of East Bloomfield	XXX	XX	XX	XX	XX	XX	XX	XX	XX	XXX	XXX	XXX	XXX
Town of Farmington	N/A	XX	XX	X	XX	X	XX	XX	X	XXX	XXX	XXX	XXX
City of Geneva	N/A	XX	X	XX	XX XX	XX	XX	XX	XX	XX	XX	XXX	XX
Town of Geneva	N/A	XX	X	X	XXX	X	X	XX	X	XX	XX	XX	XX
Town of Gorham	N/A	XX	X	X	XX	X	X	XX	X	XX	XX	XX	XX
Town of Hopewell	N/A	XXX	XX	XX	XXX	XX	XX	XX	XX	XXX	XXX	XXX	XXX
Town of Manchester	N/A	XX	XX	XX	XXX	XX	XX	XX	XX	XXX	XXX	XXX	XXX
Village of Manchester	N/A	XXX X	XX	XX	XX XX	XXX	XXX	XX	XXX	XXX	XXX	XXX	XXX
Town of Naples	N/A	XX	X	X	XXX	X	X	XX	X	XX	XX	XX	XX
Village of Naples	N/A	XX	XX	XX	XXX	XXX	XXX	XX	XXX	XXX	XXX	XXX	XXX
Town of Phelps	N/A	XX	X	XX	XXX	XXX	XXX	XX	XXX	XXX	XXX	XXX	XXX
Village of Phelps	N/A	XX	X	X	XXX	X	X	XX	X	XX	XX	XX	XX
Town of Richmond	N/A	XX	XX	XXX	XXX	XX	XX	XX	XX	XX	XX	XXX	XX
Village of Rushville	N/A	XX	X	X	XX	X	X	XX	X	XX	XX	XX	XX
Town of Seneca	N/A	XX	X	X	X	X	X	XX	X	XX	XX	XX	XX
Village of Shortsville	N/A	XX	X	X	XX	X	X	XX	X	XX	XX	XX	XX
Town of South Bristol	XXX	XX	XX	XX	XX	XX	XX	XX	XX	XXX	XXX	XXX	XXX
Town of Victor	XXX	XX	X	X	XX	X	X	XX	X	XX	XX	XX	XX
Village of Victor	N/A	XX	X	X	X	X	X	XX	X	XX	XX	XX	XX
Town of West Bloomfield	N/A	XX	XX	XX	XX	XX	XX	XX	XX	XXX	XXX	XXX	XXX

Table 26-2. Ontario County Mitigation Action Matrix for Man-Made 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)	

SECTION 26: MITIGATION ACTIONS

Jurisdiction	Fire	Infestation	Hazardous Materials	Terrorism	Utility Failure	Water Supply Contamination
Ontario County	X	X	X	X	XX	X
Village of Bloomfield	XX	X	X	X	XX	XX
Town of Bristol	X	X	X	X	X	XX
Town of Canadice	XX	X	X	X	X	X
City of Canandaigua	X	X	X	X	X	X
Town of Canandaigua	X	X	X	X	XX	X
Village of Clifton Springs	X	X	X	X	XX	X
Town of East Bloomfield	XX	X	X	X	XX	X
Town of Farmington	XX	X	XX	X	X	X
City of Geneva	X	X	X	X	XX	XX
Town of Geneva	X	X	X	X	X	X
Town of Gorham	X	X	X	X	X	XX
Town of Hopewell	X	X	X	XXX	XX	X
Town of Manchester	X	X	X	X	XX	X
Village of Manchester	X	X	X	X	XX	XX
Town of Naples	X	X	X	X	X	X
Village of Naples	X	X	X	X	XXX	X
Town of Phelps	XX	X	X	X	XXX	XX
Village of Phelps	X	X	X	X	X	X
Town of Richmond	X	XX	X	X	XX	X
Village of Rushville	XX	X	X	X	X	XX
Town of Seneca	X	X	X	X	X	X
Village of Shortsville	X	X	X	X	X	X
Town of South Bristol	X	X	X	X	XX	X
Town of Victor	X	X	X	X	X	X
Village of Victor	X	X	X	X	X	X
Town of West Bloomfield	X	X	X	X	XX	X

ONTARIO COUNTY

ONTARIO COUNTY PROPOSED 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
1	4.2	Flood	Feasibility Study: An existing county bridge in the Village of Victor needs to be evaluated for flood risk. Floodwaters can cause debris to back up at the bridge, exacerbating flooding, damaging the bridge, and causing scour and erosion to embankments at the bridge site. This project protects communities and reduces risk of flooding.	Ontario County will complete a feasibility study for the county bridge located in the Village of Victor to identify the current flood risk, determine if mitigation is needed, assess alternatives, and implement feasible alternative for flood reduction, protecting the infrastructure to the 0.2% flood level.	Yes	Further review required	18 months	Ontario County Public Works Departments	$2,500,000	Reduce flood risk; reduce damages and risk of injuries or fatalities; reduce emergency response and improve egress, reduce loss of function.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security
2	2.3	Flood	Drainage Improvements: Inadequate drainage systems along multiple county route locations cause flooding, damage to roadways, and create hazardous driving conditions for motorists. This project protects communities and reduces risk of flooding.	Refine multi-disciplinary strategy to identify vulnerable county highway infrastructure and private properties, opportunities to restore the function of natural systems, expand retention/detention in the upland drainage area, and if appropriate expanding capacity of roadside drainage infrastructure. Numerous locations including CR 1, CR 11, CR 16, CR 18, CR 30, CR, 33, CR 36, CR 37.	No	Further review required	18 months	Ontario County Highway Department	Dependent upon extent of need or damages	By identifying highly vulnerable 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

SECTION 26: MITIGATION ACTIONS

ONTARIO COUNTY PROPOSED 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
3	3.3	Flood	Floodplain permits: Due to a lack of code enforcement authority regarding local development, the County will focus on helping municipalities draft and adopt development regulations to protect and maintain water resources. This project protects communities and reduces risk of flooding.	Encourage local municipalities to adopt floodplain development permit standards higher than minimum FEMA standards. Higher standards to include: o Requirement to balance on-site cut and fill with resulting no impact to base flood elevation o Requirement that elevation of structures above lake flood elevation on properties adjacent to creeks and other drainageways use non-fill means of elevation to minimize drainageway flood impacts to adjacent properties.	No	N/A	12 Months	Ontario County Planning Department	Staff Time	Reduce flood damages through development restrictions and improved construction requirements in flood-prone areas. Build resiliency.	Local Department Budget, Staff time	H	Communication
4	4.2	Flood	Hydraulic (H&H) Watershed Study: The hydraulic capacity at these watersheds may not comply with commonly accepted standards. This project protects communities and reduces the risk of flooding.	Conduct detailed sub-watershed hydraulic assessments and modeling of Black Brook, Paddleford Brook, Mud Creek, Beaver Creek, and other sub-watersheds with repeat flood damage.	No	Further review required	18 months	Ontario County Planning Department in conjunction with local municipalities and other stakeholders	$1,000,000	Improve risk assessment; Reduce risk of damages or injuries through drainage improvements; Reduce risk of damages and injuries.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Communication, Safety/Security

SECTION 26: MITIGATION ACTIONS

ONTARIO COUNTY PROPOSED 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
5	4.3	Flood	Downstream Flooding: Extreme rainfall and snowmelt events result in high water volume and stormwater flow rates, which can result in significant amounts of debris (including sediment, rubble, and woody debris) being mobilized and directed to downstream portions of streams. The build-up of debris can compromise the performance of downstream bridges and culverts, jeopardizing these installations (as well as the associated roadways). This project protects communities and reduces risk of flooding.	Encourage local municipalities to adopt more protective standards to prevent downstream flooding than those of the NYS Stormwater Design Manual which requires addressing 24 hour 100-year storm. Applies to new buildings and redevelopment of sites that are disturbing greater than 5 acres of soil.	No	N/A	2 years	Ontario County Planning Department	Staff Time	Reduce flood damages and risk of injuries or fatalities through regulated development; Reduce the amount of stormwater runoff in densely developed areas during flood events; Reduce the risk of downstream flooding.	Local Department Budget, Staff time	M	Safety/Security
6	4.3	Flood	Maintenance of stormwater management facilities: Assessment and maintenance of critical stormwater facilities are needed to maintain continuity of operations during and after a hazard event. This action protects infrastructure, reduces cost of reparations, and ensures critical facilities continue to provide services.	Encourage local municipalities to use drainage districts as effective mechanism to raise funds and complete maintenance of stormwater management facilities on private development sites or at a minimum obtain access easements to allow emergency maintenance	No	N/A	18 months	Ontario County Planning	Staff Time	Reduce risk of flood damages through improved drainage capacity/stormwater diversion; 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

SECTION 26: MITIGATION ACTIONS

ONTARIO COUNTY PROPOSED 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
7	3.1	Extreme Heat, Drought	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include heat advisory warning alerts, water conservation techniques, etc.	No	N/A	12 months	Ontario County Public Health, Emergency Management and Office for Agencing in partnership with Soil and Water Conservation district and Cooperatives Extension	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication
8	3.1	Extreme Cold, Ice Storm, Snow Storm	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of extreme cold, ice storms and snowstorms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, installing warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes, etc.	No	N/A	12 months	Ontario County Public Health and Emergency Management in partnership with Soil and Water Conservation district and Cooperatives Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

ONTARIO COUNTY PROPOSED 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
9	3.1	Hail, Tornado, Wind	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	Ontario County Emergency Management in partnership with Soil and Water Conservation district and Cooperatives Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
10	3.1	Lightning	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	Ontario County Emergency Management in partnership with Soil and Water Conservation district and Cooperatives Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

ONTARIO COUNTY PROPOSED 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
11	3.1	Wildfire	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	12 months	Ontario County Emergency Management in partnership with Soil and Water Conservation district and Cooperatives Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
12	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	Ontario County Planning in partnership with Soil and Water Conservation district	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	H	Communication

SECTION 26: MITIGATION ACTIONS

ONTARIO COUNTY PROPOSED 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
13	3.1	Infestation	Invasive Species and Infestation: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices from Finger Lakes PRISM and NYS DEC to reduce damage from invasive species on county-wide publicly owned and privately own properties.	No	N/A	36 months	Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters. Reduces risk of health impacts (both terrestrial and aquatic). Reduces risk of agricultural losses.	Local Department Budget, Staff time	L	Communication
14	3.1	Drought, Extreme Cold, Extreme Heat, Flood, Hail, Ice Storm, Landslide, Lightning, Snow Storm Tornado, Wildfire, Wind	Enhance recording for hazard events: The county will work on enhancing the current record keeping of event history and damages. This project promotes public safety.	Enhance tracking mechanism for natural hazards events in the planning area to provide information needed for grant application cost-/benefit analysis.	No	N/A	36 months	Ontario County Public Works	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages. Enhances record keeping and historical event data.	Local Department Budget, Staff time	L	Communication
15	5.4	Extreme Cold, Flood, Ice Storm, Snow Storm, Tornado, Wildfire	Special Needs Shelter: The County needs to provide assistance to the Red Cross to ensure special needs clients are directed to appropriate facilities in the event of a natural disaster or other similar emergency. This project promotes public safety.	Review and amend existing plan for emergency shelter assistance to ensure the County can provide the assistance needed to ensure special needs individuals are placed in appropriate shelters during a disaster event.	Yes	Further review required	5 years	Ontario County, Sheriff, Emergency Management and Public Health, Local Enforcement Officials, Committees: Health & Human Services, Public Safety	Staff Time	Reduce risk to vulnerable residents by providing shelter during extreme weather events.	Local Department Budget, Staff time	M	Safety/Security, Food/Shelter/ Water

SECTION 26: MITIGATION ACTIONS

ONTARIO COUNTY PROPOSED 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
16	2.3	Flood	Flood Mitigation at Honeoye Lake Wastewater treatment Plant: Evaluate Flood Mitigation measures at Public Works Facilities to maintain 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.	Recently completed plant improvements include constructing new structures/equipment 2' above the existing estimated 100-year floodplain elevation and floodproofing of other existing structures / equipment to the same elevation using flood planks. The proposed new flood map for the Town of Richmond proposed by FEMA will raise the 100-year flood elevation significantly at the plant.	Yes	Further review required	Dependent on new proposed flood maps	Ontario County Public Works	$1,000,000 - 2,000,000	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	M	Safety/Security
17	1.4	Flood	Flood Mitigation at 18 pump stations: Evaluate Flood Mitigation measures at Public Works Facilities to maintain 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.	Floodproofing pump stations as pump stations require necessary improvements and/or reconstruction associated with Honeoye Lake County Sewer District and Canandaigua Lake County Sewer District.	Yes	Further review required	On-going	Ontario County Public Works	$1,000,000 - $2,000,000	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	M	Safety/Security

SECTION 26: MITIGATION ACTIONS

ONTARIO COUNTY PROPOSED 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
18	1.4	Flood	Flood Mitigation at 2 flow meters and 152 manholes within Sewer Districts: Evaluate Flood Mitigation measures at Public Works Facilities to maintain 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.	Assess and inspect identified flow meters and manhole covers to compile inventory of critical infrastructure that requires implementation of flood mitigation measures.	Yes	Further review required	On-going	Ontario County Public Works	$100,000 - $200,000	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
19	1.4	Flood	Flood Mitigation at Hopewell Campus: Evaluate Flood Mitigation measures at Public Works Facilities to maintain 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.	Assess and elevate electric switchgear located at Hopewell Campus to protect critical infrastructure and services.	Yes	Further review required	On-going	Ontario County Public Works	$100,000 - $200,000	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

SECTION 26: MITIGATION ACTIONS

ONTARIO COUNTY PROPOSED 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
20	1.1	Flood, Tornado, Wildfire	Emergency Evacuation Routes: There are limited routes designated to be used for emergency evacuation. This project promotes public safety.	Develop a County Emergency Evacuation Plan by designating routes to be used for emergency evacuation. This action is needed to ensure county wide emergency evacuation is safe and efficient.	No	N/A	18 months	Ontario County Office of Emergency Management	Staff Time	Reduce risk to residents through improved evacuation alternatives; Improve response time for emergency; Provides additional routes through high-risk areas to prevent loss of life and avoid rescue efforts.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security, Communication
21	4.2	Dam Failure, Extreme Cold, Extreme Heat, Flood, Hail, Ice Storm, Lightning, Snow Storm, Tornado, Wildfire, Wind, and Utility Failure	Renewable Energy: Production and use of energy from non-renewable sources is more expensive and not sustainable over the long term. This project helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.	Perform a comprehensive analysis of County energy usage, quantify the financial and environmental cost and benefits, and make specific recommendations for investing in renewable energy for County buildings and other facilities.	Yes	Further review required	18 months	Ontario County Buildings and Grounds	$30,000 for engineering cost	Provide alternative source of power for critical facilities during power outages and ensure continuity of critical services	Local Department Budget; NYSERDA Clean Energy Communities (CEC) program; DEC Climate Smart Communities (CSC) Certification program HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Energy (Power/Fuel)

ONTARIO COUNTY PROPOSED 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
22	1.2	Dam Failure, Drought, Extreme Cold, Extreme Heat, Flood, Hail, Ice Storm, Landslide, Lightning, Snow Storm, Tornado, Wildfire, Wind	County-wide Resiliency / Climate Action Plan: A plan is needed to address how communities in Ontario County can more directly address the impacts from climate change. This project promotes public safety and resiliency.	Develop a plan that improves capacity for the community and its ecosystem to withstand climate change and extreme hazard events and quickly recover the interconnected social, economic, and ecological systems structure and function in the aftermath of a disasters. Based on assessments, implement necessary improvements to enhance capacity and reduce the effects of climate change and hazard events within the planning area. This action helps protect the community.	No	N/A	On-going	Ontario County Planning Department in conjunction with Genesee/Finger Lakes Planning Council grant project	$50,000 - $80,000	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	Communication
23	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	Ontario County Emergency Management, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

ONTARIO COUNTY PROPOSED 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
24	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns about a potential threat.	No	N/A	36-60 months	Ontario County Emergency Management, in conjunction with Local Police Department and partnership with the County Sheriff's Office and the NYS Police	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
25	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service customers by mail or paperless enrollment.	No	N/A	36-60 months	Ontario County Emergency Management, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
26	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination have been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as minimizing phosphorus in run-off, not disposing of hazardous materials in storm drains, clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	Ontario County Planning Department, Public Health, Water Resources Council, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

ONTARIO COUNTY PROPOSED 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
27	4.2	Flood, Dam Failure	Acquisition Program: County has high-risk flood areas and would like to consider pursuing an acquisition of these areas to reduce risk. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Develop a land acquisition program in flood hazard areas. Acquire and demolish repetitive loss properties.	No	Further review required	12-60 months	County Planning Department	Determined based on land	Eliminate risk of flood damages to high-risk structures and prevent future losses in high-risk flood hazard areas; Reduce downstream impacts associated with development in the floodplain; 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
28	4.2	Flood, Landslide unmanaged release, odor proliferation	Ontario County Landfill Mitigation: On November 16 a veneer failure of a cap construction project caused approximately 3 acres of clean soil to migrate downslope. Two gas wells were impacted as the clean material slide at the Ontario County Landfill.	Continue to assess the cause of the veneer failure. All affected soil has been removed from the slide area and all stormwater and gas infrastructure has been re-established.	No	Further review required	On-going	County Planning Department, Director of Sustainability and Solid Waste Management, Casella Waste Services and DEC	No cost to County[1]	Reduce damage and risk of injuries or fatalities; Ensure continuity of critical services.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security, Communication

[1] Per the County's contract with Casella, all costs related to landfill closure (capping) and post closure monitoring (stability of the landfill and associated infrastructure) are to be borne by the landfill operator for the life of the site. This financial obligation is held in bonds and reviewed/updated by NYSDEC and the County on an annual basis.

VILLAGE OF BLOOMFIELD

VILLAGE OF BLOOMFIELD PROPOSED 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
1	1.4	Extreme Cold, Extreme Heat, Flood, Hail, Ice Storm, Lightning, Snow Storm Tornado, Wildfire, Wind, and Utility Failure	Acquire generator for new Village Hall Office: During severe hazard events the Town Hall serves as the Emergency Operations Center (EOC) as well. Power outages are likely and render the facility useless. Within the Village Hall Office, there are lights, computers, heat, communications, etc., which all rely on electricity. This action helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.	Acquire and install generators with hard wired quick connections at new Village Hall facility.	Yes	Further review required	24 months	Village Board	$1,000,000	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)
2	4.2	Flood	Critical Facility Flood Risk Phase II: There is potential flood risk to the Village Treatment Plant Structure which has had a frequency of flooding in the area in which electric has failed interrupting service. This action protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Implement proposed upgrades operational upgrades identified in Phase I evaluation of treatment plant which includes but is not limited to new pumps, new pumps to storm tanks, new piping, and new filters, and any additional upgrades recommended.	Yes	Further review required	September 2023 – On-going	Village Board	$2,300,000	Increase the efficiency capability to enhance stormwater inflow during a severe weather event. Ensures continuity of critical services.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security

SECTION 26: MITIGATION ACTIONS

VILLAGE OF BLOOMFIELD PROPOSED 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
3	5.4	Flood	Stormwater Drainage Improvement – Maple Street: Frequency in stormwater flooding requiring maintenance of the existing/ abandoned railroad bed is required to facilitate proper drainage and stormwater flow around Maple Street. This action protects the community and reduces risk of flooding.	Identify and address sources of stormwater infiltration into the sanitary sewer system. Implement necessary maintenance to facilitate proper stormwater flow. Maintenance of the existing/ abandoned railroad bed is required to facilitate proper drainage and stormwater flow around Maple Street.	No	Further review required	On-going	Village Public Works	$100,000 and Staff Time	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
4	4.2	Drought, Flood, Water Supply Contamination	Water Supply Protection – Well Head: The public water supply could be better regulated and protected in an effort to prevent of cross-connections to the public water system; Well head protection is a priority.	Continue assessment and review wellhead protection areas to ensure compliance with Village ordinance. Implement necessary improvements to wells and springs to ensure regulation, protection and prevent cross-connections to the public water system.	Yes	Further review required	On-going	Village Board and Zoning Department	Staff Time	Reduce risk of flood water contamination; 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

SECTION 26: MITIGATION ACTIONS

VILLAGE OF BLOOMFIELD PROPOSED 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
5	3.1	Extreme Heat, Drought	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include heat advisory warning alerts, water conservation techniques, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication
6	3.1	Extreme Cold, Ice Storm, Snow Storm	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of extreme cold, ice storms and snow storms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF BLOOMFIELD PROPOSED 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
7	3.1	Hail, Tornado, Wind	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden / retrofitting structures, tree removal / branch maintenance, covered parking, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
8	3.1	Lightning	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF BLOOMFIELD PROPOSED 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
9	3.1	Wildfire	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
10	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF BLOOMFIELD PROPOSED 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
11	3.1	Infestation	Invasive Species and Infestation: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide public and privately owned properties.	No	N/A	36 months	Village Board, and Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
12	3.3	Drought, Flood, Landslide, Snow Storm Tornado, Wildfire, Wind	Code Enforcement: There is a code enforcement officer shortage throughout the county. and those smaller jurisdictions may need to evaluate and update local codes to follow the County (who will potentially take lead if position is vacant)	If applicable, need to evaluate and update local codes to follow the County.	No	N/A	As needed	Village Board	Staff Time	Ensures compliance to current code and restrictions. Reduce damages to structures and infrastructure; Reduce risk of injuries or fatalities.	Local Department Budget	L	Communication
13	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	Village Board, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF BLOOMFIELD PROPOSED 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
14	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns on a potential threat.	No	N/A	36-60 months	Village Board, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
15	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service customers by mail or paperless enrollment.	No	N/A	36-60 months	Village Board, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
16	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination has been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	Village Board, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
17	3.3	Fire	Inspections for public facilities: Ensure that facilities are up to code to reduce the risk of structural fires.	Complete annual and bi-annual inspections are required on all public facilities to ensure fire and carbon monoxide are functional based on local code chapter 63.	No	N/A	Annual and Bi-Annual	Code Enforcement Officer	Staff Time	Reduce risk damages and loss of life.	Local Budget	M	Communication, Safety/Security

SECTION 26: MITIGATION ACTIONS

VILLAGE OF BLOOMFIELD PROPOSED 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
18	3.3	Fire	Code requirement for new development: Ensure there is a limited risk to new development for structural fires.	Adopt a code that requires new development to meet all state and local fire code regulations	No	N/A	12-24 months	Village Board, Code Enforcement Officer	Staff Time	Reduce risk damages and loss of life.	Local Budget	M	Communication, Safety/Security

TOWN OF BRISTOL

TOWN OF BRISTOL PROPOSED 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
1	4.3	Flood, Wildfire	Development Restrictions: With the increase in development growth there is a need to restrict building in high-risk areas throughout town. This action protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Town will look to review current zoning and ordinances in an effort to restrict future development in high-risk areas.	No	N/A	12 months	Town Zoning Board	Staff Time	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	H	Communication, Safety/Security
2	1.4	Flood, Hail, Ice Storm, Lightning, Snow Storm Tornado, Wind, Wildfire	Tree Maintenance 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.	Adopt and implement a routine tree trimming program that clears tree limbs near power lines and/or hanging in right-of-way for all town roads; Remove dead trees from right-of way and drainage systems on a scheduled basis throughout town-wide roadways.	No	Further review required	12 Months	Town Highway Department	$50,000 (annually)	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	H	Safety/Security
3	6.1	Drought	Landscape Ordinance: Within climate change, the Town would benefit from incorporate drought tolerant landscaping into new development practices to assist in water availability during drought periods.	Adopt a landscape ordinance (selection and planting guidelines).	No	N/A	24 months	Town Zoning Board	Staff Time	Reduce impact on groundwater; Reduce rainfall runoff volume and risk of flooding; Reduce risk and spread of wildfire.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF BRISTOL PROPOSED 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
4	6.1	Extreme Heat, Drought, Flood	"Green Infrastructure" Program: Adopting and implementing long term nature-based mitigation solutions will assist the Town in sustainable planning, design, environmental management, and engineering practices that weave natural features or processes into the built environment to promote adaptation and resilience. This action protects infrastructure and reduces cost of reparation.	Establish, adopt, and implement a "green infrastructure" program for town parks.	No	N/A	36 months	Park Commissioner	Staff Time	Reduce impacts of flood through expanded greenspace and restoration of floodplains and wetlands; Reduce 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.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	L	Safety/Security
5	5.4	Flood	Drain and Culvert Improvements: Inadequate drainage systems along multiple county route locations 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 roads and new development.	No	Further review required	18 months	Town Highway Department	$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

SECTION 26: MITIGATION ACTIONS

TOWN OF BRISTOL PROPOSED 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
6	2.1	Wildfire	Implement a fuels reduction program: Wildfire and fire events are extremely likely due to the planning area terrain. Developing a program to reduce the potential fuel and increase defensible space will help reduce the spread of wildfire throughout the community especially in high-risk areas in the WUI.	Work with state and local agencies to determine locations to reduce fuel on public and private lands.	No	Further review required	24 months	Park Commissioner	Staff Time	Reduce risk of wildfires and the spread of wildfire through targeted fuels reduction programs.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security, Communication
7	1.3	Wildfire	Create defensible space: Wildfire and fire events are extremely likely due to the planning area terrain. Developing a program to reduce the potential fuel and increase defensible space will help reduce the spread of wildfire throughout community.	Cut firebreaks into public wooded areas within town parks according to risk factors.	No	Further review required	24 months	Park Commissioner	$200,000 - $500,000	Reduce risk of wildfires and the spread of wildfire through targeted firebreaks.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security
8	1.2	Wildfire	Install Burn Ban Signs: The general public may not have a full understanding of the risk associated with hazards impacting the planning area. Installing warning sides throughout the community will provide life safety benefits to residents in the area.	Install fire danger rating/burn ban signs through town parks.	No	N/A	12 months	Fire Department	Staff Time $100 per sign	Reduce risk and spread of wildfires through education and awareness programs; Reduce risk of damages and injuries.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF BRISTOL PROPOSED 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
9	3.1	Ice Storm, Snow Storm	Education of prevention of frozen pipes: 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	Educate citizens on mitigation measures to prevent frozen pipes; Educate homeowners on carbon monoxide monitors/alarms. Display information at Town Hall, Fire Department and Public Library.	No	N/A	12 months	Town Board, Fire Department	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication
10	4.2	Ice Storm, Snow Storm	Winterization of Public Facilities: Due to the location of the planning area winter storm events are highly likely. It would be beneficial to protect critical infrastructure to ensure continuity of operations during and after an event.	Add building insulation to walls and attics and wrap/insulate pipes at Town Hall and Highway Garage.	Yes	N/A	24 months	Town Board	$100,000	Reduce risk of damages at public buildings resulting from freezing temperatures; Ensure continuity of public services.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security
11	1.4	Water Contamination	Monitoring of water tanks: There has been an on-going issue with chemicals being prevalent at Day Road water tank.	Continue monitoring and working with MRB Engineering, USDA and Canandaigua Water District to implement a plan to remediate and prevent further potential water contamination.	Yes	N/A	12 months	Town Board	Staff and Personnel Time	Prevents water contamination and ensures potable water. Reduces risk of injury and fatalities to residents.	Local Department Budget, Staff time	H	Communication, Safety/Security

SECTION 26: MITIGATION ACTIONS

TOWN OF BRISTOL PROPOSED 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
12	3.1	Infestation	Invasive Species and Infestation Notification: The Town of Bristol is a risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Town will promote awareness and mitigation measures residents can take to reduce the risk of species that are invasive to the area. Information will be provided through town website, postings in affected areas and in cooperation with local library.	No	N/A	12 months	Town Board	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
13	1.4	Flood	Stormwater Maintenance Program: Flooding/severe storm concerns and risk - significant flooding in the past. Drainage Issues have caused stormwater concerns as roads have flooded. This action protects the community and reduces the risk of flooding.	Implement debris removal (tree and brush) from culverts and drains.	No	Further review required	24 months	Town Highway Department	10,000 - $15,000	Reduce damages caused by flooding by maintaining or restoring drainage capacity.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security
14	2.3	Flood	Flood Damage Prevention Law: The current prevention law is outdated and should be reviewed and updated. This action protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Review and update Flood Prevention Law (1987).	No	N/A	12 months	Town Board	Staff Time $175/hr. for Town Attorney involvement)	Reduce flood damages through development restrictions and improved construction requirements in flood-prone areas.	Local Department Budget, Staff time	H	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF BRISTOL PROPOSED 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
15	5.2	Flood	Stormwater controls with sediment and erosion measures: Extreme rainfall and snowmelt events result in high stormwater flow rates, which can result in significant amounts of debris (including sediment, rubble, and woody debris) being mobilized and directed to downstream portions of streams. The build-up of debris can compromise the performance of downstream bridges and culverts, jeopardizing these installations (as well as the associated roadways). This action protects the community and reduces risk of flooding.	Engineered sediment and erosion plans required. Assess existing requirements for measures as part of municipal project review and implement necessary improvements.	No	Further review required	24 months	Town Board	$4-6 per square yard for potential improvements	Reduce risk of flood damages due to erosion or scour during flood events.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bond	M	Safety/Security
16	3.1	Extreme Cold, Ice Storm, Snow Storm	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of extreme cold, ice storms and snowstorms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	Town Board, Ontario County Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF BRISTOL PROPOSED 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
17	3.1	Hail, Tornado, Wind	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	Town Board, Ontario County Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
18	3.1	Lightning	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF BRISTOL PROPOSED 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
19	3.1	Wildfire	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
20	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	Town Board, Ontario County Planning in partnership with Soil and Water Conservation district	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF BRISTOL PROPOSED 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
21	3.1	Infestation	Invasive Species and Infestation: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide own properties and private own properties.	No	N/A	36 months	Town Board, and Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
22	3.3	Drought, Flood, Landslide, Snow Storm Tornado, Wildfire, Wind	Code Enforcement: There is a code enforcement officer shortage throughout the county. and those smaller jurisdictions may need to evaluate and update local codes to follow the County (who will potentially take lead if position is vacant)	If applicable, need to evaluate and update local codes to follow the County.	No	N/A	As needed	Town Board	Staff Time	Ensures compliance to current code and restrictions. Reduce damages to structures and infrastructure; Reduce risk of injuries or fatalities.	Local Department Budget	L	Communication
23	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	Town Board, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF BRISTOL PROPOSED 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
24	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns on a potential threat.	No	N/A	36-60 months	Town Board, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
25	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service customers by mail or paperless enrollment.	No	N/A	36-60 months	Town Board, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
26	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination has been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	Town Board, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

TOWN OF CANADICE

TOWN OF CANADICE PROPOSED 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
1	1.4	Flood, Tornado, Wildfire, Wind	Tree Trimming Annual Maintenance Program: Tree maintenance is a priority to due utility wires. A plan will need to be developed and implemented. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Adopt and implement a routine tree trimming program that clears tree limbs in right-of-way; Remove dead trees from right-of way and drainage systems on a scheduled basis.	No	Further review required	12 months	Town Highway Department, in coordination with Coordination with State and County for utilization of service provider	Staff Time $50,000 (annually)	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
2	3.2	Flood	Debris Maintenance Education: The build-up of debris can compromise the performance of bridges and culverts, jeopardizing these installations (as well as the associated roadways). This project protects the community and reduces risk of flooding.	Educate community on the impact of debris in drainage systems located on private property up stream of culvert pipes.	No	N/A	12 months	Town Board	Staff Time	Reduce damages caused by flooding by maintaining or restoring drainage capacity.	Local Department Budget	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF CANADICE PROPOSED 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
3	5.4	Flood	Stormwater management and erosion control improvements at Lawrence Hill Road (primarily the north/south leg, but also on the east/west leg: 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.	Assess current infrastructure for necessary upgrades such as ditch stabilization, rip rap, cable concrete, etc. to preserve road surface, shoulders, and drainage ditches.	No	Further review required	2024	Town Highway Department	$60,000	Reduce the risk of flood damages 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; Local bonds; WQIP grant	H	Safety/Security
4	5.4	Wildfire, Fire	Fire hydrant inventory, assessment & installation at Coykendall Hill Road: There are some areas within the town that have limited capacity to address fire hazards.	Survey potential areas that can be served by additional dry hydrant locations. Install additional dry hydrants at area water sources.	No	N/A	24 months	Hemlock (Local) Fire Department	$12,500 per hydrant	Reduce risk of wildfires and the spread of wildfire by increasing water access and firefighting capabilities.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	L	Safety/Security

SECTION 26: MITIGATION ACTIONS

TOWN OF CANADICE PROPOSED 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
5	3.1	Extreme Heat, Drought	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include heat advisory warning alerts, water conservation techniques, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication
6	3.1	Extreme Cold, Ice Storm, Snow Storm	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of extreme cold, ice storms and snow storms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF CANADICE PROPOSED 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
7	3.1	Hail, Tornado, Wind	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
8	3.1	Lightning	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF CANADICE PROPOSED 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
9	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
10	3.1	Infestation	Invasive Species: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide own properties and private own properties.	No	N/A	36 months	Town Board, Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF CANADICE PROPOSED 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
11	3.3	Dam Failure, Drought, Flood, Landslide, Snow Storm Tornado, Wildfire, Wind	Code Enforcement: There is a code enforcement officer shortage throughout the county. and those smaller jurisdictions may need to evaluate and update local codes to follow the County (who will potentially take lead if position is vacant)	If applicable, need to evaluate and update local codes to follow the County.	No	N/A	As needed	Town Board	Staff Time	Ensures compliance to current code and restrictions. Reduce damages to structures and infrastructure; Reduce risk of injuries or fatalities.	Local Department Budget	L	Communication
12	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	Town Board, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
13	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns on a potential threat.	No	N/A	36-60 months	Town Board, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF CANADICE PROPOSED 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
14	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service customers by mail or paperless enrollment.	No	N/A	36-60 months	Town Board, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
15	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination has been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	Town Board, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
16	3.1	Dam Failure	Dam Inundation Risk	Identify the area potentially at- risk in the event of dam failure and educate residents at risk on ways they can mitigate and reduce the effects of downstream impacts in the event of inundation.	No	N/A	12 months	Town Board	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

CITY OF CANANDAIGUA

CITY OF CANANDAIGUA PROPOSED 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
1	5.4	Flood	Culvert and drainage upgrades: Throughout the City 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 risk of flooding.	Upgrade undersized stormwater drains and culverts.	No	Further review required	On-going	City Public Works Department, with consultation of SWCD	$500,000 based on site location and need	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
2	5.4	Flood	Drainage improvements: 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.	Increase drainage capacity; add stormwater detention and/or retention basins as deemed necessary to reduce flood risk.	No	Further review required	On-going	City Public Works Department	$500,000 based on site location and need	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
3	2.3	Flood	Debris Maintenance Program: The build-up of debris can compromise the performance of bridges and culverts, jeopardizing these installations (as well as the associated roadways). This project protects the community and reduces risk of flooding.	Adopt and implement a program for clearing debris from bridges, drains, and culverts.	No	Further review required	24 months	City Public Works Department	Staff Time	Reduce damages caused by flooding by maintaining or restoring drainage capacity.	Local Department Budget	M	Safety/Security

SECTION 26: MITIGATION ACTIONS

CITY OF CANANDAIGUA PROPOSED 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
4	4.2	Flood	Sucker Brook Flooding: 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.	Assess bank stabilization needs and develop maps that correctly identify risk to critical facilities, residents, schools, and businesses located in the Sucker Brook floodway. Implement necessary flood mitigation measures to reduce the flood event peak flow.	No	Further review required	On-going	City Public Works Department, with consultation of SWCD	$50,000 H&H study at each site location in floodway	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	H	Safety/Security
5	2.1	Infestation	Invasive Aquatic Species at Canandaigua Lake: Need aquatic invasive species prevention. Vegetative invasive species can also disrupt drainage ditches.	Continue to promote watercraft inspection program, boat washing stations with the goal of creating a permanent boat washing facility, and educational campaign through printed materials and public billboards.	No	Further review required	On-going	City Parks and Recreation Department with support from Finger Lakes PRISM (Partnership for Regional Invasive Species Management)	$10,000 education materials. $100,000 – hire boat inspectors (if need be) $40,000 – 3 boat washing stations	Reduces risk to issues water intake. Reduce risk to economic hardship and potential storm water management issues.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Communication

SECTION 26: MITIGATION ACTIONS

CITY OF CANANDAIGUA PROPOSED 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
6	3.1	Extreme Heat, Drought	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include heat advisory warning alerts, water conservation techniques, etc.	No	N/A	12 months	City Council, Ontario County Emergency Management	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication
7	3.1	Extreme Cold, Ice Storm, Snow Storm	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of extreme cold, ice storms and snow storms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	City Council, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

CITY OF CANANDAIGUA PROPOSED 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
8	3.1	Hail, Tornado, Wind	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	City Council, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
9	3.1	Lightning	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	City Council, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

CITY OF CANANDAIGUA PROPOSED 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
10	3.1	Wildfire	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	12 months	City Council, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
11	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	City Council, Ontario County Planning in partnership with Soil and Water Conservation district	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication

SECTION 26: MITIGATION ACTIONS

CITY OF CANANDAIGUA PROPOSED 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
12	3.1	Infestation	Invasive Species: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide own properties and private own properties.	No	N/A	36 months	City Council, Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
13	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	City Council, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
14	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns on a potential threat.	No	N/A	36-60 months	City Council, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

CITY OF CANANDAIGUA PROPOSED 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
15	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service providers customers by mail or paperless enrollment.	No	N/A	36-60 months	City Council, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
16	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination has been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	City Council, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
17	3.1	Sanitary Sewer Overflows	Public Awareness Program: The effects of illicit sanitary connections has been experienced throughout the County causing backups on private property and sanitary sewer overflows (SSOs) at the Water Resource Recovery Facility (WRRF).	Work with local water districts on educating the public the problems of and solutions to sources of infiltration and inflow (I&I) which can include sending property owners letters that informs them of the importance of scheduling inspections, education on what I&I sources are, etc.	Yes	N/A	On-going	City Council, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to identify and correct connection failures and illegal connections.	Local Budget	H	Safety/Security, Communication

TOWN OF CANANDAIGUA

TOWN OF CANANDAIGUA PROPOSED 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
1	3.3	Drought, Flood, Wildfire	Landscape Ordinance: Explore alternative ways to promote mitigation and preserve the land within the Town.	Adopt landscape ordinance (selection and planting guidelines). Review parcels in recognized steep slopes and add planting requirements.	No	N/A	12 months	Town Board	Staff Time	Reduce impact on groundwater; Minimize impacts of expansive soils; Reduce rainfall runoff volume and risk of flooding; Reduce risk and spread of wildfire.	Local Department Budget	L	Communication, Safety/Security
2	4.3	Flood, Wildfire	Restrict Development: There are high-risk areas within the Town.	Restrict future development in high-risk areas. Ordinance committee could review projects within potential flood zones and wildfire locations.	No	Further review required	12 months	Town Board and Ordinance Committee	Staff Time	Reduce risk of damages to new structures and infrastructure through building restrictions in high-risk areas.	Local Department Budget	L	Communication, Safety/Security
3	1.2	Extreme Heat, Flood, Hail, Lightning, Ice Storm, Snow Storm, Tornado, Wildfire, Wind	NOAA Weather Radios: There are some rural and remote areas within the town-limits.	Acquire and distribute NOAA weather radios.	No	N/A	24-36 months	Town Board	$50,000	Reduce risk to residents through improved communication and early warning.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF CANANDAIGUA PROPOSED 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
4	1.1	Flood, Hail, Ice Storm, Tornado, Snow Storm, Wind	StormReady Program: The Town should consider enhancing current preparedness practices.	Obtain certification in the Nation Weather Service StormReady Program.	No	N/A	12-24 months	Town Board	$10,000	Reduce risk to residents by educating the public on how to prepare for hazards and disasters.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	L	Communication
5	1.2	Flood, Snow, Storm, Tornado, Wildfire, Wind	Emergency Notification System: The general public may not have the means to access educational material or notification alerts. By considering an area wide notification system ensures community members are aware of risk.	Look to coordinate with County to activate locally an area-wide telephone Emergency Notification System ("Reverse 911") through exploring software and potential vendors.	No	N/A	24-36 months	Town Board in coordination with 911 Center.	$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	Communication
6	5.4	Flood	Drainage System Improvements: Inadequate drainage systems cause flooding, damages to roadways, and create hazardous driving conditions for motorists.	Assess drainage system. As identified, increase drainage capacity; add stormwater detention and/or retention basins as deemed necessary to reduce flood risk. Multiple properties located. Expand some drainage projects. Secure more land for more retention parcels. Coordinate with City especially along Sucker Brook Corridor.	No	Further review required	24 – 48 months	Town Board and Public Works	$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

SECTION 26: MITIGATION ACTIONS

TOWN OF CANANDAIGUA PROPOSED 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
7	1.4	Extreme Cold, Extreme Heat, Flood, Hail, Ice Storm, Lightning, Snow Storm Tornado, Wildfire, Wind, and Utility Failure	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.	Assessment of critical facilities that are in need of back-up power sources. Acquire and install generators with hard wired quick connections at identified critical facilities.	Yes	Further review required	24 months	Town Board and Public Works	$1,000,000	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)
8	1.4	Flood, Hail, Ice Storm, Lightning, Snow Storm Tornado, Wildfire, Wind, and Utility Failure	Tree Trimming Program: Tree maintenance is a priority and a plan to address continued maintenance to reduce risk of further damage will need to be developed and implemented. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	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	12 months	Town Board in coordination with location utility companies	Staff Time	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	L	Safety/Security

SECTION 26: MITIGATION ACTIONS

TOWN OF CANANDAIGUA PROPOSED 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
9	4.2	Flood	Feasibility Study at Outhouse Park, 2550 Outhouse Road, Canandaigua, NY 14424: There is potential flood risk as location is near (or within) flood zones. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Town of Canandaigua will complete a feasibility study for Outhouse Park to identify the current flood risk to the shelter, determine if mitigation is needed, assess alternatives, implement feasible alternative for flood reduction, protecting the structure to the 0.2% flood level. The study will also evaluate alternative facilities outside of the 1% and .2% flood risk areas.	Yes	Further review required	24-36 months	Town Board	Cost determined based on feasibility assessment	Reduce risk of damage or injuries through flood mitigation at high-risk structures. Ensure continuity of critical services.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security, Communication
10	4.2	Flood	Feasibility Study at CR 16 (West Lake Road) and State Route 364 (East Lake Road): There is potential flood risk as location is near (or within) flood zones. CR 16 in Canandaigua (West Lake Road) is identified as the only access road/egress for residents on the west side of the lake. State Route 364 in Canandaigua (East Lake Road) is identified as the only access road/egress for some residents on East Lake Road. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Town of Canandaigua will complete a feasibility study for CR 16 (West Lake Road) and State Route 364 (East Lake Road) to identify the current flood risk to these access roads, determine if mitigation is needed, assess alternatives, implement feasible alternative for flood reduction, protecting the infrastructure to the 0.2% flood level. The study will also evaluate the feasibility of creating alternate egress routes.	Yes	Further review required	24-36 months	Town Board	Cost determined based on feasibility assessment	Reduce flood risk; reduce damages and risk of injuries or fatalities; reduce loss of function; alternate egress to protect lives and ensure continuity of emergency services.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bond	H	Safety/Security, Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF CANANDAIGUA PROPOSED 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
11	5.4	Flood	County Road 46 Electric Substation (Tax Map # 84.00-1-18.000): This site is near the border of the City of Canandaigua, the Town of Canandaigua, Town of Hopewell and an Ontario County Road and is a critical facility these communities. There is potential flood risk if future development is located near (or within) flood zones as predicted. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	In conjunction with RG&E's assess flood risk and implement necessary flood mitigation measures to reduce flooding at site location. Explore if alternative mitigation needs to be assessed and completed to reduce roadway flooding.	Yes	Further review required	24 months – On-going	Town Board and Ontario County Engineering Department, in conjunction with RG&E's	Staff Time	Reduce flood risk; reduce damages and risk of injuries or fatalities; protect lives, ensure accessibility of shelter facility.	Local Department Budget, Staff time	M	Safety/Security. Energy (Power/Fuel)
12	3.1	Extreme Heat, Drought	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include heat advisory warning alerts, water conservation techniques, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF CANANDAIGUA PROPOSED 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
13	3.1	Extreme Cold, Ice Storm, Snow Storm	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of extreme cold, ice storms and snow storms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
14	3.1	Hail, Tornado, Wind	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF CANANDAIGUA PROPOSED 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
15	3.1	Lightning	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
16	3.1	Wildfire	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF CANANDAIGUA PROPOSED 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
17	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	Town Board, Ontario County Planning in partnership with Soil and Water Conservation district	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
18	3.1	Infestation	Invasive Species: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide own properties and private own properties.	No	N/A	36 months	Town Board, Ontario County Soil and Water Conservation and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF CANANDAIGUA PROPOSED 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
19	3.3	Drought, Flood, Landslide, Snow Storm Tornado, Wildfire, Wind	Code Enforcement: There is a code enforcement officer shortage throughout the county. and those smaller jurisdictions may need to evaluate and update local codes to follow the County (who will potentially take lead if position is vacant)	If applicable, need to evaluate and update local codes to follow the County.	No	N/A	As needed	Town Board	Staff Time	Ensures compliance to current code and restrictions. Reduce damages to structures and infrastructure; Reduce risk of injuries or fatalities.	Local Department Budget	L	Communication
20	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	Town Board, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
21	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns on a potential threat.	No	N/A	36-60 months	Town Board, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF CANANDAIGUA PROPOSED 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
22	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service customers by mail or paperless enrollment.	No	N/A	36-60 months	Town Board, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
23	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination has been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	Town Board, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

VILLAGE OF CLIFTON SPRINGS

VILLAGE OF CLIFTON SPRINGS PROPOSED 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
1	4.2	Flood	Feasibility Study at Foster Block apartments, 7 Crane St, Clifton Springs, NY 14432: There is potential flood risk as location is near (or within) flood zones. Located in a Special Flood Hazard Area, this building is 4 story, 44 unit, low income residential housing complex. Mitigation alternatives are limited due to the size of the structure and the historic status of the building. Floodproofing is not considered as a feasible alternative if residential space occupies the first floor. Identifying alternative housing locations outside of the SFHA may be part of the study. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Village of Clifton Springs will complete a feasibility study for the historic Foster Block building to identify the current flood risk, determine if mitigation is needed, assess alternatives, and implement feasible alternative for flood reduction, protecting the structure to the 0.2% flood level. Alternatives to consider may include relocation of vulnerable populations, floodproofing on the first level/commercial space and elevating residential units to higher floors; drainage improvements to reduce flood risk at the site.	Yes	Further review required	24-36 months	Village Board and Public Works	Cost determined based on feasibility assessment	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	H	Safety/Security, Communication

VILLAGE OF CLIFTON SPRINGS PROPOSED 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
2	3.1	Extreme Heat, Drought	Drought 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.	Through the Village quarterly newsletter, the Village of Clifton Springs will encourage citizens to take water saving measures, such as installing low flow water saving shower heads and toilets, turning water flow off while brushing teeth or during other cleaning activities, adjust sprinklers to water the lawn and not the sidewalk or street, running the dishwasher and washing machine. Throughout the Village only when they are full, checking for leaks in plumping or dripping faucets, installing rain capturing devices for irrigation.	No	N/A	12 months	Village Board	$250 Staff Time	Promote hazard awareness and protect residents from potential injuries and damage. Reduce the risk of drought and properly respond in the event of drought.	Local Department Budget, Staff time	L	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF CLIFTON SPRINGS PROPOSED 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
3	5.4	Flood	Re-build Kendall and Silver Streets and Improve Drainage: Extreme rainfall events result in high stormwater flow rates, which can result in damage to downstream infrastructure and also 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 existing infrastructure, including roads, bridges, and buildings. This project would protect the community and reduce flooding.	Assess need for upgrading and improving drainage system.	No	Further review required	24-36 months Annual maintenance of drains	Village Board and Public Works	$30,000	Implementation/expansion of this program would result in prompt design and construction of stormwater debris basins with the goal of capturing / controlling stormwater debris to protect downstream drainage structures.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security
4	1.4	Flood	Water infrastructure improvements: Inadequate drainage systems along cause flooding, damage to roadways, and create hazardous driving conditions for motorists. This project would protect the community and reduce flooding.	Upgrade/replacement of water mains, water valves and hydrants especially on Kendall St and Silver St.	No	Further review required	On-going	Village Water Department	Staff Time	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	Safety/Security
5	5.4	Flood	Drainage improvements near Kendall St and monitoring of Sulphur Brook: Inadequate drainage systems along cause flooding, damages to roadways, and create hazardous driving conditions for motorists. This project would protect the community and reduce flooding.	Improve drainage where identified. Continue to monitor and maintain banks associated with Sulphur Brook.	No	Further review required	24 months On-going maintenance for Sulphur Brook	Village Board and Streets Department	$35,000 for Kendall St improvements $60,000 for Sulphur Brook Maintenance	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; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security

SECTION 26: MITIGATION ACTIONS

VILLAGE OF CLIFTON SPRINGS PROPOSED 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
6	1.4	Extreme Cold, Extreme Heat, Flood, Hail, Ice Storm, Lightning, Snow Storm Tornado, Wildfire, Wind, and Utility Failure	Generators at Sewer Plant: During power outages, the sewage plant is 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.	Acquire and install a permanent generator at sewer lift station and/or larger generator for sewer plant.	No	Further review required	24 months	Village Board	$250,000	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	L	Energy (Power/Fuel)
7	3.1	Extreme Cold, Ice Storm, Snow Storm	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme cold, ice storms and snow storms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

VILLAGE OF CLIFTON SPRINGS PROPOSED 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
8	3.1	Hail, Tornado, Wind	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
9	3.1	Lightning	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

VILLAGE OF CLIFTON SPRINGS PROPOSED 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
10	3.1	Wildfire	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
11	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	Village Board, Ontario County Planning in partnership with Soil and Water Conservation district	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF CLIFTON SPRINGS PROPOSED 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
12	3.1	Infestation	Invasive Species and Infestation: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide own properties and private own properties.	No	N/A	36 months	Village Board, and Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
13	3.3	Drought, Flood, Landslide, Snow Storm Tornado, Wildfire, Wind	Code Enforcement: There is a code enforcement officer shortage throughout the county. and those smaller jurisdictions may need to evaluate and update local codes to follow the County (who will potentially take lead if position is vacant)	If applicable, need to evaluate and update local codes to follow the County.	No	N/A	As needed	Village Board	Staff Time	Ensures compliance to current code and restrictions. Reduce damages to structures and infrastructure; Reduce risk of injuries or fatalities.	Local Department Budget	L	Communication
14	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	Village Board, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF CLIFTON SPRINGS PROPOSED 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
15	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns on a potential threat.	No	N/A	36-60 months	Village Board, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
16	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service customers by mail or paperless enrollment.	No	N/A	36-60 months	Village Board, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
17	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination has been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	Village Board, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

TOWN OF EAST BLOOMFIELD

TOWN OF EAST BLOOMFIELD PROPOSED 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
1	1.4	Dam Failure, Extreme Cold, Extreme Heat, Flood, Hail, Ice Storm, Lightning, Snow Storm Tornado, Wildfire, Wind, and Utility Failure	Generator at Town Hall: During power outages, the Town Hall would act as an emergency operation center and if needed a shelter, and 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.	Acquire and install a permanent generator at Town Hall	Yes	Further review required	24 months	Town Supervisor and 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)
2	4.2	Flood	Town-wide Flood Risk Study: Lack of correct and current information regarding flood risk makes it difficult to guide development in a manner that minimizes flood risk. This action protects the community and reduces risk of flooding.	Identify areas susceptible to flooding due to storm water in the Town and produce a plan to implement recommended improvements as identified from assessments and study.	Yes	Further review required	12-24 months	Town Board	$80,000 to identify risk and implement plan	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, Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF EAST BLOOMFIELD PROPOSED 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
3	5.4	Flood	Culvert Inspection/Replacement at Fish Creek: Inadequate drainage systems along cause flooding, damages to roadways, and create hazardous driving conditions for motorists. This action protects the community and reduces risk of flooding.	Culvert Inspection and/or replacement along flood prone creeks within the Town. The Creek is classified as a trout stream which will necessitate correspondence with DEC and USACE prior to any work being done. Work along this Creek will also require buy in by property owners and adjacent municipality as many of the drainage issues lie outside of the Town's right of way. The Town will begin reaching out to these stake holders to determine what, if any, work can be done.	No	Further review required	36-60 months	Town Board	$125,000	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; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	L	Safety/Security
4	4.2	Dam Failure	Boughton Park (Fairport Reservoir) Dam Repair Phase Project: Since the dams were initially built, there has been settling of the dam now causing downstream flooding impacts and concerns that the structure is potentially compromised.	Dam repair/compliance of the east and west dams at Boughton Park in the Town of East Bloomfield but would affect the Town of Victor.	No	Further review required	12-60 months	Town Board, in conjunction with Town of East and West Bloomfield	$4,258,705	Improve risk assessment; Reduce risk of damage or injuries through drainage improvements; Reduce risk of damages and injuries.	Local Department Budget; Grant submitted to DHSES/FEMA	H	Safety/Security

SECTION 26: MITIGATION ACTIONS

TOWN OF EAST BLOOMFIELD PROPOSED 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
5	3.1	Extreme Heat, Drought	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips to have made available of municipal website for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include heat advisory warning alerts, water conservation techniques, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication
6	3.1	Extreme Cold, Ice Storm, Snow Storm	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips to have made available on municipal website for avoiding impacts of extreme cold, ice storms and snow storms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

TOWN OF EAST BLOOMFIELD PROPOSED 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
7	3.1	Hail, Tornado, Wind	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips to have made available on municipal website for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
8	3.1	Lightning	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips to have made available on municipal website for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF EAST BLOOMFIELD PROPOSED 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
9	3.1	Wildfire	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips to have made available on municipal website for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
10	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	Town Board, Ontario County Planning in partnership with Soil and Water Conservation district	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF EAST BLOOMFIELD PROPOSED 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
11	3.1	Infestation	Invasive Species and Infestation: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide own properties and private own properties.	No	N/A	36 months	Town Board, and Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
12	3.3	Dam Failure, Drought, Flood, Landslide, Snow Storm Tornado, Wildfire, Wind	Code Enforcement: There is a code enforcement officer shortage throughout the county. and those smaller jurisdictions may need to evaluate and update local codes to follow the County (who will potentially take lead if position is vacant)	If applicable, need to evaluate and update local codes to follow the County.	No	N/A	As needed	Town Board	Staff Time	Ensures compliance to current code and restrictions. Reduce damages to structures and infrastructure; Reduce risk of injuries or fatalities.	Local Department Budget	L	Communication
13	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	Town Board, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF EAST BLOOMFIELD PROPOSED 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
14	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns on a potential threat.	No	N/A	36-60 months	Town Board, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
15	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service customers by mail or paperless enrollment.	No	N/A	36-60 months	Town Board, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
16	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination has been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	Town Board, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF EAST BLOOMFIELD PROPOSED 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
17	3.3	Fire	Inspections for public facilities: Ensure that facilities are up to code to reduce the risk of structural fires.	Complete annual and bi-annual inspections are required on all public facilities to ensure fire and carbon monoxide are functional based on local code chapter 63.	No	N/A	Annual and Bi-Annual	Code Enforcement Officer	Staff Time	Reduce risk damages and loss of life.	Local Budget	M	Communication, Safety/Security
18	3.3	Fire	Code requirement for new development: Ensure there is a limited risk to new development for structural fires.	Adopt a code that requires new development to meet all state and local fire code regulations	No	N/A	12-24 months	Town Board, Code Enforcement Officer	Staff Time	Reduce risk damages and loss of life.	Local Budget	M	Communication, Safety/Security

TOWN OF FARMINGTON

TOWN OF FARMINGTON PROPOSED 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
1	1.4	Extreme Cold, Flood, Ice Storm, Snow Storm Tornado, Wildfire, Wind	Upgrades to Farmington Volunteer Fire Department Station #2: During hazard events the Fire Station will serve as the Emergency Operations Center (EOC) and centralized shelter for residents and tourist in the area. Assessment of operational capacity and necessary improvements required. Farmington utilizes this site to provide shelter to residents and the traveling public during major weather events and power outages. Farmington was the 5th fastest growing community in upstate New York during the last Census period and continue to attract growth and development. This project helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.	Enhance operational capacity to ensure appropriate accommodations for residents/evacuees and ensuring appropriate response during and after a disaster event. This can include but is not limited to expansion of communication needs for command operations, enhancing space for evacuee and those with special needs accessibility when being utilized as a community-wide shelter.	Yes	Further review required	12-36 months	Town Boarding, Farmington VFD, and MRB Group, D.P.C	$2,000,000	Reduce the risk of injury and fatalities to residents. The VFD serves approximately 13,000 residents in a 32 square mile area, an addition 2,000 employees within the town-limits, and an additional 3,500 people who visit the area daily for tourist attractions. Ensure continuity of critical services and emergency response.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Energy (Power/Fuel)

SECTION 26: MITIGATION ACTIONS

TOWN OF FARMINGTON PROPOSED 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
2	3.2	Fire, HazMat	Assessment for Farmington Volunteer Fire Department Station #2: Farmington is located along I-90 and State Routes 96 & 332, the Gateway Corridors to the Finger Lakes Region of New York State. The Fire Department is the first responder to numerous vehicle crashes and hazardous material spills along these corridors. At this time, inadequate decontamination systems in place.	Assess current facility to ensure appropriate accommodations for first responders after an event. This can include but is not limited to decontamination and washing/laundry facility.	No	N/A	12-36 months	Town Board, Farmington VFD, and MRB Group, D.P.C	$2,000,000	Ensure continuity of critical services and emergency response. Reduces risk to emergency response personnel.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security, Hazardous Material
3	4.2	Flood	Drainage Management for Portion of the Black Creek – Black Brook Drainage Divides: Examine extending the drainage district to town-wide. Continue to need maintenance of stream corridors and debris removal. This project protects the community and reduces the risk of flooding.	Complete study of the downstream portions of this extensive drainage divides in the County. Implement improvements to identified areas.	No	Further review required	February 2024 – July of 2025	Town Board in conjunction with Ontario County Planning Department, and Ontario County Soil & Water Conservation District.	$95,000	Reduce damages caused by flooding by maintaining or restoring drainage capacity.	Local Department Budget, Staff time, Bonds, Tax Revenue; State Grants: New York State Department of Environmental Conservation Nonpoint Source Planning Grant Program	H	Safety/Security

SECTION 26: MITIGATION ACTIONS

TOWN OF FARMINGTON PROPOSED 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
4	3.1	Extreme Heat, Drought	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include heat advisory warning alerts, water conservation techniques, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication
5	3.1	Extreme Cold, Ice Storm, Snow Storm	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of extreme cold, ice storms and snow storms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can includes advertising of VFD Station #2 and identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF FARMINGTON PROPOSED 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
6	3.1	Hail, Tornado, Wind	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
7	3.1	Lightning	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

TOWN OF FARMINGTON PROPOSED 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
8	3.1	Wildfire	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
9	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	Town Board, in conjunction with Ontario County Planning, Soil and Water Conservation district	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF FARMINGTON PROPOSED 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
10	3.1	Infestation	Public Awareness Program: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide own properties and private own properties.	No	N/A	36 months	Town Board and Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
11	3.3	Drought, Flood, Landslide, Snow Storm Tornado, Wildfire, Wind	Code Enforcement: There is a code enforcement officer shortage throughout the county. and those smaller jurisdictions may need to evaluate and update local codes to follow the County (who will potentially take lead if position is vacant)	If applicable, need to evaluate and update local codes to follow the County.	No	N/A	As needed	Town Board	Staff Time	Ensures compliance to current code and restrictions. Reduce damages to structures and infrastructure; Reduce risk of injuries or fatalities.	Local Department Budget	L	Communication
12	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	Town Board, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF FARMINGTON PROPOSED 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
13	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns about a potential threat.	No	N/A	36-60 months	Town Board, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
14	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notifications to service customers by mail or paperless enrollment.	No	N/A	36-60 months	Town Board, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
15	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination have been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	Town Board, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

CITY OF GENEVA

CITY OF GENEVA PROPOSED 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	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
1	2.3	Flood, Hail, Ice Storm, Lightning, Snow Storm Tornado, Wildfire, Wind, and Utility Failure	Tree Trimming Program: Tree maintenance is a priority and a plan to address continued maintenance to reduce risk of further damage will need to be developed and implemented. This project 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; Remove dead trees from right-of way and drainage systems on a scheduled basis.	No	N/A	12 months	City Council and Public Works	Staff Time	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
2	6.1	Drought, Extreme Heat, Flood, Wildfire	Smart Growth Initiatives: Consider in an effort to make the City more resilient and help reduce the impacts of climate change City is experiencing. This project protects the community and reduces the risk of flooding.	Adopt smart growth initiatives. Incorporate a formal hazard mitigation plan in long-term community development planning activities.	No	N/A	12 months	City Council	Staff Time	Reduce risk in high hazard areas by promoting and incentivizing development in low-risk areas; Build resiliency within the community; Reduce risk of damages through improved planning and construction practices.	Local Department Budget, Staff time	M	Communication
3	6.1	Drought, Flood, Landslide, Wildfire	Landscape Ordinance: Current standards do not fully account for hazard mitigation and should be reviewed and updated. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Update and/or adopt an additional landscape ordinance (selection and planting guidelines).	No	N/A	12 months	City Council	Staff Time	Reduce impact on groundwater; Reduce rainfall runoff volume and risk of flooding; Reduce risk and spread of wildfire.	Local Department Budget, Staff time	M	Communication, Safety/Security

CITY OF GENEVA PROPOSED 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	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
4	2.3	Flood, Hail, Ice Storm, Lightning, Snow Storm, Tornado, Wildfire, Wind, Utility Failure	Burial of Utilities: Current standards do not require alternative mitigation of utility lines. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Create a local ordinance to update the standards for burial of electrical, telephone, cable lines and other utilities in new developments.	Yes	N/A	12 months	City Council	Staff Time, in conjunction with local utility service providers	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, Staff time	M	Energy (Fuel/Power), Safety/Security
5	6.1	Drought, Flood	Green Infrastructure Program: Explore alternative ways to promote mitigation and preserve the land within the City due to the impact of climate change. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Establish, adopt and implement a "green infrastructure" program for parks, nature preserves, greenbelts, etc.	No	N/A	36-60 months	City Council	Staff Time	Reduce impacts of flood through expanded greenspace and restoration of floodplains and wetlands; Reduce 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.	Local Department Budget, Staff time	L	Safety/Security

SECTION 26: MITIGATION ACTIONS

CITY OF GENEVA PROPOSED 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	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
6	4.2	Flood	Feasibility Study at Sewage Treatment Plant (South Plant), 1 Mile Point, Geneva, NY 14456: There is potential flood risk as location is near (or within) flood zones. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	City of Geneva will complete a feasibility study for the Sewage Treatment Plant (South Plant) facility to identify the current flood risk, determine if mitigation is needed, assess alternatives, and implement feasible alternative for flood reduction, protecting the infrastructure to the 0.2% flood level.	Yes	Further review required	24-36 months	City Council and Public Works	Cost determined based on feasibility assessment	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	H	Safety/Security, Communication
7	4.2	Flood	Feasibility Study at Gulvin Park Pump Station 120 Middle Street, Geneva, NY 14456: There is potential flood risk as location is near (or within) flood zones. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	The City of Geneva will complete a feasibility study for the Gulvin Park Pump Station to identify the current flood risk, determine if mitigation is needed, assess alternatives, and implement feasible alternative for flood reduction, protecting the facility to the 0.2% flood level if determined to be feasible.	Yes	Further review required	24-36 months	City Council and Public Works	Cost determined based on feasibility assessment	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	H	Safety/Security, Communication

SECTION 26: MITIGATION ACTIONS

CITY OF GENEVA PROPOSED 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	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
8	2.3	Flood	Debris Clearing Program: Extreme rainfall and snowmelt events result in high stormwater flow rates, which can result in significant amounts of debris (including sediment, rubble, and woody debris) being mobilized and directed to downstream portions of drainage courses. The build-up of debris can compromise the performance of bridges and culverts, jeopardizing these installations (as well as the associated roadways). This project protects the community and reduces the risk of flooding.	Update and continue to implement a program for clearing debris from bridges, drains and culverts.	Yes	Further review required	24 months	City Council and Public Works	$50,000 (annually)	Reduce damages caused by flooding by maintaining or restoring drainage capacity.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security
9	4.2	Flood	Flood Risk Study: Evaluation of high-risk areas within the City to identify flood mitigation needs to reduce risk. Floodwaters can cause debris to back up at the bridge, exacerbating flooding, damaging the bridge, and causing scour and erosion to embankments at the bridge site. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Undertake a comprehensive study of flood risk and reduction alternatives, with the assistance of the US Army Corps of Engineers. Implement feasible alternatives for flood reduction.	Yes	Further review required	24 - 36 months	City Council	$500,000	Improve risk assessment; Reduce risk of damages or injuries through drainage improvements; Reduce risk of damages and injuries.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Communication, Safety/Security

SECTION 26: MITIGATION ACTIONS

CITY OF GENEVA PROPOSED 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	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
10	4.1	Flood	Community Rating System: Currently the City recognizes the minimum requirements for the NFIP program. By exploring the CRS program the City would potentially receive insurance premium rates 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 protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Learn more and explore joining the Community Rating System program.	Yes	N/A	36-60 months	City Council	Staff Time	Reduce flood insurance premiums for local residents; Reduce flood risk and build resiliency.	Local Department Budget, Staff time	L	Safety/Security
11	6.1	Flood	Wetland Regulations: Reviewing and updating local codes and ordinances to better protect and maintain water resources. This project protects the community and reduces the risk of flooding.	Adopt additional wetlands development regulations for new development.	No	Further review required	36-60 months	City Council	Staff Time	Preserve/restore the natural function of the floodplain; Reduce flood damages and risk of injuries or fatalities through comprehensive development standards.	Local Department Budget, Staff time	M	Safety/Security

SECTION 26: MITIGATION ACTIONS

CITY OF GENEVA PROPOSED 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	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
12	2.3	Flood	Erosion Control: Extreme rainfall and snowmelt events result in high stormwater flow rates, which can result in significant amounts of debris (including sediment, rubble, and woody debris) being mobilized and directed to downstream portions of streams. The build-up of debris can compromise the performance of downstream bridges and culverts, jeopardizing these installations (as well as the associated roadways).	Require erosion/sedimentation controls to be utilized during construction; Include on-site sediment retention as a development requirement.	No	Further review required	36-60 months	City Council	Staff Time	Reduce risk of flood damages due to erosion or scour during flood events. Erosion	Local Department Budget, Staff time	M	Safety/Security
13	5.4	Flood	Upgrade of culverts and drains: 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.	Continue to assess and implement upgrades undersized stormwater drains and culverts.	No	Further review required	Annually	City Council	Staff Time, and additional cost determined based on assessment	Reduce damages caused by flooding by maintaining or restoring drainage capacity.	Local Department Budget, Staff time	M	Safety/Security

SECTION 26: MITIGATION ACTIONS

CITY OF GENEVA PROPOSED 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	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
14	5.4	Flood	Drainage System Improvements: Inadequate drainage systems cause flooding, damages to roadways, and create hazardous driving conditions for motorists. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Increase drainage capacity; add stormwater detention and/or retention basins as deemed necessary to reduce flood risk.	No	Further review required	24 – 48 months	City Council	$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	M	Safety/Security
15	1.3	Flood	Vegetation Maintenance: Loose 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.	Retain and maintain natural vegetation in stormwater channels.	No	Further review required	12- 24 months	City Council	Staff Time	Reduce risk of flood damages due to erosion or scour during flood events.	Local Department Budget	H	Safety/Security
16	1.4	Flood, Water Supply Contamination	Maintenance of storm and sanitary sewer lines: City currently does not have a routine maintenance schedule. This project protects the community and reduces risk of flooding.	Create regular cleaning and televising schedule of storm and sanitary sewer lines.	No	Further review required	12 months	City Council	Staff Time, in conjunction with wastewater district	Reduce risk of flood water contamination; Reduce risk of surface water infiltration and sewage backup; Ensure continuity of critical services.	Local Department Budget	M	Safety/Security

CITY OF GENEVA PROPOSED 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	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
17	2.1	Flood	Stream Stabilization: Stream banks along steeper roadways are prone to significant 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,	Collaborate with Soil and Water of Ontario County to further stabilize stream banks.	No	Further review required	12 months	City Council	Staff Time, in conjunction with Soil and Water	Reduce risk of flood damages through improved drainage capacity/stormwater diversion; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget	M	Safety/Security
18	4.2	Flood	Cemetery Creek Drainage: In the 19th century much of Cemetery Creek was directed through underground pipes. The areas above were later developed making replacement/enlargement of most of the system impractical. The City has submitted a grant continue this process and is in consultation with an engineering firm. This project protects the community and reduces risk of flooding.	Complete diversion study. Implement mitigation measures as identified in study to improve access to the drainage system.	No	Further review required	12-36 months	City Council	$500,000	Reduce damages caused by flooding by maintaining or restoring drainage capacity.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security

SECTION 26: MITIGATION ACTIONS

CITY OF GENEVA PROPOSED 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	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
19	5.4	Flood	Castle Creek Intermunicipal Drainage Study: Periodic flooding and erosion along Castle Creek. The Castle Creek watershed includes portions of the Town and City of Geneva. Through the City, Castle Creek runs east to west through a dense mix of residential and downtown commercial uses. It outlets into Seneca Lake near a lakefront park and swimming area. Some of it runs through underground culverts. An overall look at this complex watershed is needed to assess conditions and develop solutions to minimize flooding, erosion, and negative impacts to Seneca Lake. This project protects the community and reduces risk of flooding.	Continue to develop solutions and addresses improvements/maintenance to properly manage runoff, drainage, and erosion while identifying potential negative impacts to the environment, public health, and property throughout the Castle Creek Watershed.	No	Further review required	On-going (Annually)	City Council and Ontario County Planning Department	$100,000	Reduce risk of flood damages through improved drainage capacity/stormwater diversion; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event. Reduce negative impacts to the environment, public health, and property.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security

CITY OF GENEVA PROPOSED 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	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
20	2.3	Flood	Marsh Creek Intermunicipal Drainage Study and Wastewater Treatment Plant: Periodic flooding and erosion along Marsh Creek. The Marsh Creek watershed includes portions of the Town and City of Geneva. Through the City, Marsh Creek runs north to south through a dense pattern of mixed development, and outlets into Seneca Lake near a lakefront park and swimming area. Some of it runs through underground culverts. The City of Geneva Sewage Treatment Plan also outlets into Marsh Creek about 0.6 miles north of the inlet to Seneca Lake. A watershed wide approach is needed to address longstanding problems with, erosion, flooding, and negative impacts to water quality. This project protects the community and reduces risk of flooding.	Continue to coordinate and develop a plan to properly manage runoff, drainage, and erosion, while identifying potential negative impacts to the environment, public health, and property throughout the Marsh Creek Watershed. Annual maintenance conducted.	No	Further review required	On-going (Annually)	City Council and Soil and Water District	$100,000	Reduce risk of flood damages through improved drainage capacity/stormwater diversion; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event. Reduce negative impacts to the environment, public health, and property.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security

SECTION 26: MITIGATION ACTIONS

CITY OF GENEVA PROPOSED 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	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
21	3.1	Flood	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include providing FEMA/NFIP materials to mortgage lenders, real estate agents and insurance agents and place them in local libraries, residential flood mitigation techniques, installation of backflow values, “turn around – don’t down campaign, etc.	No	N/A	12 months	City Council, Ontario County Planning in partnership with Soil and Water Conservation district and Cooperatives Extension	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication
22	3.1	Extreme Heat, Drought	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include heat advisory warning alerts, water conservation techniques, etc.	No	N/A	12 months	City Council, Ontario County Emergency Management	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

CITY OF GENEVA PROPOSED 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	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
23	3.1	Extreme Cold, Ice Storm, Snow Storm	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of extreme cold, ice storms and snow storms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	City Council, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
24	3.1	Hail, Tornado, Wind	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	City Council, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

CITY OF GENEVA PROPOSED 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	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
25	3.1	Lightning	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	City Council, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
26	3.1	Wildfire	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	12 months	City Council, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

CITY OF GENEVA PROPOSED 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	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
27	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	City Council, Ontario County Planning in partnership with Soil and Water Conservation district	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
28	3.1	Infestation	Invasive Species: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide own properties and private own properties.	No	N/A	36 months	City Council, Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication

SECTION 26: MITIGATION ACTIONS

CITY OF GENEVA PROPOSED 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	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
29	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	City Council, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
30	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns on a potential threat.	No	N/A	36-60 months	City Council, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
31	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service customers by mail or paperless enrollment.	No	N/A	36-60 months	City Council, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

CITY OF GENEVA PROPOSED 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	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
32	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination has been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	City Council, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
33	4.2	Flood, Landslide unmanaged release, odor proliferation	Ontario County Landfill Mitigation: On November 16 a large pile of soil from an inactive part of the 389-acre landfill slid down the slope, impacting landfill gas-collection wells and pipes at the Ontario County Landfill.	Continue to assess the impact recent landslide such as cascading effects related to air / water / odor / fire / combustion, renewed and new hazards as a result and necessary mitigation required. Educate residents near landfill and east of it (per prevailing western winds, etc.) of potential risks/hazards informed by NYS Dept of Environmental Conservation (DEC) guidance and/or enforcement action.	No	Further Review Required	On-going	Town Supervisors, County Planning Department, Director of Sustainability and Solid Waste Management, Casella Waste Services and DEC	$1,500,000	Reduce damage and risk of injuries or fatalities; Ensure continuity of critical services.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security

TOWN OF GENEVA

TOWN OF GENEVA PROPOSED 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	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
1	1.2	Flood, Snow, Storm, Tornado, Wildfire, Wind	Emergency Notification System: The general public may not have the means to access educational material or notification alerts. By considering an area wide notification system ensures community members are aware of risk.	Look to coordinate with County to activate locally an area-wide telephone Emergency Notification System ("Reverse 911") through exploring software and potential vendors.	No	N/A	24-36 months, in progress	Town Board	$100,000	Reduce risk to residents through improved communication and early warning.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Communication
2	5.4	Flood	Drainage System Improvements: Inadequate drainage systems cause flooding, damages to roadways, and create hazardous driving conditions for motorists.	Assess drainage system. As identified, increase drainage capacity; add stormwater detention and/or retention basins as deemed necessary to reduce flood risk.	No	Further review required	12 – 60 months	Town Board and Public Works	$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

SECTION 26: MITIGATION ACTIONS

TOWN OF GENEVA PROPOSED 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	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
3	2.3	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.	Review and update town-wide stormwater study as needed to enhance current procedures. Conduct public education and outreach for high-risk areas.	No	Further review required	On-going	Town Board	Staff Time	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	Safety/Security
4	1.4	Flood, Water Supply Contamination	Kashong Creek Bank Stabilization and Monitoring: Extreme rainfall and snowmelt events result in high stormwater flow rates, which can result in significant amounts of debris (including sediment, rubble, and woody debris) being mobilized and directed to downstream portions of drainage courses. The build-up of debris can compromise the performance of bridges and culverts, jeopardizing these installations (as well as the associated roadways). This project protects the community and reduces risk of flooding.	Continue further assessments needed to maintain creek to ensure protection of Town's 3 well heads.	No	Further review required	On-going	Town Water Department	$25,000	Reduce risk of flood damages through improved drainage capacity/stormwater diversion; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event. Avoids contamination of public water supply to over 7,000 customers.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security

SECTION 26: MITIGATION ACTIONS

TOWN OF GENEVA PROPOSED 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	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
5	3.1	Extreme Heat, Drought	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include heat advisory warning alerts, water conservation techniques, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication
6	3.1	Extreme Cold, Ice Storm, Snow Storm	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme cold, ice storms and snow storms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF GENEVA PROPOSED 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	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
7	3.1	Hail, Tornado, Wind	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
8	3.1	Lightning	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF GENEVA PROPOSED 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	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
9	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	Town Board, Ontario County Planning in partnership with Soil and Water Conservation district	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
10	3.1	Infestation	Invasive Species: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide own properties and private own properties.	No	N/A	36 months	Town Board, Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication

TOWN OF GENEVA PROPOSED 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	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
11	3.3	Drought, Flood, Landslide, Snow Storm Tornado, Wildfire, Wind	Code Enforcement: There is a code enforcement officer shortage throughout the county. and those smaller jurisdictions may need to evaluate and update local codes to follow the County (who will potentially take lead if position is vacant)	If applicable, need to evaluate and update local codes to follow the County.	No	N/A	As needed	Town Board	Staff Time	Ensures compliance to current code and restrictions. Reduce damages to structures and infrastructure; Reduce risk of injuries or fatalities.	Local Department Budget	L	Communication
12	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	Town Board, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
13	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns on a potential threat.	No	N/A	36-60 months	Town Board, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

TOWN OF GENEVA PROPOSED 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	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
14	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service customers by mail or paperless enrollment.	No	N/A	36-60 months	Town Board, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
15	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination has been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	Town Board, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

TOWN OF GORHAM

TOWN OF GORHAM PROPOSED 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
1	4.2	Flood	County Road 11 Area Flood Mitigation: Flood hazard from stream and culvert blockages in steep slope areas near County Road 11. Assessment of the road and drainage system required. The hydraulic capacity of this structure may not comply with commonly accepted standards. Floodwaters can cause debris to back up at the bridge, exacerbating flooding, and causing scour and erosion to embankments at the culvert site. This project protects the community and reduces risk of flooding.	Conduct an inventory and analysis of steep slope (>15%) areas in the southwest corner of the Town to assess existing conditions and identify where mitigation measures are needed. Develop an implementation strategy for mitigation that includes prioritization, schedule and funding and implement recommended improvements.	Yes	Further review required	24-36 months	Town Board with assistance from Ontario County Planning Department and SWCD	$100,000 - $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; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security
2	5.4	Flood	Crystal Beach/Deep Run Drainage: Lack of proper drainage in the area of Crystal Beach and Deep Run Cove. This project protects the community and reduces risk of flooding.	Analysis of current grading and drainage improvements in the area of Crystal Beach and Deep Run. Create a strategy that includes prioritized steps for mitigation and a plan for implementation.	No	Further review required	24-36 months	Town Board with assistance from Ontario County Planning Department and SWCD	$500,000 - $1,000,000	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

TOWN OF GORHAM PROPOSED 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
3	2.3	Drought, Water Supply Contamination	Manure Storage and Water Quality: Flood susceptibility and potential water quality impacts from large scale manure storage facilities.	Inventory the location, size, and design of manure storage facilities to assess and minimize the potential for surface and ground water impacts. Develop of plan to protect infrastructure and reduce potential contamination.	No	Further review required	24-36 months	Town Board with assistance from Ontario County Planning Department and SWCD	$500,000	Reduce risk of water contamination. Reduce the risk of damages and risk of injuries or fatalities.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security, Food/Water/ Shelter
4	3.1	Extreme Heat, Drought	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include heat advisory warning alerts, water conservation techniques, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF GORHAM PROPOSED 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
5	3.1	Extreme Cold, Ice Storm, Snow Storm	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme cold, ice storms and snow storms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
6	3.1	Hail, Tornado, Wind	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

TOWN OF GORHAM PROPOSED 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
7	3.1	Lightning	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
8	3.1	Wildfire	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF GORHAM PROPOSED 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
9	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	Town Board, Ontario County Planning in partnership with Soil and Water Conservation district	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
10	3.1	Infestation	Invasive Species: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide own properties and private own properties.	No	N/A	36 months	Town Board, Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
11	3.3	Drought, Flood, Landslide, Snow Storm Tornado, Wildfire, Wind	Code Enforcement: There is a code enforcement officer shortage throughout the county. and those smaller jurisdictions may need to evaluate and update local codes to follow the County (who will potentially take lead if position is vacant)	If applicable, need to evaluate and update local codes to follow the County.	No	N/A	As needed	Town Board	Staff Time	Ensures compliance to current code and restrictions. Reduce damages to structures and infrastructure; Reduce risk of injuries or fatalities.	Local Department Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF GORHAM PROPOSED 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
12	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	Town Board, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
13	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns on a potential threat.	No	N/A	36-60 months	Town Board, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
14	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service customers by mail or paperless enrollment.	No	N/A	36-60 months	Town Board, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF GORHAM PROPOSED 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
15	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination have been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	Town Board, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
16	4.2	Flood	Feasibility Study: Existing bridges in the Town of Gorham need to be evaluated for flood risk. Floodwaters can cause debris to back up at the bridge, exacerbating flooding, damaging the bridge, and causing scour and erosion to embankments at the bridge site. This project protects communities and reduces risk of flooding.	Town of Gorham will complete a feasibility study for the following bridges located in the Town to identify the current flood risk, determine if mitigation is needed, assess alternatives, and implement feasible alternative for flood reduction, protecting the infrastructure to the 0.2% flood level: Blodgett Rd-West River Bridge; East Swamp-Flint Creek; Tileyard Rd-Flint Creek; Lake to Lake Rd-Flint Creek; Railroad Ave-West River	Yes	Further review required	18 months	Town Board and Public Works	$2,500,000	Reduce flood risk; reduce damages and risk of injuries or fatalities; reduce emergency response and improve egress, reduce loss of function.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security

TOWN OF HOPEWELL

TOWN OF HOPEWELL PROPOSED 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
1	5.4	Flood	Flood Mitigation Improvements: FEMA has provided the Town of Hopewell with a list of 19 projects, 15 which are still in need of flood mitigation improvements to be implemented. 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.	Implement mitigation as noted in FEMA notification letter for remaining 15 site locations identified. 42.85902,-77.23077 42.8795,-77.23494 42.94424,-77.23527 42.93351,-77.24125 42.93184,-772459 42.88663,-77.17299 and 42.88657,-77.17602 3551 Lincoln Hill Road Smith Road from SR5-20 (42.87056,-77.22987) Smith Road 2741 to County Road 4 Smith Road 2525 to 2503 Stoddard Road 3982 Swamp Road 3724 to Freshour Road Freshour Road 2793 Freshour Road 2665 to 2576 Freshour road Pole #T13	No	Further review required	On-going	Town Board	Staff Time with the exception of specialized equipment	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; if in need of specialized equipment, then we would utilize Ontario. County Bid Book or State Bid	H	Safety/Security
2	1.4	Extreme Cold, Extreme Heat, Flood, Hail, Ice Storm, Lightning, Snow Storm Tornado, Wildfire, Wind, Utility Failure	Generator at Town Hall: During hazard events, the Town Hall serves as the Emergency Operations Center and a place for residents to go if needed. This project helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.	Acquire and install generators with hard wired quick connections at Town Hall.	Yes	Further review required	24 months	Town Board	$25,000	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	H	Energy (Power/Fuel)

SECTION 26: MITIGATION ACTIONS

TOWN OF HOPEWELL PROPOSED 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
3	4.2	Terrorism	Fencing for water critical infrastructure: Town of Hopewell has protection around critical infrastructure.	Install fencing around water tanks and valve houses for security.	Yes	Further review required	36-48 months	Town Board, Department of Energy and Homeland Security	$75,000	Ensures continuity of critical services. Reduces damage to infrastructures. Reduce risk of chemical/biological poisoning to water supply.	Local Department Budget	M	Safety/Security, Food/Water/ Shelter
4	2.3	Terrorism	Develop a plan for critical infrastructure protection: Town of Hopewell has no plan in place in the event of a domestic attack on critical resources.	Develop a plan to protect critical natural gas and compressor stations from domestic attacks.	Yes	Further review required	36-48 months	Town Board, Department of Energy and Homeland Security	$50,000	Ensures continuity of critical services. Reduces damage to infrastructures.	Local Department Budget	M	Safety/Security, Communication
5	4.2	Drought	Drill for additional aquifers: Town of Hopewell has limited alternative water sources in response to a drought event.	Determine if there is a deep aquifer within town-limited and drill to obtain access to additional water sources.	No	Further review required	36-48 months	Town Board	$50,000	Reduce risk of injuries or fatalities to vulnerable populations.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	L	Food/Water/ Shelter
6	1.4	Flood, Hail, Ice Storms, Lightning, Snow Storm, Tornado, Wildfire, Wind	Ditch Clearing and Maintenance Program: 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.	Evaluate Road ditches, right-a-ways for erosion and sediments, trees and brush along town roads are evaluated to determine any obstructions and need to for removal/maintenance.	No	Further review required	Annually	Town Highway Department	Staff Time	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; local bonds	M	Safety/Security

SECTION 26: MITIGATION ACTIONS

TOWN OF HOPEWELL PROPOSED 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
7	1.4	Extreme Cold, Extreme Heat, Flood, Hail, Ice Storm, Lightning, Snow Storm Tornado, Wildfire, Wind, Utility Failure	Transformer Connections for generator at Water Department Pump Station: The Town owns and maintains a stormwater pump station at Hopewell Water Department. Upgrade of the pumps and electrical system is to be assessed for the installation of an emergency generator. This project helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.	Transformer connection to be wired to previously installed to generator.	Yes	Further review required	12/2023	Town Water Department	Staff Time	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	H	Energy (Power/Fuel)
8	3.1	Extreme Heat, Drought	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include heat advisory warning alerts, water conservation techniques, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF HOPEWELL PROPOSED 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
9	3.1	Extreme Cold, Ice Storm, Snow Storm	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme cold, ice storms and snow storms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
10	3.1	Hail, Tornado, Wind	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF HOPEWELL PROPOSED 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
11	3.1	Lightning	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
12	3.1	Wildfire	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF HOPEWELL PROPOSED 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
13	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	Town Board, Ontario County Planning in partnership with Soil and Water Conservation district	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
14	3.1	Infestation	Invasive Species: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide own properties and private own properties.	No	N/A	36 months	Town Board, Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication

TOWN OF HOPEWELL PROPOSED 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
15	3.3	Drought, Flood, Landslide, Snow Storm Tornado, Wildfire, Wind	Code Enforcement: There is a code enforcement officer shortage throughout the county. and those smaller jurisdictions may need to evaluate and update local codes to follow the County (who will potentially take lead if position is vacant)	If applicable, need to evaluate and update local codes to follow the County.	No	N/A	As needed	Town Board	Staff Time	Ensures compliance to current code and restrictions. Reduce damages to structures and infrastructure; Reduce risk of injuries or fatalities.	Local Department Budget	L	Communication
16	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	Town Board, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
17	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns on a potential threat.	No	N/A	36-60 months	Town Board, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF HOPEWELL PROPOSED 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
18	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service customers by mail or paperless enrollment.	No	N/A	36-60 months	Town Board, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
19	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination has been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	Town Board, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

TOWN OF MANCHESTER

TOWN OF MANCHESTER PROPOSED 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
1	1.4	Extreme Cold, Extreme Heat, Flood, Hail, Ice Storm, Lightning, Snow Storm Tornado, Wildfire, Wind, and Utility Failure	Generator for Town Hall and DPW Building: During power outages, the Town Hall and Public Works facility 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.	Acquire and install a permanent generator at both critical facilities: Town Hall and DPW building located at 1272 Co. Rd. 7	Yes	Further review required	24 months	Town Board and Public Works	$1,000,000	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	H	Energy (Power/Fuel)
2	3.1	Extreme Heat, Drought	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include heat advisory warning alerts, water conservation techniques, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Promote hazard awareness and protect residents from potential injuries and damage.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF MANCHESTER PROPOSED 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
3	3.1	Extreme Cold, Ice Storm, Snow Storm	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme cold, ice storms and snow storms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
4	3.1	Hail, Tornado, Wind	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

TOWN OF MANCHESTER PROPOSED 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
5	3.1	Lightning	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
6	3.1	Wildfire	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF MANCHESTER PROPOSED 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
7	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	Town Board, Ontario County Planning in partnership with Soil and Water Conservation district	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
8	3.1	Infestation	Invasive Species and Infestation: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide own properties and private own properties.	No	N/A	36 months	Town Board, and Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF MANCHESTER PROPOSED 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
9	3.3	Drought, Flood, Hail, Landslide, Snow Storm Tornado, Wildfire, Wind	Code Enforcement: There is a code enforcement officer shortage throughout the county. and those smaller jurisdictions may need to evaluate and update local codes to follow the County (who will potentially take lead if position is vacant)	If applicable, need to evaluate and update local codes to follow the County.	No	N/A	As needed	Town Board	Staff Time	Ensures compliance to current code and restrictions. Reduce damage to structures and infrastructure; Reduce risk of injuries or fatalities.	Local Department Budget	L	Communication
10	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	Town Board, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
11	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns on a potential threat.	No	N/A	36-60 months	Town Board, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF MANCHESTER PROPOSED 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
12	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service customers by mail or paperless enrollment.	No	N/A	36-60 months	Town Board, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
13	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination has been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	Town Board, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
14	4.1	Flood	Flood Zone Outreach Program: Recent developments have occurred near flood zones and some future development is anticipated near or within flood zones. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Once new FEMA maps are available, create a flood zone brochure for homeowners within flood zones to ensure they are in proper regulations.	No	N/A	12 months	Town Planning Department	Staff Time	Reduces risk of flood damages to high-risk structures and prevent future losses in high-risk flood hazard areas; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF MANCHESTER PROPOSED 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
15	4.2	Flood	Feasibility Study: Existing bridge in the Town of Manchester will need to be evaluated for flood risk. Floodwaters can cause debris to back up at the bridge, exacerbating flooding, damaging the bridge, and causing scour and erosion to embankments at the bridge site. This project protects communities and reduces risk of flooding.	Town of Manchester will complete a feasibility study for the following bridge located in the Town to identify the current flood risk, determine if mitigation is needed, assess alternatives, and implement feasible alternative for flood reduction, protecting the infrastructure to the 0.2% flood level: Bridge over outlet on Rt. 96 (JCT RTS 96 & 21)	Yes	Further review required	18 months	Town Board and Public Works	$2,500,000	Reduce flood risk; reduce damages and risk of injuries or fatalities; reduce emergency response and improve egress, reduce loss of function.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security

VILLAGE OF MANCHESTER

VILLAGE OF MANCHESTER PROPOSED 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
1	1.4	Extreme Cold, Extreme Heat, Flood, Hail, Ice Storm, Lightning, Snow Storm Tornado, Wildfire, Wind, and Utility Failure	Generator at Town Hall and DPW Building: During power outages, the Town Hall and Public Works facility 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.	Acquire and install a permanent generator at both critical facilities: Town Hall and DPW building located at 1272 Co. Rd. 7.	Yes	Further review required	24 months	Village Board and Public Works	$1,000,000	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	H	Energy (Power/Fuel)
2	2.3	Flood, Hail, Ice Storm, Lightning, Snow Storm Tornado, Wildfire, Wind, and Utility Failure	Tree Trimming Program: Tree maintenance is a priority and a plan to address continued maintenance to reduce risk of further damage will need to be developed and implemented. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	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	Further review required	12 months	Village Board and Public Works	Staff Time	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

SECTION 26: MITIGATION ACTIONS

VILLAGE OF MANCHESTER PROPOSED 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
3	3.3	Flood, Hail, Ice Storms, Landslide, Lightning, Snow Storms, Tornado, Wildfire, Wind	Review and update building codes: Current standards do not full account for hazard mitigation and building codes should be reviewed and updated. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Incorporate higher standards for hazard resistance in local application of the building code.	No	N/A	12 months	Village Board	Staff Time	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	Communication
4	1.2	Flood, Snow, Storm, Tornado, Wildfire, Wind	Emergency Notification System: The general public may not have the means to access educational material or notification alerts. By considering an area wide notification system ensures community members are aware of risk. This action promotes public safety.	Look to coordinate with County to activate locally an area-wide telephone Emergency Notification System ("Reverse 911").	No	N/A	24-36 months	Village Board and Public Works	$1,000,000	Reduce risk to residents through improved communication and early warning.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Communication
5	6.1	Drought, Extreme Heat, Flood, Wildfire	Smart Growth Initiatives: Consider in an effort to make the Village more resilient and help reduce the impacts of climate change Village is experiencing. This project protects the community and reduces risk of flooding.	Adopt smart growth initiatives. Incorporate a formal hazard mitigation plan in long-term community development planning activities.	No	N/A	12 months	Village Board	Staff Time	Reduce risk in high hazard areas by promoting and incentivizing development in low-risk areas; Build resiliency within the community; Reduce risk of damages through improved planning and construction practices.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF MANCHESTER PROPOSED 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
6	4.2	Flood, Water Supply Contamination	Sewer man-hole covers: Assessment of village sewer manholes to prevent water contamination which has been experienced in the past to due stormwater and flooding. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Equip sewer manholes with watertight covers and inflow guards.	No	Further review required	24 months	Village Board and Public Works	$100,000	Reduce risk of flood water contamination; 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	L	Safety/Security, Food/Water/ Shelter
7	6.1	Drought, Flood	Green Infrastructure Program: Explore alternative ways to promote mitigation and preserve the land within the Village due to the impact of climate change. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Establish, adopt and implement a "green infrastructure" program for parks, nature preserves, greenbelts, etc.	No	N/A	36-60 months	Village Board	Staff Time	Reduce impacts of flood through expanded greenspace and restoration of floodplains and wetlands; Reduce 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.	Local Department Budget, Staff time	L	Safety/Security

VILLAGE OF MANCHESTER PROPOSED 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
8	2.3	Flood	Debris Clearing Program: Extreme rainfall and snowmelt events result in high stormwater flow rates, which can result in significant amounts of debris (including sediment, rubble, and woody debris) being mobilized and directed to downstream portions of drainage courses. The build-up of debris can compromise the performance of bridges and culverts, jeopardizing these installations (as well as the associated roadways). This project protects the community and reduces risk of flooding.	Adopt and implement a program for clearing debris from bridges, drains and culverts.	No	Further review required	24 months	Village Board and Public Works	$50,000 (annually)	Reduce damages caused by flooding by maintaining or restoring drainage capacity.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security
9	4.2	Flood	Flood Risk Study: Evaluation of high-risk areas within village to identify flood mitigation needs to reduce risk. Floodwaters can cause debris to back up at the bridge, exacerbating flooding, damaging the bridge, and causing scour and erosion to embankments at the bridge site. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Undertake a comprehensive study of flood risk and reduction alternatives. Implement feasible alternatives for flood reduction.	No	Further review required	24 - 36 months	Village Board	$500,000	Improve risk assessment; Reduce risk of damages or injuries through drainage improvements; Reduce risk of damages and injuries.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Communication, Safety/Security

SECTION 26: MITIGATION ACTIONS

VILLAGE OF MANCHESTER PROPOSED 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
10	4.3	Flood	Wetland Development Restrictions: Reviewing and updating local codes and ordinances to better protect and maintain water resources. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Adopt wetlands development regulations; Implement a Comprehensive Watershed Ordinance for new development.	No	Further review required	12- 24 months	Village Board	Staff Time	Preserve/restore the natural function of the floodplain; Reduce flood damages and risk of injuries or fatalities through comprehensive development standards.	Local Department Budget	M	Communication
11	3.2	Flood	Education for installing backflow flows: 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. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Provide how-to information to residents for installing backflow valves to prevent reverse-flow floods.	No	Further review required	12- 24 months	Village Board	Staff Time	Reduce damage impact on residents after a flood event; Reduce risk of sewage back-up in structures; Reduce risk of injury or illness to residents.	Local Department Budget	M	Communication
12	5.4	Flood	Drainage System Improvements: Inadequate drainage systems cause flooding, damages to roadways, and create hazardous driving conditions for motorists. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Increase drainage capacity; add stormwater detention and/or retention basins as deemed necessary to reduce flood risk.	No	Further review required	24 – 48 months	Village Board	$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	M	Safety/Security

SECTION 26: MITIGATION ACTIONS

VILLAGE OF MANCHESTER PROPOSED 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
13	6.1	Flood	Vegetation Maintenance: Loose 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.	Retain and maintain natural vegetation in stormwater channels.	No	Further review required	12- 24 months	Village Board	Staff Time	Reduce risk of flood damages due to erosion or scour during flood events.	Local Department Budget	H	Safety/Security
14	4.3	Flood	New Development Regulations: Reviewing and updating local codes and ordinances will guide decisions that will protect and maintain water resources. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Adopt regulations to limit amount of impervious cover in conjunction with new development.	No	N/A	12- 24 months	Village Board	Staff Time	Reduce flood damages and risk of injuries or fatalities through regulated development; Reduce the amount of stormwater runoff in densely developed areas during flood events; Reduce the risk of downstream flooding.	Local Department Budget	M	Communication
15	2.3	Wildfire, Fire	Fire Hydrant Maintenance Program: In the event of a wildfire or fire event the Village would need to ensure fire hydrants are working appropriately to enhance emergency response efforts.	Adopt and implement routine fire hydrant maintenance program.	No	Further review required	12- 24 months	Village Board, Local Fire Department	Staff Time	Reduce risk and spread of wildfires through routine maintenance of fire hydrants; Reduce risk of injury or damages.	Local Department Budget, Local Fire Department Budget	M	Safety/Security

VILLAGE OF MANCHESTER PROPOSED 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
16	4.2	Drought	Drought Mitigation at critical public facilities: Assessment of critical facilities to identify those that would benefit from drought mitigation measures to protect any further damage.	Upgrade critical facilities to include drought mitigation measures and expansive soils protection such as greywater reuse systems, drought tolerant landscaping, installation of a sprinkler system with regular watering schedule and installation of French drains where high plasticity soils are indicated.	No	Further review required	48-60 months	Village Board and Public Works	$100,000	Reduce damages at critical facilities.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	L	Safety/Security
17	2.3	Tornado	Construction of safe rooms: The Village has no designated safe rooms within the community for at-risk residents in the event of a high-wind or tornado event.	Build safe room shelters throughout jurisdiction to include community centers and/or manufactured home parks so that all park residents can reach shelter in less than five minutes.	No	Further review required	48-60 months	Village Board and Public Works	$500,000	Reduce risk to citizens by providing shelter in high-risk areas during extreme weather events.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	L	Safety/Security, Food/Water/ Shelter
18	4.2	Extreme Cold, Extreme Heat, Flood, Hail, Ice Storm, Lightning, Snow Storm, Tornado, Wildfire, Wind	Community Shelter / EOC: The Village 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.	Find solutions with assistance from Ontario County to upgrade a facility and/or construct a community shelter for extreme hazard events. Ensure generator is installed at site location once determined.	Yes	Further review required	12-60 months	Village Board, in conjunction with Ontario County, School Districts, Local Churches	$500,000 - $1,000,000	Reduce risk to residents by providing shelter during extreme weather events.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security, Food/Water/ Shelter

SECTION 26: MITIGATION ACTIONS

VILLAGE OF MANCHESTER PROPOSED 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
19	3.1	Extreme Heat, Drought	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include heat advisory warning alerts, water conservation techniques, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication
20	3.1	Extreme Cold, Ice Storm, Snow Storm	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme cold, ice storms and snow storms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF MANCHESTER PROPOSED 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
21	3.1	Hail, Tornado, Wind	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
22	3.1	Lightning	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

VILLAGE OF MANCHESTER PROPOSED 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
23	3.1	Wildfire	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
24	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	Village Board in conjunction with Ontario County Planning and Soil and Water Conservation district	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF MANCHESTER PROPOSED 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
25	3.1	Infestation	Public Awareness Program: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide own properties and private own properties.	No	N/A	36 months	Village Board , Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
26	3.3	Drought, Flood, Landslide, Snow Storm Tornado, Wildfire, Wind	Code Enforcement: There is a code enforcement officer shortage throughout the county. and those smaller jurisdictions may need to evaluate and update local codes to follow the County (who will potentially take lead if position is vacant)	If applicable, need to evaluate and update local codes to follow the County.	No	N/A	As needed	Village Board	Staff Time	Ensures compliance to current code and restrictions. Reduce damages to structures and infrastructure; Reduce risk of injuries or fatalities.	Local Department Budget	L	Communication
27	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	Village Board, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

VILLAGE OF MANCHESTER PROPOSED 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
28	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns on a potential threat.	No	N/A	36-60 months	Village Board, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
29	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service customer by mail or paperless enrollment.	No	N/A	36-60 months	Village Board, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
30	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination has been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	Village Board, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

TOWN OF NAPLES

TOWN OF NAPLES PROPOSED 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
1	5.4	Flood	Town Wide Roadway Stabilization Effort: Forest and vegetation management concerns, hillside, and road stabilization. Excess sediment results in sedimentation of downstream stream reaches, reducing channel capacity and negatively impacting trout habitat and grounds. This project protects the community and reduces risk of flooding.	Continue to assess and implement recommended mitigation measures to preserve or improve the roadways.	No	Further review required	On-going	Town Board	Staff Time	Reduce risk of flood damages due to erosion or scour during flood events.	Local Department Budget	H	Safety/Security
2	4.1	Flood	Flood Zone Outreach Program: Recent developments have occurred near flood zones and some future development is anticipated near or within flood zones. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Create a flood zone brochure for homeowners within flood zones to ensure they are in proper regulations.	No	N/A	12 months	Town Planning Department	Staff Time	Reduces risk of flood damages to high-risk structures and prevent future losses in high-risk flood hazard areas; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF NAPLES PROPOSED 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
3	3.1	Extreme Heat, Drought	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include heat advisory warning alerts, water conservation techniques, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication
4	3.1	Extreme Cold, Ice Storm, Snow Storm	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme cold, ice storms and snow storms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF NAPLES PROPOSED 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
5	3.1	Hail, Tornado, Wind	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
6	3.1	Lightning	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

TOWN OF NAPLES PROPOSED 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
7	3.1	Wildfire	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
8	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	Town Board in conjunction with Ontario County Planning and Soil and Water Conservation district	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF NAPLES PROPOSED 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
9	3.1	Infestation	Invasive Species: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide own properties and private own properties.	No	N/A	36 months	Town Board, Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
10	3.3	Drought, Flood, Landslide, Snow Storm Tornado, Wildfire, Wind	Code Enforcement: There is a code enforcement officer shortage throughout the county. and those smaller jurisdictions may need to evaluate and update local codes to follow the County (who will potentially take lead if position is vacant)	If applicable, need to evaluate and update local codes to follow the County.	No	N/A	As needed	Town Board	Staff Time	Ensures compliance to current code and restrictions. Reduce damages to structures and infrastructure; Reduce risk of injuries or fatalities.	Local Department Budget	L	Communication
11	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	Town Board, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF NAPLES PROPOSED 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
12	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns on a potential threat.	No	N/A	36-60 months	Town Board, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
13	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service customers by mail or paperless enrollment.	No	N/A	36-60 months	Town Board, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
14	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination has been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	Town Board, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

VILLAGE OF NAPLES

VILLAGE OF NAPLES PROPOSED 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
1	1.4	Extreme Cold, Extreme Heat, Flood, Hail, Ice Storm, Landslide, Lightning, Snow Storm Tornado, Wildfire, Wind, and Utility Failure	Generator at critical facilities: During power outages critical facilities would be without lights, communications, and maintenance equipment/machinery. The operations are basically bought to a halt. This project helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.	Assessment of critical facilities. Based on assessment acquire and install a permanent generator at designated sites.	Yes	Further review required	24 months	Village Board and Public Works	$1,000,000	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	H	Energy (Power/Energy)
2	3.3	Flood, Hail, Ice Storm, Lightning, Snow Storm, Tornado, Wildfire, Wind, and Utility Failure	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 standards for burial of electrical, telephone, cable lines and other utilities in new developments.	No	Further review required	24 months	Village Board and Code Enforcement	Staff Time	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	Energy (Power/Energy)

SECTION 26: MITIGATION ACTIONS

VILLAGE OF NAPLES PROPOSED 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
3	4.2	Flood	Feasibility Study for the Relocation of Village of Naples DPW Municipal Highway Building located at 8 Mark Circle, Naples, NY 14512: There is potential flood risk as location is near (or within) flood zones. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Village of Naples will complete a feasibility study for the Public Works Municipal Highway Building to identify the current flood risk, determine if mitigation is needed, assess alternatives, and implement feasible alternative for flood reduction, protecting the structure to the 0.2% flood level.	Yes	Further review required	2030	Village Board	Cost determined by feasibility assessment	Reduce flood risk; reduce damages and risk of injuries or fatalities; reduce loss of function and continuity of operations and critical services.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security
4	2.3	Flood	Naples Creek & Grimes Creek improvements: Sediment and erosion control concerns. This erosion and sedimentation results in sedimentation of downstream stream reaches, reducing channel capacity and negatively impacting trout habitat and spawning grounds. This project protects the community and reduces risk of flooding.	Request permission and receive permits from NYS DEC, FEMA, and the Army Corps of Engineers to remove existing log jams, perform dredging in need areas (bridges) and add stream bank stabilization to mitigate the effects of flooding. These actions are currently not being attempted due to lack of funds and inability to receive permits form state and federal agencies to perform such activities, as both watercourses are protected due to the native trout population.	No	N/A	12 -24 months	Village Board and SWCD	$100,000	Reduces risk of flood damages to high-risk structures and prevent future losses in high-risk flood hazard areas; 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	M	Safety/Security

SECTION 26: MITIGATION ACTIONS

VILLAGE OF NAPLES PROPOSED 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
5	4.1	Flood	Flood Zone Outreach Program: Recent developments have occurred near flood zones and some future development is anticipated near or within flood zones. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Once new FEMA maps are available, create a flood zone brochure for homeowners within flood zones to ensure they are in proper regulations.	No	N/A	12 months	Village Planning Department	Staff Time	Reduces risk of flood damages to high-risk structures and prevent future losses in high-risk flood hazard areas; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget, Staff time	M	Communication
6	3.1	Extreme Heat, Drought	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include heat advisory warning alerts, water conservation techniques, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF NAPLES PROPOSED 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
7	3.1	Extreme Cold, Ice Storm, Snow Storm	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme cold, ice storms and snow storms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
8	3.1	Hail, Tornado, Wind	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF NAPLES PROPOSED 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
9	3.1	Lightning	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
10	3.1	Wildfire	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF NAPLES PROPOSED 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
11	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	Village Board in conjunction with Ontario County Planning and Soil and Water Conservation district	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
12	3.1	Infestation	Invasive Species: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide own properties and private own properties.	No	N/A	36 months	Village Board, Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
13	3.3	Drought, Flood, Landslide, Snow Storm Tornado, Wildfire, Wind	Code Enforcement: There is a code enforcement officer shortage throughout the county. and those smaller jurisdictions may need to evaluate and update local codes to follow the County (who will potentially take lead if position is vacant)	If applicable, need to evaluate and update local codes to follow the County.	No	N/A	As needed	Village Board	Staff Time	Ensures compliance to current code and restrictions. Reduce damages to structures and infrastructure; Reduce risk of injuries or fatalities.	Local Department Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF NAPLES PROPOSED 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
14	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	Village Board, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
15	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns on a potential threat.	No	N/A	36-60 months	Village Board, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
16	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service customers by mail or paperless enrollment.	No	N/A	36-60 months	Village Board, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF NAPLES PROPOSED 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
17	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination has been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	Village Board, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

TOWN OF PHELPS

TOWN OF PHELPS PROPOSED 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
1	1.4	Flood, Hail, Ice Storm, Lightning, Snow Storm Tornado, Wildfire, Wind, and Utility Failure	Weatherization/Storm Readiness: Tree maintenance is a priority and a plan to address continued maintenance to reduce risk of further damage will need to be developed and implemented. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Trim trees near public right-of ways and utility lines to reduce falling limbs during sever weather events	No	Further review required	12 - 24 months	Town Highway Department	$25,000 (annually)	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
2	1.2	Extreme Cold, Flood, Snow, Storm, Tornado, Wildfire	Emergency Notification System: The general public may not have the means to access educational material or notification alerts. By considering an area wide notification system ensures community members are aware of risk. This project promotes public safety.	Enhance community awareness / alertness and communication by coordinating with the County to utilize reverse 911 system, social media, and the internet.	No	N/A	12 months	Town Board	$5,000	Reduce risk to citizens through improved communication and early warning.	Local Department Budget	H	Communication
3	5.4	Flood	Drainage System Improvements: Inadequate drainage systems cause flooding, damages to roadways, and create hazardous driving conditions for motorists. This project protects the community and reduces risk of flooding.	Increase drainage capacity; add stormwater detention and/or retention basins as deemed necessary to reduce flood risk.	No	Further review required	Annually	Town Board	$100,000 (annually)	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

SECTION 26: MITIGATION ACTIONS

TOWN OF PHELPS PROPOSED 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
4	4.3	Flood, Wildfire	Disclosure Notification: Due to high-risk areas within the Town, there is a need to inform potential buyers of at risk-properties. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Disclosure of natural hazard risks during real estate transaction	No	N/A	As needed	Town Board	Staff Time	Reduce risk of damages to new structures and infrastructure through building restrictions in high-risk areas.	Local Department Budget	M	Communication
5	3.1	Wildfire	Fire and HazMat Safety Awareness: 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.	Prepare tips for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	12 months	Local Fire Districts: Phelps, Clifton Springs, Oaks Corners	$25,000 per Fire District	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time; FASNY	M	Communication
6	4.2	Wildfire, Fire, Water Supply Contamination	Bulk Water Station: The Town of Phelps utilizes 3 water sources for various water districts. We are implementing a continuous connection between all water sources to separate specific water sources in case of contamination of a single water source.	Assess and expand water districts throughout the Town of Phelps for better fire protection coverage and safer water for our residents and businesses.	No	Further Review Required	12-24 months	Town Board	$500,000	Reduce risk and spread of fire and wildfires; Reduce risk of injury or damages.	USDA loans and low interest loans	H	Safety/Security, Food/Water/ Shelter

TOWN OF PHELPS PROPOSED 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
7	2.3	Flood, Hail, Ice Storm, Lightning, Snow Storm Tornado, Wildfire, Wind, and Utility Failure	Utility Standard: Currently there are no standards for utility line protection. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Proposed legislation for the implementation of utility standards.	No	Further review required	Annually	Town Board	Staff Time	Reduce risk of damage to infrastructure. Ensure continuity of critical services.	Private Developers	L	Communication
8	6.1	Drought, Extreme Heat, Flood, Wildfire	Landscape Ordinance: Currently there are no codes in place to recommend use of landscape native to area. This project will protect the community and reduce flooding.	Adopt a landscape ordinance (selection and planting guidelines).	No	Further review required	Annually	Town Board	Staff Time	Reduce impact on groundwater; Minimize impacts of expansive soils; Reduce rainfall runoff volume and risk of flooding; Reduce risk and spread of wildfire.	Private Developers	L	Communication
9	5.4	Flood	Drainage improvements for new development areas near flood zone according to the rules and regulations in the 2020 IEC Residential and Building Codes: 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.	Installation of drainage is done per project according to rules and regulations of all necessary departments involved (DEC, Code, Zoning, County, etc.).	No	Further review required	On-going	Town Board	Minor drainage improvements (e.g., minor regrading) - $50,000+; More significant projects requiring land acquisition, permitting and large-scale earthwork - $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	M	Safety/Security, Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF PHELPS PROPOSED 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
10	2.3	Flood	Town Drainage Plan: 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.	Drainage is to be considered and evaluated for every project, so flood risks related to 500yr flood events are considered for critical facilities. Drainage is evaluated in every project, involve all departments and agencies needed.	No	Further review required	On-going	Town Board	Staff Time	Reduce flood risk through improved drainage capacity; Reduce risk of damages and injuries; Reduce emergency response demands.	Local Department Budget	M	Safety/Security, Communication
11	4.2	Wildfire, Fire	Expansion of water district and bulk water station: Assessment of current water districts and capabilities.	To expand water districts throughout the Town of Phelps for better fire coverage and better water for our residents. Keep expanding water districts and a bulk water station at the corners of State Route 14 and Cross Road	No	Further review required	On-going	Local Fire Departments: Phelps, Clifton Springs, Oaks Corners	Staff Time	Clean and safe water for the residents. Bulk water station benefits fire departments, residents with wells and nonresidents passing through with campers and water needs	Local Department Budget; FASNY	L	Safety/Security, Food/Water/ Security
12	3.1	Extreme Heat, Drought	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include heat advisory warning alerts, water conservation techniques, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication

TOWN OF PHELPS PROPOSED 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
13	3.1	Extreme Cold, Ice Storm, Snow Storm	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of extreme cold, ice storms and snow storms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
14	3.1	Hail, Tornado, Wind	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF PHELPS PROPOSED 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
15	3.1	Lightning	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
16	3.1	Wildfire	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

TOWN OF PHELPS PROPOSED 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
17	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	Town Board, Ontario County Planning in partnership with Soil and Water Conservation district	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
18	3.1	Infestation	Invasive Species and Infestation: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide own properties and private own properties.	No	N/A	36 months	Town Board, Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication

TOWN OF PHELPS PROPOSED 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
19	3.3	Drought, Flood, Landslide, Lightning, Snow Storm Tornado, Wildfire, Wind	Code Enforcement: There is a code enforcement officer shortage throughout the county. and those smaller jurisdictions may need to evaluate and update local codes to follow the County (who will potentially take lead if position is vacant)	If applicable, need to evaluate and update local codes to follow the County.	No	N/A	As needed	Town Board	Staff Time	Ensures compliance to current code and restrictions. Reduce damages to structures and infrastructure; Reduce risk of injuries or fatalities.	Local Department Budget	L	Communication
20	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	Town Board, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
21	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns on a potential threat.	No	N/A	36-60 months	Town Board, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF PHELPS PROPOSED 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
22	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service customers by mail or paperless enrollment.	No	N/A	36-60 months	Town Board, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
23	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination has been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	Town Board, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
24	1.4	Flood	Feasibility Study at Wastewater Treatment Plant: Determine feasible alternatives to mitigate repetitive flood issues at plant. Implement cost effective alternative identified in study to ensure continuity of operations during 500yr flood events. This project helps ensure critical facilities continue to provide services during unforeseen events.	Town of Phelps will complete a feasibility study for the Sewage Treatment Plant to identify the current flood risk, determine if mitigation is needed, assess alternatives, and implement feasible alternative for flood reduction, protecting the infrastructure to the 0.2% flood level.	Yes	Further review required	18 months	Town Board and Public Works	Cost to be determined based on feasibility study.	Reduce flood risk; reduce damages and risk of injuries or fatalities; reduce emergency response and improve egress, reduce loss of function.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security

VILLAGE OF PHELPS

VILLAGE OF PHELPS PROPOSED 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
1	5.4	Flood	Debris Maintenance Program: 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.	Continue to assess and implement maintenance as needed for clearing debris from bridges, drains, and culverts.	Yes	Further review required	Annually	Village Board	Staff Time	Reduce damages caused by flooding by maintaining or restoring drainage capacity.	Local Department Budget, Staff time	M	Safety/Security
2	3.1	Extreme Heat, Drought	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include heat advisory warning alerts, water conservation techniques, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication

VILLAGE OF PHELPS PROPOSED 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
3	3.1	Extreme Cold, Ice Storm, Snow Storm	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme cold, ice storms and snowstorms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
4	3.1	Hail, Tornado, Wind	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF PHELPS PROPOSED 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
5	3.1	Lightning	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
6	3.1	Wildfire	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF PHELPS PROPOSED 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
7	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	Village Board in conjunction with Ontario County Planning and Soil and Water Conservation district	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
8	3.1	Infestation	Invasive Species: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide own properties and private own properties.	No	N/A	36 months	Village Board, Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication

VILLAGE OF PHELPS PROPOSED 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
9	3.3	Drought, Flood, Landslide, Snow Storm Tornado, Wildfire, Wind	Code Enforcement: There is a code enforcement officer shortage throughout the county. and those smaller jurisdictions may need to evaluate and update local codes to follow the County (who will potentially take lead if position is vacant)	If applicable, need to evaluate and update local codes to follow the County.	No	N/A	As needed	Village Board	Staff Time	Ensures compliance to current code and restrictions. Reduce damages to structures and infrastructure; Reduce risk of injuries or fatalities.	Local Department Budget	L	Communication
10	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	Village Board, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
11	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns on a potential threat.	No	N/A	36-60 months	Village Board, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF PHELPS PROPOSED 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
12	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service customers by mail or paperless enrollment.	No	N/A	36-60 months	Village Board, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
13	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination has been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	Village Board, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
14	4.1	Flood	Flood Zone Outreach Program: Recent developments have occurred near flood zones and some future development is anticipated near or within flood zones. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Once new FEMA maps are available, create a flood zone brochure for homeowners within flood zones to ensure they are in proper regulations.	No	N/A	12 months	Village Planning Department	Staff Time	Reduces risk of flood damages to high-risk structures and prevent future losses in high-risk flood hazard areas; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget, Staff time	M	Communication

VILLAGE OF PHELPS PROPOSED 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
15	1.4	Flood	Feasibility Study at Wastewater Treatment Plant: Determine feasible alternatives to mitigate repetitive flood issues at plant. Implement cost effective alternative identified in study to ensure continuity of operations during 500yr flood events. This project helps ensure critical facilities continue to provide services during unforeseen events.	Village of Phelps will complete a feasibility study for the Sewage Treatment Plant to identify the current flood risk, determine if mitigation is needed, assess alternatives, and implement feasible alternative for flood reduction, protecting the infrastructure to the 0.2% flood level.	Yes	Further review required	18 months	Village Board and Public Works	Cost to be determined based on feasibility study.	Reduce flood risk; reduce damages and risk of injuries or fatalities; reduce emergency response and improve egress, reduce loss of function.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security

TOWN OF RICHMOND

TOWN OF RICHMOND PROPOSED 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
1	4.2	Flood	Feasibility Study for Richmond Town Hall (Honeoye), 8690 Main St., Honeoye: There is potential flood risk as location is near (or within) flood zones. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Town of Richmond will complete a feasibility study for the Richmond Town Hall (Honeoye) to identify the current flood risk, determine if mitigation is needed, assess alternatives, and implement feasible alternative for flood reduction, protecting the structure to the 0.2% flood level.	Yes	Further review required	24 months	Town Board and Public Works	Cost determined based on feasibility study	Reduce flood risk; reduce damages and risk of injuries or fatalities; reduce loss of function and continuity of operations and critical services.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security, Communication
2	4.2	Flood	Feasibility Study for Honeoye Lake Sewer District facilities and sewer treatment plant, 8632 Main St., Honeoye: There is potential flood risk as location is near (or within) flood zones. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Ontario County in coordination with the Town of Richmond will complete a feasibility study for the Honeoye Lake Sewer District facilities and treatment plant to identify the current flood risk, determine if mitigation is needed, assess alternatives, and implement feasible alternative for flood reduction, protecting the infrastructure to the 0.2% flood level.	Yes	Further review required	24 months	Ontario County, Town Board and Public Works	Cost determined based on feasibility study	Reduce flood risk; reduce damages and risk of injuries or fatalities; reduce loss of function and continuity of operations and critical services.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security, Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF RICHMOND PROPOSED 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
3	1.4	Extreme Cold, Extreme Heat, Flood, Hail, Ice Storm, Lightning, Snow Storm Tornado, Wildfire, Wind, and Utility Failure	Generator at Town Hall (8690 Main St, Honeoye) and Highway Garage (8935 Dugan Dr, Honeoye): During power outages, the 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.	Assess the need for generators at critical facilities within Town. Acquire and install a permanent generator for facilities based on a priority level.	Yes	Further review required	24 months	Town Board and Public Works	$1,000,000	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	H	Energy (Power/Fuel)
4	1.1	Flood, Hail, Snow Storm, Tornado, Wind	StormReady Program: Better enhance community's preparedness for natural weather events. This project protects the community and promotes public safety.	Obtain certification in the National Weather Service StormReady Program which is a community preparedness program that encourages government entities to prepare for severe storms. The program issues recognition to communities and sites across the country that demonstrate severe weather readiness.	No	N/A	48-60 months	Town Board	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget	L	Communication, Safety/Security

SECTION 26: MITIGATION ACTIONS

TOWN OF RICHMOND PROPOSED 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
5	5.4	Drought, Flood, Hail, Ice Storm, Lighting, Snow Storm, Tornado, Wildfire, Wind	Harden Critical Facilities: Assessment of current facilities and whether they need upgrades as some facilities within Town may need necessary updates due to date of structure. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Harden/retrofit critical facilities to hazard-resistant levels. Based on assessment will make upgrades on a priority level.	Yes	Further review required	24 months	Town Board and Public Works	$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
6	4.1	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.	Relocate critical facilities out of high hazard areas	Yes	Further review required	24-60 months	Town Board	Cost to be determined based of proposed site locations	Reduce risk of damages to structures; Ensure continuity of critical services; Reduce risk of injuries to critical service employees.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security
7	4.3	Flood	Development restrictions: There is known flood and high-risk within the area. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Require new public buildings to be sited on low-risk parcels and/or restrict future development in high-risk areas. In addition, look to acquire and preserve open spaces adjacent to floodplain areas.	Yes	Further review required	12 months	Town Board	Staff Time Cost determined based on acquiring land as needed	Reduce flood risk to structures and infrastructure in and near the floodplain; Reduce downstream impacts associated with development in the floodplain; 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	Communication, Safety/Security

SECTION 26: MITIGATION ACTIONS

TOWN OF RICHMOND PROPOSED 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
8	2.3	Flood, Wildfire	On-site retention basin program: Extreme rainfall events result in high stormwater flow rates, which can result in damage to downstream infrastructure and also 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 existing infrastructure, including roads, bridges, and buildings. This project protects the community and reduces flooding.	Adopt on-site retention basin program in conjunction with development to address excessive stormwater / firefighting water source.	No	Further review required	24-36 months	Town Board and Public Works	Staff Time	Requiring developers to implement on-site retention basin for new developments will prevent downstream impacts, reduce impacts to floodplain and provide additional potential water sources for firefighting uses.	Local Department Budget	M	Safety/Security
9	2.3	Flood, Wildfire	Alternative Evacuation Routes: Limited evacuation routes for residents during extreme hazard events. This project promotes public safety.	Develop alternative evacuation routes/plans and designate emergency thoroughfares, particularly in areas with limited capacity. Educate citizens on evacuation routes and procedures	No	Further review required	36-60 months	Town Board	Staff Time	Reduce risk residents through improved evacuation alternatives and awareness efforts.	Local Department Budget	L	Safety/Security, Communication

TOWN OF RICHMOND PROPOSED 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
10	5.4	Flood, Wildfire	Enhance road conditions: Excessive rain can cause ditches to overflow and compromise roadways. Assessment and recommended road improvements are needed. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Evaluate access and road conditions for response vehicles. Develop and implement options to improve access and/or add redundant access routes in high-risk areas.	No	Further review required	36-60 months	Town Board	$500,000	Reduce risk and spread of wildfires through maintained and redundant access routes in high-risk areas; Improve response time for emergency services; Reduce risk of injury or damages; Provide additional ingress/egress routes through high-risk areas to prevent loss of life and avoid rescue efforts.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	L	Safety/Security, Transportation
11	6.1	Drought, Extreme Heat, Flood, Wildfire	Smart Growth Initiatives: Consider in an effort to make the Town more resilient. This project protects the community and reduces risk of flooding.	Adopt smart growth initiatives. Incorporate a formal hazard mitigation plan in long-term community development planning activities.	No	N/A	36-60 months	Town Board	Staff Time	Reduce risk in high hazard areas by promoting and incentivizing development in low-risk areas; Build resiliency within the community; Reduce risk of damages through improved planning and construction practices.	Local Department Budget, Staff time	L	Safety/Security

SECTION 26: MITIGATION ACTIONS

TOWN OF RICHMOND PROPOSED 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
12	2.3	Flood	Debris Clearing Program: Extreme rainfall and snowmelt events result in high stormwater flow rates, which can result in significant amounts of debris (including sediment, rubble, and woody debris) being mobilized and directed to downstream portions of drainage courses. The build-up of debris can compromise the performance of bridges and culverts, jeopardizing these installations (as well as the associated roadways). This project protects the community and reduces risk of flooding.	Adopt and implement a program for clearing debris from bridges, drains and culverts.	No	Further review required	24 months	Town Board and Public Works	$50,000 (annually)	Reduce damages caused by flooding by maintaining or restoring drainage capacity.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security
13	4.2	Flood	Flood Risk Study: Evaluation of high-risk areas within Town to identify flood mitigation needs to reduce risk. Floodwaters can cause debris to back up at the bridge, exacerbating flooding, damaging the bridge, and causing scour and erosion to embankments at the bridge site. This project protects the community and reduces risk of flooding.	Undertake a comprehensive study of flood risk and reduction alternatives. Implement feasible alternatives for flood reduction. Study can also include identification of flood prone and repetitive loss properties.	No	Further review required	24 - 36 months	Town Board	$500,000	Improve risk assessment; Reduce risk of damages or injuries through drainage improvements; Reduce risk of damages and injuries.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Communication, Safety/Security

TOWN OF RICHMOND PROPOSED 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
14	3.2	Flood	Flood Education Program: The general public may not have a full understanding of the risk associated with hazards impacting the planning area. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Implement a flood awareness program that can include providing FEMA/NFIP materials to mortgage lenders, real estate agents and insurance agents, and public venues, installation of warning signs and promotion of "Turn Around, Don't Drown", how-to-information for installation of backflow values, etc.	No	N/A	12 months	Town Board	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication
15	5.4	Flood	Drainage System Improvements: 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.	Increase drainage capacity by implementing a program for clearing debris from bridges, culverts, and drains, upgrading undersized stormwater drains/culverts, add stormwater detention and/or retention basins, etc., as deemed necessary to reduce flood risk.	No	Further review required	24 – 48 months	Town Board	$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	M	Safety/Security

SECTION 26: MITIGATION ACTIONS

TOWN OF RICHMOND PROPOSED 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
16	4.2	Flood	Implement stream restoration/channelization program: Loose 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.	Reduce effects of erosion and sedimentation by requiring erosion/sedimentation controls for new construction; Include on-site sediment retention as a development requirement, adding thick vegetation to public lands along riverbanks, retain/maintain natural vegetation in stormwater channels	No	Further review required	24 – 48 months	Town Board	$3,000,000	Reduce risk of flood damages through improved drainage capacity/stormwater diversion; 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	M	Safety/Security
17	3.3	Wildfire	Hillside Development Restriction: There is known high- risk within the area.	Restrict hillside development in wildfire areas; Implement density and setback requirements for structures located in wildfire hazard areas.	No	N/A	36-60 months	Town Board	Staff Time	Reduce risk of wildfires and the spread of wildfire through improved development practices and building requirements/ restrictions.	Local Department Budget, Staff time	L	Communication, Safety/Security
18	1.3	Wildfire	Implement a Fuel Reduction 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.	Prepare tips for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	24-36 months	Town Board, in conjunction with state and local agencies	Staff Time $500,000	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters. Reduce risk of wildfires and the spread of wildfire through targeted fuels reduction programs.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	M	Safety/Security

SECTION 26: MITIGATION ACTIONS

TOWN OF RICHMOND PROPOSED 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
19	2.3	Flood	Flood Insurance Study and Maps: Heavy rain has affected the water system in the past. Water flowed out of the top of well number two for three straight days from the hydraulic pressure due to saturated ground. This project protects the community and reduces risk of flooding.	Seek funding to update the community's flood insurance study and mapping and develop a strategy to protect critical facilities from ongoing flood risk.	No	N/A	24-36 months	Town Board	Determined based on updated maps	Improve risk assessment; Reduce risk of damages or injuries through drainage improvements; Reduce risk of damages and injuries.	Local Department Budget, Staff time	H	Communication
20	2.1	Infestation	Expand aquatic invasive species programs: Aquatic invasive species problem on Honeoye Lakes.	Continue to implement programs to help control invasive species from entering the Lake and continued to be an ongoing effort requiring constant lake monitoring and educating the public.	No	Further Review Required	24-36 months	Town Board, Honeoye Lake Watershed Task Force, Honeoye Valley Association with support from Finger Lakes (Partnership for Regional Invasive Species Management (PRISM)	$10,000 education materials; $50,000 – hire boat inspectors (if need be) $40,000 – set up boat washing stations (if need be)	Promote hazard awareness. Reduces the risk of continued infestation of non-native species.	Local Department Budget, Staff time	H	Communication, Safety/Security
21	3.3	Landslide, Flood	Enforcement of stormwater management, soil erosion, steep slopes and timber harvesting laws: Landslides continue to be a growing concern for the area. Erosion and sediment control related to Honeoye Lake is a concern as mudslide occurred due to heavy rain and flooding. This project protects community and reduces risk of flooding.	Enforce Storm Water Management, Soil Erosion, Steep Slopes, and Timber Harvesting Laws and review/update periodically	No	Further Review Required	On-going	Town Board, Local Law Enforcement	Staff Time	Reduce risk to structures and infrastructure; Reduce risk of injuries to citizens; Reduce burden on emergency services.	Local Department Budget, Staff time	H	Communication, Safety/Security

SECTION 26: MITIGATION ACTIONS

TOWN OF RICHMOND PROPOSED 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
22	3.1	Extreme Heat, Drought	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include heat advisory warning alerts, water conservation techniques, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication
23	3.1	Extreme Cold, Ice Storm, Snow Storm	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme cold, ice storms and snow storms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF RICHMOND PROPOSED 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
24	3.1	Hail, Tornado, Wind	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
25	3.1	Lightning	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF RICHMOND PROPOSED 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
26	3.1	Wildfire	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
27	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	Town Board in conjunction with Ontario County Planning and Soil and Water Conservation district	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF RICHMOND PROPOSED 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
28	3.1	Infestation	Invasive Species: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide own properties and private own properties.	No	N/A	36 months	Town Board, Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
29	3.3	Drought, Flood, Hail, Landslide, Snow Storm Tornado, Wildfire, Wind	Code Enforcement: There is a code enforcement officer shortage throughout the county. and those smaller jurisdictions may need to evaluate and update local codes to follow the County (who will potentially take lead if position is vacant)	If applicable, need to evaluate and update local codes to follow the County.	No	N/A	As needed	Town Board	Staff Time	Ensures compliance to current code and restrictions. Reduce damages to structures and infrastructure; Reduce risk of injuries or fatalities.	Local Department Budget	L	Communication
30	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	Town Board, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF RICHMOND PROPOSED 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
31	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns on a potential threat.	No	N/A	36-60 months	Town Board, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
32	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service customers by mail or paperless enrollment.	No	N/A	36-60 months	Town Board, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
33	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination has been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	Town Board, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF RICHMOND PROPOSED 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
34	4.2	Flood	Feasibility Study for Honeoye Public Library: There is potential flood risk as location is within flood zones. This project protects community asset, reduces cost of repairs, and prevents injury to residents.	Town of Richmond will complete a feasibility study for the Honeoye Public Library to identify the current flood risk, determine if mitigation is needed, assess alternatives, and implement feasible alternative for flood reduction, protecting the structure to the 0.2% flood level.	Yes	Further review required	24 months	Town Board and Public Works	Cost determined based on feasibility study	Reduce flood risk; reduce damages and risk of injuries or fatalities; reduce loss of function and continuity of operations and critical services.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security, Communication

VILLAGE OF RUSHVILLE

VILLAGE OF RUSHVILLE PROPOSED 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
1	1.4	Flood	Creek Maintenance at Railroad Ave and Warehouse St.: Creek flows through the Village and significantly heavy rain events result in unexpected flash flooding for the Village. This project protects the community and reduces the risk of flooding.	Implement a maintenance schedule to remove loose vegetation and debris to promote drainage capacity and stormwater flow.	No	Further review is required	36-60 months	Village Board	$5,000	Reduce risk of flood damages through improved drainage capacity/stormwater diversion; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget	L	Safety/Security
2	4.2	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.	Assess and make necessary upgrades to current stormwater drainage system. Remove sump pump connections to sanitary sewer.	No	Further review required	24 months	Village Board	$50,000	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
3	1.4	Flood	Village-wide creek stabilization program: Loose 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.	Reduce effects of erosion and sedimentation by requiring erosion/sedimentation controls for new construction; Include on-site sediment retention as a development requirement, adding thick vegetation to public lands along riverbanks, retain/maintain natural vegetation in stormwater channels	No	Further review required	24 – 48 months	Village Board	$75,000	Reduce risk of flood damages through improved drainage capacity/stormwater diversion; 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	M	Safety/Security

SECTION 26: MITIGATION ACTIONS

VILLAGE OF RUSHVILLE PROPOSED 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
4	1.4	Wildfire, Fire	Water main value and hydrant maintenance program: Limited maintenance protocol currently in place for these critical infrastructures.	Implement a routine maintenance program for fire hydrants and main water value.	No	Further review required	24 months	Village Board and Local Fire Department	Staff Time	Reduce risk and spread of wildfires through routine maintenance of fire hydrants; Reduce risk of injury or damages.	Local Department Budget	M	Safety/Security, Food/Water/ Shelter
5	4.2	Flood, Water Supply Contamination	Wastewater Treatment System Upgrades: Assessment of current issues with outstanding storm water collection system easements. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Improvement of storm water collection system through the purchase of easements and installation of collection lines and related facilities.	Yes	Further review required	24-36 months	Village Public Works	Staff Time $75,000 for new collection lines once all easements have been obtained.	Reduce risk of flood water contamination; 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	M	Safety/Security, Food/Water/ Shelter
6	5.4	Flood	West River Tributary Stream Bank Stabilization: Creek Bank Restoration/stabilization at North Main Street by sanitary manhole S-7. Manhole is near creek bank, where continuous erosion exposes it. This project protects the community and reduces risk of flooding.	Monitor erosion progress and develop plan for streambank stabilization	No	Further review required	24-36 months	Village Public Works	Staff Time	Reduce risk of flood damages through improved drainage capacity/stormwater diversion; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget	M	Safety/Security
7	3.1	Extreme Heat, Drought	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include heat advisory warning alerts, water conservation techniques, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication

VILLAGE OF RUSHVILLE PROPOSED 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
8	3.1	Extreme Cold, Ice Storm, Snow Storm	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme cold, ice storms and snow storms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
9	3.1	Hail, Tornado, Wind	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF RUSHVILLE PROPOSED 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
10	3.1	Lightning	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
11	3.1	Wildfire	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF RUSHVILLE PROPOSED 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
12	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	Village Board in conjunction with Ontario County Planning and Soil and Water Conservation district	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
13	3.1	Infestation	Invasive Species: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide own properties and private own properties.	No	N/A	36 months	Village Board, Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication

VILLAGE OF RUSHVILLE PROPOSED 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
14	3.3	Drought, Flood, Landslide, Snow Storm Tornado, Wildfire, Wind	Code Enforcement: There is a code enforcement officer shortage throughout the county. and those smaller jurisdictions may need to evaluate and update local codes to follow the County (who will potentially take lead if position is vacant)	If applicable, need to evaluate and update local codes to follow the County.	No	N/A	As needed	Village Board	Staff Time	Ensures compliance to current code and restrictions. Reduce damages to structures and infrastructure; Reduce risk of injuries or fatalities.	Local Department Budget	L	Communication
15	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	Village Board, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
16	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns on a potential threat.	No	N/A	36-60 months	Village Board, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF RUSHVILLE PROPOSED 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
17	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service customers by mail or paperless enrollment.	No	N/A	36-60 months	Village Board, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
18	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination has been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	Village Board, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

TOWN OF SENECA

TOWN OF SENECA PROPOSED 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
1	4.2	Flood	Town-wide Drainage District: Improved agricultural field drainage and clearing has resulted in existing road drainage systems being inundated during significant rain events while the soil is saturated. Concerns community buy-in and prioritizing drainage improvements. This project will protect the community and reduce risk of flooding.	Improve stormwater management by completing a study to assess town-wide drainage district. Implement necessary recommendations.	No	Further review required	24-36 months	Town Board and Public Works Department	$25,000 for a Phase 1 study.	Reduce risk of flood water contamination; 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	M	Safety/Security
2	3.1	Extreme Heat, Drought	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include heat advisory warning alerts, water conservation techniques, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication

TOWN OF SENECA PROPOSED 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
3	3.1	Extreme Cold, Ice Storm, Snow Storm	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme cold, ice storms and snow storms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
4	3.1	Hail, Tornado, Wind	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF SENECA PROPOSED 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
5	3.1	Lightning	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
6	3.1	Wildfire	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF SENECA PROPOSED 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
7	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	Town Board in conjunction with Ontario County Planning and Soil and Water Conservation district	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
8	3.1	Infestation	Invasive Species: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide own properties and private own properties.	No	N/A	36 months	Town Board, Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication

TOWN OF SENECA PROPOSED 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
9	3.3	Drought, Flood, Hail, Landslide, Snow Storm Tornado, Wildfire, Wind	Code Enforcement: There is a code enforcement officer shortage throughout the county. and those smaller jurisdictions may need to evaluate and update local codes to follow the County (who will potentially take lead if position is vacant)	If applicable, need to evaluate and update local codes to follow the County.	No	N/A	As needed	Town Board	Staff Time	Ensures compliance to current code and restrictions. Reduce damages to structures and infrastructure; Reduce risk of injuries or fatalities.	Local Department Budget	L	Communication
10	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	Town Board, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
11	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns on a potential threat.	No	N/A	36-60 months	Town Board, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

TOWN OF SENECA PROPOSED 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
12	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service customers by mail or paperless enrollment.	No	N/A	36-60 months	Town Board, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
13	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination has been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	Town Board, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

VILLAGE OF SHORTSVILLE

VILLAGE OF SHORTSVILLE PROPOSED 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
1	4.2	Flood	Water Street Bridge Repair/Replacement: The existing structure is in need of replacement. In addition, the hydraulic capacity of this structure may not comply with commonly accepted standards. Floodwaters can cause debris to back up at the bridge, exacerbating flooding, damaging the bridge and causing scour and erosion to embankments at the bridge site. If the bridge is out of service this would affect Red Jacket School traffic, pedestrian traffic, and emergency vehicles. This project promotes public safety.	Assess and implement necessary improvements needed for Water Street Bridge over Paddleford Creek.	No	Further review required	12-24 months	Village Board and Highway Department	$920,000	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	H	Safety/Security, Transportation
2	3.1	Extreme Heat, Drought	Improve Household Preparedness: 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.	Prepare tips for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include heat advisory warning alerts, water conservation techniques, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication

VILLAGE OF SHORTSVILLE PROPOSED 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
3	3.1	Extreme Cold, Ice Storm, Snow Storm	Improve Household Preparedness: 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.	Prepare tips for avoiding impacts of extreme cold, ice storms and snow storms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
4	3.1	Hail, Tornado, Wind	Improve Household Preparedness: 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.	Prepare tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF SHORTSVILLE PROPOSED 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
5	3.1	Lightning	Improve Household Preparedness: 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.	Prepare tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
6	3.1	Wildfire	Improve Household Preparedness: 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.	Prepare tips for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF SHORTSVILLE PROPOSED 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
7	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	Village Board in conjunction with Ontario County Planning and Soil and Water Conservation district	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
8	3.1	Infestation	Invasive Species: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide own properties and private own properties.	No	N/A	36 months	Village Board, Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication

VILLAGE OF SHORTSVILLE PROPOSED 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
9	3.3	Drought, Flood, Landslide, Snow Storm Tornado, Wildfire, Wind	Code Enforcement: There is a code enforcement officer shortage throughout the county. and those smaller jurisdictions may need to evaluate and update local codes to follow the County (who will potentially take lead if position is vacant)	If applicable, need to evaluate and update local codes to follow the County.	No	N/A	As needed	Village Board	Staff Time	Ensures compliance to current code and restrictions. Reduce damages to structures and infrastructure; Reduce risk of injuries or fatalities.	Local Department Budget	L	Communication
10	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	Village Board, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
11	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns on a potential threat.	No	N/A	36-60 months	Village Board, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF SHORTSVILLE PROPOSED 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
12	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service customers by mail or paperless enrollment.	No	N/A	36-60 months	Village Board, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
13	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination has been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	Village Board, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

TOWN OF SOUTH BRISTOL

TOWN OF SOUTH BRISTOL PROPOSED 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
1	1.4	Dam Failure, Extreme Cold, Extreme Heat, Flood, Hail, Ice Storm, Lightning, Snow Storm Tornado, Wildfire, Wind, and Utility Failure	Generator for Critical Facilities: During power outages, the Town Hall and Highway Department facility would be without lights, communications, and maintenance equipment / machinery. The operations are basically brought to a halt. The Town Hall also acts as a shelter for vulnerable populations in need. This project helps ensure critical facilities continue to provide services during a power outage caused by unforeseen events.	Acquire and install a permanent generator at both critical facilities: Town Hall and Highway Department	Yes	Further review required	24-48 months	Town Board and Highway Department	$40,000-$50,000 per location	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	H	Energy (Power/Fuel)
2	4.2	Flood	Flood Mitigation of Gullies: South Bristol is quite hilly, and we have many, many gullies that drain directly into Canandaigua Lake. Most of these gullies are on private property. Over time they fill with obstacles that cause flooding and erosion. This project protects the community and reduces risk of flooding.	Conduct an assessment to identify flood mitigation projects that could be implemented to reduce erosion and flooding. Work with private property owners on a solution.	No	Further review required	24-48 months	Town Board	Cost determined based on proposed mitigation solutions	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	H	Safety/Security

SECTION 26: MITIGATION ACTIONS

TOWN OF SOUTH BRISTOL PROPOSED 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
3	3.3	Flood	Flood Regulations: There is some future development is anticipated adjacent to the flood zone on Canandaigua Lake in which adherence flood regulations is needed. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Enforce flood zone regulations on future development.	No	N/A	On-going	Town Board and Code	Staff Time	Reduce flood damages and risk of injuries or fatalities through regulated development; Reduce the amount of stormwater runoff in densely developed areas during flood events; Reduce the risk of downstream flooding.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Communication, Safety/Security
4	5.4	Flood	Culvert, Ditch and Drainage Improvements: Flooding has caused road closures, damage to homes and structures, etc.; lost a road last year. Issues with drainage on Gulick Rd., culverts, damage to NY rte. 21 is still prevalent. This project protects the community and reduces risk of flooding.	Review flood impacts and assess need for culvert replacement and ditch and drainage improvements.	No	Further review required	On-going	Town Board and Highway Department	$500,000	Improve risk assessment; Reduce risk of damages or injuries through drainage improvements; Reduce risk of damages and injuries.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	H	Safety/Security
5	3.1	Extreme Heat, Drought	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include heat advisory warning alerts, water conservation techniques, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF SOUTH BRISTOL PROPOSED 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
6	3.1	Extreme Cold, Ice Storm, Snow Storm	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme cold, ice storms and snow storms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
7	3.1	Hail, Tornado, Wind	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF SOUTH BRISTOL PROPOSED 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
8	3.1	Lightning	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
9	3.1	Wildfire	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF SOUTH BRISTOL PROPOSED 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
10	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	Town Board in conjunction with Ontario County Planning and Soil and Water Conservation district	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
11	3.1	Infestation	Invasive Species: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide own properties and private own properties.	No	N/A	36 months	Town Board, Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF SOUTH BRISTOL PROPOSED 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
12	3.3	Dam Failure, Drought, Flood, Landslide, Snow Storm Tornado, Wildfire, Wind	Code Enforcement: There is a code enforcement officer shortage throughout the county. and those smaller jurisdictions may need to evaluate and update local codes to follow the County (who will potentially take lead if position is vacant)	If applicable, need to evaluate and update local codes to follow the County.	No	N/A	As needed	Town Board	Staff Time	Ensures compliance to current code and restrictions. Reduce damages to structures and infrastructure; Reduce risk of injuries or fatalities.	Local Department Budget	L	Communication
13	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	Town Board, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
14	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns on a potential threat.	No	N/A	36-60 months	Town Board, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF SOUTH BRISTOL PROPOSED 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
15	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service customers by mail or paperless enrollment.	No	N/A	36-60 months	Town Board, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
16	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination has been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	Town Board, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
17	3.1	Dam Failure	Dam Inundation Risk	Identify the area potentially at- risk in the event of dam failure and educate residents at risk on ways they can mitigate and reduce the effects of downstream impacts in the event of inundation.	No	N/A	12 months	Town Board	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

TOWN OF VICTOR

TOWN OF VICTOR PROPOSED 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
1	4.2	Dam Failure	Boughton Park (Fairport Reservoir) Dam Repair Phase Project: Since the dams were initially built, there has been settling of the dam now causing downstream flooding impacts and concerns that the structure is potentially compromised.	Dam repair/compliance of the east and west dams at Boughton Park in the Town of East Bloomfield but would affect the Town of Victor.	No	Further review required	12-60 months	Town Board, in conjunction with Town of East and West Bloomfield	$4,258,705	Improve risk assessment; Reduce risk of damage or injuries through drainage improvements; Reduce risk of damages and injuries.	Local Department Budget; Grant submitted to DHSES/FEMA	H	Safety/Security
2	6.1	Drought, Flood	Green Infrastructure Policy: Explore alternative ways to promote mitigation and preserve the land within the Town. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Draft & implement a Green Infrastructure Policy per the Town of Victor's Comprehensive Plan for parks, nature preserves, greenbelts, etc.	No	Further review required	24-36 months	Town Planning & Building Department	Staff Time	Reduce impacts of flood through expanded greenspace and restoration of floodplains and wetlands; Reduce 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.	Local Department Budget;	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF VICTOR PROPOSED 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
3	2.3	Flood	Regional Watershed Study: Encourage Ontario County to conduct regional drainage studies of the creek watersheds to realize a comprehensive solution to drainage concerns. Town has concerns that all municipalities involved may not participate in the study. This project protects the community and reduces risk of flooding.	Development of a drainage analysis and mitigation strategy for Ganargua (aka Mud), Beaver and Black Brook Creeks watersheds. The Towns of Canandaigua, East Bloomfield, Farmington, Manchester, and Victor would coordinate in a comprehensive approach to correcting drainage concerns. The plan will include a detailed inventory and assessment of conditions as well as recommendations for mitigation.	No	Further review required	24-60 months	Town Board in conjunction with Ontario County Planning Department and Towns of Canandaigua, East Bloomfield, Farmington, and Manchester	Staff Time $200,000	Improve risk assessment; Reduce risk of damage or injuries through drainage improvements; Reduce risk of damages and injuries through comprehensive planning.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable), EPA, local bonds	M	Safety/Security
4	3.1	Extreme Heat, Drought	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include heat advisory warning alerts, water conservation techniques, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF VICTOR PROPOSED 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
5	3.1	Extreme Cold, Ice Storm, Snow Storm	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme cold, ice storms and snow storms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
6	3.1	Hail, Tornado, Wind	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF VICTOR PROPOSED 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
7	3.1	Lightning	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
8	3.1	Wildfire	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

TOWN OF VICTOR PROPOSED 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
9	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	Town Board in conjunction with Ontario County Planning and Soil and Water Conservation district	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
10	3.1	Infestation	Invasive Species: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide own properties and private own properties.	No	N/A	36 months	Town Board, Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF VICTOR PROPOSED 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
11	3.3	Dam Failure, Drought, Flood, Landslide, Snow Storm Tornado, Wildfire, Wind	Code Enforcement: There is a code enforcement officer shortage throughout the county. and those smaller jurisdictions may need to evaluate and update local codes to follow the County (who will potentially take lead if position is vacant)	If applicable, need to evaluate and update local codes to follow the County.	No	N/A	As needed	Town Board	Staff Time	Ensures compliance to current code and restrictions. Reduce damages to structures and infrastructure; Reduce risk of injuries or fatalities.	Local Department Budget	L	Communication
12	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	Town Board, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF VICTOR PROPOSED 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
13	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns on a potential threat.	No	N/A	36-60 months	Town Board, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
14	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service customers by mail or paperless enrollment.	No	N/A	36-60 months	Town Board, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
15	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination has been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	Town Board, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

VILLAGE OF VICTOR

VILLAGE OF VICTOR PROPOSED 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
1	4.2	Flood	Main sewage line on School St. to Maple Ave: Enhance inflow and keep it out of wastewater plant. This project will protect the community and reduce risk of flooding.	Funds have been allocated through development that is being put in at 160 School St. to enhance main sewage line.	No	Further review required	2024	Village Board and Senior Developer	Developer to upfront cost of material and Village to provide labor	Reduce risk of flood water contamination; Reduce risk of surface water infiltration and sewage backup; Ensure continuity of critical services.	In-kind labor	H	Safety/Security
2	5.4	Flood	Erosion Plan / Sediment & Erosion program: Excessive erosion results in excessive sediment being deposited resulting in the diversion of flows from the stream to roadways and other areas. This project will protect the community and reduce risk of flooding.	Erosion/steep slope concerns and requirement to have a sediment and erosion program for new development.	No	Further review required	24-36 months	Village Board	Staff Time	Implementation of this program would result in prompt repairs to destabilized streams; improved protection for adjacent infrastructure; improved safety for motorists; and reduced sediment reaching waterbodies.	Local Department Budget, Staff time	H	Safety/Security
3	1.4	Flood	Pump Stations at Wastewater Treatment Plant: Install a pump station at the Wastewater Treatment Plant to provide continued operation and protection of operations and facilities during 500yr flood events. This project helps ensure critical facilities continue to provide services during unforeseen events.	Assessment of new plant upgrades to ensure pump stations have been incorporated. If not, implement and install.	Yes	Further review required	24-36 months	Village Board	Staff Time	Reduce risk of flood water contamination; 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	M	Safety/Security

SECTION 26: MITIGATION ACTIONS

VILLAGE OF VICTOR PROPOSED 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
4	3.1	Extreme Heat, Drought	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include heat advisory warning alerts, water conservation techniques, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication
5	3.1	Extreme Cold, Ice Storm, Snow Storm	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme cold, ice storms and snow storms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF VICTOR PROPOSED 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
6	3.1	Hail, Tornado, Wind	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
7	3.1	Lightning	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF VICTOR PROPOSED 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
8	3.1	Wildfire	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	12 months	Village Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
9	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	Village Board in conjunction with Ontario County Planning and Soil and Water Conservation district	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF VICTOR PROPOSED 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
10	3.1	Infestation	Invasive Species: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide own properties and private own properties.	No	N/A	36 months	Village Board, Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
11	3.3	Drought, Flood, Landslide, Snow Storm Tornado, Wildfire, Wind	Code Enforcement: There is a code enforcement officer shortage throughout the county. and those smaller jurisdictions may need to evaluate and update local codes to follow the County (who will potentially take lead if position is vacant)	If applicable, need to evaluate and update local codes to follow the County.	No	N/A	As needed	Village Board	Staff Time	Ensures compliance to current code and restrictions. Reduce damages to structures and infrastructure; Reduce risk of injuries or fatalities.	Local Department Budget	L	Communication
12	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	Village Board, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

VILLAGE OF VICTOR PROPOSED 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
13	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns on a potential threat.	No	N/A	36-60 months	Village Board, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
14	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service customers by mail or paperless enrollment.	No	N/A	36-60 months	Village Board, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
15	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination has been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	Village Board, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

VILLAGE OF VICTOR PROPOSED 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
16	1.4	Flood	Feasibility Study at Wastewater Treatment Plant: Determine feasible alternatives to mitigate repetitive flood issues at plant. Implement cost effective alternative identified in study to ensure continuity of operations during 500yr flood events. This project helps ensure critical facilities continue to provide services during unforeseen events.	Study to determine the most feasible alternative to mitigate flood losses. Implement cost effective solution identified in study.	Yes	Further review required	36-60 months	Village Board	$1,000,000-5,000,000	Reduce risk of flood water contamination; 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	M	Safety/Security

TOWN OF WEST BLOOMFIELD

TOWN OF WEST BLOOMFIELD PROPOSED 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
1	4.2	Flood	Boughton Park Dam (Fairport Reservoir) Repair Phase Project: Since the dams were initially built, there has been settling of the dam now causing downstream flooding impacts and concerns that the structure is potentially compromised.	Dam repair/compliance of the east and west dams at Boughton Park in the Town of East Bloomfield but would affect the Town of Victor.	No	Further review required	12-60 months	Town Board, in conjunction with Town of East and West Bloomfield	$4,258,705	Improve risk assessment; Reduce risk of damage or injuries through drainage improvements; Reduce risk of damages and injuries.	Local Department Budget; Grant submitted to DHSES/FEMA	H	Safety/Security
2	3.3	Drought, Flood, Hail, Landslide, Snow Storm Tornado, Wildfire, Wind	Code Enforcement: There is a code enforcement officer shortage throughout the county. and those smaller jurisdictions may need to evaluate and update local codes to follow the County (who will potentially take lead if position is vacant)	If applicable, need to evaluate and update local codes to follow the County.	No	N/A	As needed	Town Board	Staff Time	Ensures compliance to current code and restrictions. Reduce damages to structures and infrastructure; Reduce risk of injuries or fatalities.	Local Department Budget	L	Communication
3	1.4	Extreme Cold, Extreme Heat, Flood, Hail, Ice Storm, Lightning, Snow Storm Tornado, Wildfire, Wind, and Utility Failure	Generator at critical facilities: During power outages, the Town Hall facility 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.	Acquire and install a permanent generator at both critical facilities: New Town Hall	Yes	Further review required	24 months	Town Board and Public Works	$750,000	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	H	Energy (Power/Fuel)

SECTION 26: MITIGATION ACTIONS

TOWN OF WEST BLOOMFIELD PROPOSED 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
4	2.3	Extreme Heat, Flood, Hail, Ice Storm, Lightning, Snow Storm Tornado, Wildfire, Wind, and Utility Failure	Tree Trimming Annual Maintenance Program: Tree maintenance is a priority to due utility wires. A plan will need to be developed and implemented. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	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	12 months	Town Highway Department, in coordination with Coordination with State and County for utilization of service provider	Staff Time $50,000 (annually)	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
5	1.2	Flood, Hail, Ice Storm, Landslide, Lightning, Snow Storm Tornado, Wildfire, Wind, Fire, HazMat	EMS Radio Interoperability: Better coordination is needed between the three fire departments that serve the town, as well as EMS coverage. This project promotes public safety.	Enhance communication systems. Explore Migrate two (Ionia and WB VFD's) to Ontario County system, integrate with HFMVA	No	N/A	24 months	Town Board, Local Fire Departments/EMS, and Ontario County Planning Department	$50,000 - $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	Communication, Safety/Security
6	3.1	Extreme Heat, Drought	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include heat advisory warning alerts, water conservation techniques, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF WEST BLOOMFIELD PROPOSED 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
7	3.1	Extreme Cold, Ice Storm, Snow Storm	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of extreme cold, ice storms and snowstorms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
8	3.1	Hail, Tornado, Wind	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF WEST BLOOMFIELD PROPOSED 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
9	3.1	Lightning	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
10	3.1	Wildfire	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of wildfire to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identification of high-risk areas, creating defensive space, brush/debris maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

SECTION 26: MITIGATION ACTIONS

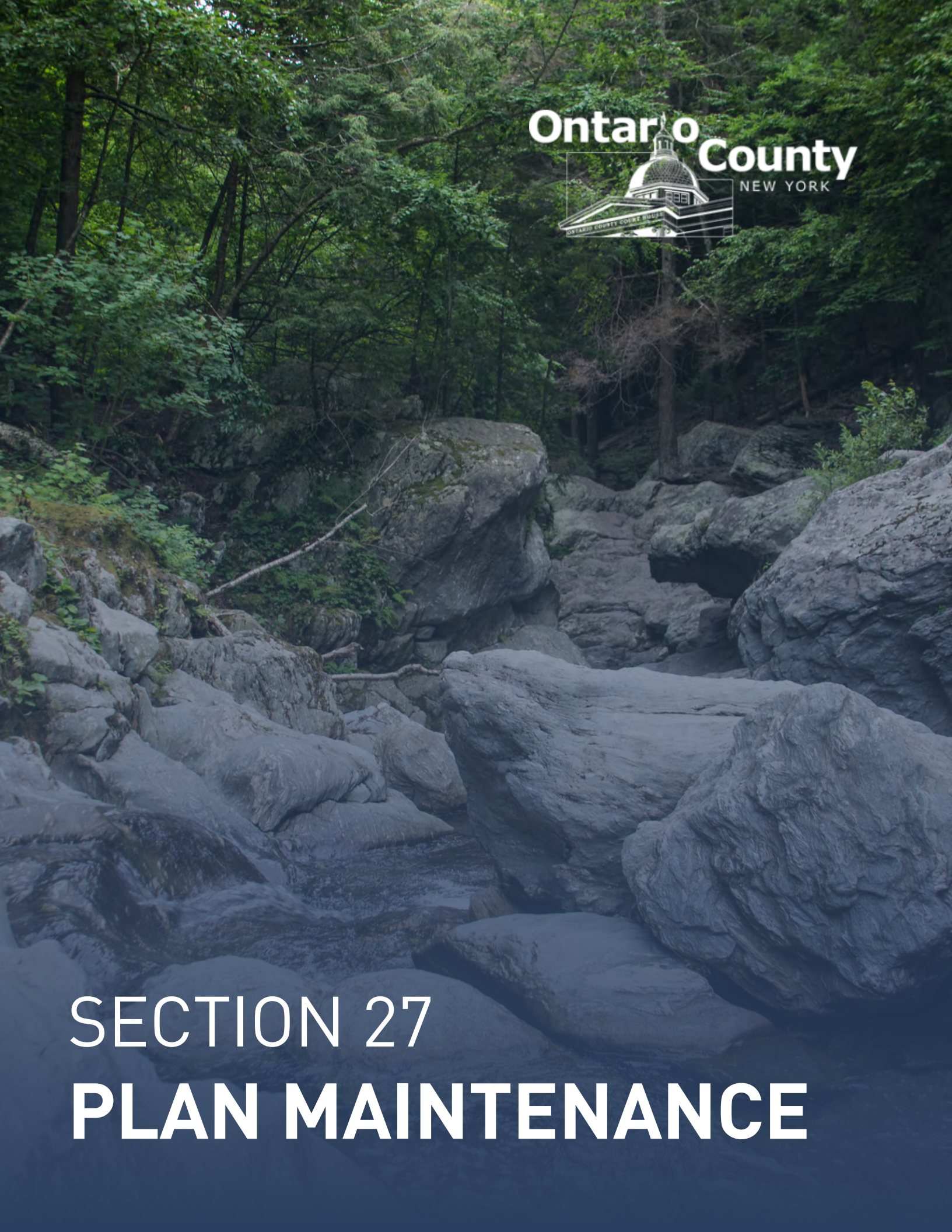
TOWN OF WEST BLOOMFIELD PROPOSED PROJECTS													
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.													
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline
11	3.1	Landslide	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 life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	Town Board in conjunction with Ontario County Planning and Soil and Water Conservation district	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
12	3.1	Infestation	Invasive Species: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide own properties and private own properties.	No	N/A	36 months	Town Board, Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF WEST BLOOMFIELD PROPOSED 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
13	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	Town Board, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
14	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns on a potential threat.	No	N/A	36-60 months	Town Board, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
15	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service customers by mail or paperless enrollment.	No	N/A	36-60 months	Town Board, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

SECTION 26: MITIGATION ACTIONS

TOWN OF WEST BLOOMFIELD PROPOSED 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
16	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination has been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	Town Board, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
17	4.1	Flood	Flood Zone Outreach Program: Recent developments have occurred near flood zones and some future development is anticipated near or within flood zones. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Once new FEMA maps are available, create a flood zone brochure for homeowners within flood zones to ensure they are in proper regulations.	No	N/A	12 months	Town Planning Department	Staff Time	Reduces risk of flood damages to high-risk structures and prevent future losses in high-risk flood hazard areas; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget, Staff time	M	Communication



SECTION 27

PLAN MAINTENANCE

SECTION 27: PLAN MAINTENANCE

Plan Maintenance Procedures 1
Incorporation 1
Process of Incorporation 1
Monitoring and Evaluation 5
Monitoring 6
Evaluation 7
Updating 7
Plan Revisions 7
Five (5) Year Review 7
Continued Public Involvement 8

PLAN MAINTENANCE PROCEDURES

The following is an explanation of how the participating jurisdictions within Ontario 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 Ontario 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 Ontario 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 Ontario County will integrate implementation of their mitigation actions with other plans and policies such as construction standards, land use plans, and emergency management plans, and ensure that these actions, or proposed projects, are reflected

in other planning efforts. 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.

Ontario 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 27-1 identifies types of planning mechanisms and examples of methods for incorporating the Plan Update into other planning efforts. The team members, listed in Table 27-2 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 27-1. Methods of Incorporation of the Plan

PLANNING MECHANISM	DEPARTMENT / TITLE RESPONSIBLE	INCORPORATION OF PLAN
Annual Budget Review	Ontario County: Director of Planning Village of Bloomfield: Mayor Town of Bristol: Town Supervisor Town of Canadice: Town Supervisor City of Canandaigua: City Manager Town of Canandaigua: Town Supervisor Village of Clifton Springs: Mayor Town of East Bloomfield: Town Supervisor Town of Farmington: Town Supervisor City of Geneva: City Manager Town of Geneva: Town Supervisor Town of Gorham: Town Supervisor Town of Hopewell: Town Supervisor Town of Manchester: Town Supervisor Village of Manchester: Mayor	Various departments and key personnel that participated in the planning process for participating jurisdictions within Ontario 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.

PLANNING MECHANISM	DEPARTMENT / TITLE RESPONSIBLE	INCORPORATION OF PLAN
	Town of Naples: Town Supervisor Village of Naples: Mayor Town of Phelps: Town Supervisor Village of Phelps: Mayor Town of Richmond: Town Supervisor Village of Rushville: Mayor Town of Seneca: Town Supervisor Village of Shortsville: Mayor Town of South Bristol: Town Supervisor Town of Victor: Town Supervisor Village of Victor: Mayor Town of West Bloomfield: Town Supervisor	
Capital Improvement Plans	Ontario County: Director of Planning Town of Bristol: Town Supervisor City of Canandaigua: City Manager Town of Canandaigua: Town Supervisor Town of East Bloomfield: Town Supervisor Town of Farmington: Town Supervisor City of Geneva: City Manager Town of Gorham: Town Supervisor Town of Hopewell: Town Supervisor Village of Manchester: Mayor Village of Naples: Board of Trustees Town of Phelps: Town Supervisor Village of Rushville: Mayor Town of Seneca: Town Supervisor Town of Victor: Town Supervisor Village of Victor: Mayor	Several participating jurisdictions within Ontario County have a Capital Improvement Plan (CIP) in place or under development. Prior to any revisions to the CIP, County, 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.
Comprehensive Plans	Town of Bristol: Town Supervisor City of Canandaigua: City Manager Town of Canandaigua: Town Supervisor Village of Clifton Springs: Mayor Town of East Bloomfield: Town Supervisor Town of Farmington: Town Supervisor City of Geneva: City Manager Town of Geneva: Town Supervisor Town of Gorham: Town Supervisor Town of Hopewell: Town Supervisor Town of Manchester: Town Supervisor Village of Manchester: Mayor Town of Naples: Town Supervisor Village of Naples: Board of Trustees Town of Phelps: Town Supervisor Village of Phelps: Mayor Town of Richmond: Town Supervisor Village of Rushville: Mayor Town of Seneca: Town Supervisor Village of Shortsville: Mayor Town of Victor: Town Supervisor	Several participating jurisdictions within Ontario County have Long-term Comprehensive Development Plans 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.

PLANNING MECHANISM	DEPARTMENT / TITLE RESPONSIBLE	INCORPORATION OF PLAN
	Village of Victor: Mayor Town of West Bloomfield: Town Supervisor	
Floodplain Management Plans	Town of Bristol: Floodplain Administrator City of Canandaigua: Floodplain Administrator Town of Canandaigua: Floodplain Administrator Town of Farmington: Floodplain Administrator City of Geneva: Floodplain Administrator Village of Manchester: Floodplain Administrator Town of Naples: Floodplain Administrator Village of Naples: Floodplain Administrator Town of Phelps: Floodplain Administrator Town of Richmond: Floodplain Administrator Village of Rushville: Floodplain Administrator Town of Victor: Floodplain Administrator	Floodplain management plans include preventative and corrective actions to address the flood hazard. Therefore, the actions for flooding and information found in Section 9 of this Plan Update discussing the people and property at risk to flood will be reviewed and revised when participating jurisdictions within Ontario County update their management plans or develops new plans.
Grant Applications	Ontario County: Director of Planning Village of Bloomfield: Mayor Town of Bristol: Town Supervisor Town of Canadice: Town Supervisor City of Canandaigua: City Manager Town of Canandaigua: Town Supervisor Village of Clifton Springs: Mayor Town of East Bloomfield: Town Supervisor Town of Farmington: Town Supervisor City of Geneva: City Manager Town of Geneva: Town Supervisor Town of Gorham: Town Supervisor Town of Hopewell: Town Supervisor Town of Manchester: Town Supervisor Village of Manchester: Mayor Town of Naples: Town Supervisor Village of Naples: Mayor Town of Phelps: Town Supervisor Village of Phelps: Mayor Town of Richmond: Town Supervisor Village of Rushville: Mayor Town of Seneca: Town Supervisor Village of Shortsville: Mayor Town of South Bristol: Town Supervisor Town of Victor: Town Supervisor Village of Victor: Mayor Town of West Bloomfield: Town Supervisor	The Plan will be evaluated by participating jurisdictions within Ontario 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.

PLANNING MECHANISM	DEPARTMENT / TITLE RESPONSIBLE	INCORPORATION OF PLAN
Regulatory Plans	Ontario County: Director of Planning Village of Bloomfield: Mayor Town of Bristol: Town Supervisor City of Canandaigua: City Manager Town of Canandaigua: Town Supervisor Village of Clifton Springs: Mayor Town of East Bloomfield: Town Supervisor Town of Farmington: Town Supervisor City of Geneva: City Manager Town of Geneva: Town Supervisor Town of Gorham: Town Supervisor Town of Hopewell: Town Supervisor Town of Manchester: Town Supervisor Village of Manchester: Mayor Town of Naples: Town Supervisor Village of Naples: Board of Trustees Town of Phelps: Town Supervisor Village of Phelps: Mayor Town of Richmond: Town Supervisor Village of Rushville: Mayor Town of Seneca: Town Supervisor Town of South Bristol: Town Supervisor Town of Victor: Town Supervisor Village of Victor: Mayor Town of West Bloomfield: Town Supervisor	Currently, several participating jurisdictions within Ontario County have regulatory plans in place, such as Emergency Management Plans, Continuity of 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.

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 27-2 indicates the department and title of the party responsible for Plan monitoring, evaluating, updating, and review of the Plan.

Table 27-2. Team Members Responsible for Plan Monitoring, Evaluating, Updating, and Review of the Plan

JURISDICTION	TITLE
Ontario County	Director of Planning
Village of Bloomfield	Mayor
Town of Bristol	Town Supervisor
Town of Canadice	Town Supervisor
City of Canandaigua	City Manager
Town of Canandaigua	Town Supervisor

JURISDICTION	TITLE
Village of Clifton Springs	Mayor
Town of East Bloomfield	Town Supervisor
Town of Farmington	Town Supervisor
City of Geneva	City Manager
Town of Geneva	Town Supervisor
Town of Gorham	Town Supervisor
Town of Hopewell	Town Supervisor
Town of Manchester	Town Supervisor
Village of Manchester	Mayor
Town of Naples	Town Supervisor
Village of Naples	Mayor
Town of Phelps	Town Supervisor
Village of Phelps	Mayor
Town of Richmond	Town Supervisor
Village of Rushville	Mayor
Town of Seneca	Town Supervisor
Village of Shortsville	Mayor
Town of South Bristol	Town Supervisor
Town of Victor	Town Supervisor
Village of Victor	Mayor
Town of West Bloomfield	Town Supervisor

MONITORING

Designated Planning Team members are responsible for monitoring, evaluating, updating, and reviewing the Plan, as shown in Table 27-2. Individuals holding the title listed in Table 27-2 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

annual monitoring, the Plan will be similarly reviewed immediately after natural hazard events including 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 natural hazard 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 Ontario County Hazard Mitigation Action Plan Update 2024. The plan may be amended to include additional hazard mitigation actions as they are developed. 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 Ontario 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.

The Plan review process provides the participating jurisdictions within Ontario 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 Ontario County Planning Department with the Director of Planning, 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, may be used to notify the public of any maintenance or periodic review activities during the implementation, monitoring, and evaluation phases. Additionally, local news media may be contacted to cover information regarding Plan updates, status of grant applications, and project implementation. Local and social media outlets, such as Facebook and X (formerly known as Twitter), can keep the public and stakeholders apprised of potential opportunities to fund and implement mitigation projects identified in the Plan.



APPENDIX A
PLANNING TEAM

APPENDIX A: PLANNING TEAM

Planning Team Members 1
Stakeholders 6

PLANNING TEAM MEMBERS

The Ontario County Hazard Mitigation Plan Update 2024 was organized using a direct representative model. An Executive Planning Team from Ontario 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
Ontario County	Senior Planner
Village of Bloomfield	Mayor
Town of Bristol	Town Supervisor
Town of Canadice	Town Supervisor
City of Canandaigua	City Manager
Town of Canandaigua	Town Supervisor
Village of Clifton Springs	Mayor
Town of East Bloomfield	Town Supervisor
Town of Farmington	Town Supervisor
City of Geneva	City Manager
Town of Geneva	Town Supervisor
Town of Gorham	Town Supervisor
Town of Hopewell	Town Supervisor
Town of Manchester	Town Supervisor
Village of Manchester	Mayor
Town of Naples	Town Supervisor
Village of Naples	Mayor
Town of Phelps	Town Supervisor
Village of Phelps	Mayor
Town of Richmond	Town Supervisor
Village of Rushville	Mayor
Town of Seneca	Town Supervisor
Village of Shortsville	Mayor

APPENDIX A: PLANNING TEAM

ORGANIZATION / DEPARTMENT	TITLE
Town of South Bristol	Town Supervisor
Town of Victor	Town Supervisor
Village of Victor	Mayor
Town of West Bloomfield	Town Supervisor

Table A-2. Advisory Planning Team

ORGANIZATION / DEPARTMENT	TITLE
Ontario County	Associate Planner
Ontario County	Chief Communication Officer for the County Sheriff's Office
Ontario County	Code Enforcement Officer
Ontario County	Commissioner of the Public Works Department
Ontario County	County Public Health – Emergency Preparedness Coordinator
Ontario County	County Public Works - Supervisor Building and Grounds
Ontario County	County Supervisor for City of Canandaigua Wards 1 & 4
Ontario County	County Supervisor for City of Canandaigua Wards 2 & 3
Ontario County	County Supervisor for City of Geneva Wards 1 & 2
Ontario County	County Supervisor for City of Geneva Wards 3 & 4
Ontario County	County Supervisor for City of Geneva Wards 5 & 6
Ontario County	Deputy County Administrator
Ontario County	Director of Emergency Management
Ontario County	Director of Public Health
Ontario County	Director of the Planning Department
Ontario County	GIS Coordinator
Ontario County	Highway & Stormwater Management Program Coordinator
Ontario County	Supervisor for County Highway Department
Ontario County	Undersheriff for the County Sheriff's Office
Village of Bloomfield	Code Enforcement Officer
Village of Bloomfield	Superintendent of the Department of Public Works
Village of Bloomfield	Village Clerk

APPENDIX A: PLANNING TEAM

ORGANIZATION / DEPARTMENT	TITLE
Town of Bristol	Council Member Position 4
Town of Bristol	Park Commissioner
Town of Bristol	Planning Board Secretary
Town of Bristol	Highway Superintendent
Town of Bristol	Town Clerk
Town of Canadice	Code Enforcement Officer
Town of Canadice	Highway Superintendent
Town of Canadice	Town Board Councilman
Town of Canadice	Town Board Councilwoman
Town of Canadice	Town Clerk
City of Canandaigua	Chief of Police
City of Canandaigua	City Clerk
City of Canandaigua	Code Enforcement Officer
City of Canandaigua	Director of Development
City of Canandaigua	Director of Public Works
City of Canandaigua	Mayor
Town of Canandaigua	Code Enforcement Officer
Town of Canandaigua	Highway & Water Superintendent
Town of Canandaigua	Planner for the Development Office
Town of Canandaigua	Town Manager
Town of Canandaigua	Town Clerk
Town of Canandaigua	Zoning Inspector
Town of Canandaigua	Zoning Officer
Village of Clifton Springs	Code Enforcement Officer
Village of Clifton Springs	Fire Chief
Village of Clifton Springs	Highway & Water Superintendent
Village of Clifton Springs	Superintendent of Wastewater (Sewage)
Village of Clifton Springs	Village Clerk
Town of East Bloomfield	Code Enforcement Officer
Town of East Bloomfield	Town Clerk
Town of Farmington	Administrative Assistant for the Planning, Building, and Zoning Department
Town of Farmington	Code Enforcement Officer

APPENDIX A: PLANNING TEAM

ORGANIZATION / DEPARTMENT	TITLE
Town of Farmington	Director of Planning and Development
Town of Farmington	Highway & Park Superintendent
Town of Farmington	Secretary to the Department of Planning and Zoning
Town of Farmington	Town Clerk
Town of Farmington	Water & Sewer Superintendent
City of Geneva	Building & Zoning Coordinator
City of Geneva	Chief of Police
City of Geneva	City Clerk
City of Geneva	Deputy Fire Chief
City of Geneva	Director of Public Works
City of Geneva	Fire Chief
City of Geneva	Mayor
City of Geneva	Project Coordinator
Town of Geneva	Code Enforcement Officer
Town of Geneva	Highway Superintendent
Town of Geneva	Town Clerk
Town of Geneva	Water & Sewer Superintendent
Town of Gorham	Town Clerk
Town of Gorham	Highway Superintendent
Town of Gorham	Water Supervisor
Town of Gorham	Zoning Officer
Town of Hopewell	Code Enforcement Officer
Town of Hopewell	Highway Superintendent
Town of Hopewell	Town Clerk
Town of Hopewell	Water District Superintendent
Town of Manchester	Code Enforcement Officer I
Town of Manchester	Code Enforcement Officer II
Town of Manchester	Highway Superintendent
Town of Manchester	Town Clerk
Town of Manchester	Water Superintendent
Village of Manchester	Code Enforcement Officer
Village of Manchester	Supervisor of the Department of Public Works

APPENDIX A: PLANNING TEAM

ORGANIZATION / DEPARTMENT	TITLE
Village of Manchester	Village Clerk
Town of Naples	Code Enforcement Officer
Town of Naples	Superintendent of the Department of Public Works & Highway
Town of Naples	Town Clerk
Village of Naples	Code Enforcement Officer
Village of Naples	Superintendent of the Department of Public Works
Village of Naples	Village Clerk
Town of Phelps	Code Enforcement Officer
Town of Phelps	Confidential Secretary to the Town Supervisor
Town of Phelps	Highway Superintendent
Town of Phelps	Superintendent of the Department of Public Works
Town of Phelps	Town Board Councilman
Town of Phelps	Town Clerk
Town of Phelps	Water Superintendent
Village of Phelps	Code Enforcement Officer
Village of Phelps	Superintendent of the Department of Public Works
Village of Phelps	Village Clerk
Town of Richmond	Code Enforcement Officer
Town of Richmond	Director of Recreation
Town of Richmond	Highway Superintendent
Town of Richmond	Town Clerk
Town of Richmond	Town Planning Board Member
Village of Rushville	Code Enforcement Officer
Village of Rushville	Superintendent of the Public Works Department
Village of Rushville	Village Clerk
Town of Seneca	Code Enforcement Officer
Town of Seneca	Highway Superintendent
Town of Seneca	Town Clerk
Town of Seneca	Water Superintendent
Village of Shortsville	Code Enforcement Officer
Village of Shortsville	Deputy Mayor

APPENDIX A: PLANNING TEAM

ORGANIZATION / DEPARTMENT	TITLE
Village of Shortsville	Supervisor of the Department of Public Works
Village of Shortsville	Village Clerk
Town of South Bristol	Assistant for the Planning Board & Zoning Board
Town of South Bristol	Code Enforcement Officer
Town of South Bristol	Highway Superintendent
Town of South Bristol	Town Clerk
Town of Victor	Director of Economic Development
Town of Victor	Fire Marshal
Town of Victor	Highway Superintendent
Town of Victor	Planning and Building Project Coordinator
Town of Victor	Town Clerk
Village of Victor	Code Enforcement Officer
Village of Victor	Superintendent of the Department of Public Works
Village of Victor	Village Clerk
Town of West Bloomfield	Highway Superintendent
Town of West Bloomfield	Town Clerk
Town of West Bloomfield	Zoning Officer

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[1].

Table A-3. Stakeholders

AGENCY	TITLE	STAKEHOLDER TYPE
American Farmland Trust	New York Office Representative	Private Organization
American Red Cross of Ontario	Executive Director	Nonprofit / Community-Based Organization
ARC of Ontario	Executive Director	Nonprofit / Community-Based Organization
Bishop Sheen Ecumenical Housing Foundations Inc.	Ontario County Flood Assistance Representative	Private Organization

[1] Information contained in Appendix E is exempt from public release under the Freedom of Information Act (FOIA).

APPENDIX A: PLANNING TEAM

AGENCY	TITLE	STAKEHOLDER TYPE
Bristol Fire Department	Fire Chief	Local Organization
Canandaigua – Farmington Water District	Water Superintendent	Representatives of local business - utility service provider
Canandaigua Fire Department	Fire Chief	Local Organization
Canandaigua Lake Watershed Association	Administrative Coordinator	Community-Based Organization
Canandaigua Lake Watershed Council	Watershed Manager	Community-Based Organization
Canandaigua School District	Superintendent	Academia
Canandaigua VA Fire Department	Fire Chief	Local Organization
Chamber of Commerce Ontario County	General Representative	Community-Based Organization
Cheshire Fire Department	Fire Chief	Local Organization
City of Canandaigua	City Historian	Local Community Organization
City of Geneva	City Historian	Local Community Organization
Clifton Springs Fire Department	Fire Chief	Local Organization
Clinton Springs Hospital & Clinic	Chief Operating Officer	Healthcare Agency
Community Choice Aggregation Energy Choice	General Representative	Utility Service Provider
Crystal Springs Fire Department	Fire Chief	Local Organization
East Bloomfield Fire Department	Fire Chief	Local Organization
East Bloomfield School District	Superintendent	Academia
Empire State Development Corporation	Finger Lake Region Representative	Regional Agency
Family Counseling of the Finger Lakes	General Representative	Healthcare Agency
Family Counseling of the Finger Lakes, Substance Abuse Treatment Facility	Outreach Representative	Healthcare Agency
Farmington Fire Department	Fire Chief	Local Organization
Federal Emergency Management Association (FEMA)	Mitigation Planner	Federal Agency
Finger Lakes Community Choice	General Representative	Representatives of local business - utility service provider
Figure Lakes Community College	Executive Assistant to the President	Academia
Finger Lakes Community College	President	Academia
Finger Lakes Health College of Nursing / Marion S. Whelen School of Practical Nursing	Dean	Academia
Finger Lakes Institute - Seneca Lake Watershed	Watershed Steward	Community-Based Organization
Figure Lakes Land Trust	Director of Operations	Private Organization / Authority to Regulate

APPENDIX A: PLANNING TEAM

AGENCY	TITLE	STAKEHOLDER TYPE
Finger Lakes Land Trust	Senior Director of Press Inquires	Private Organization / Authority to Regulate
Finger Lakes Trail System	General Representative	Private Organization
Fishers Fire Department	Fire Chief	Local Organization
Genesee Valley Conservancy	Executive Director	Private Organization
Geneva Business Improvement District	Executive Director	Representatives of local business
Geneva City School District	Assistant to Superintendent	Academia
Geneva Fire Department	Fire Chief	Local Organization
Geneva General / Finger Lakes Health	Vice President of Community Services	Healthcare Agency
Geneva General Hospital	Associate Director of Community Outreach & Engagement	Healthcare Agency
Geneva Housing Authority	General Representative	Private Organization / Authority to Regulate
Geneva School District	Grants Coordinator	Academia
Geneva School District	Superintendent	Academia
Gorham Fire Department	Fire Chief	Local Organization
Gorham-Middlesex School District	Superintendent	Academia
Habitat for Humanity	Executive Director	Nonprofit / Community-Based Organization
Hall Fire Department	Fire Chief	Local Organization
Hemlock & Canadice Lake Water Supply	Hemlock Water Treatment Plant Manager	Representatives of local business - utility service provider
Hobart & William Smith College	General Representative	Academia
Honeoye Central School District	Superintendent	Academia
Honeoye - Richmond Fire Department	Fire Chief	Local Organization
Honeoye Lake Watershed	Watershed Representative	Community-Based Organization
Honeoye Lake Watershed Task Force	Chairman	Community-Based Organization
Honeoye Valley Association	President	Community-Based Organization
Hopewell Fire Department	Fire Chief	Local Organization
Ionia Fire Department	Fire Chief	Local Organization
Livingston County	Director of Emergency Management	Neighboring Community
Livonia Central School	Assistant Superintendent of Operations	Academia
Manchester Fire Department	Fire Chief	Local Organization
Monroe County	Deputy Director of Public Safety	Neighboring Community

APPENDIX A: PLANNING TEAM

AGENCY	TITLE	STAKEHOLDER TYPE
Naples Central School District	Superintendent	Academia
Naples Fire Department	Fire Chief	Local Organization
Naples Open Cupboard	General Representative	Nonprofit / Community-Based Organization
Naples Water Utility Department	General Representative	Representatives of local business - utility service provider
National Grid	Ontario Consumer Representative	Representatives of local business - utility service provider
New York State Assembly	131 District Representative	State Agency
New York State Assembly	133 District Representative	State Agency
NYS Department of Environmental Conservation	Administrative Assistant to the Office of Indian Nation Affairs	State Agency
NYS Department of Environmental Conservation	Director of Division of Forest Protection	State Agency
NYS Department of Environmental Conservation	Director of the Division of Lands & Forests	State Agency
NYS Department of Environmental Conservation	Director of the Division of Operations	State Agency
NYS Department of Environmental Conservation	Director of the Office of Climate Change	State Agency
NYS Department of Environmental Conservation	Director of Office of Indian Nation Affairs	State Agency
NYS Department of Environmental Conservation, Region 8	Environmental Conversation Officer	State Agency
NYS Department of Health	Geneva District Representative	State Agency
NYS Department of Homeland Security and Emergency Services (DHSES), Region V	Environmental Specialist	State Agency
NYS Department of Homeland Security and Emergency Services (DHSES), Region V	Hazard Mitigation Planner (consultant)	State Agency
NYS Department of Homeland Security and Emergency Services (DHSES), Region V	Hazard Mitigation Project Manager	State Agency
NYS Department of Homeland Security and Emergency Services (DHSES), Region V	Hazard Mitigation Planning Supervisor	State Agency
NYS Department of Housing and Community Renewal	Press Office Representative	State Agency
NYS Department of Transportation, Region 4	Regional Coordinator	State Agency
NYS Department of Transportation, Region 4	Resident Engineer Ontario County	State Agency
NYS Department of Transportation, Region 4	Safety Engineer	State Agency

APPENDIX A: PLANNING TEAM

AGENCY	TITLE	STAKEHOLDER TYPE
NYS Department of Transportation, Region 4	Wayne-Ontario Regional Representative	State Agency
NYS Electric and Gas (NYSEG)	Director of Transmission Services	Representatives of local business - utility service provider
NYS Energy Research & Development (NYSERDA)	General Representative	State Agency
NYS Environmental Facilities Corporation	Press Office Representative	State Agency
New York State Legislature	Governor	State Agency
New York State Legislature	Senator of the 54th District	State Agency
NYS Office for Small Cities – Empire State Development	Finger Lake Regional Representative	State Agency
NYS Office of Parks, Recreation and Historic Preservation	Regional Director for Finger Lake Region	State Agency
NYS Office of Parks, Recreation and Historic Preservation	Historic Preservation Program Analyst	State Agency
NYS Office of Parks, Recreation and Historic Preservation	Historic Preservation Public Outreach Representative	State Agency
NYS Office of Resilient Homes and Communities – Governor's Office of Storm Recovery	ADA Coordinator	State Agency
NYS Office of Resilient Homes and Communities – Governor's Office of Storm Recovery	Press Office Representative	State Agency
NYS Rural Housing Coalition	General Representative	State Agency
NYS Thruway Authority	Stormwater Regional Representative	State Agency
NOAA	General Outreach	Federal Agency
Northside Fire Department	Fire Chief	Local Organization
NWS	Regional Representative	Federal Agency
Oak Corners Fire Department	Fire Chief	Local Organization
Ontario County Cornell Cooperative Extension	Executive Director	Nonprofit / Community-Based Organization
Ontario County Agriculture Enhancement Board	Senior Planner	Nonprofit / Community-Based Organization
Ontario County Office of Aging	Director	Local Organization
Ontario County Office of Economic Development and Industrial Development Agency	Director	Local Organization
Ontario County Humane Society	General Representative	Nonprofit / Community-Based Organization
Ontario County Partnership	Executive Director	Nonprofit / Community-Based Organization

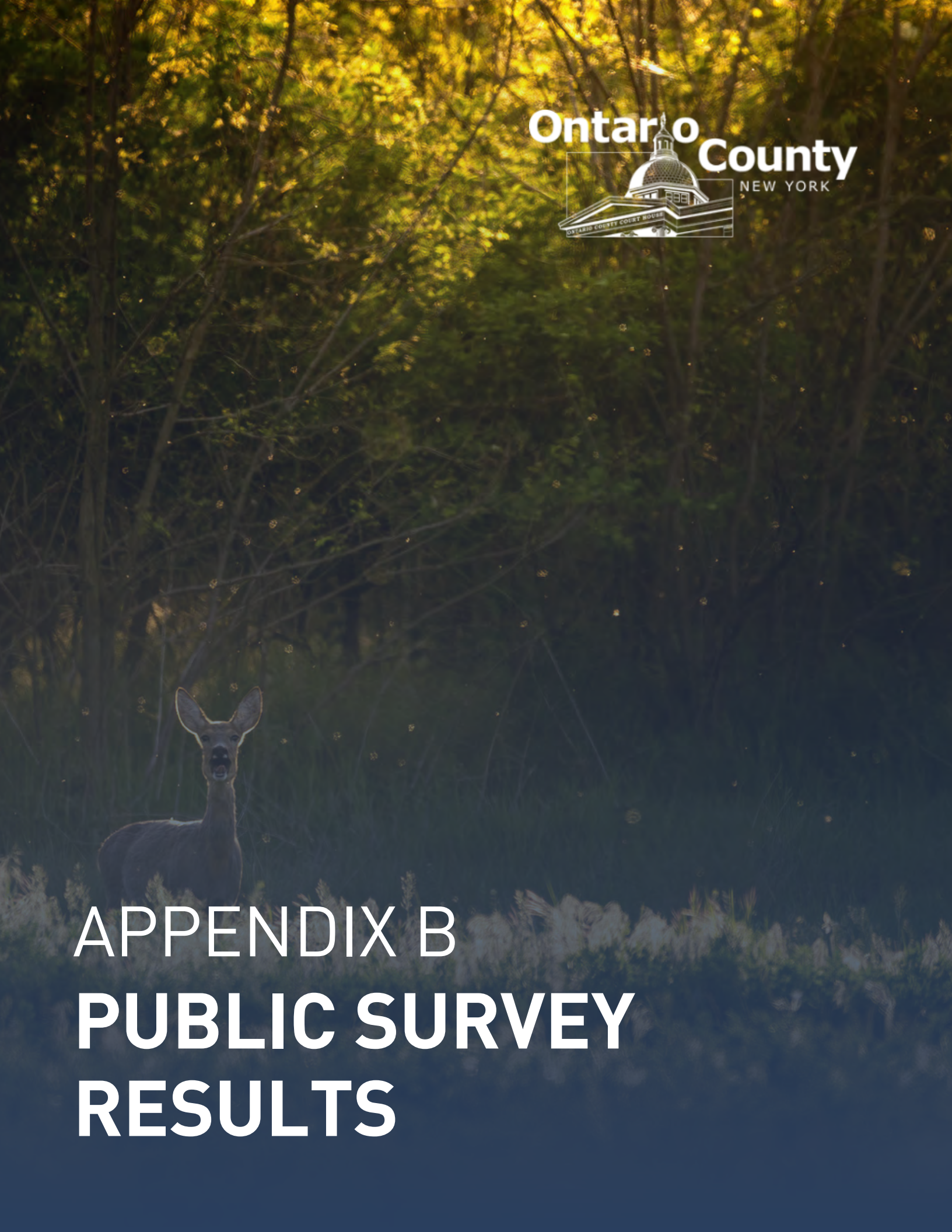
APPENDIX A: PLANNING TEAM

AGENCY	TITLE	STAKEHOLDER TYPE
Ontario County Soil and Water Conservation District	District Manager	Representatives of local business - utility service provider
Ontario County Soil and Water Conservation District	Watershed Inspector	Representatives of local business - utility service provider
Ontario Pathways	Board Member	Nonprofit / Community-Based Organization
PathStone	Ontario County Flood Assistance Representative	Private Organization
Phelps-Clifton Springs School District	Superintendent	Academia
Phelps Fire Department	Fire Chief	Local Organization
Port Gibson Fire Department	Fire Chief	Local Organization
Rochester Gas and Electric Corporation (RGE) (Avangrid is the Parent Company)	General Representative	Representatives of local business - utility service provider
St. Frances de Sales/St. Stephens Catholic School	Principal	Academia
St. Peter's Community Ares Academy	Head of School	Academia
Seneca Castle	Fire Chief	Local Organization
Seneca County	County Manager	Neighboring Community
Seneca Housing Inc	General	Nonprofit / Community-Based Organization
Seneca Lake Pure Waters Association	Administrative Coordinator	Community-Based Organization
Shortsville Fire Department	Fire Chief	Local Organization
Stanley Fire Department	Fire Chief	Local Organization
The Never Alone Club	Program Chaperone	Nonprofit / Community-Based Organization
Thompson Hospital	Community Wellness Manager	Healthcare Agency
Town of Bristol	Town Historian	Local Community Organization
Town of Canadice	Town Historian	Local Community Organization
Town of Canandaigua	Town Historian	Local Community Organization
Town of East Bloomfield	Town Historian	Local Community Organization
Town of Farmington	Town Historian	Local Community Organization
Town of Geneva	Town Historian	Local Community Organization
Town of Gorham	Town Historian	Local Community Organization
Town of Hopewell	Town Historian	Local Community Organization
Town of Manchester	Town Historian	Local Community Organization
Town of Naples	Town Historian	Local Community Organization
Town of Phelps / Village of Phelps	Town Historian	Local Community Organization

APPENDIX A: PLANNING TEAM

AGENCY	TITLE	STAKEHOLDER TYPE
Town of Richmond	Town Historian	Local Community Organization
Town of Seneca	Town Historian	Local Community Organization
Town of South Bristol	Town Historian	Local Community Organization
Town of Victor / Village of Victor	Town Historian	Local Community Organization
U.S. Army Corps of Engineers	Regional Representative	Federal Agency
U.S. Fish & Wildlife, Region 5	Regional Director	Federal Agency
Victor Fire Department	Fire Chief	Local Organization
Victor Hiking Trails Inc.	Chairperson	Community-Based Organization
Victor School District	Superintendent	Academia
Village of Bloomfield	Village Historian	Local Community Organization
Village of Clifton Springs	Village Historian	Local Community Organization
Village of Manchester	Village Historian	Local Community Organization
Village of Naples	Village Historian	Local Community Organization
Village of Rushville	Village Historian	Local Community Organization
Village of Shortsville	Village Historian	Local Community Organization
Wayland Cohocton School	Superintendent	Academia
Wayne-Finger Lakes Boces Adult and Continuing Education	Assistant Superintendent for Administration	Academia
West Bloomfield Fire Department	Fire Chief	Local Organization
West Bloomfield Historical Society	General Representative	Community-Based Organization
West Lake Road Fire Department	Fire Chief	Local Organization
White Spring Fire Department	Fire Chief	Local Organization
Yates County	Director of Emergency Management	Neighboring Community

Ontario County
NEW YORK



APPENDIX B
PUBLIC SURVEY RESULTS

APPENDIX B: PUBLIC SURVEY RESULTS

Overview 1
Public Survey Results 2

OVERVIEW

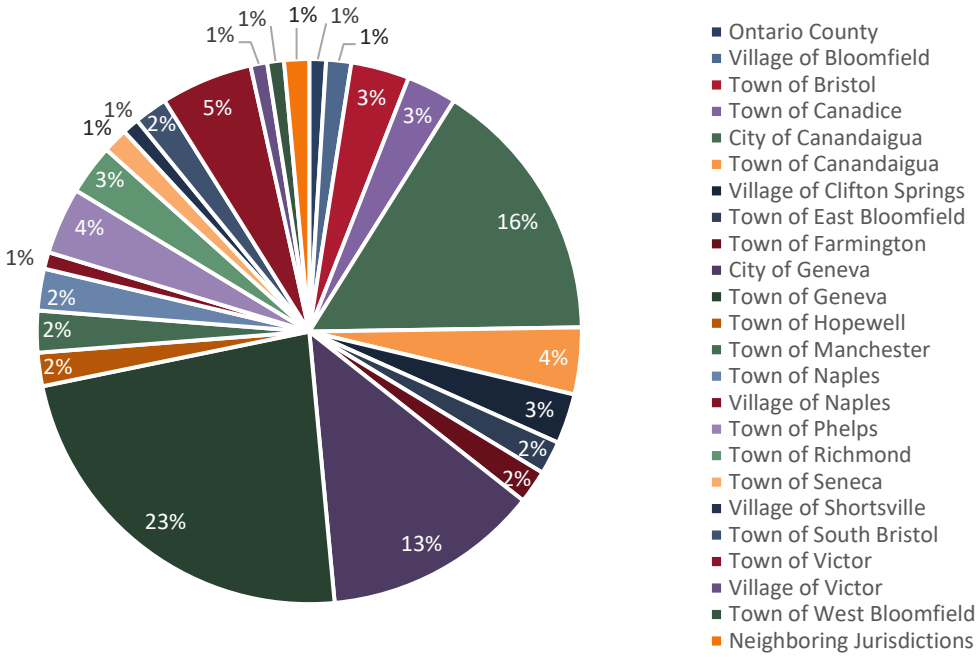
Ontario County prepared a public survey that requested public opinion on a wide range of questions relating to natural hazards. The survey was made available via the County's websites, along with participating jurisdictions. This survey link was also distributed at public meetings and stakeholder events throughout the planning process.

A total of 202 surveys were collected, the results of which are analyzed in Appendix B. The survey was available in Spanish, however, there were no responses provided. 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.

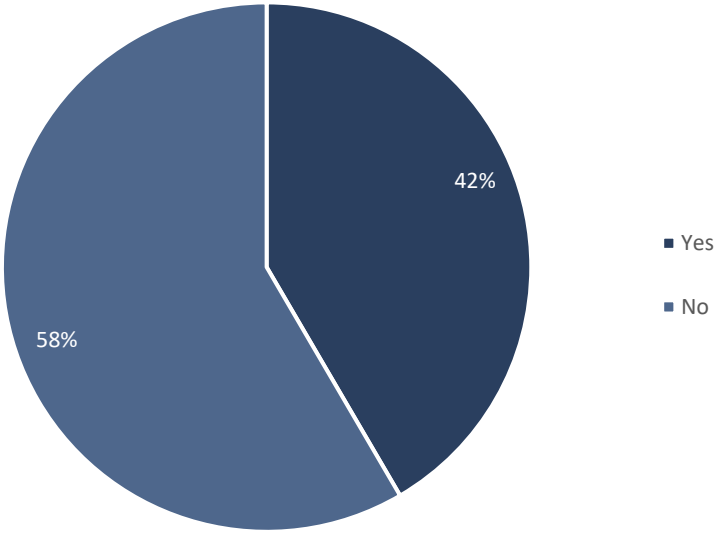
The following survey results depict the percentage of responses for each answer. Similar responses have been summarized for questions that did not provide a multiple-choice answer or that required an explanation.

PUBLIC SURVEY RESULTS

1. Please state the jurisdiction (city or community) where you reside.[1]

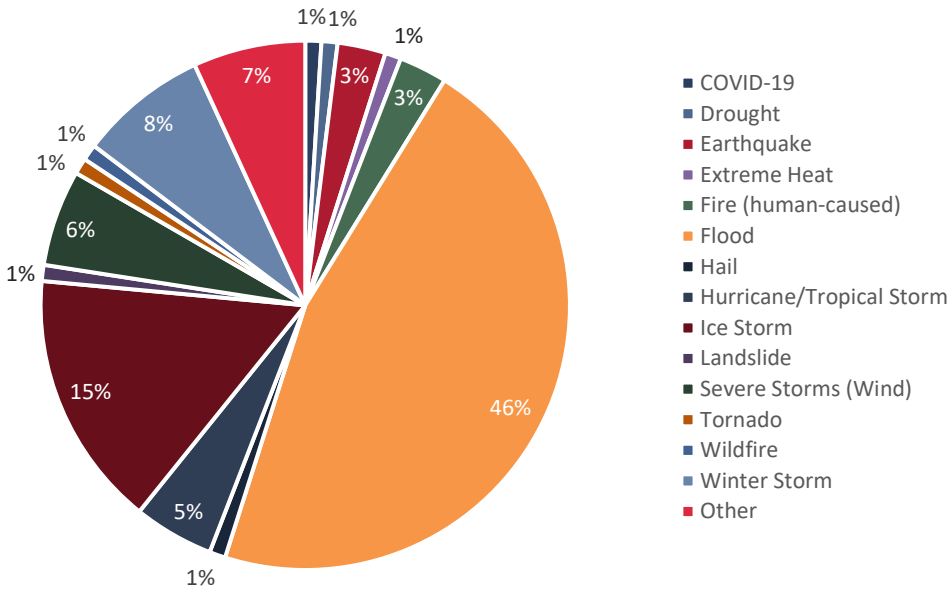


2. Have you ever experienced or been impacted by a disaster?

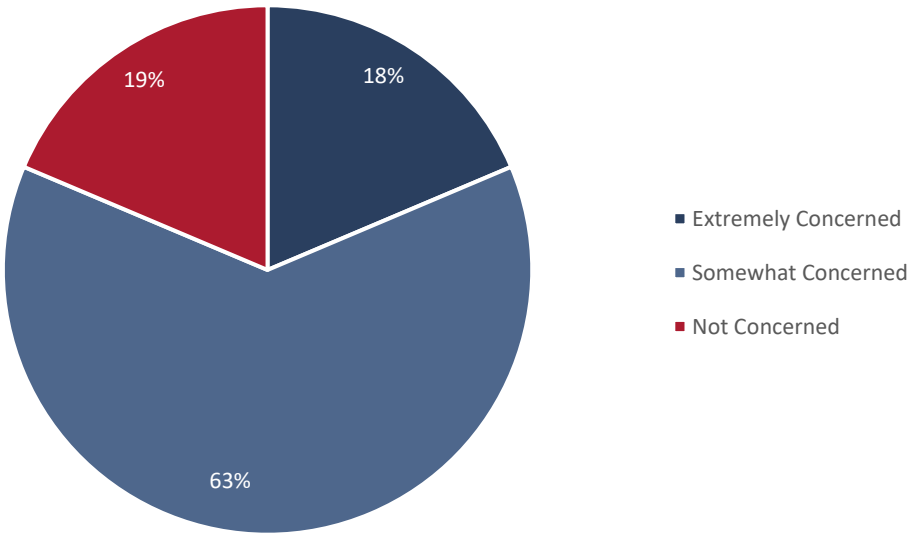


[1] Some respondents were in neighboring counties, however due to their proximity to Ontario County, their responses were included in the survey results. For those responses that did not indicate a specific city, town or village were incorporated under the corresponding city or the town response total.

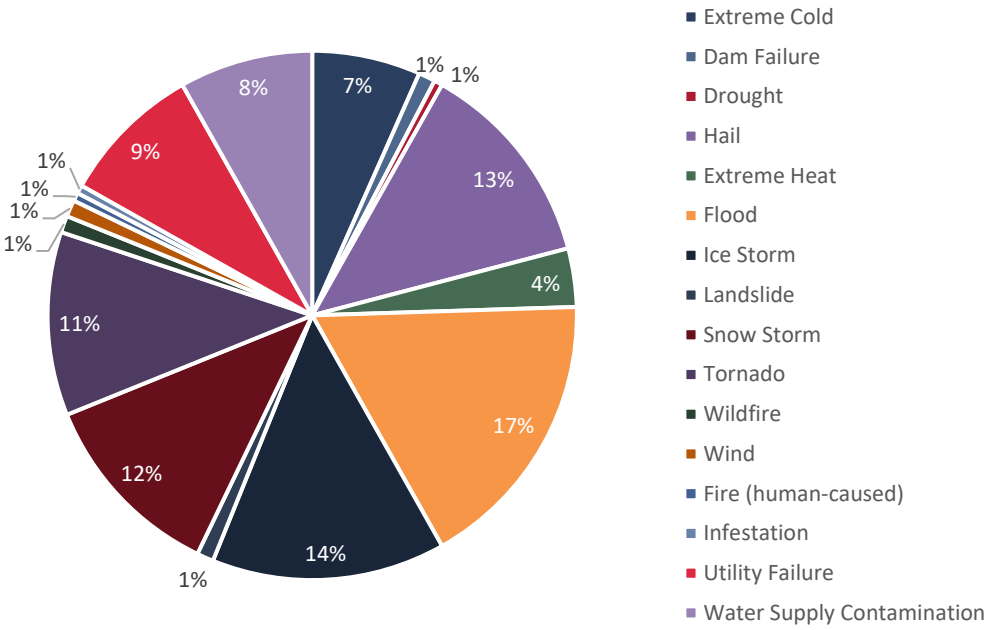
3. If you answered “Yes” to Question #2, please explain.



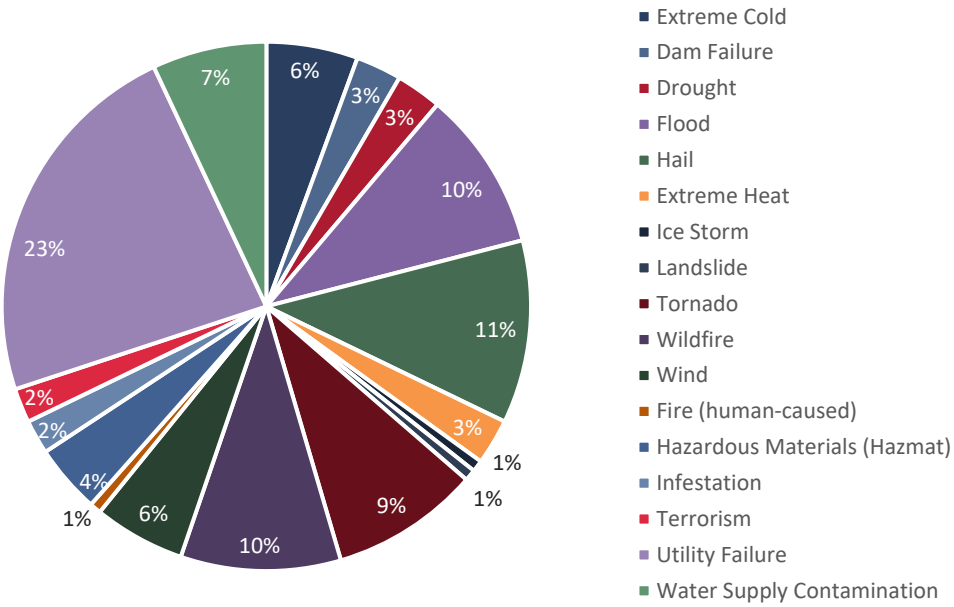
4. How concerned are you about the possibility of your community being impacted by a disaster?



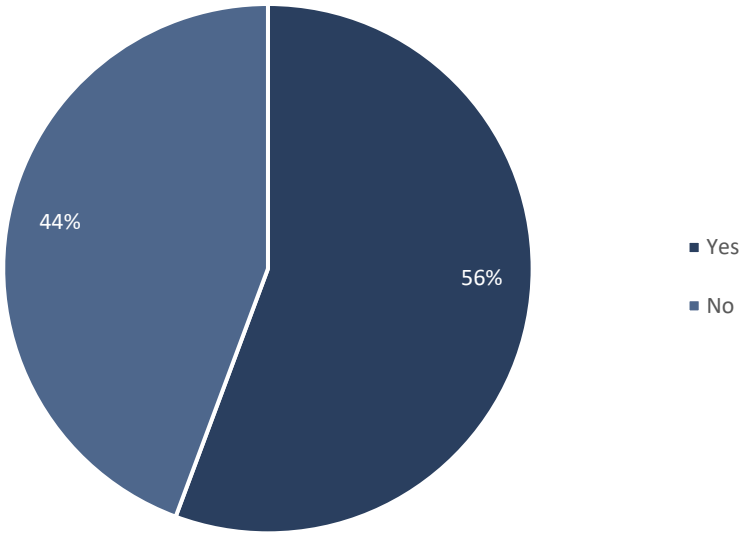
5. Please select the one hazard you think is the highest threat to your neighborhood:



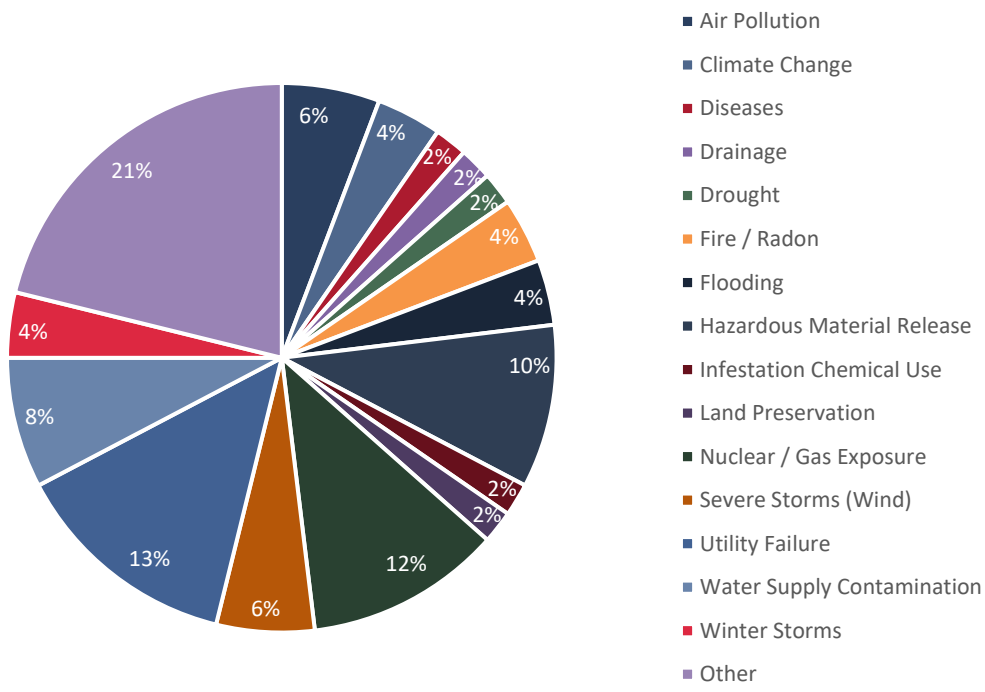
6. Please select the one hazard you think is the second highest threat to your neighborhood:



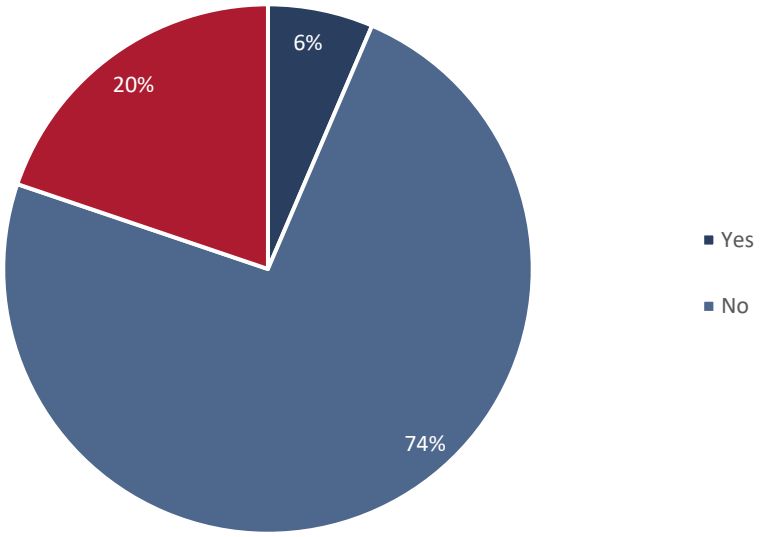
7. Is there another hazard not listed above that you this is a wide-scale threat to your neighborhood?



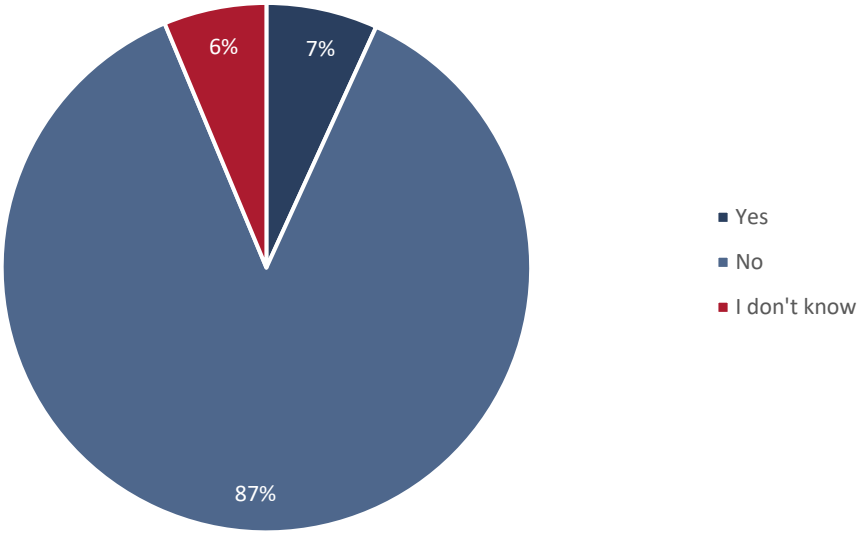
8. If you answered “Yes” to Question #7, please explain.



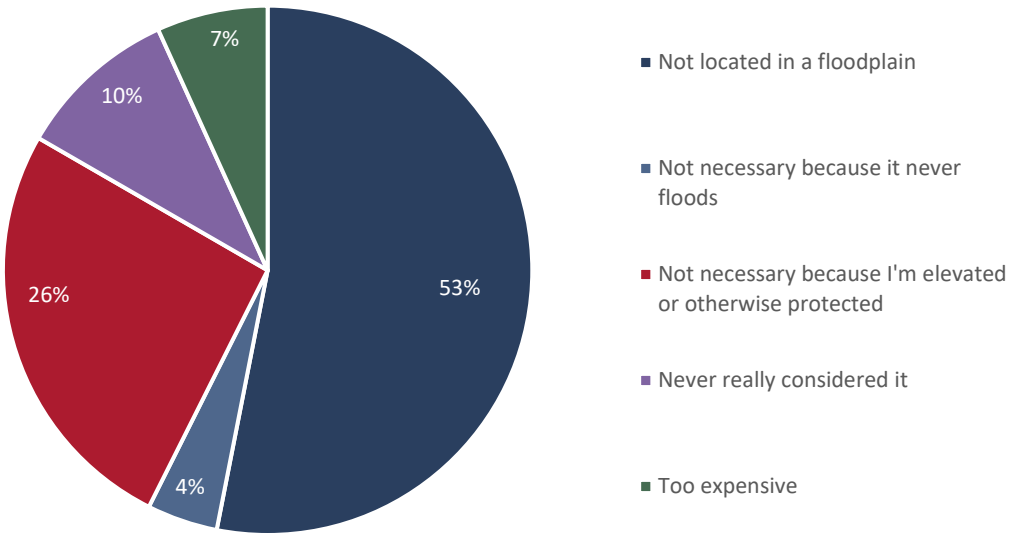
9. Is your home located in a floodplain?



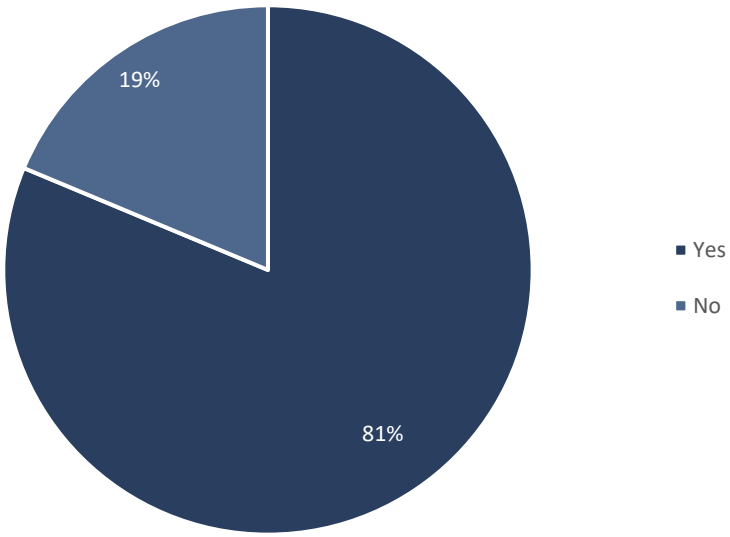
10. Do you have flood insurance?



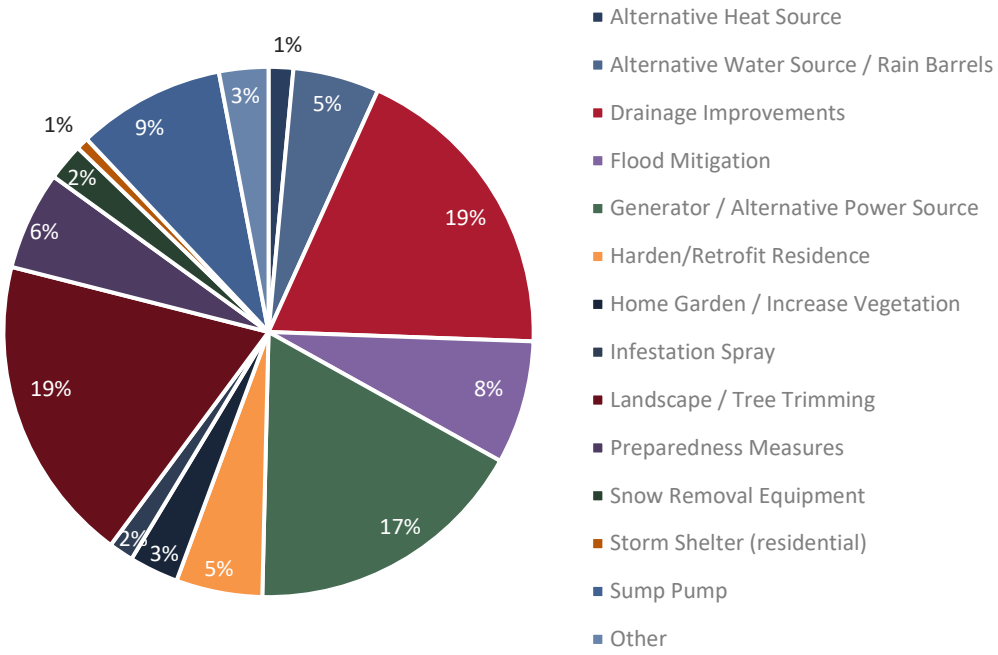
11. If you do not have flood insurance, why not?



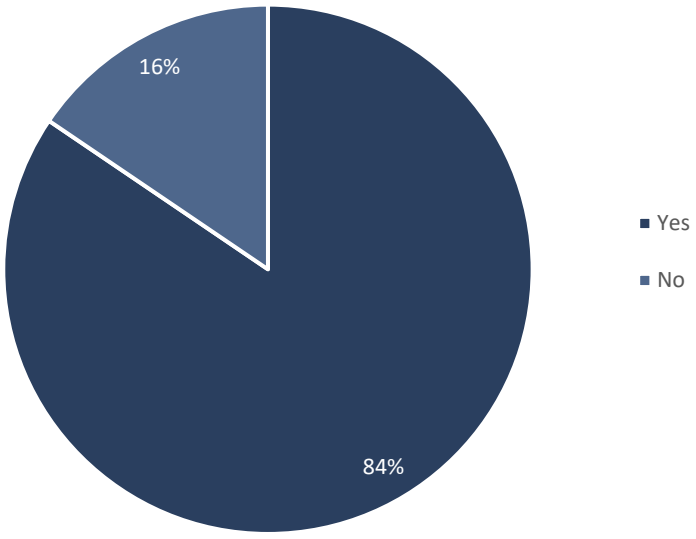
12. Have you taken any actions to make your home or neighborhood more resistant to hazards?



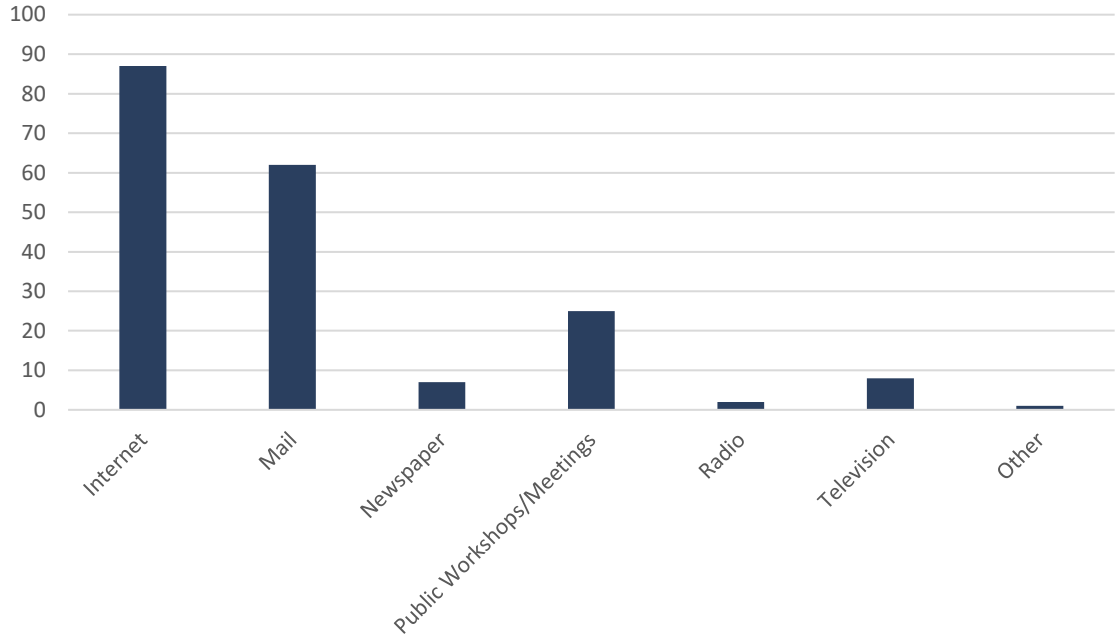
13. If you answered “Yes” to Question #12, please explain.



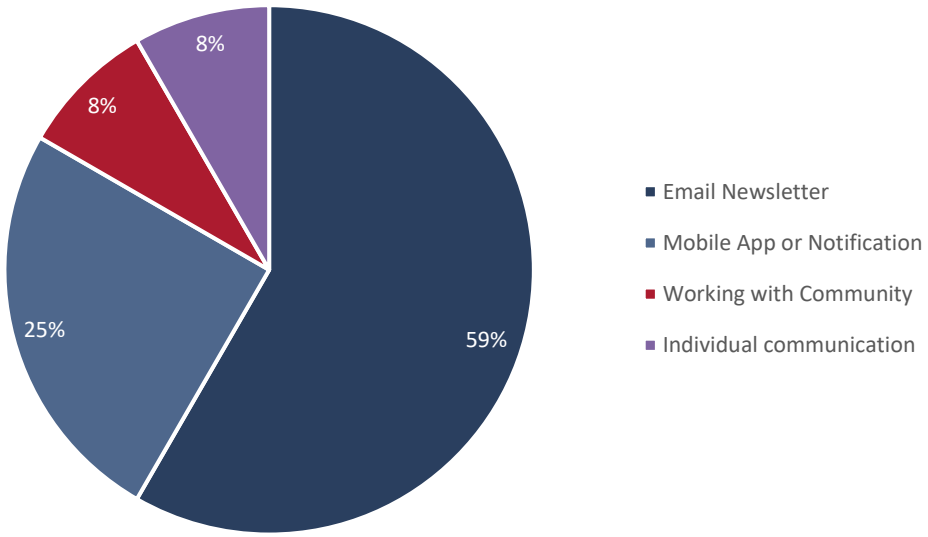
14. Are you interested in making your home or neighborhood more resistant to hazards?



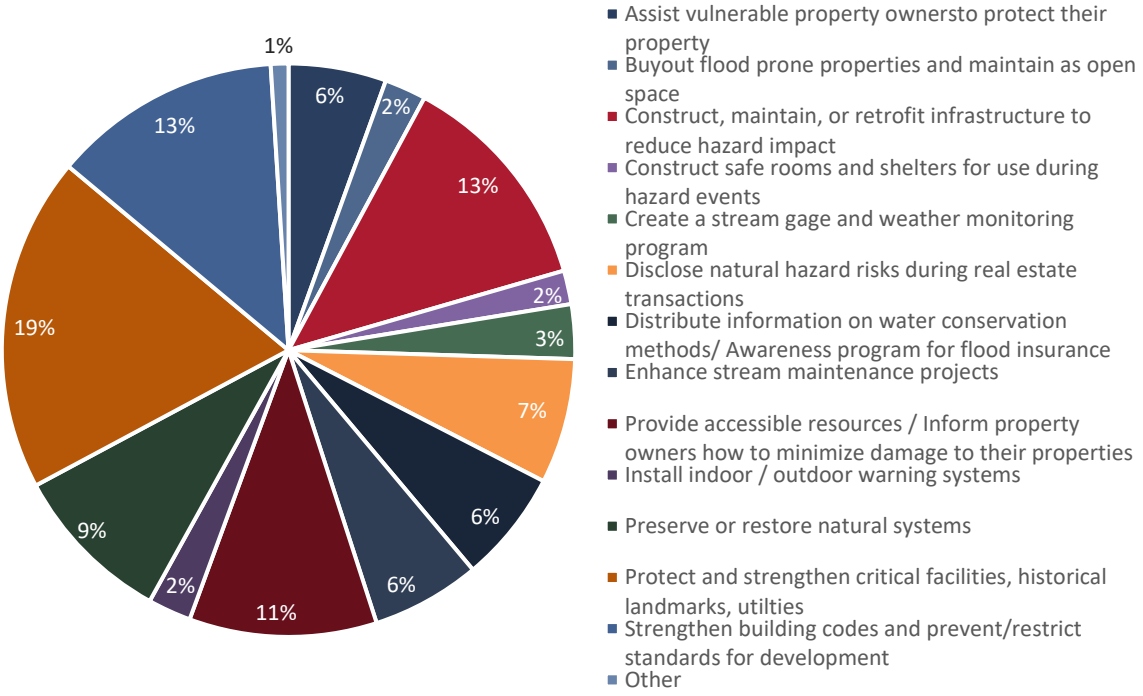
15. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to hazards?



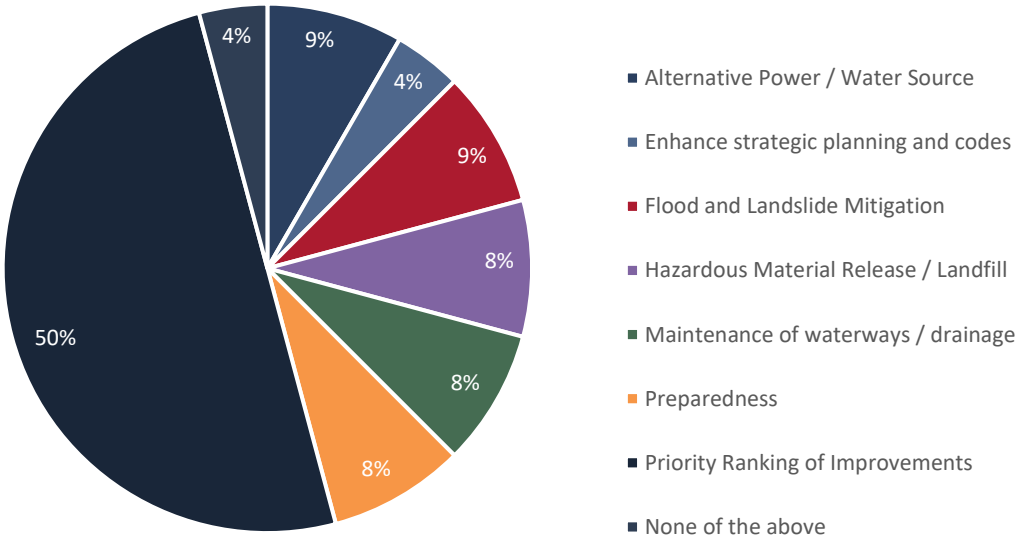
16. If you answered “Other” to Question #15, please explain.



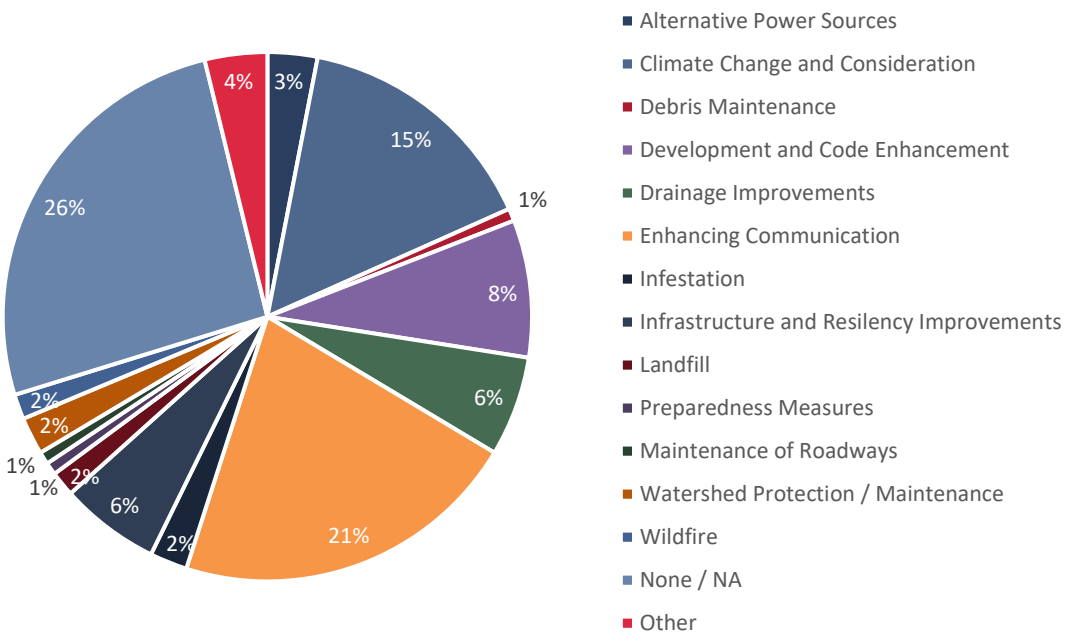
17. In your opinion, what are some steps your local government could take to reduce or eliminate the risk of future hazard damages in your neighborhood?



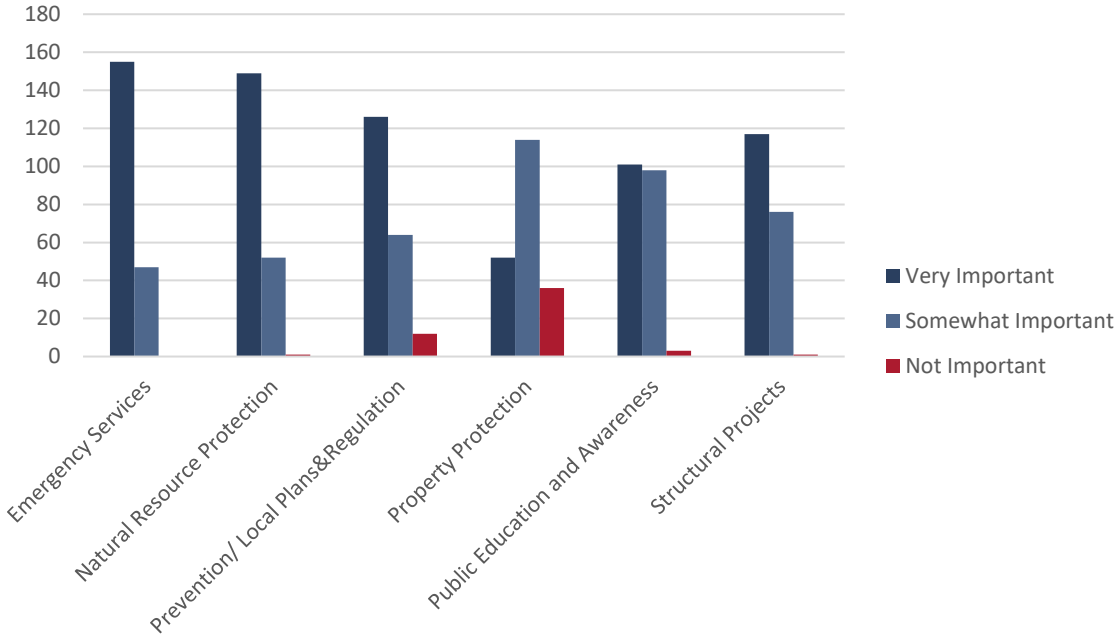
18. If you answered Other, please explain?



19. Are there any other issues regarding the reduction of risk and loss associated with hazards or disasters in the community that you think are important?



20. 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.

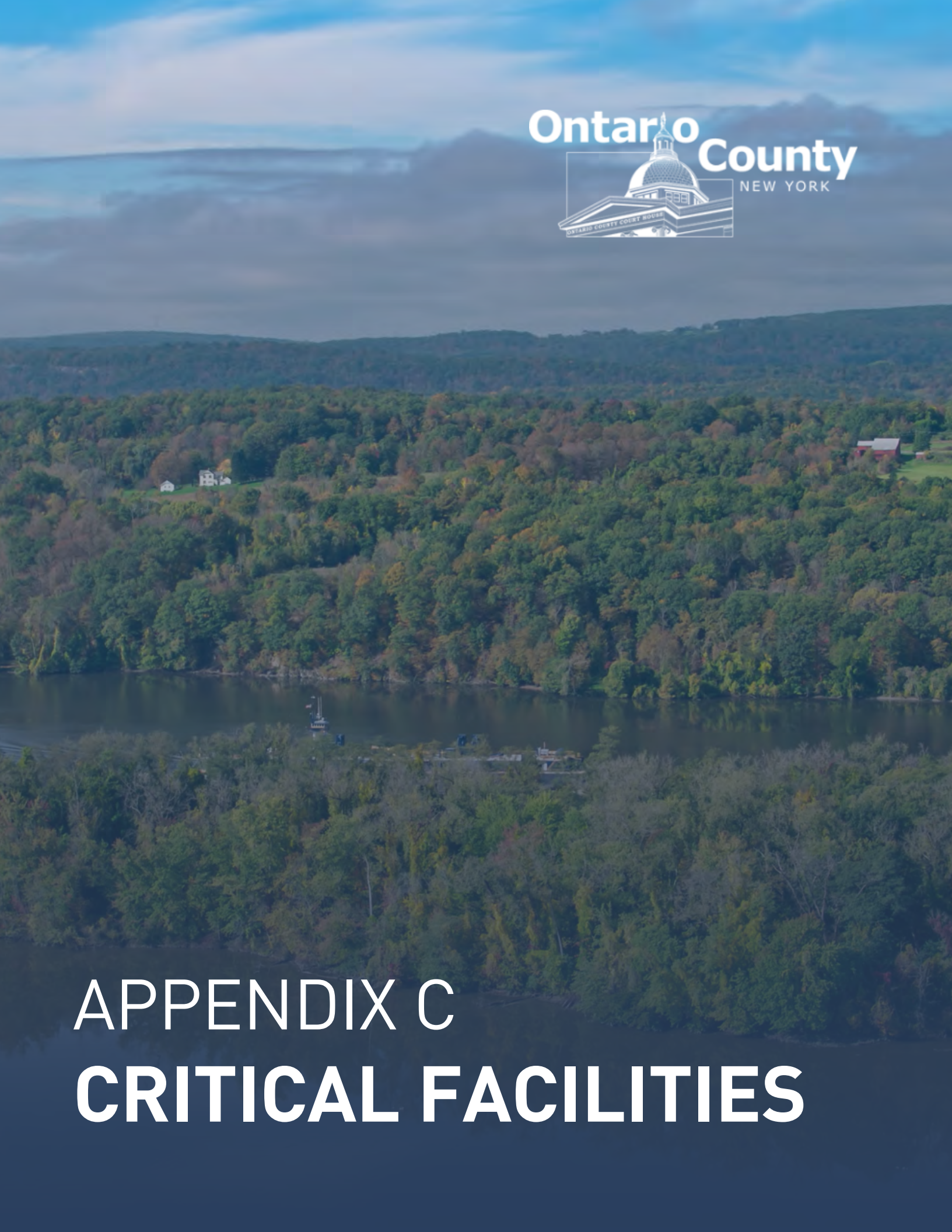
Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems. Examples include floodplain protection, habitat preservation, slope stabilization, riparian buffers, and forest management.

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.

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.

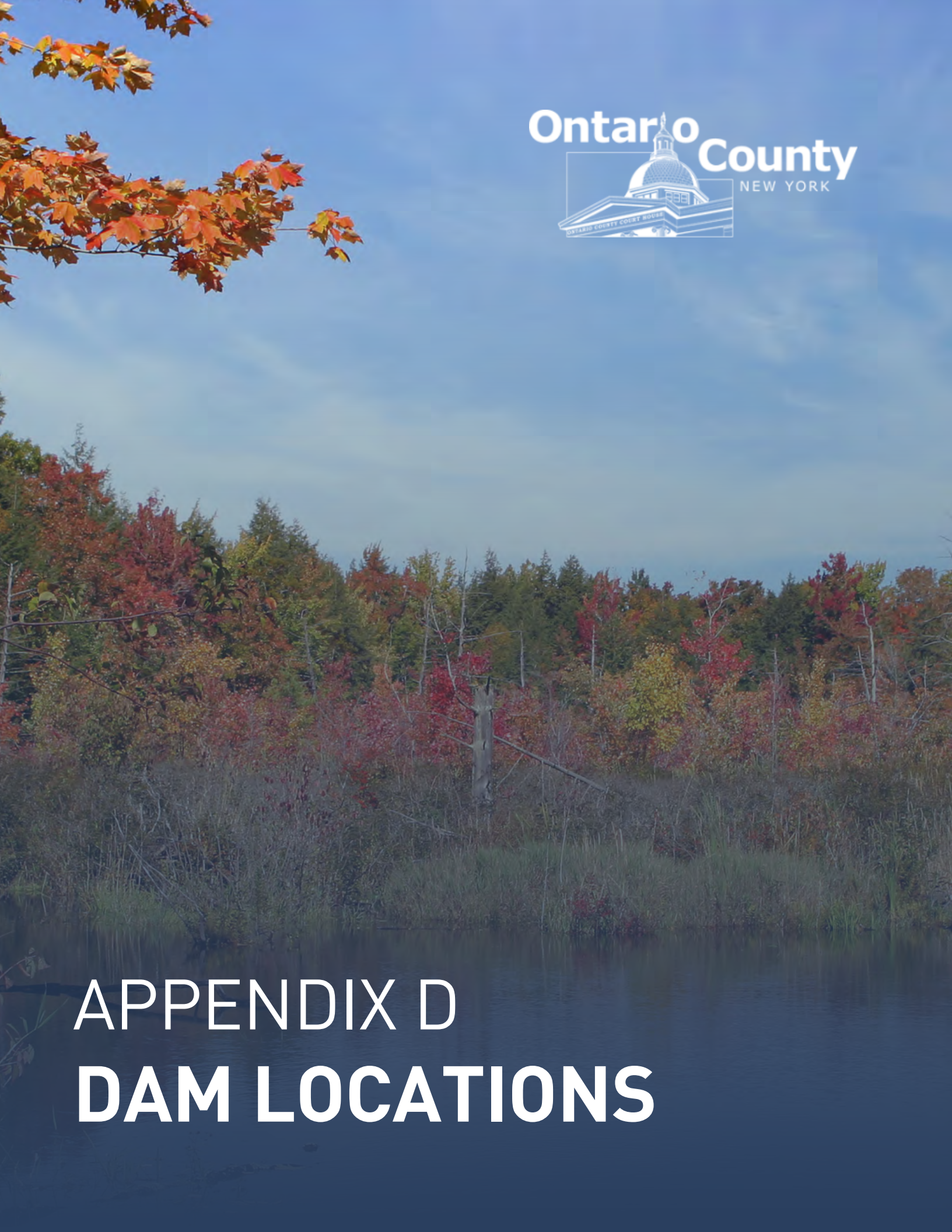
Structural Projects - Actions intended to lessen the impact of a hazard by modifying the natural progression of the hazard. Examples include dams, levees, seawalls detention / retention basins, channel modification, retaining walls, and storm sewers.



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).



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).



APPENDIX E
MEETING DOCUMENTATION

APPENDIX E: MEETING DOCUMENTATION

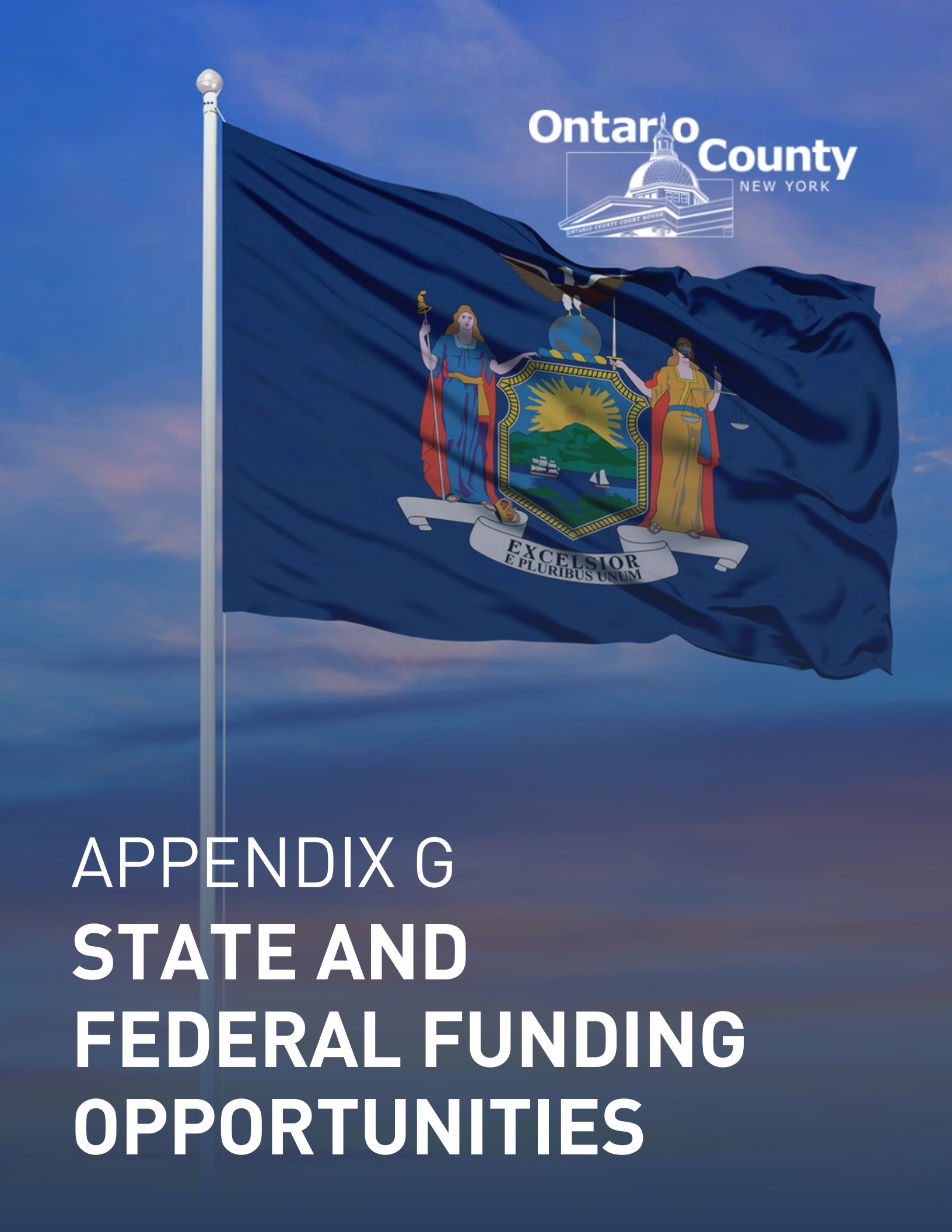
Appendix E is **For Official Use Only (FOUO)** and may be exempt from public release under the Freedom of Information Act (FOIA).



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).



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	o Clean Water Act Section 604(b) o Hudson River Estuary Program Grants o Urban & Community Forestry Program Costs Share Grants o Wastewater Infrastructure Engineering Planning Grant o Water Quality Improvement (WQIP) Program
DHSES	o Emergency Management Performance Grant Program (EMPG) o Fire Prevention and Control – Recruitment and Retention Grant Program o Hazard Mitigation Grant Program o Hazard Mitigation Revolving Local Rund (HM RLF) o Hazardous Materials Emergency Preparedness (HMEP) Grant Program
EFC	o Green Innovation Grant Program
NYS DOS	o Local Waterfront Revitalization Program Grants
NYSDOT	o Emergency Relief Program
HCR	o Community Development Block Grant (CDBG)
OCR	o Community Development Block Grant for Rural New York

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 New York State.

Table G-2. Federal, State, Local and Non-Profit Mitigation Funding Sources in New York State

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.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
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.
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.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
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.
Community Assistance Program (CAP)	Federal	FEMA, NFIP	DEC	Product-oriented financial assistance program directly related to the flood loss reduction objectives of the NFIP.
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

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Community Rating System (continued)				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.
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).
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.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
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.
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.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
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.
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.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
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.
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.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
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 basic, in restoring, enhancing and protecting forestland resources on private lands through easements.
High Hazard Potential Dam Rehabilitation Program (HHDR)	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.
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).

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
HPP Cooperative Agreement (continued)				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.
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.
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

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
Mitigation Banks (continued)				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 Dam Safety Program	Federal	FEMA		Technical assistance, training, and grants to help improve State dam safety programs.
National Digital Orthophoto Program	Federal	DOI-USGS		Develops topographic quadrangles for use in mapping of flood and other hazards.
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.
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.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
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: Environnemental Justice in Communities	Federal	EPA		To support technical assistance for businesses to specifically target an improve human health and the environment in disadvantaged communities.
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.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
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.
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).

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
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.
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.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
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)
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.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
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.
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.
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.
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.

APPENDIX G: STATE AND FEDERAL FUNDING OPPORTUNITIES

NAME	LEVEL	SOURCE AGENCY	MANAGING STATE AGENCY	PURPOSE OF FUNDING
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.
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.

Ontario County

Board of Supervisors

Canandaigua, New York 14424

Supervisor David Phillips offered the following resolution and moved for its adoption, seconded by Supervisor William Namestnik. Passed. Yes 19, No 0, Abstained 0, Necessarily Absent 1.

RESOLUTION NO. 600-2024
ADOPTION OF THE ONTARIO COUNTY HAZARD MITIGATION ACTION PLAN

WHEREAS, Ontario County recognizes the threat that natural hazards pose to people and property within Ontario County; and

WHEREAS, Ontario County accepted a grant from NYS Department of Homeland Security and Emergency Services by Resolution No. 179-2023 to update its Multi-Jurisdictional Hazard Mitigation Plan; and

WHEREAS, Resolution No. 352-2023 authorized a professional consultant services contract with H2O Partners for the preparation of an updated Multi-Jurisdictional Hazard Mitigation Plan; and

WHEREAS, Said consultant drafted and updated the multi-hazard mitigation plan, hereby known as the 2024 Ontario County Hazard Mitigation Action Plan, in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS, Ontario County hosted public meetings on September 14, 2023 and October 13, 2023 to solicit input on preparation of the Hazard Mitigation Action Plan; and

WHEREAS, Ontario County Hazard Mitigation Action Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in Ontario County from the impacts of future hazards and disasters; and

WHEREAS, Adoption by this Board demonstrates their commitment to hazard mitigation and achieving the goals outlined in the 2024 Ontario County Mitigation Action Plan; and

WHEREAS, This Board is the only agency involved in the County's adoption of the 2024 Ontario County Hazard Mitigation Plan, which includes local municipal annexes; and

WHEREAS, This Board conducted an environmental review of the adoption of the 2024 Ontario County Hazard Mitigation Action Plan pursuant to the New York State Environmental Quality Review Act and its implementing regulations found at 6 NYCRR Part 617; and

WHEREAS, As the lead agency for the environmental review of the 2024 Ontario County Hazard Mitigation Action Plan, that was adopted by Resolution No. 599-2024 this Board determined that adoption of said Plan would not result in any significant adverse environmental impacts, thus making a negative determination of significance; and

WHEREAS, The Planning and Environmental Quality Committee has reviewed the Plan and related environmental review and approves adoption of the 2024 Ontario County Hazard Mitigation Plan; now, therefore, be it

RESOLVED, This Board hereby approves and adopts the 2024 Ontario County Hazard Mitigation Action Plan; and further

RESOLVED, That upon approval and adoption by resolution of this Board, the consultant is directed to add a copy of this resolution and all other municipal resolutions of adoption and Resolution No. 599-2024 wherein a negative declaration of significance was made by this Board, to the Plan document that is on file with the Clerk of this Board and submit this amended document to the Clerk of this Board, the NYS Department of Homeland Security and Emergency Services, and the US Federal Emergency Management Agency (FEMA); and further

RESOLVED, This Plan, including its municipal annexes, may be edited or amended after submission to FEMA. Such amendment(s) shall only require approval of the acting jurisdiction, not adoption by a majority of all jurisdictions. Such amendments do not absolve Ontario County or its constituent jurisdictions from updating the Plan in 5 years.

State of New York}
County of Ontario}

I do hereby certify that I have compared the preceding with the original thereof, on file in the Office of the Clerk of the Board of Supervisors at Canandaigua, New York, and that the same is a correct transcript therefrom and of the whole of said original; and that said original was duly adopted at a meeting of the Board of Supervisors of Ontario County held at Canandaigua, New York on October 24, 2024.
Given under my hand and official seal on October 25, 2024.

Kristin A. Voss

Kristin A. Voss, Clerk of the Board of Supervisors of Ontario County, NY

RESOLUTION 2024-004
VILLAGE OF BLOOMFIELD
ADOPTING THE ONTARIO COUNTY
HAZARD MITIGATION ACTION PLAN.

WHEREAS the Village of Bloomfield recognizes the threat that natural hazards pose to people and property within the Village of Bloomfield; and

WHEREAS the County of Ontario has prepared a multi-hazard mitigation plan, hereby known as Ontario County Hazard Mitigation Action Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS Ontario County Hazard Mitigation Action Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Village of Bloomfield from the impacts of future hazards and disasters; and

WHEREAS adoption by the Village Board demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Ontario County Hazard Mitigation Action Plan.

NOW THEREFORE, BE IT RESOLVED BY THE VILLAGE OF BLOOMFIELD, NEW YORK, THAT:

Section 1. In accordance with (local rule for adopting resolutions), the Village Board adopts the Ontario County Hazard Mitigation Action Plan. This plan, approved by the community, may be edited or amended after submission for review, but will not require the community to re-adopt any further iterations. This only applies to this specific plan and does not absolve the community from updating the plan in 5 years.

ADOPTED by a vote of 4 in favor and 0 against, and 0 abstaining, this 23rd day of October, 2024.

I, Donna Wollschleger, clerk of the Board, do hereby attest to the accuracy of the above resolution being acted upon and recorded in the minutes of the Village of Bloomfield Village Board for the October 23, 2024, meeting.

Donna Wollschleger
Village Clerk
Dated 10/24/2024

TOWN OF BRISTOL

6740 Co. Rd. 32, Canandaigua, NY 14424

TOWN BOARD RESOLUTION Oct 15, 2024

ADOPTION OF THE ONTARIO COUNTY HAZARD MITIGATION ACTION PLAN

At a regular meeting of the Town Board of the Town of Bristol, held at the town hall in said town, County of Ontario and State of New York on Oct 15, 2024, and a quorum of the Board being present, the following resolution was offered by Council Member Giordano and seconded by Council Member Pappano;

WHEREAS the Town of Bristol recognizes the threat that natural hazards pose to people and property within the Town of Bristol; and

WHEREAS the County of Ontario has prepared a multi-hazard mitigation plan, hereby known as Ontario County Hazard Mitigation Action Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS Ontario County Hazard Mitigation Action Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Town of Bristol from the impacts of future hazards and disasters; and

WHEREAS adoption by the Town Board demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Ontario County Hazard Mitigation Action Plan.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN OF BRISTOL, NEW YORK, THAT:

The Bristol Town Board adopts the Ontario County Hazard Mitigation Action Plan. This plan, approved by the community, may be edited or amended after submission for review, but will not require the community to re-adopt any further iterations. This only applies to this specific plan and does not absolve the community from updating the plan in 5 years.

The question of the adoption of the resolution was duly put to a vote which resulted as follows:

Voting:	Supervisor Fred Stresing	Y
	Council Member Patti Giordano	Y
	Council Member Lauren Bolonda	Absent
	Council Member Chris Hart	Y
	Council Member Steve Pappano	Y

The Resolution was thereupon deemed duly adopted on October 15, 2024.

STATE OF NEW YORK
COUNTY OF ONTARIO
TOWN OF BRISTOL

This is to certify that I, Karen Maczynski, Town Clerk of the Town of Bristol, in the said County of Ontario, have compared the foregoing copy of a resolution adopted by the Town Board of the Town of Bristol at their meeting on Oct 15, 2024, with the original now on file in this office, and the same is a correct and true transcript of such original and the whole thereof.
In Witness Whereof, I have hereunto set my hand and affixed the seal of the Town of Bristol.

Karen Maczynski

Karen Maczynski, Town Clerk

Town of Canadice
Town Board

Resolution Number 74 of 2024

October 14, 2024

ONTARIO COUNTY HAZARD MITIGATION ACTION PLAN

WHEREAS, the Town of Canadice recognizes the threat that natural hazards pose to people and property within the Town of Canadice; and

WHEREAS, the County of Ontario has prepared a multi-hazard mitigation plan, hereby known as Ontario County Hazard Mitigation Action Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS, Ontario County Hazard Mitigation Action Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Town of Canadice from the impacts of future hazards and disasters; and

WHEREAS, adoption by the Town Board demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Ontario County Hazard Mitigation Action Plan, August 8, 2024.

RESOLVED, that the Town Board adopts the Ontario County Hazard Mitigation Action Plan. This plan, approved by the community, may be edited or amended after submission for review, but will not require the community to re-adopt any further iterations. This only applies to this specific plan and does not absolve the community from updating the plan in five years.

RESOLVED, that the Clerk of this Board email a certified copy of this resolution to Stevie Ann O'Donnel at sodonnell@h2opartnersusa.com and retain a copy in the Town records.

I hereby certify that I have compared the preceding copy of a Resolution with the original thereof, duly adopted by the Town Board of such Town at a regular meeting of such Board, held on the 14th day of October 2024, and that the same is a true and correct copy of such Resolution and of the whole thereof.

In testimony whereof I have hereunto set my hand and affixed the Seal of said Town this 15th day of October 2024.

Eileen Schaefer, Town Clerk
Town of Canadice

RESOLUTION #2024-114

A RESOLUTION ADOPTING THE ONTARIO COUNTY HAZARD MITIGATION ACTION PLAN

WHEREAS, the City of Canandaigua recognizes the threat that natural hazards pose to people and property within the City of Canandaigua; and

WHEREAS, the County of Ontario has prepared a multi-hazard mitigation plan, hereby known as Ontario County Hazard Mitigation Action Plan, in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS, the Ontario County Hazard Mitigation Action Plan, identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the City of Canandaigua from the impacts of future hazards and disasters;

WHEREAS, adoption by the City Council demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Ontario County Hazard Mitigation Action Plan;

NOW, THEREFORE BE IT RESOLVED that City Council adopts the Ontario County Hazard Mitigation Action Plan.

ADOPTED this 3rd day of October, 2024.
ATTEST:

Erin VanDamme
City Clerk

Town of Canandaigua

5440 Routes 5 & 20 West
Canandaigua, NY 14424
(585) 394-1120
Fax: (585) 394-9476

Established 1791

The following resolution was acted upon by the Canandaigua Town Board on October 28, 2024.

RESOLUTION NO. 2024-263: TOWN OF CANANDAIGUA ADOPTION OF THE ONTARIO COUNTY HAZARD MITIGATION ACTION PLAN

WHEREAS, the Town of Canandaigua recognizes the threat that natural hazards pose to people and property within the Town of Canandaigua; and

WHEREAS, the County of Ontario has prepared a multi-hazard mitigation plan, hereby known as Ontario County Hazard Mitigation Action Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS, Ontario County Hazard Mitigation Action Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Town of Canandaigua from the impacts of future hazards and disasters; and

WHEREAS, adoption by the Town Board demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Ontario County Hazard Mitigation Action Plan, August 8, 2024; and

NOW, THEREFORE, BE IT RESOLVED that the Canandaigua Town Board adopts the Ontario County Hazard Mitigation Action Plan, along with any future edits or amendments made by Ontario County to the current plan term, but shall be considered for re-adoption upon completion of the County's required five-year update; and

BE IT FURTHER RESOLVED that the Town Clerk provide a copy of this resolution to the Ontario County Office of Emergency Management.

Motion made by Council Member Fennelly, seconded by Council Member Rudolph.

5 Ayes: Casey, Fennelly, Rudolph, Sauter, Simpson

STATE OF NEW YORK}
County of Ontario}
Town of Canandaigua}

I DO HEREBY CERTIFY that I have compared the preceding with the original thereof, on file and on record in the Town Clerk's office, and that the same is a correct copy and transcript therefrom and of the whole of said original;

and that said original was duly adopted at a meeting of the Town Board held at Canandaigua, New York, on October 28, 2024.

SEAL

Given under my hand and the official seal of said Town, at Canandaigua NY, in said county, on October 29, 2024

Jaren Outhouse, Deputy Town Clerk

Village of Clifton Springs
1 West Main Street
Clifton Springs, New York 14432
315-462-5151 FAX 315-462-6235
TDD 1-800-662-1220

An Equal Opportunity Employer and Provider

VILLAGE OF CLIFTON SPRINGS, NEW YORK

A RESOLUTION OF THE VILLAGE OF CLIFTON SPRINGS ADOPTING THE ONTARIO COUNTY HAZARD MITIGATION ACTION PLAN.

WHEREAS the Village of Clifton Springs recognizes the threat that natural hazards pose to people and property within the Village of Clifton Springs; and

WHEREAS the County of Ontario has prepared a multi-hazard mitigation plan, hereby known as Ontario County Hazard Mitigation Action Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS Ontario County Hazard Mitigation Action Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Village of Clifton Springs from the impacts of future hazards and disasters; and

WHEREAS adoption by the Village Board demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Ontario County Hazard Mitigation Action Plan.

NOW THEREFORE, BE IT RESOLVED BY THE VILLAGE OF CLIFTON SPRINGS, NEW YORK, THAT:

Section 1. In accordance with (local rule for adopting resolutions), the Village Board adopts the Ontario County Hazard Mitigation Action Plan. This plan, approved by the community, may be edited or amended after submission for review, but will not require the community to re-adopt any further iterations. This only applies to this specific plan and does not absolve the community from updating the plan in 5 years.

ADOPTED by a vote of 4 in favor and 0 against, and 1 absent, this 15th day of October, 2024.

By: Lori A. Reals

Lori A. Reals, Village Clerk/Treasurer

ATTEST: By: _____

(print name and title)

APPROVED AS TO FORM: By: _____

(print name and title)

The regularly scheduled meeting for the Town of East Bloomfield was held at the East Bloomfield Town Hall on Tuesday evening, October 15, 2024, at 7:00 PM with Supervisor Frederick Wille presiding.

Wille opened the regular Town Board meeting at 7:00 PM.

Present:	Supervisor	Frederick A. Wille
	Council Member	Michelle T. MacMillan
	Council Member	Frank W. Fessner
	Council Member	Kathleen M. Conradt
	Council Member	Stephen C. Lester

Motion was made by Conradt, seconded by Fessner, to adopt Resolution 2024-038 Town of East Bloomfield, New York A Resolution of the Town of East Bloomfield Adopting the Ontario County Hazard Mitigation Action Plan and waive the reading of the Resolution. Discussion was held. Motion Adopted: Ayes 5 (Fessner, Conradt, Lester, MacMillan, and Wille) Nays 0

TOWN OF EAST BLOOMFIELD, NEW YORK

RESOLUTION NO. 2024-038

A RESOLUTION OF THE TOWN OF EAST BLOOMFIELD ADOPTING THE ONTARIO COUNTY HAZARD MITIGATION ACTION PLAN.

WHEREAS the Town of East Bloomfield recognizes the threat that natural hazards pose to people and property within the Town of East Bloomfield; and

WHEREAS the County of Ontario has prepared a multi-hazard mitigation plan, hereby known as Ontario County Hazard Mitigation Action Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS Ontario County Hazard Mitigation Action Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Town of East Bloomfield from the impacts of future hazards and disasters; and

WHEREAS adoption by the Town Board demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Ontario County Hazard Mitigation Action Plan, August 8, 2024.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN OF EAST BLOOMFIELD, NEW YORK, THAT:

Section 1. In accordance with (local rule for adopting resolutions), the Town Board adopts the Ontario County Hazard Mitigation Action Plan. This plan, approved by the community, may be edited or amended after submission for review, but will not require the community to re-adopt any further iterations. This only applies to this specific plan and does not absolve the community from updating the plan in 5 years.

ADOPTED by a vote of 5 in favor and 0 against, and 0 abstaining, on this 15th day of October, 2024.

By: Margaret M. Gochenaur, East Bloomfield Town Clerk

ATTEST: By: Frederick A. Wille, East Bloomfield Town Supervisor

APPROVED AS TO FORM: By: East Bloomfield Town Board

I, Margaret M. Gochenaur, Town Clerk of the Town of East Bloomfield, hereby certify the foregoing resolution to be a true and exact copy of said resolution as contained in the official minute's book of said town.

Margaret M. Gochenaur
Town Clerk
Dated: October 15, 2024

(Seal)

Town Supervisor
Peter Ingalsbe
315-986-8100 opt 2

Deputy Supervisor
Steven Holtz

Town Clerk
Michelle Finley
315-986-8100 opt 1

Town Councilmen
Michael Casale
Steven Holtz
Ron Herendeen
Nate Bowerman

TOWN OF
FARMINGTON

1000 County Road 8, Farmington, New York 14425

"The Gateway to Ontario County" (Exit 44 NYS Thruway)
The Town of Farmington is an Equal Opportunity Provider

TDD 1-800-662-1220

www.townoffarmingtonny.com

Justices
Nathan Thomas
315-986-3113
Morris H. Lew
315-986-8195
Highway Supt.
Tim Ford
315-986-5540
Water & Sewer Supt.
Robin MacDonald
585-924-3158
Assessor
Donna LaPlant
315-986-8100 opt 4
Code Enforcement Office
Dan Delpriore
315-986-8100 opt 3

RESOLUTION #379-2024:
Councilman Bowerman offered the following Resolution, seconded by **Councilman Herendeen:**

ADOPTION OF ONTARIO COUNTY HAZARD MITIGATION ACTION PLAN

WHEREAS, the Town of Farmington Town Board (hereinafter referred to as Town Board), has on September 24, 2024, received from Stevie-Ann Hodgson-O'Donnell, Mitigation Outreach Coordinator, H2O Partners, the County's Planning Consultant for preparing the 2024 Edition of the Ontario County Hazard Mitigation Action Plan (hereinafter referred to as the Plan), a memorandum requesting each municipality in Ontario County to adopt the Plan; and

WHEREAS, the adoption of the Plan, a comprehensive resource management plan, is hereby classified by the Town Board as a Type II Action under the provisions of 6NYCRR, Part 617.5 (c) (24), (27) and (34), a part of article 8 of the New York State Environmental Conservation Law (ECL); and

WHEREAS, Type II Actions have been determined not to have a significant impact on the environment or are otherwise precluded from environmental review under the ECL; and

WHEREAS, the Town Board recognizes the threat that natural hazards pose to people and property within the Town of Farmington, Ontario County; and

WHEREAS, the County of Ontario has prepared a multi-hazard mitigation plan, known as Ontario County Hazard Mitigation Plan in accordance with the Federal Disaster Mitigation Act of 2000; and

WHEREAS, the Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Town of Farmington from the impacts of future hazards and disasters; and

WHEREAS, adoption by the Town Board demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Plan.

NOW, THEREFORE, BE IT RESOLVED, that the Town Board does hereby adopt the Plan in its' entirety.

BE IT FURTHER RESOLVED, that the adopted Plan may be edited or amended after submission for review but will not require the Town Board to re-adopt any further iterations.

BE IT FURTHER RESOLVED, that this Action applies only to this specific Plan and does not absolve the Town from participating in the updating of the Plan in five years (2029).

BE IT FINALLY RESOLVED, that the Town Clerk is directed to provide certified electronic copies of this resolution to Thomas Harvey, Ontario County Director of Planning, Thomas.Harvey@co.ontario.ny.us, Stevie Ann Hodgson-O'Donnell, H2O Partners, sodonnell@h2opartnerusa.com and Ronald Brand, Town of Farmington Director of Planning and Development, rlbplans@gmail.com.

I, Michelle Finley, Town Clerk of the Town of Farmington do hereby certify that the aforementioned resolution was **adopted** by the Town Board of the Town of Farmington on October 22, 2024, by the following vote:

	Aye	Nay	Absent
Peter Ingalsbe	X		
Michael Casale	X		
Steven Holtz	X		
Ronald Herendeen	X		
Nathan Bowerman	X		

STATE OF NEW YORK
ONTARIO COUNTY

This is to certify that I, Michelle Finley, Town Clerk of the Town of Farmington, in the said County of Ontario, has compared the foregoing copy of Resolution No. 379-2024- **ADOPTION OF ONTARIO COUNTY HAZARD MITIGATION ACTION PLAN**

With the original now on file in this office, and that the same is a correct and true transcript of such originals and the whole thereof.

TOWN OF FARMINGTON

***In Witness Whereof,* I have hereunto set my hand and affixed the seal of said Town this 23rd day of October 2024.**

SEAL

Michelle Finley MMC, RMC
Farmington Town Clerk – Ontario County

RESOLUTION # 79-2024

RESOLUTION OF THE CITY OF GENEVA ADOPTING THE
ONTARIO COUNTY HAZARD MITIGATION ACTION PLAN

WHEREAS, the City of Geneva recognizes the threat that natural hazards pose to people and property within the City of Geneva; and

WHEREAS, the County of Ontario has prepared a multi-hazard mitigation plan, hereby known as Ontario County Hazard Mitigation Action Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS, the Ontario County Hazard Mitigation Plan, identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the City of Geneva from the impacts of future hazards and disasters; and

WHEREAS, adoption by the City Council demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Ontario County Hazard Mitigation Plan.

NOW THEREFORE, BE IT RESOLVED THAT the City Council of the City of Geneva, New York, adopts the Ontario County Hazard Mitigation Action Plan. This plan, approved by the community, may be edited or amended after submission for review, but will not require the community to re-adopt any further iterations. This only applies to this specific plan and does not absolve the community from updating the plan in 5 years.

STATE OF NEW YORK)

COUNTY OF ONTARIO) ss:

I, Nicole Tillotson, City Clerk of the City of Geneva, New York, do hereby certify the foregoing to be a true and complete copy of an original resolution on file in the City Clerk's Office, which said original was adopted at a Regular Meeting of the Geneva City Council held on November 6, 2024.

Dated: November 7, 2024

Nicole Tillotson

City Clerk

2024 RESOLUTION NO. 81-2024. Adopting the Ontario County Hazard Mitigation Plan. Motion to approve made by Councilmember Aliperti, second by Councilmember Wilber. Unanimously approved.

TOWN OF GENEVA, NEW YORK
RESOLUTION OF THE TOWN BOARD
RESOLUTION NO. 81 -2024

WHEREAS the Town of Geneva recognizes the threat that natural hazards pose to people and property within the Town of Geneva; and

WHEREAS the County of Ontario has prepared a multi-hazard mitigation plan, known as the Ontario County Hazard Mitigation Action Plan, in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS the Ontario County Hazard Mitigation Action Plan identifies mitigation goals and actions to reduce or eliminate long-term risks to people and property in the Town of Geneva from the impacts of future hazards and disasters; and

WHEREAS adoption by the Town Board demonstrates its commitment to hazard mitigation and achieving the goals outlined in the Ontario County Hazard Mitigation Action Plan; now therefore it is

RESOLVED the Geneva Town Board adopts the Ontario County Hazard Mitigation Action Plan, and as it may be edited or amended after submission for review.

I, Lorie Peck, Town Clerk of the Town of Geneva do hereby certify that the Town Board of the Town of Geneva adopted the resolution on October 8th, 2024.

Lorie Peck,
Lorie Peck, Town Clerk

TOWN OF GORHAM
RESOLUTION #35-2024
ADOPTING THE ONTARIO COUNTY HAZARD MITIGATION ACTION PLAN

WHEREAS the Town of Gorham recognizes the threat that natural hazards pose to people and property in the Town of Gorham; and

WHEREAS the County of Ontario has prepared a multi-hazard mitigation plan, hereby known as Ontario County Hazard Mitigation Action Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS Ontario County Hazard Mitigation Action Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Town of Gorham from the impacts of future hazards and disasters; and

WHEREAS adoption by the Town Board demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Ontario County Hazard Mitigation Action Plan.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN OF GORHAM, NEW YORK, that:

Section 1. In accordance with (local rule for adopting resolutions), the Town Board adopts the Ontario County Hazard Mitigation Action Plan. This plan, approved by the community, may be edited or amended after submission for review, but will not require the community to re-adopt any further iterations. This only applies to this specific plan and does not absolve the community from updating the plan in 5 years.

I, Darby L. Perrotte, Town Clerk of the Town of Gorham, do hereby certify that the aforementioned resolution was adopted by the Town Board of the Town of Gorham on October 30, 2024 by the following vote:

	Aye	**Nay**
Dale C. Stell	X	
Jake Chard	X	
Phil Curtis	X	
Brian Lazarus		X
Chrissy Watkins	X	

Dated October 30, 2024

Darby L. Perrotte
Town Clerk

seal

TOWN OF HOPEWELL, NEW YORK

RESOLUTION #19-2024

A RESOLUTION OF THE TOWN OF HOPEWELL ADOPTING THE ONTARIO COUNTY HAZARD MITIGATION ACTION PLAN.

WHEREAS the Town of Hopewell recognizes the threat that natural hazards pose to people and property within the Town of Hopewell; and

WHEREAS the County of Ontario has prepared a multi-hazard mitigation plan, hereby known as Ontario County Hazard Mitigation Action Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS Ontario County Hazard Mitigation Action Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Town of Hopewell from the impacts of future hazards and disasters; and

WHEREAS adoption by the Town Board demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Ontario County Hazard Mitigation Action Plan.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN OF HOPEWELL, NEW YORK, THAT:

Section 1. In accordance with (local rule for adopting resolutions), the Town Board adopts the Ontario County Hazard Mitigation Action Plan. This plan, approved by the community, may be edited or amended after submission for review, but will not require the community to re-adopt any further iterations. This only applies to this specific plan and does not absolve the community from updating the plan in 5 years.

ADOPTED by a vote of 4 in favor and 0 against, and 0 abstaining, this 16TH day of October, 2024.

By: Denise L. Hood

Hopewell Town Clerk

ATTEST: By: William Namestnik

Hopewell Town
Supervisor

APPROVED AS TO FORM: By: Denise L. Hood

Hopewell Town Clerk

TOWN OF MANCHESTER, NEW YORK

RESOLUTION NO. 112-2024

A RESOLUTION OF THE TOWN OF MANCHESTER ADOPTING THE ONTARIO COUNTY HAZARD MITIGATION ACTION PLAN.

WHEREAS the Town of Manchester recognizes the threat that natural hazards pose to people and property within the Town of Manchester; and

WHEREAS the County of Ontario has prepared a multi-hazard mitigation plan, hereby known as Ontario County Hazard Mitigation Action Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS Ontario County Hazard Mitigation Action Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Town of Manchester from the impacts of future hazards and disasters; and

WHEREAS adoption by the Town Board demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Ontario County Hazard Mitigation Action Plan.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN OF MANCHESTER, NEW YORK, THAT:

Section 1. In accordance with (local rule for adopting resolutions), the Town Board adopts the Ontario County Hazard Mitigation Action Plan. This plan, approved by the community, may be edited or amended after submission for review, but will not require the community to re-adopt any further iterations. This only applies to this specific plan and does not absolve the community from updating the plan in 5 years.

ADOPTED by a vote of five (5) in favor and zero (0) against, and zero (0) abstaining, this 8th day of October, 2024.

By: _____

David Phillips, Supervisor

Town of Manchester

ATTEST: By: _____

Devon Hayes, Town Clerk

Town of Manchester

APPROVED AS TO FORM: By: _____

VILLAGE OF MANCHESTER, NEW YORK

RESOLUTION NO. 11-24

A RESOLUTION OF THE VILLAGE OF MANCHESTER ADOPTING THE ONTARIO COUNTY HAZARD MITIGATION ACTION PLAN.

WHEREAS the Village of Manchester recognizes the threat that natural hazards pose to people and property within the Village of Manchester; and

WHEREAS the County of Ontario has prepared a multi-hazard mitigation plan, hereby known as Ontario County Hazard Mitigation Action Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS Ontario County Hazard Mitigation Action Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Village of Manchester from the impacts of future hazards and disasters; and

WHEREAS adoption by the Village Board demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Ontario County Hazard Mitigation Action Plan.

NOW THEREFORE, BE IT RESOLVED BY THE VILLAGE OF MANCHESTER, NEW YORK, THAT:

Section 1. In accordance with (local rule for adopting resolutions), the Village Board adopts the Ontario County Hazard Mitigation Action Plan. This plan, approved by the community, may be edited or amended after submission for review but will not require the community to re-adopt any further iterations. This only applies to this specific plan and does not absolve the community from updating the plan in 5 years.

ADOPTED by a vote of 3 in favor and 0 against, and 0 abstaining, this 7th. day of October, 2024.

By: Michael Buttaccio Mayor

(print name and title)

ATTEST: By: Rita J. Gurewitch Village Clerk/Treasurer

(print name and title)

APPROVED AS TO FORM: By: Michael Buttaccio

(print name and title) Michael Buttaccio
Mayor

Town of Naples
Resolution No. 19 -2024

A RESOLUTION OF THE TOWN OF NAPLES ADOPTING THE ONTARIO COUNTY HAZARD MITIGATION ACTION PLAN.

Motion by Councilperson Edward Northrop seconded by Councilperson Kathleen Riesenberger to adopt the following resolution:

WHEREAS the Town of Naples recognizes the threat that natural hazards pose to people and property within the Town of Naples; and

WHEREAS the County of Ontario has prepared a multi-hazard mitigation plan, hereby known as Ontario County Hazard Mitigation Action Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS Ontario County Hazard Mitigation Action Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Town of Naples from the impacts of future hazards and disasters; and

WHEREAS adoption by the Town Board demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Ontario County Hazard Mitigation Action Plan.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN OF NAPLES, NEW YORK, THAT:

Section 1. In accordance with (local rule for adopting resolutions), the Town Board adopts the Ontario County Hazard Mitigation Action Plan. This plan, approved by the community, may be edited or amended after submission for review, but will not require the community to re-adopt any further iterations. This only applies to this specific plan and does not absolve the community from updating the plan in 5 years.

ADOPTED by a vote of 5 Ayes: Riesenberger, Bay, Trischler, Northrop, Cowley on this __6th___ day of _November__, _2024____.

CERTIFICATION OF CLERK

STATE OF NEW YORK)
COUNTY OF ONTARIO)
TOWN OF NAPLES)

I, Morgan Riesenberger, Clerk for the Town of Naples, County of Ontario and State of New York, do hereby certify that the before mentioned RESOLUTION 19-2024 was adopted at a meeting of the Town Board of the Town of Naples held on November 6, 2024 and is incorporated in the original minutes of said meeting, and that said resolution has not been altered, amended or revoked and is in full force and effect.

Dated: November 7, 2024

Morgan F. Riesenberger
Morgan Riesenberger – Town Clerk

VILLAGE OF NAPLES, NEW YORK

RESOLUTION NO. HM2024

A RESOLUTION OF THE VILLAGE OF NAPLES ADOPTING THE ONTARIO COUNTY HAZARD MITIGATION ACTION PLAN.

WHEREAS the Village of Naples recognizes the threat that natural hazards pose to people and property within the Village of Naples; and

WHEREAS the County of Ontario has prepared a multi-hazard mitigation plan, hereby known as Ontario County Hazard Mitigation Action Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS Ontario County Hazard Mitigation Action Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Village of Naples from the impacts of future hazards and disasters; and

WHEREAS adoption by the Village Board demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Ontario County Hazard Mitigation Action Plan.

NOW THEREFORE, BE IT RESOLVED BY THE VILLAGE OF NAPLES, NEW YORK, THAT:

Section 1. In accordance with (local rule for adopting resolutions), the Village Board adopts the Ontario County Hazard Mitigation Action Plan. This plan, approved by the community, may be edited or amended after submission for review, but will not require the community to re-adopt any further iterations. This only applies to this specific plan and does not absolve the community from updating the plan in 5 years.

ADOPTED by a vote of 4 in favor and 0 against, and 0 abstaining, this 16 day of October, 2024.

By: Trustee Sargent Frappier

ATTEST: By: Trustee Sean Sullivan

APPROVED AS TO FORM: By: Mayor Brian Schenk

Certified: 10.16.2024

Megan L Bay

Clerk/Treasurer



24-119

RESOLUTION TO ADOPT
ONTARIO COUNTY HAZARD MITIGATION ACTION PLAN

TOWN OF PHELPS, NEW YORK

WHEREAS, the Town of Phelps recognizes the threat that natural hazards pose to people and property within the Town of Phelps; and

WHEREAS, the County of Ontario has prepared a multi-hazard mitigation plan, hereby known as Ontario County Hazard Mitigation Action Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS, Ontario County Hazard Mitigation Action Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Town of Phelps from the impacts of future hazards and disasters; and

WHEREAS, adoption by the Town Board demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Ontario County Hazard Mitigation Action Plan.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN OF PHELPS, NEW YORK, THAT:

Section 1. In accordance with (local rule for adopting resolutions), the Town Board adopts the Ontario County Hazard Mitigation Action Plan. This plan, approved by the community, may be edited or amended after submission for review, but will not require the community to re-adopt any further iterations. This only applies to this specific plan and does not absolve the community from updating the plan in 5 years.

I, Amy Sitterley, Town Clerk of the Town of Phelps do hereby certify that the aforementioned resolution was adopted by the Town Board of the Town of Phelps on October 15, 2024, by the following vote:

	Aye	Nay	Absent
Ron Allen	X	___	___
Brent Ford	X	___	___
Kent Ridley	X	___	___
John Duchesneau	X	___	___
Bill Wellman	X	___	___

Dated: October 15, 2024

Amy Sitterley, Town Clerk

SEAL

VILLAGE OF PHELPS, NEW YORK

RESOLUTION NO. #18 - 2024

A RESOLUTION OF THE VILLAGE OF PHELPS ADOPTING THE ONTARIO COUNTY HAZARD MITIGATION ACTION PLAN.

WHEREAS the Village of Phelps recognizes the threat that natural hazards pose to people and property within the Village of Phelps; and

WHEREAS the County of Ontario has prepared a multi-hazard mitigation plan, hereby known as Ontario County Hazard Mitigation Action Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS Ontario County Hazard Mitigation Action Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Village of Phelps from the impacts of future hazards and disasters; and

WHEREAS adoption by the Village Board demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Ontario County Hazard Mitigation Action Plan.

NOW THEREFORE, BE IT RESOLVED BY THE VILLAGE OF PHELPS, NEW YORK, THAT:

Section 1. In accordance with (local rule for adopting resolutions), the Village Board adopts the Ontario County Hazard Mitigation Action Plan. This plan, approved by the community, may be edited or amended after submission for review, but will not require the community to re-adopt any further iterations. This only applies to this specific plan and does not absolve the community from updating the plan in 5 years.

ADOPTED by a vote of 4 in favor and 0 against, and 1 absent, this 14th day of October, 2024.

By: _____

James E. Cheney, Mayor

ATTEST: By: _____

Jill K. Seifert, Clerk/Treasurer

APPROVED AS TO FORM: By: _____

Melissa J. Lahr, Deputy Clerk/Treasurer

TOWN OF RICHMOND, NEW YORK
10 2024 45

A RESOLUTION OF THE TOWN OF RICHMOND ADOPTING THE ONTARIO COUNTY HAZARD MITIGATION ACTION PLAN.

WHEREAS the Town of Richmond recognizes the threat that natural hazards pose to people and property within the Town of Richmond; and

WHEREAS the County of Ontario has prepared a multi-hazard mitigation plan, hereby known as Ontario County Hazard Mitigation Action Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS Ontario County Hazard Mitigation Action Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Town of Richmond from the impacts of future hazards and disasters; and

WHEREAS adoption by the Town Board demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Ontario County Hazard Mitigation Action Plan.

NOW THEREFORE, BE IT RESOLVED BY THE Town Board of the TOWN OF RICHMOND, Honeoye,

NEW YORK, THAT:

Section 1. In accordance with (local rule for adopting resolutions), the Town Board adopts the Ontario County Hazard Mitigation Action Plan. This plan, approved by the community, may be edited or amended after submission for review, but will not require the community to re-adopt any further iterations. This only applies to this specific plan and does not absolve the community from updating the plan in 5 years.

ADOPTED by a vote of 4 in favor and 0 against, and 0 abstaining, this 8th day of October 2024.

Councilman Cornish motioned to wave the reading and approve the resolution adopting the Ontario County Hazard Mitigation Action Plan.
Councilman Flynn 2nd

Roll Call was performed by Tracy Lortscher, Richmond Town Clerk

Councilman Cornish	Aye
Councilman Deck	Aye
Councilman Flynn	Aye
Supervisor Marshall	Aye

Tracy Lortscher

Tracy Lortscher, Richmond Town Clerk

VILLAGE OF RUSHVILLE, NEW YORK

RESOLUTION 17-2024 Adopting the Ontario County Hazard Mitigation Action Plan

WHEREAS, the Village of Rushville recognizes the threat that natural hazards pose to people and property within the Village of Rushville; and

WHEREAS, the County of Ontario has prepared a multi-hazard mitigation plan, hereby known as Ontario County Hazard Mitigation Action Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS, Ontario County Hazard Mitigation Action Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Village of Rushville from the impacts of future hazards and disasters; and

WHEREAS, adoption by the Village Board demonstrates their commitment to hazard mitigation and achieving the goals outline in the Ontario County Hazard Mitigation Action Plan.

NOW THEREFORE, BE IT RESOLVED BY THE VILLAGE OF RUSHVILLE, NEW YORK, THAT;

Section l. In accordance with (local rule for adopting resolutions), the Village Board adopts the Ontario County Hazard Mitigation Action Plan. This plan, approved by the community, may be edited or amended after submission for review, but will not require the community to re-adopt any further iterations. This only applies to this specific plan and does not absolve the community from updating the plan in 5 years.

RESOLVED that the Mayor, Art Rilands offered the following resolution on Monday, October 21, 2024 at the Village Board meeting. Trustee Doug Rigby motioned approval and Deputy Mayor Karen Gorton seconded, the motion.

The question of the foregoing Resolution as duly put to a vote –

Trustee Cheryl Hilton-Vadner - Yes
Deputy Mayor Karen Gorton - Yes
Trustee Doug Rigby – Yes
Trustee Chandra Gilman - Absent
Mayor Art Rilands - Yes

The foregoing Resolution was thereupon declared duly adopted.
Dated: October 21, 2024

STATE OF NEW YORK)
COUNTY OF YATES)

I, Jeannie Kesel, Village Clerk for the Village of Rushville, do hereby certify that the above is a true and exact copy of a Resolution 17-2024 by the Board of Trustees for the Village of Rushville at a meeting of said Board held on October 21, 2024

Jeannie Kesel, Village Clerk

Resolution # 85-24

Adopting the Ontario County Hazard Mitigation Action Plan

WHEREAS the Town of Seneca recognizes the threat that natural hazards pose to people within the Town of Seneca; and

WHEREAS the County of Ontario has prepared a multi-hazard mitigation plan, hereby known as Ontario County Hazard Mitigation Action Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS Ontario County Hazard Mitigation Action Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Town of Seneca form the impacts of future hazards and disasters; and

WHEREAS adoption by the Town Board demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Ontario County Hazard Mitigation Action Plan.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN OF SENECA, NEW YORK, THAT:

Section 1. In accordance with (local rule for adopting resolutions), the Town Board adopts the Ontario County Hazard Mitigation Action Plan. This plan, approved by the community, may be edited or amended after submission for review, but will not require the community to re-adopt any further iterations. This only applies to this specific plan and does not absolve the community from updating the plan in 5 years.

ADOPTED by a vote of **5** in favor of and **0** against, and **0** abstaining, this 15th day of October 2024.

THIS IS TO CERTIFY THAT THIS IS A TRUE COPY OF A RECORD ON FILE IN THE OFFICE OF TOWN CLERK.

TOWN OF SENECA, NEW YORK

Haley S Eagley

AUTHORIZED SIGNATURE

VILLAGE OF SHORTSVILLE, NEW YORK

RESOLUTION NO. 9-2024

A RESOLUTION OF THE VILLAGE OF SHORTSVILLE ADOPTING THE ONTARIO COUNTY HAZARD MITIGATION ACTION PLAN.

WHEREAS the Village of Shortsville recognizes the threat that natural hazards pose to people and property within the Village of Shortsville; and

WHEREAS the County of Ontario has prepared a multi-hazard mitigation plan, hereby known as Ontario County Hazard Mitigation Action Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS Ontario County Hazard Mitigation Action Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Village of Shortsville from the impacts of future hazards and disasters; and

WHEREAS adoption by the Village Board demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Ontario County Hazard Mitigation Action Plan.

NOW THEREFORE, BE IT RESOLVED BY THE VILLAGE OF SHORTSVILLE, NEW YORK, THAT:

Section 1. In accordance with (local rule for adopting resolutions), the Village Board adopts the Ontario County Hazard Mitigation Action Plan. This plan, approved by the community, may be edited or amended after submission for review, but will not require the community to re-adopt any further iterations. This only applies to this specific plan and does not absolve the community from updating the plan in 5 years.

ADOPTED by a vote of 3 in favor and 0 against, and 0 abstaining, this 9th day of October, 2024.

By: Ernest Corino

Ernest Corino, Mayor

ATTEST: By: Amy Alexander

Amy Alexander, Village Clerk-Treasurer

APPROVED AS TO FORM: By: Amy Alexander

Amy Alexander, Village Clerk-Treasurer

TOWN OF SOUTH BRISTOL
OFFICE OF THE SUPERVISOR
6500 GANNETT HILL ROAD
NAPLES, NEW YORK 14512

DANIEL Q. MARSHALL
SUPERVISOR

TOWN OF SOUTH BRISTOL, NEW YORK
RESOLUTION NO. 37-2024
A RESOLUTION OF THE TOWN OF SOUTH BRISTOL ADOPTING THE ONTARIO COUNTY HAZARD MITIGATION ACTION PLAN.

WHEREAS the Town of South Bristol recognizes the threat that natural hazards pose to people and property within the Town of South Bristol; and

WHEREAS the County of Ontario has prepared a multi-hazard mitigation plan, hereby known as Ontario County Hazard Mitigation Action Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS Ontario County Hazard Mitigation Action Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Town of South Bristol from the impacts of future hazards and disasters; and

WHEREAS adoption by the Town Board demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Ontario County Hazard Mitigation Action Plan.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN OF SOUTH BRISTOL, NEW YORK, THAT:

Section 1. In accordance with (local rule for adopting resolutions), the Town Board adopts the Ontario County Hazard Mitigation Action Plan. This plan, approved by the community, may be edited or amended after submission for review, but will not require the community to re-adopt any further iterations. This only applies to this specific plan and does not absolve the community from updating the plan in 5 years.

ADOPTED by a vote of 5 in favor and 0 against, and 0 abstaining, this 15th day of October 2024.

By: Daniel Q. Marshall
Daniel Q. Marshall, South Bristol Supervisor

ATTEST: By: Judy Voss
Judy Voss, South Bristol Town Clerk

APPROVED AS TO FORM: By: Judy Voss
Judy Voss, South Bristol Town Clerk

OFFICE: (585) 374-6341 · FAX: (585) 374-8918
daniel.marshall@southbristolny.org
website: www.southbristolny.org

Town of Victor
Town Board
Victor, New York 14564

RESOLUTION NO. 209
TOWN OF VICTOR ADOPTING
THE ONTARIO COUNTY HAZARD MITIGATION ACTION PLAN

On motion of Councilmember Guinan, seconded by Councilmember Condon, the following resolution was adopted:

4 Ayes (Marren, Condon, Guinan, Ogra,) 0 Nays

WHEREAS, the Town of Victor recognizes the threat that natural hazards pose to people and property within the Town of Victor; and

WHEREAS, the County of Ontario has prepared a multi-hazard mitigation plan, hereby known as Ontario County Hazard Mitigation Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS, Ontario County Hazard Mitigation Action Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Town of Victor from the impacts of future hazards and disasters; and

WHEREAS, adoption by the Town Board demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Ontario County Hazard Mitigation Action Plan; now therefore, be it

RESOLVED by the Town of Victor, New York, that:

Section 1. The Town Board adopts the Ontario County Hazard Mitigation Action Plan. This plan, approved by the community, may be edited or amended after submission for review, but will not require the community to re-adopt any further iterations. This only applies to this specific plan and does not absolve the community from updating the plan in 5 years; and further

RESOLVED that this resolution be forwarded to Ontario County and Town of Victor Project Manager.

State of New York
County of Ontario

I do hereby certify that I have compared the preceding with the original thereof, on file in the Office of the Clerk of the Town of Victor, New York, and that the same is a correct transcript there from and of the whole of said original; and that said original was duly adopted at a meeting of the Town Board of the Town of Victor, New York on October 15, 2024.

Given under my hand and official seal

Karen C. Bodine

Karen C. Bodine, Victor Town Clerk

MAYOR
Gary Hadden
924-3311

DEPUTY MAYOR
Michael L. Crowley

BOARD OF TRUSTEES
Michelle Chalupa
Carol Commisso
Sean McAdoo

VILLAGE CLERK
Pamela Hogenes
924-3311

TREASURER
Diane White
924-3311

VILLAGE ATTORNEY
Reid A. Holter

DIRECTOR OF PUBLIC WORKS
John C. Turner
924-2004

CODE ENFORCEMENT OFFICER
924-3311

PLANNING BOARD CHAIRPERSON
Meg CHaides

ZONING BOARD CHAIRPERSON
Sean Sanderson

URBAN RENEWAL AGENCY CHAIRPERSON
Carol Commisso

RESOLUTION NO. 93-24

ADOPTING THE ONTARIO COUNTY HAZARD MITIGATION ACTION PLAN

On motion by Trustee Sean McAdoo, seconded by Trustee Michael Crowley the following resolution was ADOPTED 5 AYES 0 NAYS

WHEREAS the Village of Victor recognizes the threat that natural hazards pose to people and property within the Village of Victor; and

WHEREAS the County of Ontario has prepared a multi-hazard mitigation plan, hereby known as Ontario County Hazard Mitigation Action Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS Ontario County Hazard Mitigation Action Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Village of Victor from the impacts of future hazards and disasters; and

WHEREAS adoption by the Village Board demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Ontario County Hazard Mitigation Action Plan.

NOW THEREFORE, BE IT RESOLVED BY THE VILLAGE OF VICTOR, NEW YORK, THAT:

Section 1. In accordance with (local rule for adopting resolutions), the Village Board adopts the Ontario County Hazard Mitigation Action Plan. This plan, approved by the community, may be edited or amended after submission for review, but will not require the community to re-adopt any further iterations. This only applies to this specific plan and does not absolve the community from updating the plan in 5 years.

County of Ontario)

State of New York)

Village of Victor)

I hereby certify that the foregoing is a true and correct transcript of resolution duly adopted by the Village Board of Trustees on the 7th of October 2024.

Pamela S. Hogenes

Village Clerk of the Village of Victor

60 EAST MAIN STREET • VICTOR, NEW YORK 14564 (585) 924-3311 • FAX (585) 924-0282
villageclerk@villageofvictor.org

TOWN OF WEST BLOOMFIELD

This is a Certified Copy of Resolution that was passed at a Meeting of the Town Board of West Bloomfield, at which a quorum was present on October 9, 2024

RESOLUTION # 105-2024

TOWN OF WEST BLOOMFIELD, NEW YORK

RESOLUTION NO. 105

A RESOLUTION OF THE TOWN OF WEST BLOOMFIELD ADOPTING THE ONTARIO COUNTY HAZARD MITIGATION ACTION PLAN.

WHEREAS the Town of West Bloomfield recognizes the threat that natural hazards pose to people and property within the Town of West Bloomfield; and

WHEREAS the County of Ontario has prepared a multi-hazard mitigation plan, hereby known as Ontario County Hazard Mitigation Action Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS Ontario County Hazard Mitigation Action Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Town of West Bloomfield from the impacts of future hazards and disasters; and

WHEREAS adoption by the Town Board demonstrates their commitment to hazard mitigation and achieving the goals outlined in the Ontario County Hazard Mitigation Action Plan.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN OF WEST BLOOMFIELD, NEW YORK, THAT:

Section 1. In accordance with (local rule for adopting resolutions), the Town Board adopts the Ontario County Hazard Mitigation Action Plan. This plan, approved by the community, may be edited or amended after submission for review, but will not require the community to re-adopt any further iterations. This only applies to this specific plan and does not absolve the community from updating the plan in 5 years.

Supervisor Campbell asked for a resolution to adopt The Ontario County Hazard Mitigation Action Plan. Councilmember Travis made the resolution to approve seconded by Councilmember Harman.
Adopted: Ayes – Campbell, Smith, Harman, Carey, Travis - Nays, None

ATTEST: By: Brenda Thompson

Brenda Thompson – Town Clerk Town of West Bloomfield

TOWN HALL

9097 Daylight Drive
PO Box 87
West Bloomfield, NY 14585

PHONE 585-624-2914
FAX 585-624-4830
EMAIL townclerk@townofwestbloomfield.org
WEBSITE www.townofwestbloomfield.org