



Yates County, New York

Hazard Mitigation Plan

Volume III—Appendices



September 2025



2025 Yates County Hazard Mitigation Plan

September 2025
#105s039507

PREPARED FOR

Yates County Office of Emergency Services
227 Main Street
Penn Yan, NY 14527

PREPARED BY

Tetra Tech
2301 Lucien Way,
Maitland, FL 32751

P +1-321-441-8500
tetratech.com

DRAFT



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ACRONYMS AND ABBREVIATIONS

%	Percent
ACOE	Army Corps of Engineers
ACS	American Community Survey
ADA	Americans with Disabilities Act
AICP	American Institute of Certified Planners
ACE	Annual Chance Exceedance
ANSS	Advanced National Seismic System
APA	Approval Pending Adoption
ARC	American Red Cross
ASCE	American Society of Civil Engineers
ALICE	Asset Limited, Income Constrained, Employed
ASDSO	Association of State Dam Safety Officials
BCA	Benefit Cost Analysis
BCEGS	Building Code Effectiveness Grading Schedule
BFE	Base Flood Elevation
BOA	Brownfield Opportunity Area
BOCES	Board of Cooperative Educational Services of New York State
BUI	Buildup Index
C	City
CBS	Chemical Bulk Storage
CAC	Community Assistance Contacts
CAP-SSSE	Compliance Assistance Program – State Support Services Element
CAV	Community Assisted Visit
CCAHA	Conservation Center for Art and Historic Artifacts
CCE	Cornell Cooperative Extension
CDBG	Community Development Block Grant
CDBG-DR	Community Development Block Grant Disaster Recovery



CDC	Centers for Disease Control
CDMS	Comprehensive Data Management System
CEDAR	Code Enforcement Disaster Assistance Response
CEMP	Comprehensive Emergency Management Program
CEO	Chief Executive Officer
CFR	Code of Federal Regulations
CIP	Capital Improvement Plan
CMP	Coastal Management Program
COOP/COG	Continuity of Operations/Continuity of Government
COAD	Community Organizations Active in Disaster
CPC	Climate Prediction Center
C-PUD	Commercial Planned Unit Development
CRREL	Cold Regions Research and Engineering Laboratory
CRS	Community Rating System
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CSC	Climate Smart Communities (NYSDEC)
CSD	Central School District
COVID	Coronavirus Disease
CPR	Cardiopulmonary Resuscitation
CRRA	Community Risk and Resiliency Act
CWA	Clean Water Act
CWSRF	Clean Water State Revolving Fund
DBSC	Division of Building Standards and Codes
DEM	Digital Elevation Model
DFIRM	Digital Flood Insurance Rate Map
DHS	Department of Homeland Security
DI	Damage Indicators



DOD	Degree of Damage
DMA 2000	Disaster Mitigation Act of 2000
DPW	Department of Public Works
DCPW	Deputy Commissioner of Public Works
DR	Major Disaster Declaration (FEMA)
DRI	Downtown Revitalization Initiative
DOH	Department of Health
DOS	Department of State
DOT	Department of Transportation
EAB	Emerald Ash Borer
EAP	Emergency Action Plan
ECL	Environmental Conservation Law
EDD	Early Detection and Distribution
EF	Enhanced Fujita Scale
EFC	Environmental Facilities Corporation
EM	Emergency Declaration (FEMA)
EMPG	Emergency Management Program Grant
EMS	Emergency Medical Services
EPF	Environmental Protection Fund
EOC	Emergency Operation Center
EOP	Emergency Operation Plan
EPA	Environmental Protection Agency
ESF	Emergency Support Function
ESRI	Environmental Systems Research Institute
EWP	Emergency Watershed Protection Program
FAA	Federal Aviation Administration
FD	Fire Department
FDRA	Fire Danger Rating Areas
FEMA	Federal Emergency Management Agency



FERC	Federal Energy Regulatory Commission
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FIA	Flood Insurance Administration
FIS	Flood Insurance Study
FLDEC	Finger Lakes Economic Development Corporation
FLHEDC	Finger Lakes Horizon Economic Development Corporation
FGLK	Finger Lakes Railway Corporation
FLLT	Finger Lakes Land Trust
FM	Fuel Moisture
FMA	Flood Mitigation Assistance
FMCSA	Federal Motor Carrier Safety Administration
FPA	Floodplain Administrator
FPI	Fire Potential index
FTA	Federal Transit Authority
FY	Fiscal Year
GCM	Global Climate Model
GIS	Geographic Information System
GML	General Municipal Law
GOSR	Governor's Office for Storm Recovery
GSN	Global Seismographic Network
GP	General Permit
HAB	Harmful Algal Bloom
HAZMAT	Hazardous Materials
HAZUS	Hazards U.S.
HAZUS-MH	Hazards U.S. Multi-Hazard
HHPD	High Hazard Potential Dam
HMGP	Hazard Mitigation Grant Program
HMP	Hazard Mitigation Plan



HSGP	Homeland Security Grant Program
HUC	Hydrologic Unit
HUD	U.S. Department of Housing and Urban Development
HVAC	Heating, Ventilation, and Air Conditioning
IA	Individual Assistance
ICS	National Incident Command System
IDA	International Development Association
IHWDS	Inactive Hazardous Waste Disposal Site
ISO	Insurance Service Office
IT	Information Technology
JC	Johnson City
JSTP	Joint Sewage Treatment Plant
KBDI	Keetch-Bryam Drought Index
LCSN	Lamon-Doherty Cooperative Seismographic Network
LAMP	Levee Analysis and Mapping Process
LSAC	Levee Safety Action Classification
LEED	Leadership in Energy and Environmental Design
LEPC	Local Emergency Planning Committee
LWCF	Land and Water Conservation Fund
LWRP	Local Waterfront Revitalization Program
LLC	Limited Liability Company
LOP	Letter of Permission
MCI	Mass Causality Incident
MERS	Middle East Respiratory Syndrome
MOSF	Major Oil Storage Facilities
MGD	Million Gallons per Day
Mi	Mile
MMI	Modified Mercalli Intensity Scale
Mph	Miles per Hour



MRCC	Midwest Regional Climate Center
MRP	Mean Return Period
MRLC	Multi-Resolution Land Characteristics
N/A	Not Applicable
NA	Not Available
NAS	National Academy of Sciences
NASA	National Aeronautics and Space Administration
NAC-AAA	National Avalanche Center – American Avalanche Association
NCDC	National Climate Data Center
NCEI	National Centers for Environmental Information
NCI	North Central Institute
NEHRP	National Earthquake Hazards Reduction Program
NEP	National Estuary Program
NESIS	Northeast Snowfall Impact Scale
NFDRS	National Fire Danger Rating System
NFIA	National Flood Insurance Act
NFIP	National Flood Insurance Program
NFPA	National Fire Protection Association
NHC	National Hurricane Center
NHD	National Hydrography Dataset
NHTSA	National Highway Traffic Safety Administration
NID	National Inventory of Dams
NIDIS	National Integrated Drought Information System
NIMS	National Incident Management System
NLCD	
NLD	National Levee Database
NOAA	National Oceanic and Atmospheric Administration
NPDP	National Performance of Dams Program
NPL	National Priorities List (EPA)



NRCC	Northeast Regional Climate Center
NRCS	Natural Resources Conservation Service
NRDC	Natural Resources Defense Council
NSIDC	National Snow and Ice Data Center
NSSL	National Severe Storms Library
NTSB	National Transportation Safety Board
NWP	Nationwide Permit
NWS	National Weather Service
NY	New York
NYIS	New York Invasive Species Network
NYCRR	New York Codes, Rule, and Regulations
NYPA	New York Power Authority
NYRCR	New York Rising Community Reconstruction
NYS	New York State
NYS DHSES	New York State Division of Homeland Security and Emergency Services
NYS ESD	New York State Empire State Development
NYS GIS	New York State Geographic Information System
NYS OFP&C	New York State Office of Fire Prevention and Control
NYS DAM	New York State Department of Agriculture and Markets
NYS DEC	New York State Department of Environmental Conservation
NYS DOH	New York State Department of Health
NYS DOT	New York State Department of Transportation
NYS DPC	New York State Disaster Preparedness Commission
NYSEG	New York State Electric and Gas
NYSERDA	New York State Energy Research and Development Authority
NYSHMP	New York State Hazard Mitigation Plan
NYSFSMA	New York State Floodplain and Stormwater Managers
NYS OEM	New York State Office of Emergency Management
OES	Office of Emergency Services



OFA	Office for Aging
OFPC	Office of Fire Prevention and Control
OPRHP	Office of Parks, Recreation and Historic Preservation
OPSG	Operation Stonegarden
OSHA	Occupational Safety and Health Administration
PA	Public Assistance
PBS	Petroleum Bulk Storage
PD	Police Department
PDM	Pre-Disaster Mitigation Program
PDSI	Palmer Drought Severity Index
PFIS	Preliminary Flood Insurance Study
PE	Professional Engineer
PGA	Peak Ground Acceleration
PHMSA	Pipeline and Hazardous Materials Safety Administration
POC	Point of Contact
POE	Point of Entry
Pop.	Population
PPD	Presidential Policy Directive
PRISM	The Finger Lakes Partnership for Regional Invasive Species Management
PW	Public Works
RAISE	Rebuilding American Infrastructure with Sustainability and Equity
RC	Red Cross
RCV	Replacement Cost Value
REDC	Regional Economic Development Council
RL	Repetitive Loss
RLF	Revolving Loan Fund
RMC	Registered Municipal Clerk
ROW	Right of Way
RSI	Regional Snowfall Index



RTE	Route
RTP	Recreational Trails Program
SARA	Superfund Amendments and Reauthorization Act
SBA	Small Business Administration
SEQRA	State Environmental Quality Review Act
SDI	State Drought Index (NYSDEC)
SF	Square Feet
SFHA	Special Flood Hazard Area
SFRMG	State Flood Risk Management Guidance
SHMP	State Hazard Mitigation Plan
SHMO	State Hazard Mitigation Officer
SHSP	State Homeland Security Program
SILVIS	Spatial Analysis for Conservation and Sustainability
SPC	Storm Prediction Center
SPEI	Standardized Precipitation Evapotranspiration Index
SPDES	State Pollutant Discharge Elimination System
SUNY	State University of New York
Sq. Mi.	Square mile
SRL	Severe Repetitive Loss
SSBG	Social Services Block Grant
SVI	Social Vulnerability Index
SWCD	Soil and Water Conservation District
SWMP	Stormwater Management Program
SWOO	Strengths, Weaknesses, Obstacles and Opportunities
SWPPP	Stormwater Pollution Prevention Plan
T	Town
TBD	To Be Determined
TD	Tropical Depression
THIRA	Threat Hazard Identification and Risk Assessment



TS	Tropical Storm
UASI	Urban Areas Security Initiative
UCAR	University Corporation for Atmospheric Research
UHS	United Health Services
USACE	United States Army Corps of Engineers
US	United States
USDA	United States Department of Agriculture
USDM	United States
USEDA	United States Economic Development Administration
USEIA	United States Energy Information Administration
USEPA	United States Environmental Protection Agency
USFS	United States Forest Service
USGS	United States Geological Survey
USRT	Underwater Search and Recovery
UTV	Utility Task Vehicle
V	Village
VA	Vulnerability Assessment
WWTP	Waste Water Treatment Plant
WCT	Wind Chill Index
WFAS	Wildland Fire Assessment System
WFO	Weather Forecast Office
WNV	West Nile Virus
WQIP	Water Quality Improvement Project
WUI	Wildland/Urban Interface
WW	Wastewater
WHO	World Health Organization
YTS	Yates Transit Service
ZBA	Zoning Board of Appeals

APPENDIX A: RESOLUTIONS



The Yates County and municipal adoption resolutions will be included in this appendix upon receipt of the Federal Emergency Management Agency (FEMA) Approval Pending Adoption (APA) status. Please refer to Chapter 2 (Planning Process) for additional information on plan adoption procedures.

This appendix also includes an example resolution to be submitted by Yates County and participating jurisdictions authorizing adoption of the 2025 Yates County Hazard Mitigation Plan Update.

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Sample Resolution

(LOCAL GOVERNMENT, INCLUDING SPECIAL DISTRICTS), New York

RESOLUTION NO. _____

A RESOLUTION OF THE (LOCAL GOVERNMENT) ADOPTING THE 2025 Yates County Hazard Mitigation Plan

WHEREAS the (local governing body) recognizes the threat that natural hazards pose to people and property within (local government); and

WHEREAS the (local government) has prepared a multi-hazard mitigation plan, hereby known as (title and date of mitigation plan) in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS (title and date of mitigation plan) identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in (local community) from the impacts of future hazards and disasters; and

WHEREAS adoption by the (local governing body) demonstrates their commitment to hazard mitigation and achieving the goals outlined in the (title and date of mitigation plan).

NOW THEREFORE, BE IT RESOLVED BY THE (LOCAL COMMUNITY), New York, THAT:

Section 1. In accordance with (local rule for adopting resolutions), the (local governing body) adopts the (title and date of mitigation 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 ____ in favor and ____ against, and ____ abstaining, this ____ day of _____, _____.

By: _____

(print name)

ATTEST: By: _____

(print name)

APPROVED AS TO FORM: By: _____

(print name)

APPENDIX B: MEETING DOCUMENTATION



Appendix B includes meeting agendas, slides, and minutes (where applicable and available) for meetings convened during the development of the 2025 Yates County Hazard Mitigation Plan Update.

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1. Welcome and Introductions

2. Hazard Mitigation Overview

- Purpose of the HMP
- What's new for the 2025 HMP?

3. Project Organization

- Key agencies, partners, and stakeholders

4. Steering Committee Roles and Responsibilities

5. Planning Process Overview

- Planning Process
- Risk Assessment
- Public Involvement Strategy
- Mitigation Strategy
- Plan Maintenance
- Plan Update & Deliverables
- Plan Review & Adoption

6. Project Schedule

- Overview and Milestones
- Meeting Schedule

7. Questions / Wrap-Up



Meeting Date: Tuesday, August 22, 2023

Meeting Location: Yates County Auditorium - 417 Liberty Street, Penn Yan, NY 14527

Meeting Topic: Planning Partnership Kick-Off Meeting

Name/Title	Jurisdiction	Email
Loei Miller - Construction supervisor	NVSEg	lammillar@nvseg.com
Tim Paeel	T/Po Har V/Rushville	tapae0@starkyr.com code@starkyr.com village@rushville.com
ART PARSONS	T/OTHER	highwaybarn@frontier.com
JACK PERDUEAST	BEAton	Spencer@townofbeaton.us
Steve Wheeler	T/O Frontiers	townbird@frontier.net
Colby Petersen	YESUED	colby@yescilwater.com
Alyssa Palmer	YC Probation	opalmer@yatescounty.org
Ralph Warner Hwy	Starkyr	StarkyrHwy@frontier.net
George E. Lawson, supervisor	town of Starkyr	starkyr@supervisor@gmail.com



Yates County | Hazard Mitigation Plan 2025 Update
Meeting Sign-In Sheet

Name/Title	Jurisdiction	Email
George A. Roets Dir Emergency Services	Yates Co	groets@yatescounty.org
TIM GROTTH - Director of IT	Yates Co.	TGROTH@YATESCOUNTY.ORG
Dylan Maybelle - Regional Coordinator	NYS DERM	dylan.maybelle@DHSES.NY.GOV
Juli Colton - My South Emergency Mgt	FL - Health	jcolton.colton@flhealth.org
Scott Devers Town Councilman	Town of Torrey	gdevers1946@gmail.com
Annamary Volodine Emergency Coordinator	Town of Milo	coordinator@townofmilo.com
Amy D Miller / community social services	Yates County	amymiller@dfa.net.org
Joe Reed / BMS	Yates County	jreed@yatescounty.org
Ryan Bailey / EMS Coordinator	Yates County OES	rbailey@yatescounty.org
Doug Sinclair - Public Health	Yates County Public Health	bsinclair@yatescounty.org
Sandi Reel The Living Well	Yates County	sandreel@thelivingwellmission.org



TETRA TECH



Yates County | Hazard Mitigation Plan 2025 Update
Meeting Sign-In Sheet

Name/Title	Jurisdiction	Email
Justin Hamm / Lieutenant	Penn Yan Police Dept.	jhamm@villageofpennyan.com
Kerry Brennan / Personnel officer	Yates County	kbrennan@yatescounty.org
Linda Phillips	Ontario County	Linda.Phillips@ontariocounty.ny.gov
Jonathan MacKerchar / Athletic Director	Penn Yan Central Schools	jmacKerchar@pysd.org
Diane Causes, Deputy Director	Yates Co. OES	dcauses@yatescounty.org
Debra Trice / EMS coordinator	DUTASID CITY LEAD	debra.trice@ontariocounty.gov
Paul Mobley / Town Council Pct 1	Other	pasmobley@aol.com
BRUCE HENDERSON / Town Council	Townery	Bruce.Henderson



TETRA TECH



Yates County Hazard Mitigation Plan 2025 Update

Steering Committee Kick-Off Meeting
August 22, 2023 | 11:00 am

A scenic background image of a sunset over a body of water. The sun is low on the horizon, creating a golden glow across the sky and reflecting on the water's surface. The sky is filled with soft, wispy clouds. A dark silhouette of a forested hillside is visible in the distance. A white rectangular box is overlaid on the lower half of the image, containing the agenda text.

Today's Agenda

1. Welcome and Introductions
2. Hazard Mitigation Planning Overview
3. Project Organization
4. Steering Committee Responsibilities
5. Planning Process Overview
6. Schedule
7. Questions/Next Steps/Wrap Up



Hazard Mitigation Overview

Mitigation planning happens before a disaster strikes. It results in safer, more resilient communities – reducing risk for the residents, businesses, and critical services in Yates County.

Hazard Mitigation Planning Overview



- ✓ Authorized by the Disaster Mitigation Act of 2000
- ✓ Provides an overview of the impacts of natural hazards on communities
- ✓ Provides a roadmap to reducing the impact of these hazards
- ✓ Requires a FEMA-approved natural hazard mitigation plan to be eligible for Pre-Disaster Mitigation Funding
- ✓ 5-year updates required to maintain eligibility

- 1) What is hazard mitigation?
- 2) Why update the plan?
- 3) What's new for the 2025 HMP?
- 4) What is the process?

What is Hazard Mitigation?

Mitigation is a sustained action taken to reduce or eliminate long-term risk to life and property from a hazard event

-or-

Any action taken to reduce future disaster losses



“provides the blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and local ability...” (CFR).

Why Update?

- The mitigation plan update will:
 - Help prepare for and mitigate hazards
 - Eligibility for pre- and post-disaster mitigation funding
 - Since 2004, Yates County received over \$10 million in FEMA funding for flood control projects, shoreline stabilization, warning systems, generators, and mitigation planning
 - Incorporate new FEMA requirements
 - Support CRS participation/rating
- What is at risk in Yates County?
- Which hazard do you think occurred the most since 2020?

January 2020 – May 2023	
Hazard	Occurrences
Dam Failure	0
Disease Outbreak (Covid-19, influenza, Lyme)	>5,000
Drought	1
Extreme Temperature (low <8°F)	41
Extreme Temperature (high >90°F)	39
Flood	3
Harmful Algal Bloom	10
Hazardous Materials	91
Landslide	0
Severe Storm	38
Severe Winter Storm	7
Transportation Accidents	2,245
Utility Failure	11
Wildfire	1
TOTAL	>7,000

Sources: NOAA NCEI 2023; NYSDEC 2023; NYSDMV 2023; MRCC 2023



Differences from the 2020 Planning Process



Involvement – engaged and actively participating



Public and stakeholder outreach



Socially vulnerable and underserved communities



Climate change



Mitigation actions for every hazard of concern



Project Organization

Working with individuals, agencies, neighboring jurisdictions, businesses, and other partners for a successful mitigation planning process.

Project Organization

Core Planning Team

Yates County
OEM
Tetra Tech



Steering Committee

Planning Partnership



Stakeholders

NYSDHSES and FEMA



Steering Committee Roles and Responsibilities

Guide the Planning Partnership



Actively Participate



Oversee the Planning Process



Review, Update, and Provide Input





Planning Process Overview

A well-defined planning process is essential to the success of Yates County's HMP Update.

Planning Process Overview



Phase 1 – Project Organization

Core Planning Team

Yates County
OEM
Tetra Tech



Steering Committee

Planning Partnership



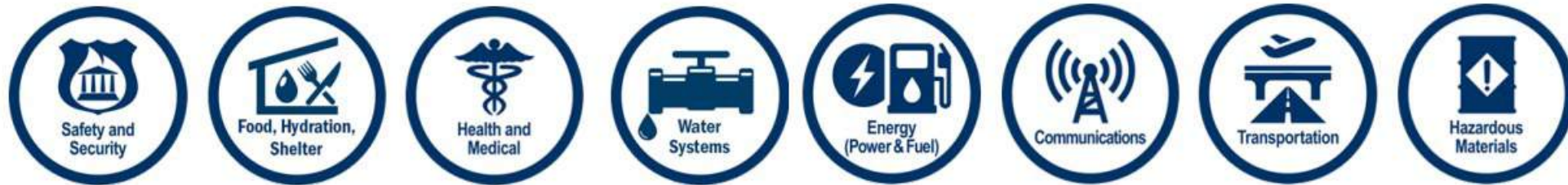
Stakeholders

NYSDHSES and FEMA



Data Collection and Input

- **Data collection and inventory assets**
- **Update critical facility/community lifeline inventory**
 - Critical Facilities provide essential services to the community, especially before, during, and after a disaster.
 - Community Lifelines provide services that allow continuity of operations of critical business and government functions, and crucial to health and safety of residents.



A lifeline enables the continuous operation of critical government and business functions and is essential to human health and safety or economic security.

New and Future Development

- Where is development occurring in your municipality?
 - Provide input online – <https://arcgis/198ev>
- How many NEW building permits have you issued since 2020?
 - Complete the worksheet you received today

Yates County | Hazard Mitigation Plan 2025 Update
Worksheet C - Building Permits

Please send all electronic Word versions **by September 19, 2023** to:
Heather Apgar, Tetra Tech | heather.apgar@tetratech.com

Municipality: _____
Name: _____
Title: _____
Email: _____

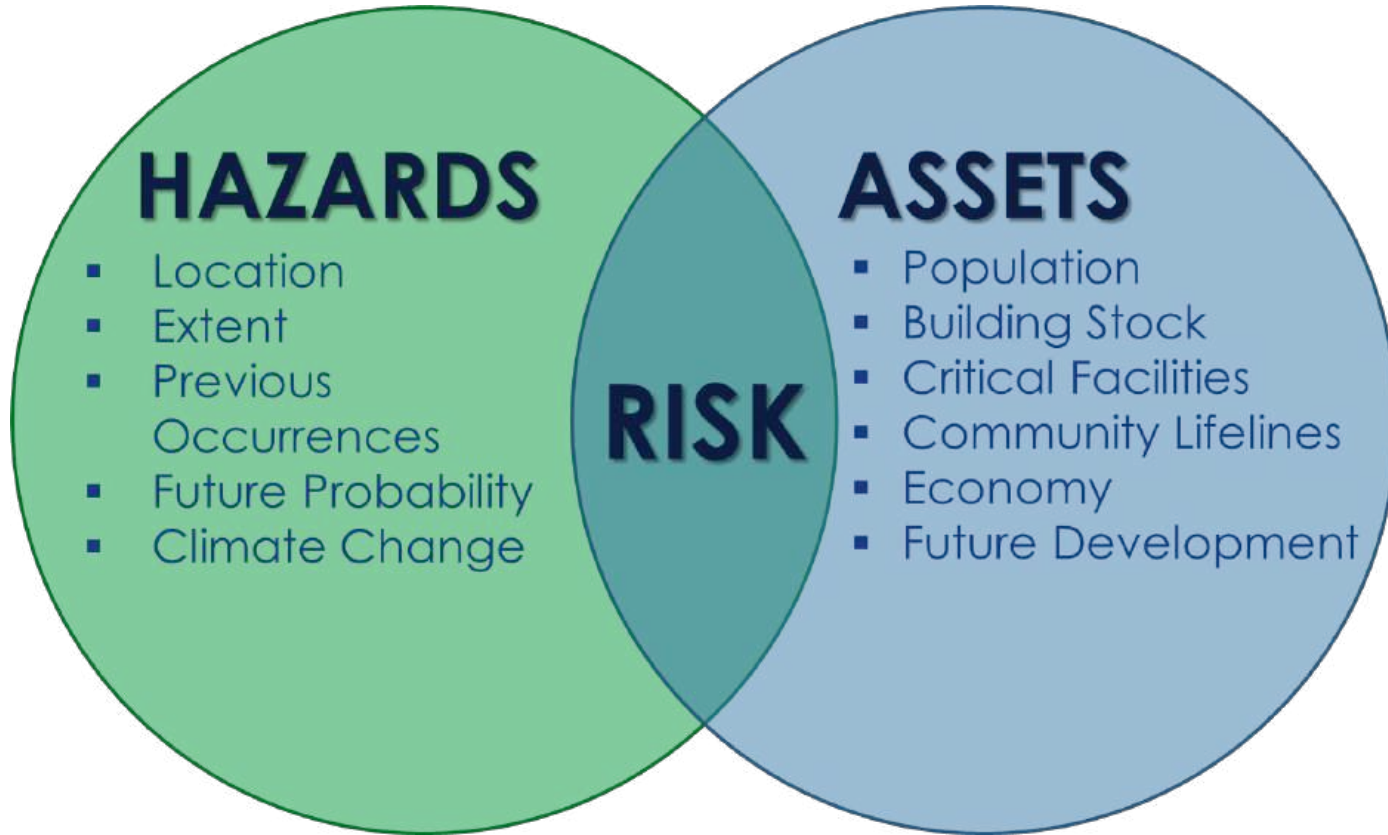
The Hazard Mitigation Plan (HMP) must address how risk has changed since the previous plan was completed. As we update the HMP, we will be looking at the number of new construction permits issued by your jurisdiction and where any new or anticipated development is occurring within your jurisdiction. **Who can assist with completing these tables?** The Building Department, Planning Department, and NFIP Floodplain Administrator.

Building Permits

In the first table, please identify the number of building permits issued for new construction since 2020. Include the number of permits issued for construction located in the Special Flood Hazard Area (SFHA) (e.g., 1% flood area). If your jurisdiction does not have the ability to differentiate between permit types, please list the total number of permits and indicate "N/A" (not applicable) for the permit sub-types.

Type of Development	2020		2021		2022		2023		2024	
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA
Single Family										
Multi-Family										
Other (residential, commercial, etc.)										

Phase 2 - Risk Assessment



- Review and update list of hazards of concern
- Update hazard profiles
- Complete risk assessment
- Review risk assessment results with Steering Committee and Planning Partnership



Hazards of Concern

Dam Failure



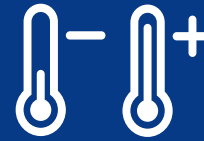
Disease Outbreak



Drought



Extreme Temperature



Flood



Harmful Algal Bloom



Hazardous Materials



Landslides



Severe Storm



Severe Winter Storm



Transportation Accident




Utility Failure



Hazards of Concern Worksheet

- Complete the worksheet and let us know what hazards we should include in the 2025 update
- We will have a virtual meeting in a few weeks to confirm the hazards



Yates County | Hazard Mitigation Plan 2025 Update
Identifying Hazards of Concern

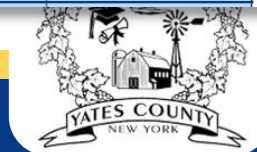
Please send all electronic Word versions by **September 19, 2023** to:
Heather Apgar, Tetra Tech | heather.apgar@tetratech.com

This worksheet can also be completed online (<https://forms.office.com/r/CUIbreavZc>).

Municipality: _____
Name: _____
Title: _____
Email: _____

A full range of natural hazards that could impact and pose a significant risk to Yates County should be included in the Hazard Mitigation Plan (HMP) risk assessment to inform the mitigation strategy. Thinking back over the last few years (2020 - present), have additional hazards impacted the County that were not discussed in the previous plan (listed below)? Please review this list and for each one identify if there has been no change, increase, or decrease in frequency/severity/location. Then, indicate whether you think it should be included in the 2025 Update.

Hazard of Concern	No Change	Increase	Decrease	Keep in the HMP	Remove from the HMP
Disease Outbreak	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drought	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Extreme Temperature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Harmful Algal Bloom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hazardous Materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Hazard Event History


- We need to know how events have impacted your community over the last 5 years
- Where are your problem areas?
- Complete the worksheet or the online form
- Input due by September 19th

Yates County Hazard Event History

Yates County has frequently experienced natural hazard events. Please complete the table below to summarize specific loss and damages experienced during hazard events since the last hazard mitigation plan update (2020). Information already populated in the table below is based on County-wide events that resulted in significant damages and losses.

Underneath each event description, please provide a summary of local impacts from event. If this event did not impact your jurisdiction, please enter "No damages or losses sustained".

* Required

 **Yates County | Hazard Mitigation Plan 2025 Update**
Worksheet A - Hazard Event History

Please send all electronic Word versions by **September 19, 2023** to:
Heather Appgar, Tetra Tech | heather.appgar@tetratech.com

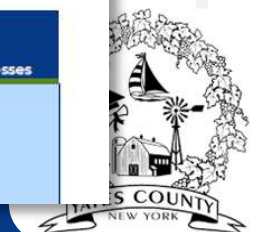
This worksheet can also be completed online (<https://forms.office.com/r/fihZZZmGcf>).

Municipality: _____
 Name: _____
 Title: _____
 Email: _____

Yates County has frequently experienced natural hazard events. Please complete the table below to summarize specific loss and damages experienced during hazard events since the last hazard mitigation plan update (2020). Information already populated in the table below is based on County-wide events that resulted in significant damages and losses.

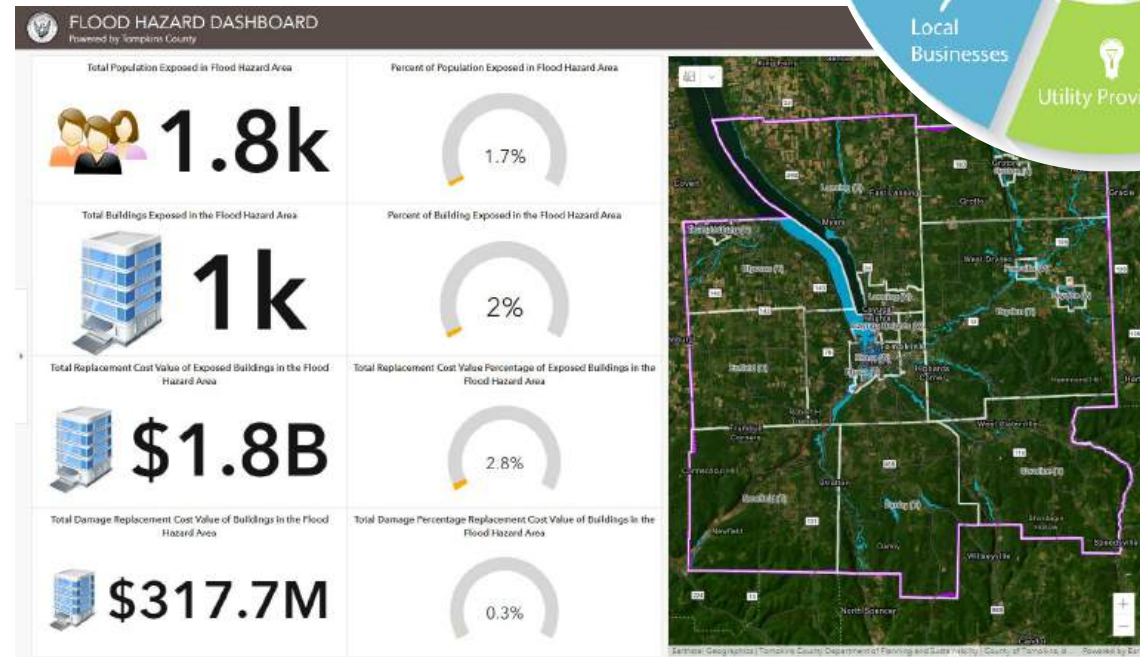
Please update the table to provide a summary of local impacts to the listed events AND note other local hazard events that resulted in damages, closures, or other impacts.

Dates of Event	Event Type (Disaster Declaration if applicable)	Summary of Event	Municipal Summary of Damages and Losses
February 6-7, 2020	Heavy Snow	A period of heavy snowfall, followed by lingering snow showers, led to an accumulated 4 to 10 inches of snowfall throughout Yates County.	



Phase 3 - Public Involvement Strategy

- Public Outreach Toolkit
 - Social media templates and posts
 - Press release templates
 - Printable materials
- Surveys
 - Stakeholders
 - Neighboring communities
 - Public
- County Website
- StoryMap



Phase 4 – Mitigation Strategy

- Review 2020 mitigation actions
- Review and update goals/objectives
- Problem statements and potential solutions
 - What specific actions will be taken to reduce hazard risk?
- Develop an action plan
 - How will the actions be prioritized and implemented?
 - One mitigation action for every hazard of concern!



Phase 4 – Capabilities and Integration

- Review existing capabilities and identify how each reduces risk and if it incorporates elements of the HMP
- Describe current and future integration process for the County and each jurisdiction

Regulatory

- Current ordinances that integrate mitigation (e.g., local flood damage prevention ordinance, stormwater management, wetlands protection, etc.).

Operational and Administrative

- County/community boards/departments that integrate mitigation in their current processes and how.

Funding

- Funding sources at the local level that may be used to fund mitigation projects.

Education/Outreach

- Current action the County/community is taking to integrate mitigation in their outreach and notifications to residents.

Adaptive Capacity

- Review the County and municipalities' adaptive capacity to deal with the potential impacts of climate change.



Review Your 2020 Mitigation Actions

- Update the 2020 mitigation actions through the BAToolSM – less paperwork!
- Video tutorial on using the program and Tetra Tech available to help
- Populate 2025 mitigation actions



Yates County 2020 Multi-Jurisdictional Hazard Mitigation Plan

Total # Jurisdictions: 14

Reporting Progress

Review Not Started	14
Review In Progress	0
Review Complete	0

Plan Approval Date	08/01/2020
Plan Expiration Date	08/01/2025
Review Cycle Frequency	annual
Review Cycle Open	07/05/2023
Review Cycle Close	07/05/2024

Jurisdiction	Review Cycle Open Date	Review Cycle Close Date	Point of Contact	# of Actions	# Actions the Review is Complete	% of Actions the Review is Complete
Barrington, Town of	07/05/2023	07/05/2024	Steven Wheeler, Steven Perry	13	0	0%

Phase 5 – Plan Maintenance

- Develop a game plan for maintaining the 2025 HMP over the next 5 years
 - How often will you meet to discuss progress on the HMP?
 - How will the County and jurisdictions integrate the HMP?
 - How will you monitor progress on the 2025 mitigation actions?



Phase 6 – Plan Updates and Deliverables

Volume I	Appendices	Volume II
Table of Contents	Sample Adoption Resolution	Planning Team
Executive Summary	Participation Matrix	Jurisdictional Annexes (14)
Introduction	Meeting Documentation	
Planning Process	Public and Stakeholder Outreach	
County Profile	Risk Assessment Information	
Risk Assessment	Mitigation Strategy Support Documentation	
Capability Assessment	Plan Maintenance Tools	
Mitigation Strategies	Linkage Procedures (if applicable)	
Plan Maintenance	Critical Facilities	
Acronyms and Abbreviations	High Hazard Potential Dam (HHPD)	
Glossary		
References		



Phase 7 - Plan Review & Adoption

- Once FEMA approves the HMP, the County and each jurisdiction will need to adopt the plan
- Adoption demonstrates the County's and municipalities commitment the goals, objectives, and mitigation actions identified in the HMP
- Integrate the HMP!
 - Include hazard mitigation principles, vulnerability information, and mitigation actions into existing plans, codes, etc.
 - This will help in reducing risk and increase resilience across Yates County

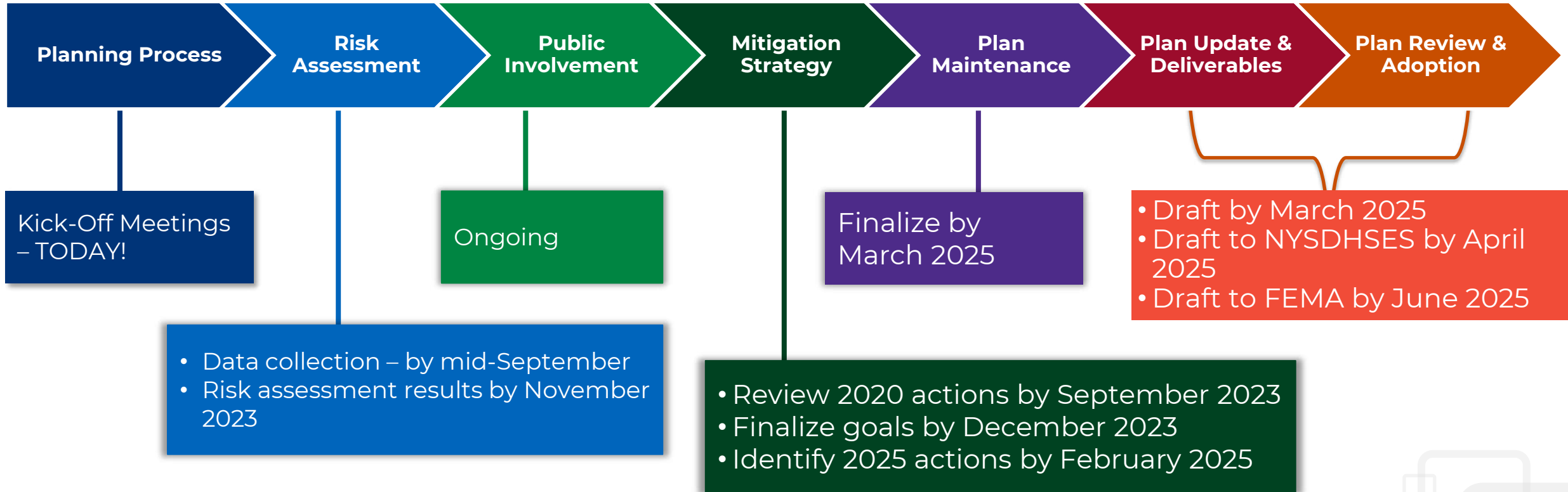




Project Schedule

Upcoming meetings and key milestones throughout the HMP update process

Schedule





Questions?



1. Welcome and Introductions

2. Hazard Mitigation Overview

- Purpose of the HMP
- What's new for the 2025 HMP?

3. Project Organization

- Key agencies, partners, and stakeholders

4. Planning Partnership Roles and Responsibilities

5. Planning Process Overview

- Planning Process
- Risk Assessment
- Public Involvement Strategy
- Mitigation Strategy
- Plan Maintenance
- Plan Update & Deliverables
- Plan Review & Adoption

6. Project Schedule

- Overview and Milestones
- Meeting Schedule

7. Questions / Wrap-Up

YATES COUNTY ALL HAZARD MITIGATION UPDATE PLAN
 STEERING COMMITTEE MEETING - AUGUST 22, 2023 1 PM
 YATES COUNTY AUDITORIUM

REPRESENTING	NAME	Title	EMAIL	SIGNATURE
Dundee Central School	James Frame	Superintendent	jframe@dundeecs.org	
FL Health	Frank Korich		Frank.Korich@flhealth.org	
Keuka College	Jim Cunningham	Security	jcunning@keuka.edu	Alan Storey
NOAA	David Nicosia		David.Nicosia@noaa.gov	astorey1@keuka.edu
NYS DEC	Patrick Dormer		patrick.dormer@dec.ny.gov	Amy Cotner acotner@keuka.edu
NYS DHSES	Corrina Cavallo	Hazard Mitigation	Corrina.Cavallo@dhses.ny.gov	
NYS DHSES	Kevin Clapp	Hazard Mitigation	Kevin.Clapp@dhses.ny.gov	
NYS DHSES	Lisa Burkovich	Region V Director	lisa.burkovich@dhses.ny.gov	
NYS DOH	Albert Cheverie		Albert.Cheverie@health.ny.gov	
NYS DOH	Nick Rich		NJR04@health.state.ny.us	
NYS DOT	Tim Alimossy		talimossy@dot.state.ny.us	
NYS OFPC	Corey Zydanowicz	FPS	Corey.Zydanowicz@dhses.ny.gov	
NYS Troopers	Brian Bernard		brian.bernard@troopers.ny.gov	
NYSEG	Lori Miller		LAMiller@nyseg.com	
Ontario County	Debra Trickey	EMS Coordinator	Debra.Trickey@co.ontario.ny.us	
Penn Yan Central School	Jon Giglio	Superintendent	jgiglio@pccsd.org	
Penn Yan Central School	John MacKerchar		jmackerchar@pccsd.org	
Schuyler County	Kirk Smith	Director of OES	ksmith@co.schuyler.ny.us	
Seneca Co		Planning	bbordeau@co.seneca.ny.us	
Seneca County	Melissa Taylor	Director of OES	mtaylor@co.seneca.ny.us	
Steuben Co Planning	Marie Myers Shearing	Planning	mshearing@steubencountyny.gov	
Steuben County	Tim Marshall	Director of OES	Tim@co.steuben.ny.us	
Town of Barrington	Steven Perry	Supervisor	steve77race@hotmail.com	
Town of Barrington	Steven Wheeler	Hwy Supt	townbarn@frontiernet.net	
Town of Benton	Casey Frankish	Hwy Supt	highway@townofbenton.us	JASONI HOOVER (Highway Supt)
Town of Benton	Jack Prendergast	Supervisor	supervisor@townofbenton.us	
Town of Italy	Richard Craig	Supervisor		
Town of Italy	Steve Faulkner	Hwy Supt	italyhwysupt@gmail.com	
Town of Jerusalem	Jamie Sisson	Supervisor	Supervisor@Jerusalem-NY.org	
NYS DHSES	Dylan Maybee	R-5 coordinator	dylan.maybee@DHSES.NY.GOV	
NYS DHSES	Roland Pappiman		roland.pappiman@DHSES.NY.GOV	

YATES COUNTY ALL HAZARD MITIGATION UPDATE PLAN
 STEERING COMMITTEE MEETING - AUGUST 22, 2023 1 PM

YATES COUNTY AUDITORIUM

PRESENTING	NAME	Title	EMAIL	SIGNATURE
wn of Jerusalem	Tony Hurd	Hwy Supt	highwaydept@jerusalem-ny.org	
wn of Middlesex	David Adam	Supervisor	supervisor@middlesexny.org	
wn of Middlesex	Tim Soles	Hwy Supt		
wn of Milo	Patti Christensen	Town Clerk	clerk@townofmilo.com	
wn of Milo	Lance Young	Hwy Supt	townofmilo@gmail.com	
wn of Milo	Leslie Church	Supervisor	lsupervisor@townofmilo.com	
wn of Potter	Art Parsons	Hwy Supt	highwaybarn@frontier.com	<i>Art Parsons</i>
wn of Potter	Larry Lewis	Supervisor		
wn of Starkey	George Lawson	Supervisor	starkeysupervisor@gmail.com	
wn of Starkey	Ralph Warren	Hwy Supt	Starkey Hwy @ Frontier Pub, etc	
wn of Torrey	Peter Martini	Supervisor		
wn of Torrey	Tim Chambers	Hwy Supt		
age of Dresden	Bill Hall	Mayor	dvillageofdres@rochester.rr.com	
age of Dresden	Brian Ellis	Hwy Supt	dvillageofdres@rochester.rr.com	
age of Dundee	Christine Sutherland	Village Clerk	villagedundee@stny.rr.com	
age of Dundee	Fred Cratsley	Mayor	mayorofdundee@gmail.com	
age of Dundee	Steven Dean	Hwy Supt	vwaterdept@stny.rr.com	
age of Penn Yan	Dan Condella	Mayor	dancondella@gmail.com	
age of Penn Yan	Tom Dunham	Police	Tdunham@villageofpennyan.com	
age of Penn Yan	Melissa Gerhardt	Dir of Public Works	mgerhardt@villageofpennyan.com	
es Co	Nonie Flynn	Administrator	nflynn@yatescounty.org	
es Co	Jessica Mullins	Director of Finance	jmullins@yatescounty.org	
es Co	Molly Linehan	Deputy Clerk	mlinehan@yatescounty.org	
es Co	Steve Griffin		steve@fingerlakesedc.com	
s Co Bldg & Grounds	Joe Reed	Supervisor	jreed@yatescounty.org	<i>Joe Reed</i>
s Co Communications	Andy Siwak		asiwak@yatescounty.org	
s Co DSS	Amy Miller	Commissioner	amy.miler@dfa.state.ny.us	<i>Amy Miller</i>
s Co E911	Jason Bassett	Supervisor	jbassett@yatescounty.org	
s Co Elections	Rob Schwarting		rschwarting@yatescounty.org	
s Co Elections	Robert Brechko		rbrechko@yatescounty.org	
s Co Hwy	Charles Bishop	Deputy Hwy Supt	cbishop@yatescounty.org	

YATES COUNTY ALL HAZARD MITIGATION UPDATE PLAN
 STEERING COMMITTEE MEETING - AUGUST 22, 2023 1 PM
 YATES COUNTY AUDITORIUM

REPRESENTING	NAME	Title	EMAIL	SIGNATURE
Yates Co Hwy	Douglas Rapalee	Hwy Supt	drapalee@yatescounty.org	
Yates Co IT	Tim Groth	Director	Tgroth@yatescounty.org	<i>Timothy M. Groth</i>
Yates Co OES	Diane Caves	Deputy Director	dcaves@yatescounty.org	<i>Diane Caves</i>
Yates Co OES	Ryan Bailey	EMS Coordinator	rbailey@yatescounty.org	<i>[Signature]</i>
Yates Co OES	Brian Winslow	Director	brianw@yatescounty.org	
Yates Co Personnel	Kerry Brennan	Director	kbrennan@yatescounty.org	
Yates Co Planning	Jeff Ayers	Planner	jayers@yatescounty.org	
Yates Co Probation	Alyssa Plamer	Director	apalmer@yatescounty.org	<i>Alyssa Plamer</i>
Yates Co Public Health	Douglas Sinclair	Director	dsinclair@yatescounty.org	<i>DS</i>
Yates Co Sheriff	Ronald Spike	Sheriff	rspike@yatescounty.org	
Yates Co Soil & Water	Colby Petersen	Dist Manager	colby@ycsoilwater.com	<i>CSP</i>
YC Chamber of Commerce	Jessica Bacher	Director	jessica@yatesny.com	
Town of Milo	Anthony Valdez	Code Enforcement Officer		codeofficer@townofmilo.com <i>[Signature]</i>
Town of Torrey	Grant Davis	Town Councilman		gjdavis1946@gmail.com <i>[Signature]</i>
Town of Torrey	Bruce Henderson	Town Councilman		<i>Bruce Henderson</i>
Town of Potter	Paul Moberg	Town Councilman		PMSnowPro@aol.com
FL Health	Josh Colton	Mgr, Security + Emergency Prep		joshva.colton@flhealth.org <i>*replacing Frank Korich</i>
Community Services Dept	George H. Roets	Dir for Comm Sv		gnoets@yatescounty.org
The Living Well Mission	Sandi Perl	Executive Director		Sandi@thelivingwellmission.org
NYSEG	Lori Miller	Supervisor		lamiller@NYSEG.com



Yates County | Hazard Mitigation Plan 2025 Update
Meeting Sign-In Sheet

Meeting Date: Tuesday, August 22, 2023
Meeting Location: Yates County Auditorium - 417 Liberty Street, Penn Yan, NY 14527
Meeting Topic: Planning Partnership Kick-Off Meeting

Name/Title	Jurisdiction	Email
Lori Miller - Construction Supervisor	NYSEQ	lamillar@NYSEQ.com
TIM PAGEL	T/Potter v/Rushville	topce0@frontier.com codeofficer@villageofrushville.com
ART PARSONS	T/Potter	highwaybarn@frontier.com
JACK PENDERGAST	BERTON	supervisor@townofberton.us
Steve Wheeler	T/O Farringford	townbarn@frontier.net
Colby Petersen	YCSWCD	colby@ycsoilwater.com
Alyssa Palmer	YC Probation	apalmer@yatescounty.org
Ralph WARREN Hwy	Starkey	StarkeyHwy@FrontierNet.NET
George E. Lawson, supervisor	town of Starkey	starkeysupervisor@gmail.com



Yates County | Hazard Mitigation Plan 2025 Update
Meeting Sign-In Sheet

Name/Title	Jurisdiction	Email
George A. Roets Dir Comm Services	Yates Co	groets@yatescounty.org
TIM GROTH - Director of IT	Yates Co.	TGROTH@YATESCOUNTY.ORG
Dylan Maybee - Regional Coordinator	NYS OEM	dylan.maybee@DHSES.NY.GOV
Josh Colter - Mgr Security Emergency Mgt	FL - Health	joshua.colter@flhealth.org
Grant Downs Town Councilman	Town of Torrey	gjdawns1946@gmail.com
Annoy Validzie Code Enforcement	Town of Milo	codeofficer@townofmilo.com
Amy D Miller / comm of social services	Yates County	amy.miller@dca.state.ny.us
Joe Reed / BMS	Yates County	jreed@yatescounty.org
Ryan Bailey / EMS Coordinator	Yates County OES	rbailey@yatescounty.org
Doug Sinclair - Public Health	Yates County Public Health	dsinclair@yatescounty.org
Sandi Perle / The Living Well	Yates County	sandi@thelivingwellmission.org



Name/Title	Jurisdiction	Email
Justin Hamm / Lieutenant	Penn Yan Police Dept.	jhamm@villageofpennyan.com
Kerry Brennan / Personnel officer	Yates County	kbrennan@yatescounty.org
Linda Phillips	Ontario County	Linda.Phillips@ontariocounty.ny.gov
Jonathan Mackerchar / Athletic Director	Penn Yan Central schools	jmackchar@pysd.org
Diane Caves, Deputy Director	Yates Co. OES	dcaves@yatescounty.org
Debra Trickey / EMS Coordinator	ONTARIO CITY / EMS	debra.trickey@ontariocountyny.gov
Paul Moberg / Town Council Potter	Potter	pmobrowpro@aol.com
BRUCE HENDERSON / Town Council Torrey	Torrey	Bruce Henderson



Yates County Hazard Mitigation Plan 2025 Update

Planning Partnership Kick-Off Meeting
August 22, 2023 | 1:00 pm

A scenic background image of a sunset over a body of water. The sun is low on the horizon, creating a golden glow across the sky and reflecting on the water's surface. The sky is filled with soft, wispy clouds. A dark silhouette of a forested hillside is visible in the distance. A white rectangular box is overlaid on the lower half of the image, containing the agenda text.

Today's Agenda

1. Welcome and Introductions
2. Hazard Mitigation Planning Overview
3. Project Organization
4. Planning Partnership Responsibilities
5. Planning Process Overview
6. Schedule
7. Questions/Next Steps/Wrap Up



Hazard Mitigation Overview

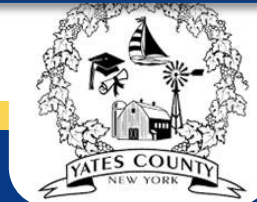
Mitigation planning happens before a disaster strikes. It results in safer, more resilient communities – reducing risk for the residents, businesses, and critical services in Yates County.

Hazard Mitigation Planning Overview



- ✓ Authorized by the Disaster Mitigation Act of 2000
- ✓ Provides an overview of the impacts of natural hazards on communities
- ✓ Provides a roadmap to reducing the impact of these hazards
- ✓ Requires a FEMA-approved natural hazard mitigation plan to be eligible for Pre-Disaster Mitigation Funding
- ✓ 5-year updates required to maintain eligibility

- 1) What is hazard mitigation?
- 2) Why update the plan?
- 3) What's new for the 2025 HMP?
- 4) What is the process?



What is Hazard Mitigation?

Mitigation is a sustained action taken to reduce or eliminate long-term risk to life and property from a hazard event

-or-

Any action taken to reduce future disaster losses



“provides the blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and local ability...” (CFR).

Why Update?

- The mitigation plan update will:
 - Help prepare for and mitigate hazards
 - Eligibility for pre- and post-disaster mitigation funding
 - Since 2004, Yates County received over \$10 million in FEMA funding for flood control projects, shoreline stabilization, warning systems, generators, and mitigation planning
 - Incorporate new FEMA requirements
 - Support CRS participation/rating
- What is at risk in Yates County?
- Which hazard do you think occurred the most since 2020?

January 2020 – May 2023	
Hazard	Occurrences
Dam Failure	0
Disease Outbreak (Covid-19, influenza, Lyme)	>5,000
Drought	1
Extreme Temperature (low <8°F)	41
Extreme Temperature (high >90°F)	39
Flood	3
Harmful Algal Bloom	10
Hazardous Materials	91
Landslide	0
Severe Storm	38
Severe Winter Storm	7
Transportation Accidents	2,245
Utility Failure	11
Wildfire	1
TOTAL	>7,000

Sources: NOAA NCEI 2023; NYSDEC 2023; NYSDMV 2023; MRCC 2023



Differences from the 2020 Planning Process



Involvement – engaged and actively participating



Public and stakeholder outreach



Socially vulnerable and underserved communities



Climate change



Mitigation actions for every hazard of concern



Project Organization

Working with individuals, agencies, neighboring jurisdictions, businesses, and other partners for a successful mitigation planning process.

Project Organization

Core Planning Team

Yates County
OEM
Tetra Tech



Steering Committee

Planning Partnership



Stakeholders

NYSDHSES and FEMA



Planning Partnership Roles and Responsibilities

- Actively participate throughout the process –
 - Coordinate and facilitate local efforts
 - Attend meetings
 - Provide information and feedback (e.g., complete municipal worksheets)
 - Involve the public and community stakeholders in the planning process
 - Identify mitigation actions for your community
 - Adopt the plan
 - Implement the plan and monitor its progress
- The Letter of Intent to Participate outlines the planning partner expectations





Planning Process Overview

A well-defined planning process is essential to the success of Yates County's HMP Update.

Planning Process Overview



Phase 1 – Project Organization

Core Planning Team

Yates County
OEM
Tetra Tech



Steering Committee

Planning Partnership



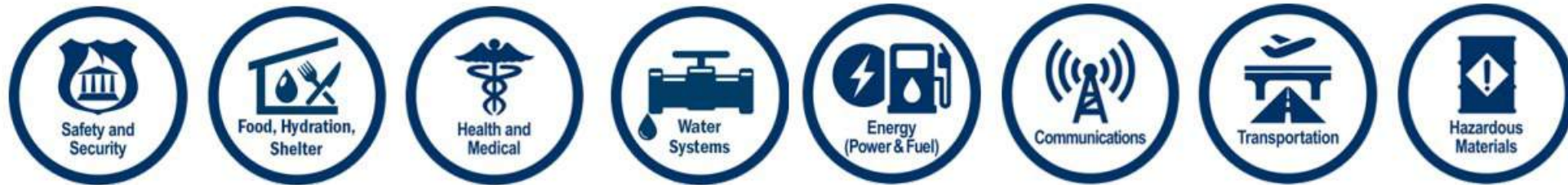
Stakeholders

NYSDHSES and FEMA



Data Collection and Input

- **Data collection and inventory assets**
- **Update critical facility/community lifeline inventory**
 - Critical Facilities provide essential services to the community, especially before, during, and after a disaster.
 - Community Lifelines provide services that allow continuity of operations of critical business and government functions, and crucial to health and safety of residents.



A lifeline enables the continuous operation of critical government and business functions and is essential to human health and safety or economic security.

New and Future Development

- Where is development occurring in your municipality?
 - Provide input online – <https://arcgis/198ev>
- How many NEW building permits have you issued since 2020?
 - Complete the worksheet you received today

Yates County | Hazard Mitigation Plan 2025 Update
Worksheet C - Building Permits

Please send all electronic Word versions **by September 19, 2023** to:
Heather Apgar, Tetra Tech | heather.apgar@tetratech.com

Municipality: _____
Name: _____
Title: _____
Email: _____

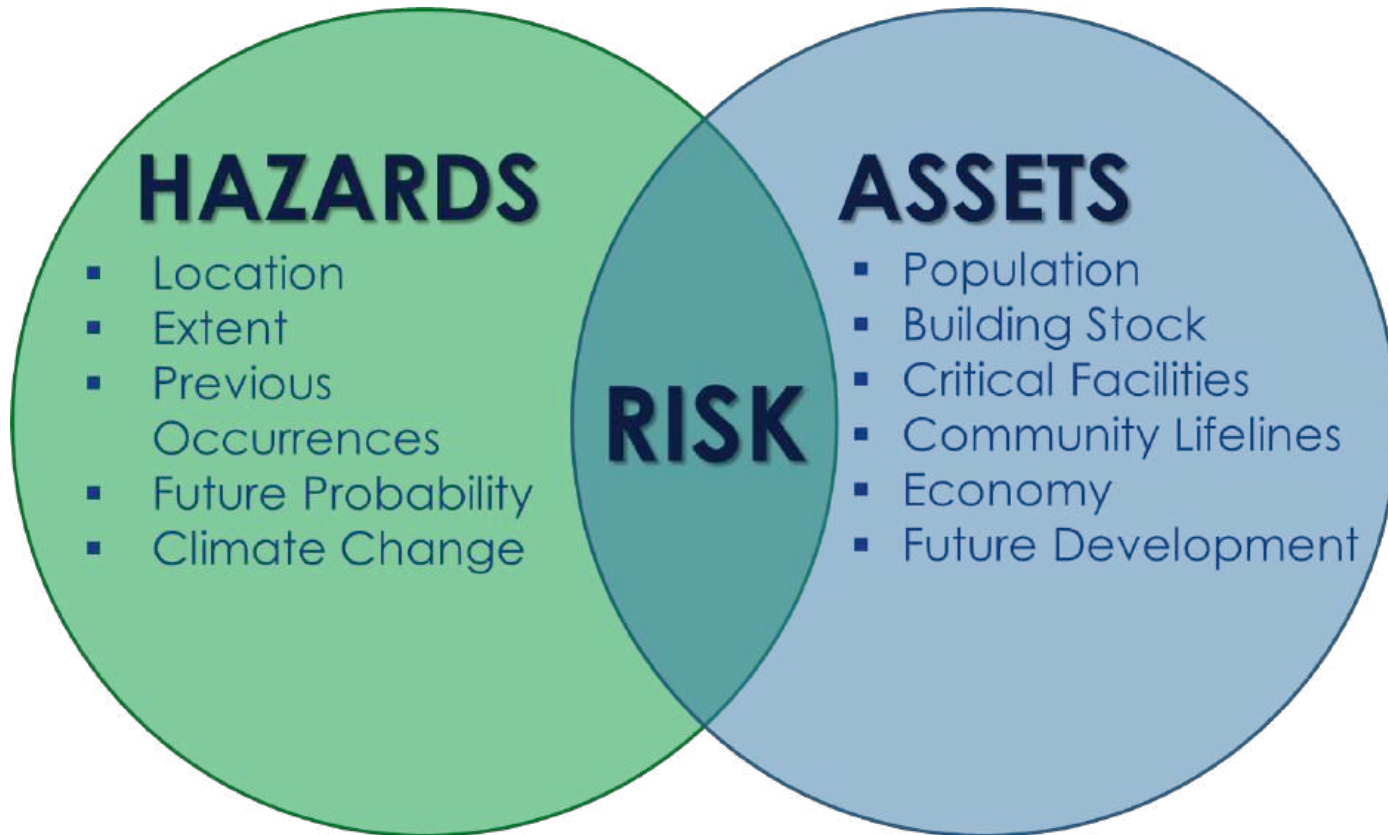
The Hazard Mitigation Plan (HMP) must address how risk has changed since the previous plan was completed. As we update the HMP, we will be looking at the number of new construction permits issued by your jurisdiction and where any new or anticipated development is occurring within your jurisdiction. **Who can assist with completing these tables?** The Building Department, Planning Department, and NFIP Floodplain Administrator.

Building Permits

In the first table, please identify the number of building permits issued for new construction since 2020. Include the number of permits issued for construction located in the Special Flood Hazard Area (SFHA) (e.g., 1% flood area). If your jurisdiction does not have the ability to differentiate between permit types, please list the total number of permits and indicate "N/A" (not applicable) for the permit sub-types.

Type of Development	2020		2021		2022		2023		2024	
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA
Single Family										
Multi-Family										
Other (residential, commercial, etc.)										

Phase 2 - Risk Assessment



- Review and update list of hazards of concern
- Update hazard profiles
- Complete risk assessment
- Review risk assessment results with Steering Committee and Planning Partnership



Hazards of Concern

Dam Failure



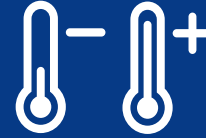
Disease Outbreak



Drought



Extreme Temperature



Flood



Harmful Algal Bloom



Hazardous Materials



Landslides



Severe Storm



Severe Winter Storm



Transportation Accident




Utility Failure



Hazards of Concern Worksheet

- Complete the worksheet and let us know what hazards we should include in the 2025 update
- We will have a virtual meeting in a few weeks to confirm the hazards



Yates County | Hazard Mitigation Plan 2025 Update
Identifying Hazards of Concern

Please send all electronic Word versions by **September 19, 2023** to:
Heather Apgar, Tetra Tech | heather.apgar@tetratech.com

This worksheet can also be completed online (<https://forms.office.com/r/CUIbreavZc>).

Municipality: _____

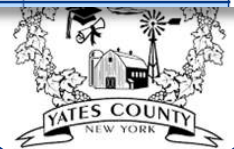
Name: _____

Title: _____

Email: _____

A full range of natural hazards that could impact and pose a significant risk to Yates County should be included in the Hazard Mitigation Plan (HMP) risk assessment to inform the mitigation strategy. Thinking back over the last few years (2020 - present), have additional hazards impacted the County that were not discussed in the previous plan (listed below)? Please review this list and for each one identify if there has been no change, increase, or decrease in frequency/severity/location. Then, indicate whether you think it should be included in the 2025 Update.

Hazard of Concern	No Change	Increase	Decrease	Keep in the HMP	Remove from the HMP
Disease Outbreak	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drought	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Extreme Temperature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Harmful Algal Bloom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hazardous Materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Hazard Event History


- We need to know how events have impacted your community over the last 5 years
- Where are your problem areas?
- Complete the worksheet or the online form
- Input due by September 19th

Yates County Hazard Event History

Yates County has frequently experienced natural hazard events. Please complete the table below to summarize specific loss and damages experienced during hazard events since the last hazard mitigation plan update (2020). Information already populated in the table below is based on County-wide events that resulted in significant damages and losses.

Underneath each event description, please provide a summary of local impacts from event. If this event did not impact your jurisdiction, please enter "No damages or losses sustained".

* Required

 **Yates County | Hazard Mitigation Plan 2025 Update**
Worksheet A - Hazard Event History

Please send all electronic Word versions by **September 19, 2023** to:
Heather Appgar, Tetra Tech | heather.appgar@tetratech.com

This worksheet can also be completed online (<https://forms.office.com/r/fihZZZmGcf>).

Municipality: _____
 Name: _____
 Title: _____
 Email: _____

Yates County has frequently experienced natural hazard events. Please complete the table below to summarize specific loss and damages experienced during hazard events since the last hazard mitigation plan update (2020). Information already populated in the table below is based on County-wide events that resulted in significant damages and losses.

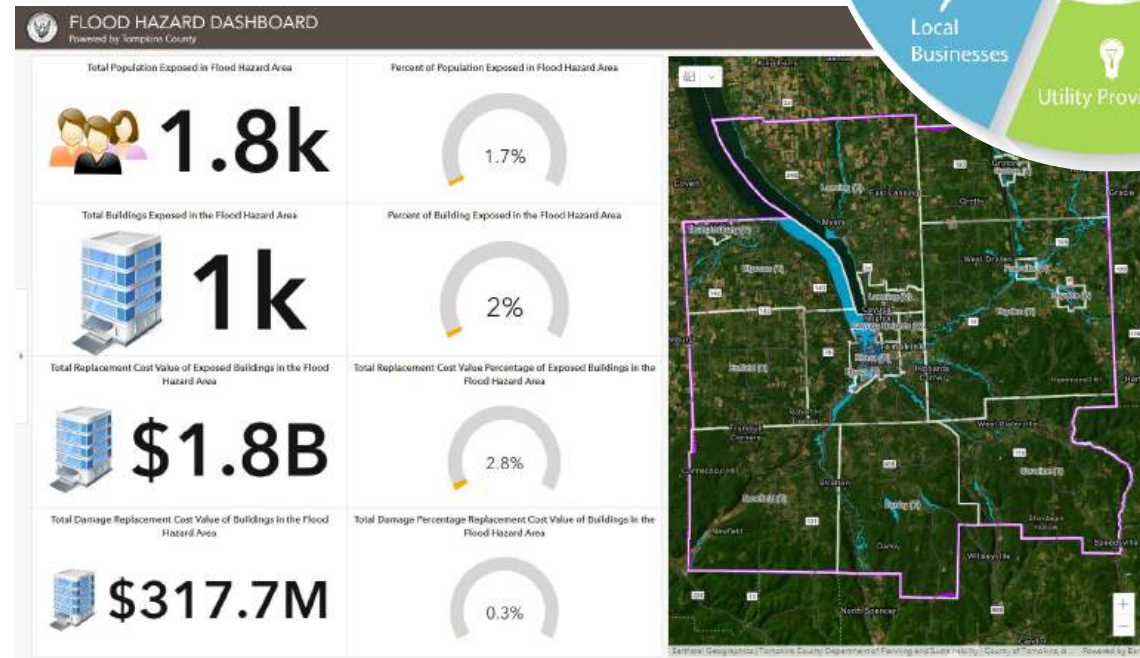
Please update the table to provide a summary of local impacts to the listed events AND note other local hazard events that resulted in damages, closures, or other impacts.

Dates of Event	Event Type (Disaster Declaration if applicable)	Summary of Event	Municipal Summary of Damages and Losses
February 6-7, 2020	Heavy Snow	A period of heavy snowfall, followed by lingering snow showers, led to an accumulated 4 to 10 inches of snowfall throughout Yates County.	



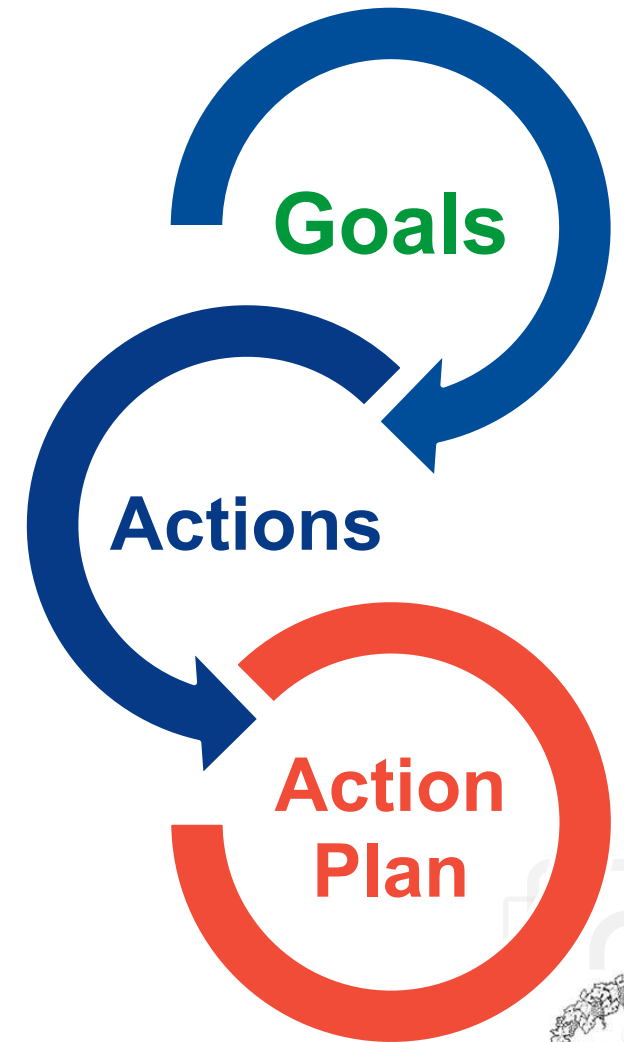
Phase 3 - Public Involvement Strategy

- Public Outreach Toolkit
 - Social media templates and posts
 - Press release templates
 - Printable materials
- Surveys
 - Stakeholders
 - Neighboring communities
 - Public
- County Website
- StoryMap



Phase 4 – Mitigation Strategy

- Review 2020 mitigation actions
- Review and update goals/objectives
- Problem statements and potential solutions
 - What specific actions will be taken to reduce hazard risk?
- Develop an action plan
 - How will the actions be prioritized and implemented?
 - One mitigation action for every hazard of concern!



Phase 4 – Capabilities and Integration

- Review existing capabilities and identify how each reduces risk and if it incorporates elements of the HMP
- Describe current and future integration process for the County and each jurisdiction

Regulatory

- Current ordinances that integrate mitigation (e.g., local flood damage prevention ordinance, stormwater management, wetlands protection, etc.).

Operational and Administrative

- County/community boards/departments that integrate mitigation in their current processes and how.

Funding

- Funding sources at the local level that may be used to fund mitigation projects.

Education/Outreach

- Current action the County/community is taking to integrate mitigation in their outreach and notifications to residents.

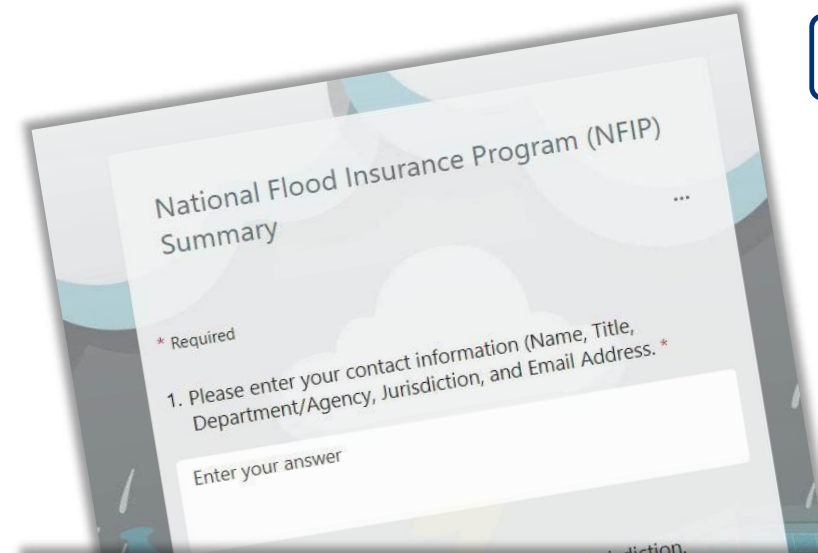
Adaptive Capacity


- Review the County and municipalities' adaptive capacity to deal with the potential impacts of climate change.



NFIP Questionnaire

- FEMA requires any municipality that participates in the NFIP to provide details on how they implement the NFIP
- Complete the handout or the online form
- Input due by September 19th



 Yates County | Hazard Mitigation Plan 2025 Update
Worksheet B – NFIP Questionnaire

Please send all electronic Word versions by September 19, 2023 to:
Heather Apgar, Tetra Tech | heather.apgar@tetratech.com

This worksheet can also be completed online through this weblink (<https://forms.office.com/r/vDkaAQEXAH>).

Municipality: _____
Name: _____
Title: _____
Email: _____

In accordance with 44 CFR § 201.6(c)(3)(ii), the Hazard Mitigation Plan must describe how each jurisdiction participates in the National Flood Insurance Program (NFIP) and how the jurisdiction enforces NFIP requirements. To help meet this requirement, please complete the following table. **Who can assist with completing this table?** NFIP Floodplain Administrator – as identified by role/title in your flood damage prevention ordinance.

NFIP Topic	Comments
Flood Vulnerability Summary Describe areas prone to flooding in your jurisdiction. <ul style="list-style-type: none">• Do you maintain a list of properties that have been damaged by flooding?	
<ul style="list-style-type: none">• Do you maintain a list of property owners interested in flood mitigation?• How many homeowners and/or business owners are interested in mitigation (location or acquisition)?	

Review Your 2020 Mitigation Actions

- Update the 2020 mitigation actions through the BAToolSM – less paperwork!
- Video tutorial on using the program and Tetra Tech available to help
- Populate 2025 mitigation actions



BAToolSM - Mitigation Module

Yates County 2020 Multi-Jurisdictional Hazard Mitigation Plan

Total # Jurisdictions: 14

Reporting Progress

Review Not Started	14
Review In Progress	0
Review Complete	0

Plan Approval Date	08/01/2020
Plan Expiration Date	08/01/2025
Review Cycle Frequency	annual
Review Cycle Open	07/05/2023
Review Cycle Close	07/05/2024

Jurisdiction	Review Cycle Open Date	Review Cycle Close Date	Point of Contact	# of Actions	# Actions the Review is Complete	% of Actions the Review is Complete
Barrington, Town of	07/05/2023	07/05/2024	Steven Wheeler, Steven Perry	13	0	0%

Phase 5 – Plan Maintenance

- Develop a game plan for maintaining the 2025 HMP over the next 5 years
 - How often will you meet to discuss progress on the HMP?
 - How will the County and jurisdictions integrate the HMP?
 - How will you monitor progress on the 2025 mitigation actions?



Phase 6 – Plan Updates and Deliverables

Volume I	Appendices	Volume II
Table of Contents	Sample Adoption Resolution	Planning Team
Executive Summary	Participation Matrix	Jurisdictional Annexes (14)
Introduction	Meeting Documentation	
Planning Process	Public and Stakeholder Outreach	
County Profile	Risk Assessment Information	
Risk Assessment	Mitigation Strategy Support Documentation	
Capability Assessment	Plan Maintenance Tools	
Mitigation Strategies	Linkage Procedures (if applicable)	
Plan Maintenance	Critical Facilities	
Acronyms and Abbreviations	High Hazard Potential Dam (HHPD)	
Glossary		
References		



Phase 7 - Plan Review & Adoption

- Once FEMA approves the HMP, the County and each jurisdiction will need to adopt the plan
- Adoption demonstrates the County's and municipalities commitment the goals, objectives, and mitigation actions identified in the HMP
- Integrate the HMP!
 - Include hazard mitigation principles, vulnerability information, and mitigation actions into existing plans, codes, etc.
 - This will help in reducing risk and increase resilience across Yates County

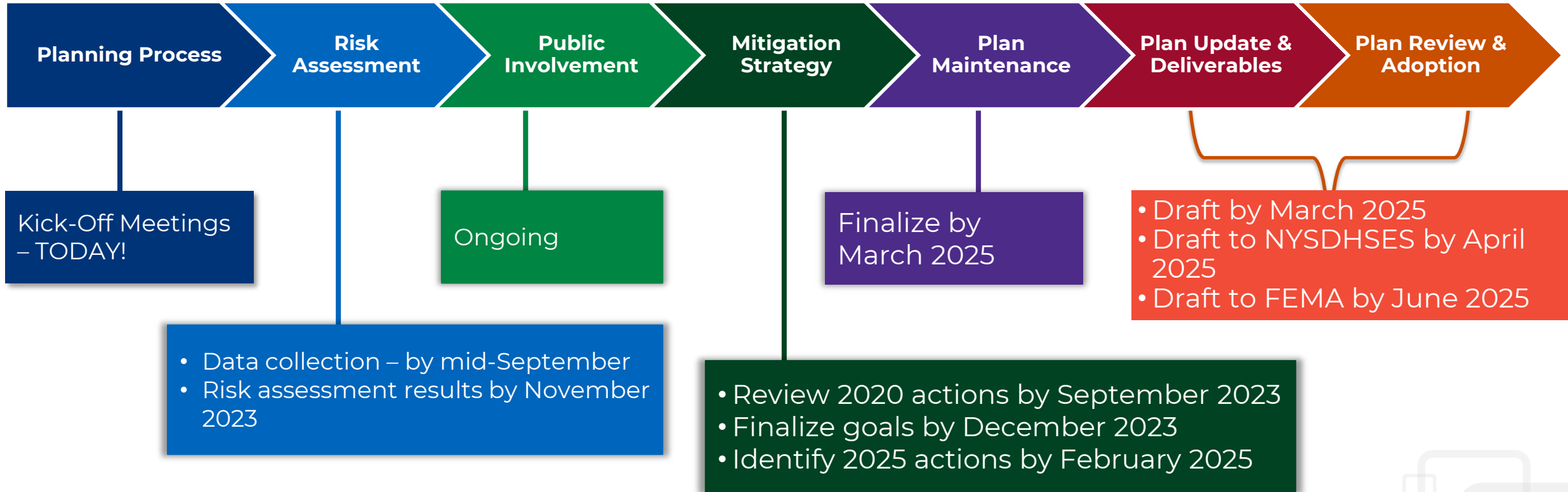




Project Schedule

Upcoming meetings and key milestones throughout the HMP update process

Schedule





Questions?

February 8, 2024 Yates County – Steering Committee

10 a.m. – 11 a.m. EST

Attendees	<ol style="list-style-type: none"> 1. Ryan Bailey – Yates County OES 2. Brian Winslow – Yates County OES 3. Grant Downs – Town of Torrey Councilman 4. Amy Ciller – Yates County DSS 5. Anthony Validzic – Milo 6. Kevin Clapp – DHSES 7. Diane Caves – Yates County OES 8. Roland Paperman – DHSES 9. Sandi Perl – The Living Well Mission 10. Michael Tarasoff – DHSES 11. Tim Growth – Yates County 12. Heather Apgar – Tetra Tech 13. Grace Altenburg – Tetra Tech
Agenda	<ul style="list-style-type: none"> - In-Kind Tracking - Schedule <ul style="list-style-type: none"> o Progress Report o Public and Stakeholder Outreach - Strengths, Weaknesses, Obstacles, and Opportunities - Risk Assessment Overview - Goals/Objectives - Questions/Next Steps/Wrap Up
In-Kind Tracking	<ul style="list-style-type: none"> - In-Kind Tracking Form: https://www.surveymonkey.com/r/YatesHMPInKind
Strengths, Weaknesses, Obstacles, and Opportunities	<ul style="list-style-type: none"> - SWOO survey: https://forms.office.com/r/qYQd3r93Tq - Helps us to identify mitigation actions for the March meeting. - Not mandatory but any feedback will be helpful. - Goal is to take weaknesses and obstacles and turn those into mitigation actions for the plan.

<p>Risk Assessment Overview</p>	<ul style="list-style-type: none"> - Risk Ranking Meeting Survey: https://forms.office.com/r/bfjaGpP9D3?origin=lprLink - Risk Ranking Post-Meeting Survey: <p>Diane Caves: We have been fortunate to not have had any aviation accidents in the last 5 years, but if we were to go back 10 - 15 years we would find more.</p> <p>Diane Caves: Brian and I will talk more about Transportation Accidents. We think this may be a Medium Risk level.</p> <p>Brian Winslow: Every couples years we will have a train derail. We had a aircraft incidents in a 10 year span. Some of our busier roads there was a gas tanker accidents, with gas leak into tributaries. Some of these incidents may not be available online.</p>
<p>Goals/Objectives</p>	<ul style="list-style-type: none"> - Goals and Objectives Survey: https://forms.office.com/r/2wnJ25JB0s - Add in socially vulnerable populations and community lifelines in Goal 1. <p>Kevin Clapp: here are the states goals and objectives https://mitigateny.org/state_mitigation/goals_and_objectives</p>
<p>Questions</p>	<ul style="list-style-type: none"> - Brian Winslow: well put together, thank you on behalf of the County.
<p>Next Steps</p>	<ul style="list-style-type: none"> -



Yates County Hazard Mitigation Plan Update

Steering Committee Meeting #2 – Review Preliminary Hazard Ranking and Goals/Objectives

February 8, 2024

While waiting for the meeting to start, please enter your name and department/agency in the chat.

Today's Agenda

1. In-Kind Tracking
2. Schedule
3. Progress Report
4. Public and Stakeholder Outreach
5. Risk Assessment Overview
6. Goals/Objectives
7. Questions/Next Steps/Wrap Up

In-Kind Tracking

Jurisdiction: _____

Name: _____ Title: _____

Date	Start Time	End Time	# hours	Task Description	Hourly Rate	Total # hours x rate	Comments describe task in more detail
					\$		

Scan the QR code for the online form to enter your time.



-or-

<https://www.surveymonkey.com/r/YatesHMPIInKind>



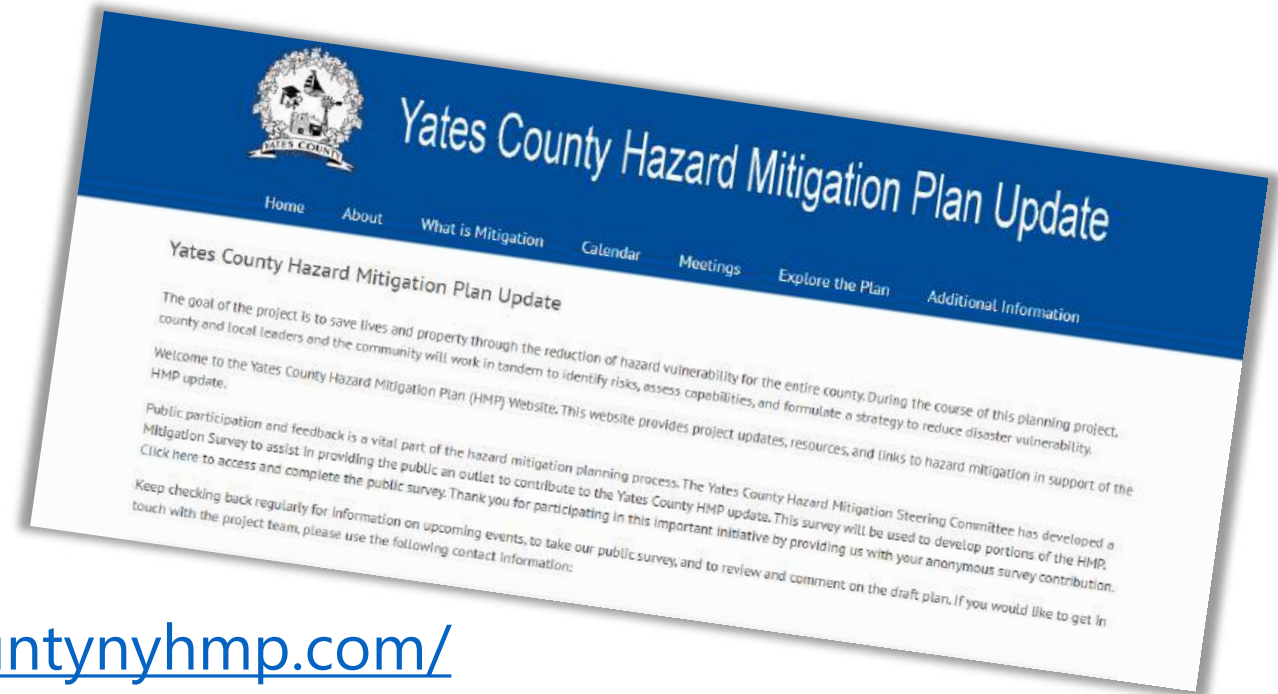
Project Schedule

- **Planning Process**
 - Ongoing
- **Update Risk Assessment**
 - Discuss risk assessment results – **TODAY!**
 - Discuss risk assessment with municipalities – **February 22nd**
- **Public and Stakeholder Outreach**
 - Ongoing
- **Capability Assessment**
 - Ongoing
- **Mitigation Strategy**
 - Continue working with municipalities
 - Mitigation Strategy Workshop with FEMA and State – **March 26th (in person)**
- **Plan Maintenance**
 - Finalize plan maintenance procedures by **March 2024**
- **Develop Plan**
 - Draft Plan to Steering Committee by **April 2024 (tentative)**
 - Draft Plan Presentation - **May 1st (tentative)**
 - Public Review Period – **May-June 2024 (tentative)**
 - Draft to NYS DHSES – **June 2024 (tentative)**
 - Draft to FEMA – **August/September 2024 (tentative)**
 - Adoption – **October/November 2024 (tentative)**



Public and Stakeholder Outreach

- Public Outreach Toolkit –
 - Social media templates and posts
 - Printable materials
- Surveys
 - Stakeholders
 - Neighboring communities
 - Public
- HMP website - <https://www.yatescountynyhmp.com/>
- StoryMap (coming soon!)
- Planning Partnership meetings open to the public and stakeholders



Risk Assessment Overview

*How are the rankings calculated?
What is the preliminary ranking?*



Hazards of Concern (2024 HMP)



Dam Failure



Disease Outbreak



Drought



Extreme Temperature



Flood



Harmful Algal Bloom



Hazardous Materials



Landslide



Severe Storm



Severe Winter Storm



Transportation
Accidents



What is Risk?

- ✓ Hazard
 - Source of potential danger or adverse condition
- ✓ Exposure
 - Manmade or natural features exposed to the hazard
- ✓ Vulnerability
 - Damage susceptibility of the exposed features
- ✓ Adaptive Capacity (or capability)
 - Plans/policies
 - Response/recovery
 - Financial resources



HAZARD

VS

RISK

A **HAZARD** is something that has the potential to harm you



RISK is the likelihood of a hazard causing harm



Conducting a Risk Assessment

Identify Hazards

Describe Hazards

Identify Community Assets

Analyze Impacts

Summarize Vulnerability





Preliminary Risk Assessment Results



Dam Failure

Preliminary Hazard Ranking

LOW

Dam failures in Yates County are a low-probability and high-consequence event. A dam failure can have devastating impacts on the County. While most dams have storage volumes small enough that failures would have little or no consequences, dams with large storage amounts could cause significant flooding downstream.

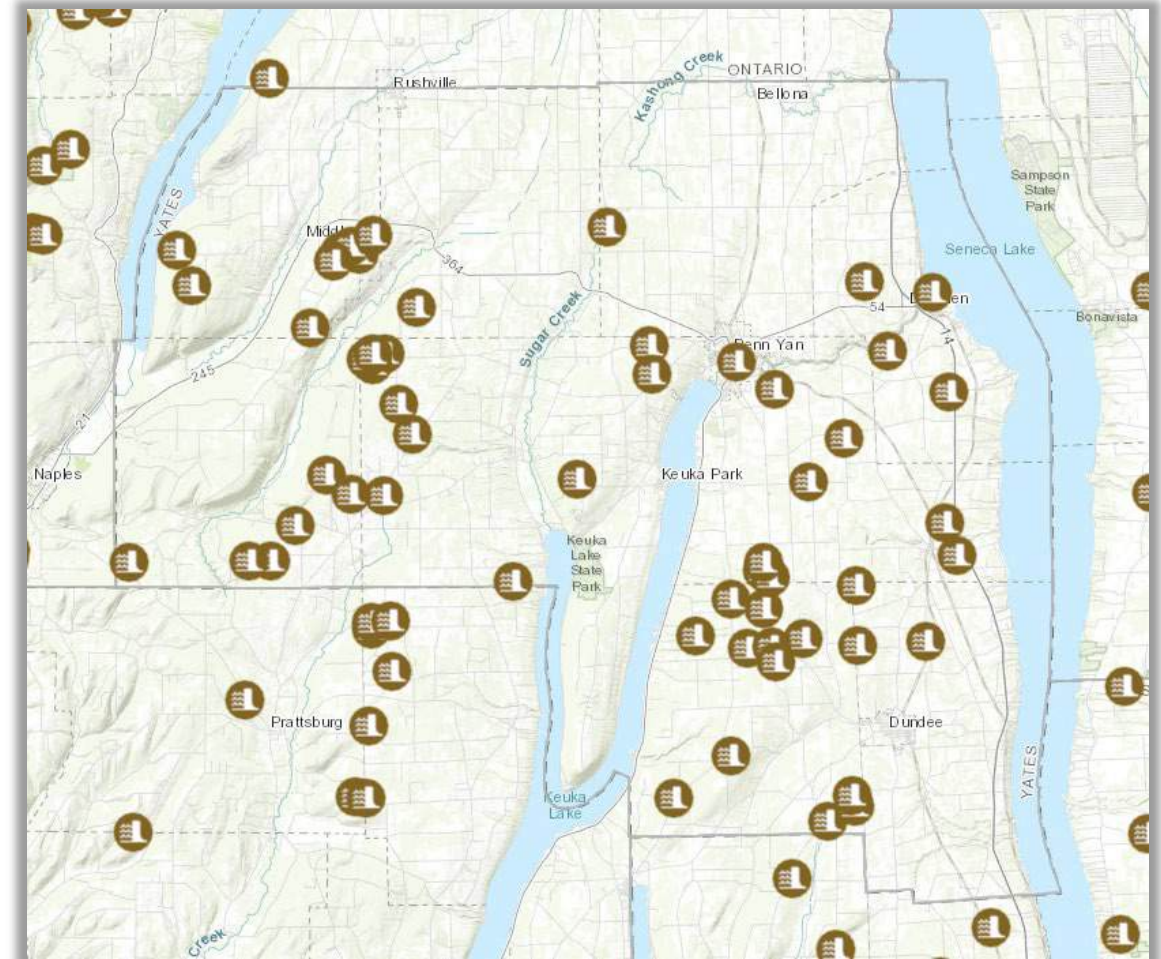
Number of Dams

66

- 24 - Low Hazard (A)
- 2 - Intermediate Hazard (B)
- 1 - High Hazard (C)
- 39 - Negligible Hazard (D)

Impacts

- Dam failure can cut evacuation routes, limit emergency access, and/or create isolation issues.
- Severe flooding that follows a dam failure can cause extensive structural damage and withhold essential services.
- The environmental impacts of a dam failure can include significant water-quality and debris-disposal issues or severe erosion that can impact local ecosystems.





Disease Outbreak

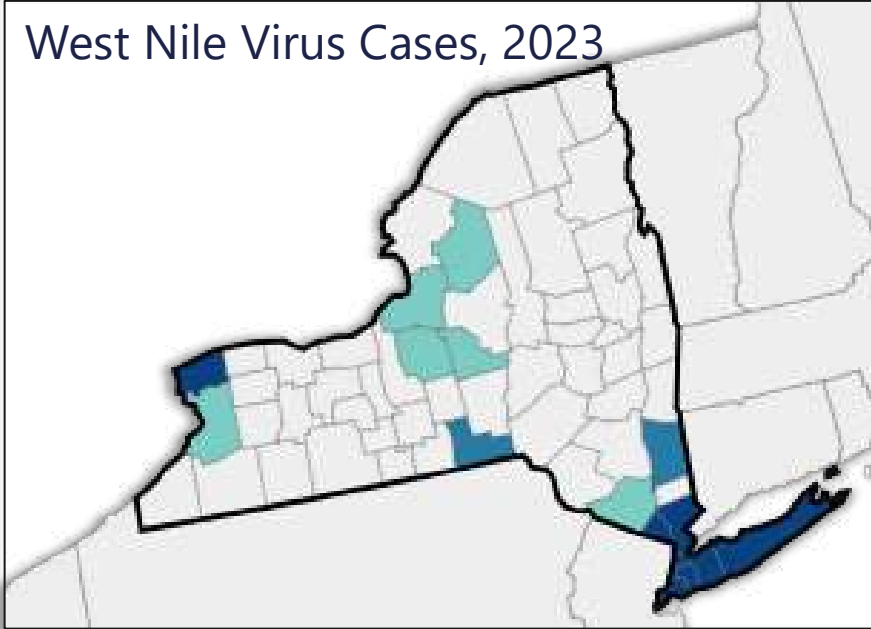
Preliminary Hazard Ranking
MEDIUM

Disease outbreaks can impact the entirety of Yates County. Emerging diseases are difficult to contain or treat and present significant challenges to risk communication since the mechanics of transmission, laboratory identification, and effective treatment protocols may be unknown.

Population Exposed
24,773
 (100%)
 The entire County is exposed and vulnerable

Hazard Types

- Influenza
- West Nile Virus
- Lyme Disease
- Coronavirus

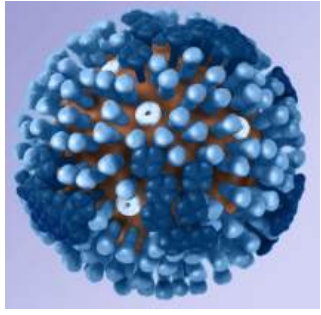


History

- Between 1999 and 2022, two human infections was reported.
- In 2020, there were 13 reported cases of Lyme disease
- For the 2023-2024 flu season, as of January 27th, there have been 126 confirmed cases of influenza.
- Since 2020, Yates County reported 4,544 positives cases of Covid-19 and 45 deaths related to Covid-19.

Impacts

- Public health threats
- Economy
- Long-term health issues
- Fatalities





Drought

Preliminary Hazard Ranking
MEDIUM

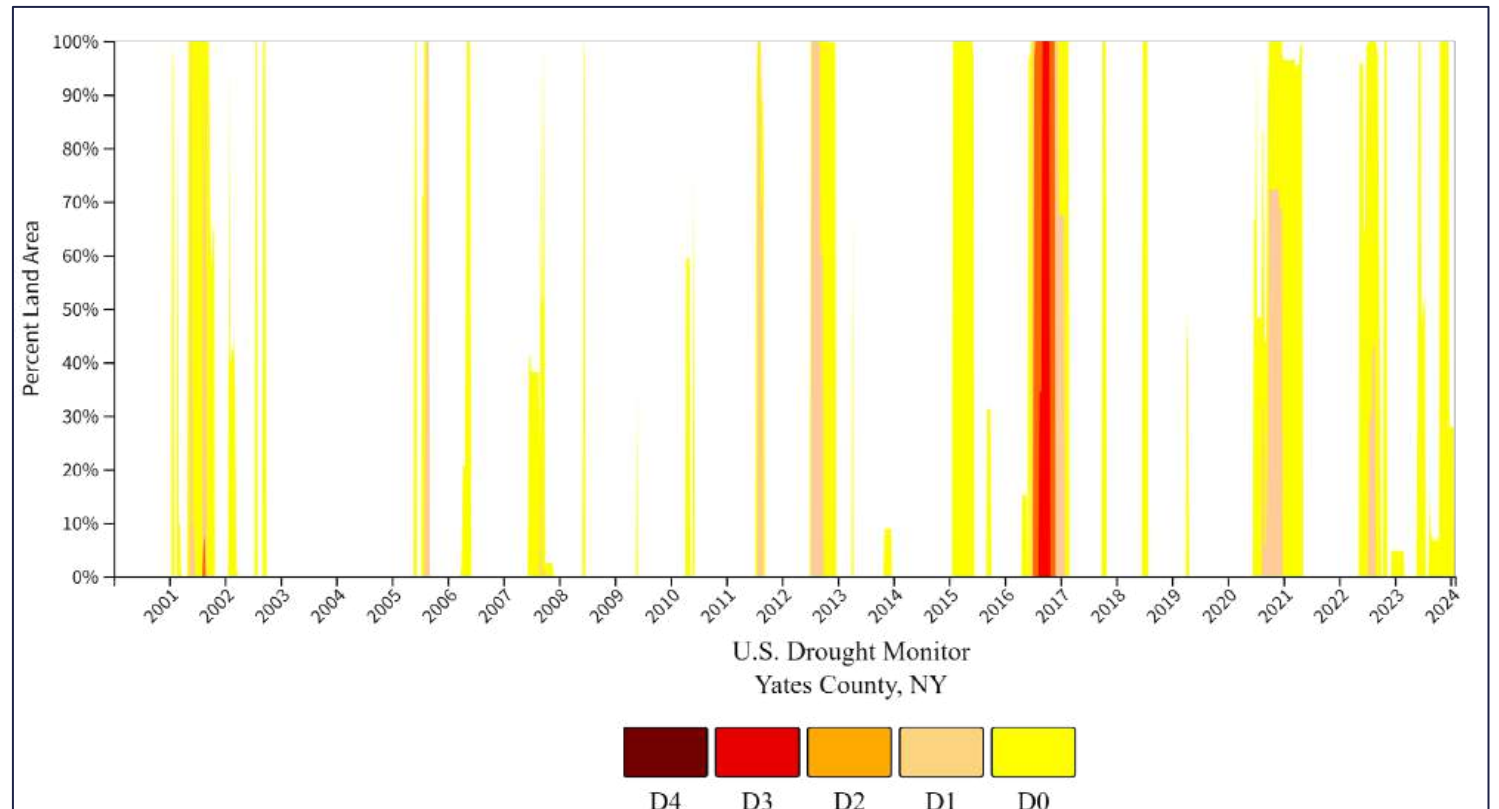
Droughts can affect Yates County's industries and make day to day tasks more difficult to complete when water usage must be monitored.

Population Exposed
24,773
(100%)
The entire County is exposed and vulnerable

Agriculture
867 farms
\$114.6 million in sales

Drought History (2000 to 2023)
17 reported impacts

Historical Drought Conditions for Yates County





Extreme Temperature

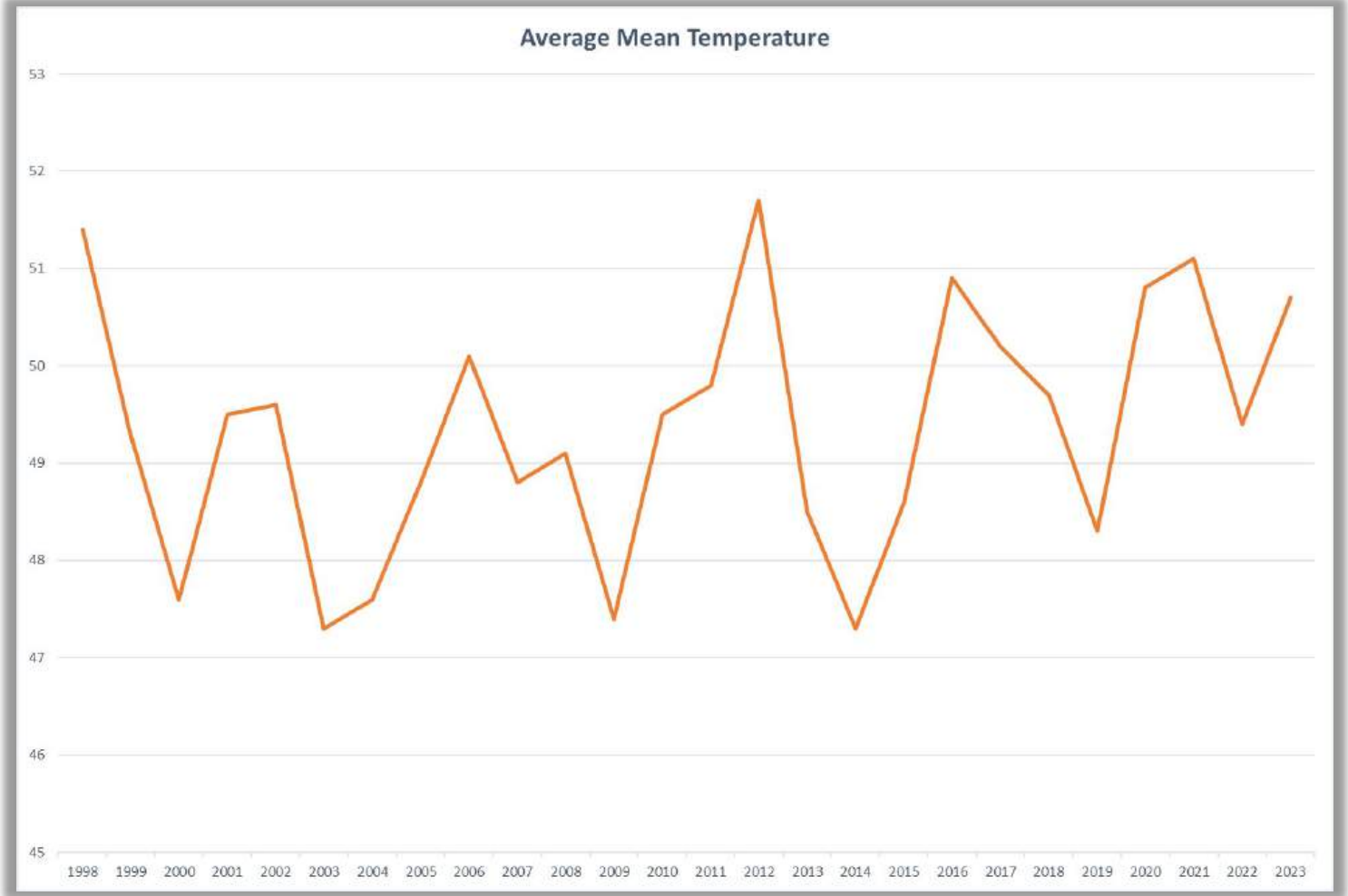
Preliminary Hazard Ranking
MEDIUM

Extreme temperature includes both heat and cold events, which affects the entire County including, human health and commercial/agricultural businesses. Extreme temperature events can have primary and secondary effects on infrastructure.

Population Exposed
24,773
(100%)
The entire County is exposed and vulnerable

USDA Declarations
3
3 frost/freeze events

Agriculture
867 farms
\$114.6 million in sales





Flood

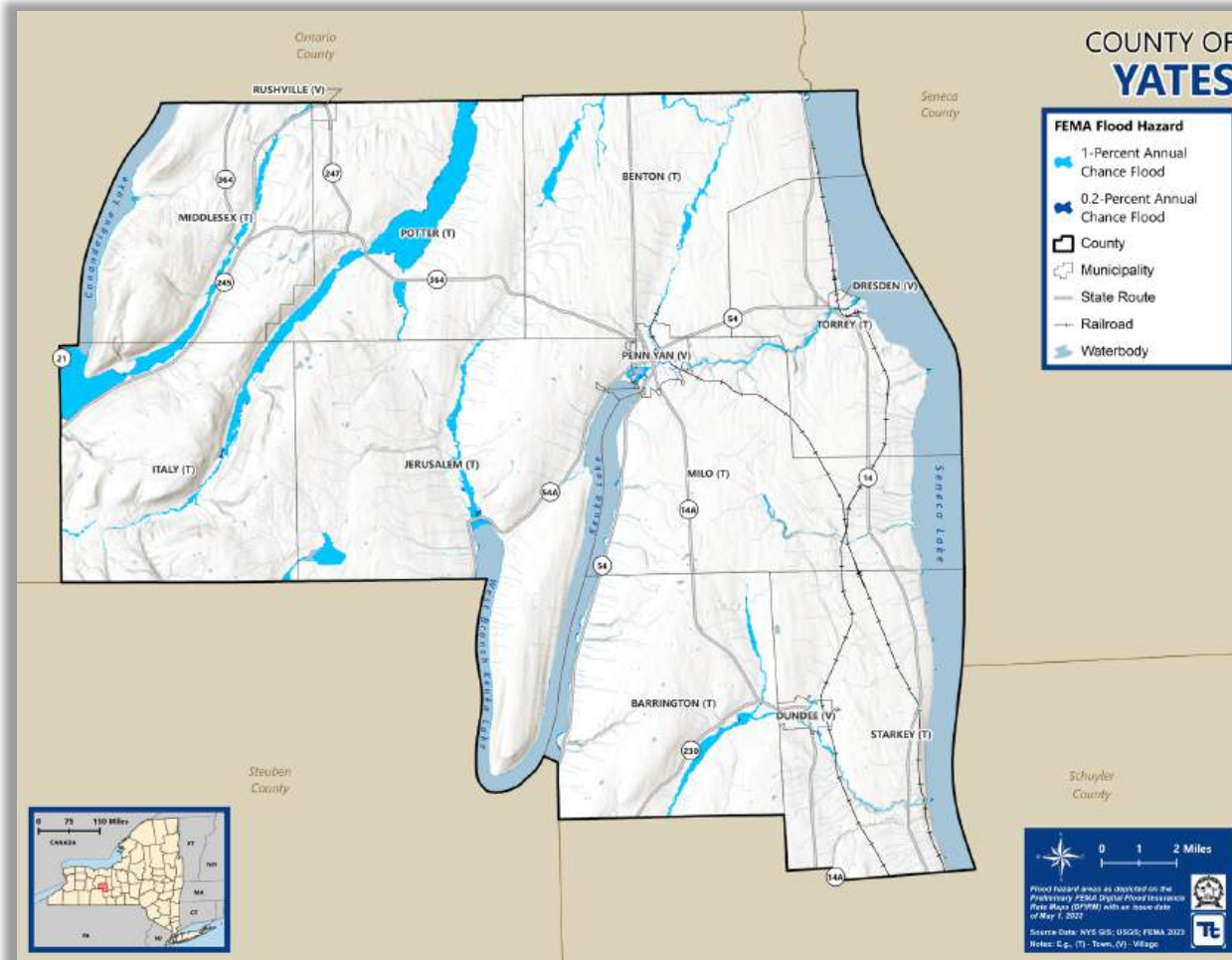
Preliminary Hazard Ranking
MEDIUM

Floods are one of the costliest natural hazards in Yates County, leading to displaced residents and economic hardships, especially to communities located within floodprone areas or floodplains.

Population Exposed
522
(2.1%)
In 1% Annual Chance Flood Hazard Area

Vulnerable Population
235
(1.8%)
In 1% Annual Chance Flood Hazard Area

Buildings
465
(2.1%)
In 1% Annual Chance Flood Hazard Area



Total Land in Flood Hazard Area
8,277 acres
(3.8%)

Incidents
Since 1954, FEMA included Yates County in 8 declarations.

- DR-487 (Storms, Rain, Flooding)
- DR-725 (Severe Storms and Flooding)
- DR-1095 (Severe Storms and Flooding)
- DR-1335 (Severe Storms and Flooding)
- DR-1486 (Severe Storms, Flooding, Tornadoes)
- DR-1534 (Severe Storms and Flooding)
- DR-1993 (Severe Storms, Flooding, Tornadoes, Wind)
- DR-4180 (Severe Storms and Flooding)



Harmful Algal Bloom

Preliminary Hazard Ranking

MEDIUM

Harmful algal blooms (HABs) in freshwater (lakes, ponds, rivers, and streams) generally consist of visible patches of cyanobacteria, also called blue-green algae. Several types of cyanobacteria can produce toxins and other harmful compounds that can pose health risks to people and animals through ingestion, skin contact, or inhalation.

Population Exposed

24,773

(100%)

Entire population exposed; however, those that are located near impacted waters or rely on lakes for drinking water are more at risk

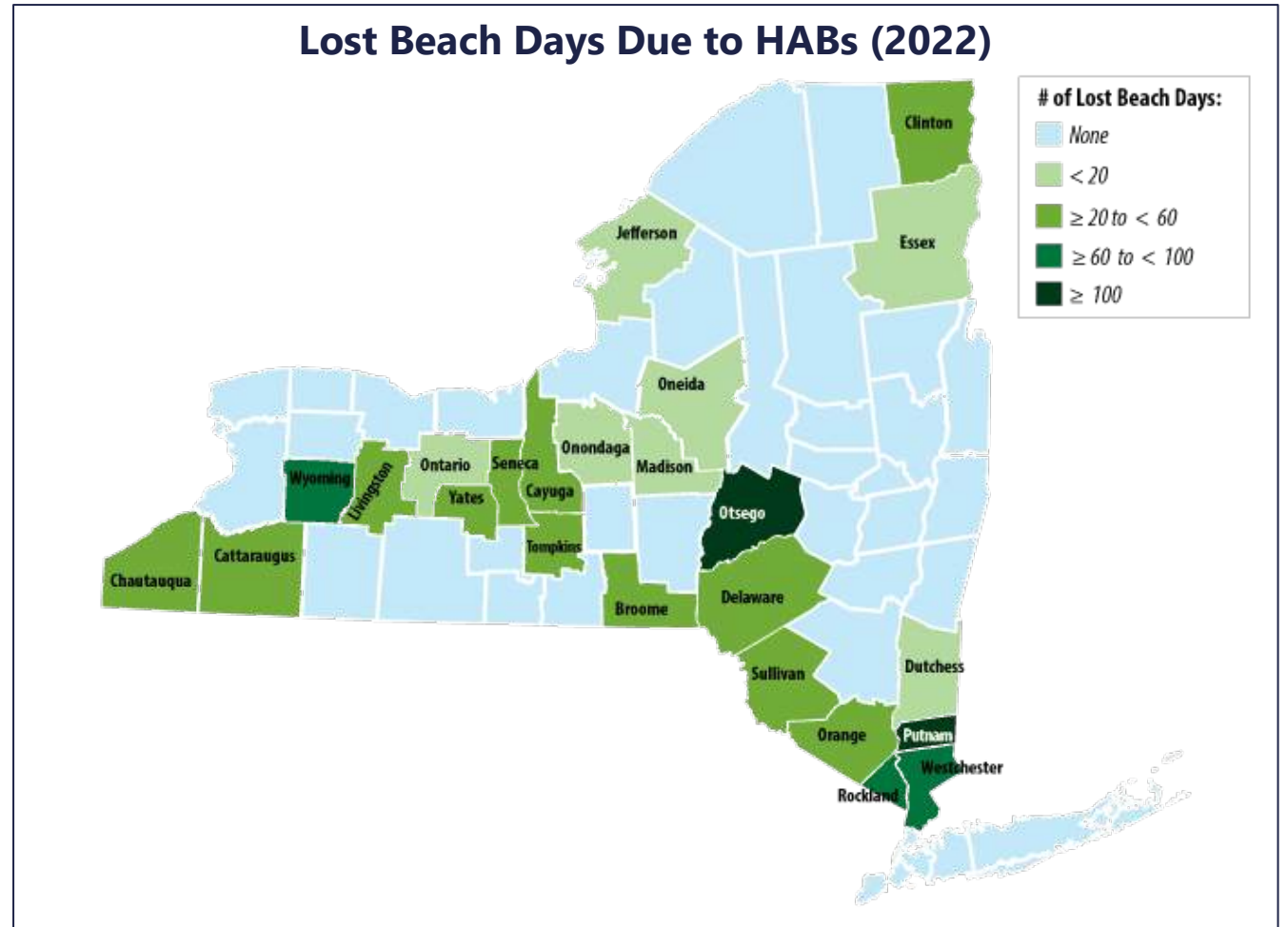
Event History

Since 2019, there have been 560 HAB reports in Yates County. Canandaigua Lake, Half Moon Lake, Keuka Lake, and Seneca Lake have all been impacted by HABs. In 2022, Beaches on Keuka Lake reported closure for a total of 32 days as a result of HABs.

Impacts

- Drinking water contamination
- Water quality
- Health issues (skin irritation, stomach issues)
- Depleting oxygen in water
- Economic losses from fisheries and recreational areas

Lost Beach Days Due to HABs (2022)





Hazardous Materials

Preliminary Hazard Ranking

MEDIUM

Hazardous material releases may happen during manufacturing, storage, transportation, or usage, both along transportation routes and at fixed-site facilities. These releases can cause harm to humans, wildlife, properties, and also lead to air, water, and soil contamination.

Population Exposed

14,553

(58.7%)

Population located within 0.5 miles of pipelines, major roadways, or railroads

Buildings Exposed

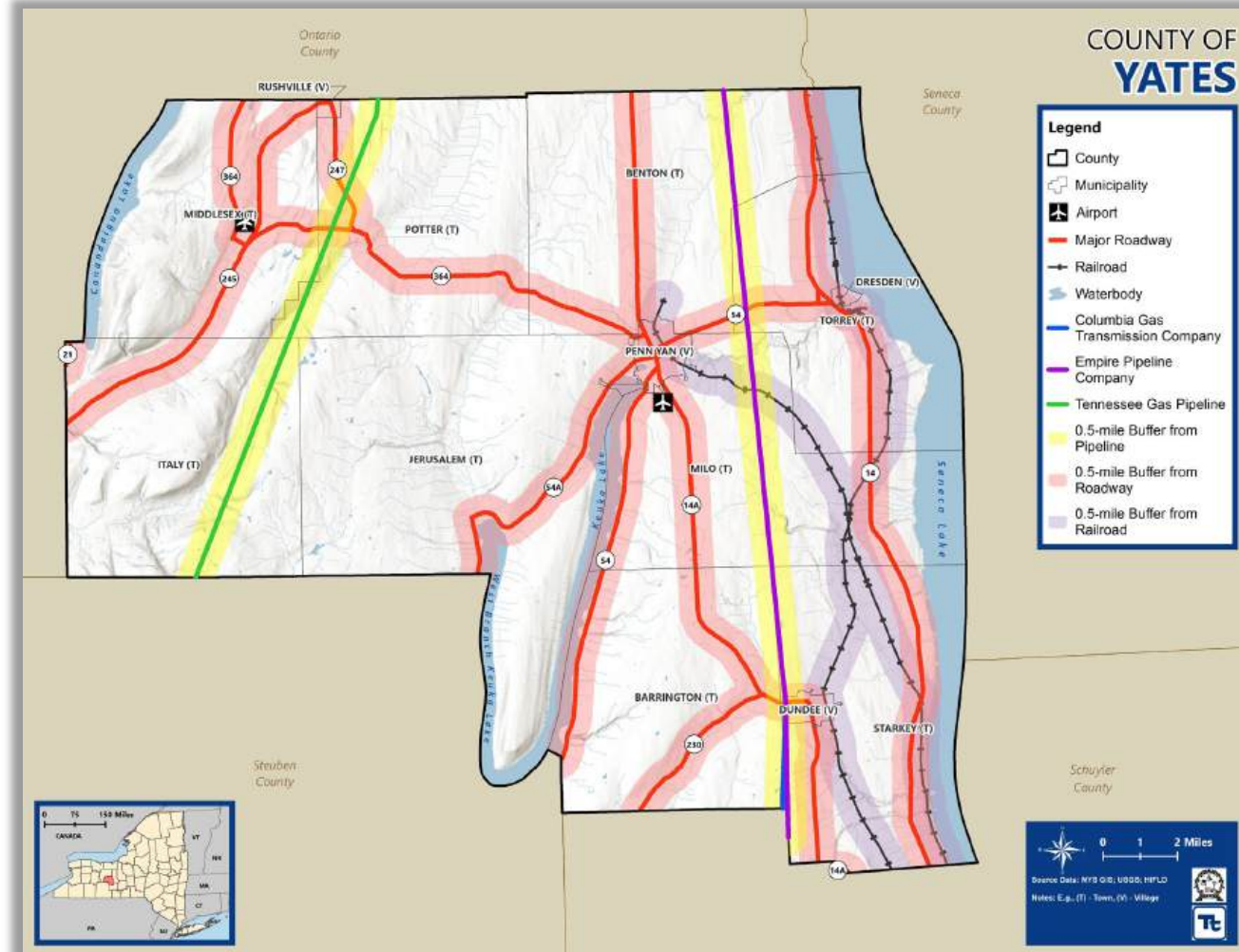
10,722

(48.5%)

Buildings located within 0.5 miles of pipelines, major roadways, or railroads

Potential Impacts

- Death
- Serious injury
- Long-lasting health effects
- Property damage
- Air and water contamination
- Closed or damaged transportation routes
- Loss of natural resources





Landslides

Preliminary Hazard Ranking
LOW

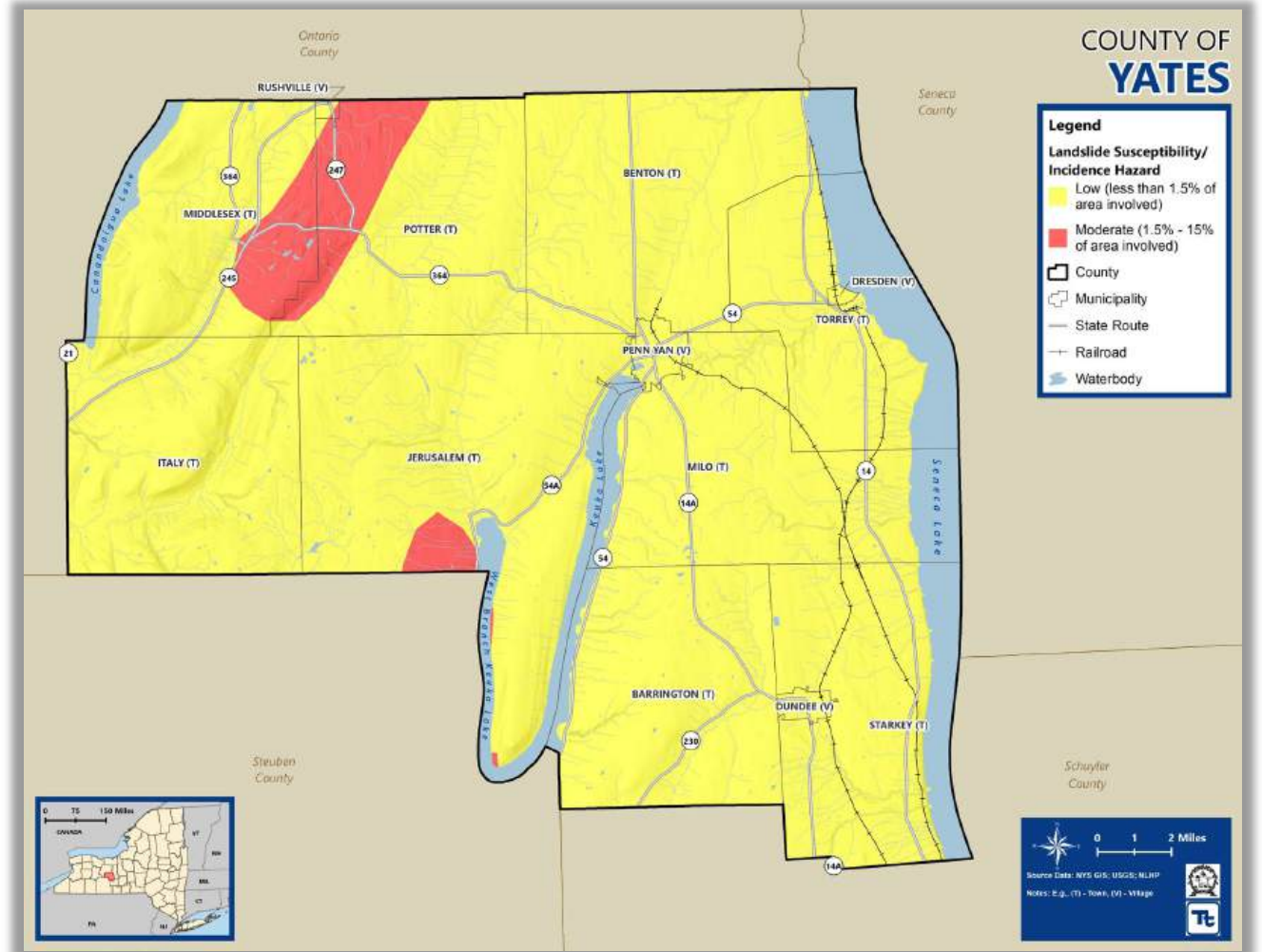
Landslides are composed of natural rock, soil, artificial fill, or a combination and move along a downward slope. They flow rapidly, striking at avalanche speeds that can travel several miles, growing in size as they pick up trees, boulders, cars and other materials.

Population Exposed
1,490
 (6%)
 People living in moderate landslide susceptibility areas

Buildings Exposed
966
 (4.4%)
 Buildings located in moderate landslide susceptibility areas

Potential Impacts

- Utility disruptions and outages
- Loss of life
- Damaged infrastructure
- Loss of natural resources
- Flooding
- Block or damage transportation routes





Severe Weather

Preliminary Hazard Ranking
MEDIUM

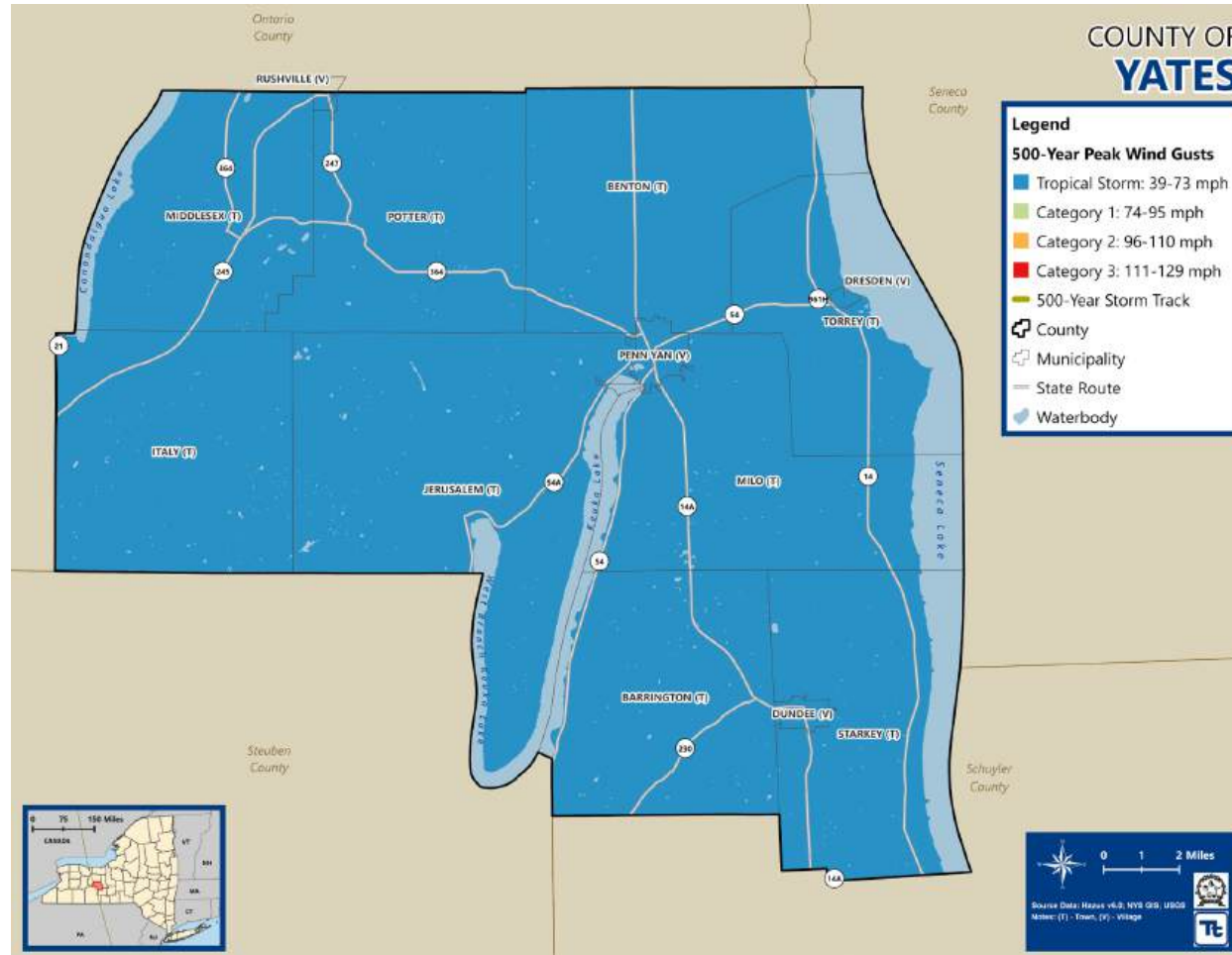
Severe storm events are a common occurrence in Yates County. A variety of severe storm types, such as thunderstorms, lightning, hail, tornadoes, high winds, and tropical cyclones have damaged property and infrastructure, disrupt power, downing trees, and power lines, and causing injuries and fatalities.

Population Exposed
24,773
 (100%)
 The entire County is vulnerable

Buildings Exposed
22,096
 (100%)
 The entire County is vulnerable

Potential Impacts

- Essential Services Interruptions
- Power Outages
- Traffic Accidents
- Downed Trees
- Property Damage
- Personal Injury / Loss of Life



Incidents

- Between 2018 and 2023, 49 severe weather events were recorded by NOAA NCEI.
- Since 1954, FEMA included Yates County in 11 declarations.
 - DR-338 (Tropical Storm Agnes)
 - DR-487 (Storms, Rain, Flooding)
 - DR-725 (Severe Storms and Flooding)
 - DR-1095 (Severe Storms and Flooding)
 - DR-1335 (Severe Storms and Flooding)
 - DR-1486 (Severe Storms, Flooding, Tornadoes)
 - DR-1534 (Severe Storms and Flooding)
 - DR-1993 (Severe Storms, Flooding, Tornadoes, Wind)
 - EM-3351 (Hurricane Sandy)
 - DR-4180 (Severe Storms and Flooding)
 - DR-4625 (Remnants of Tropical Storm Fred)



Severe Winter Weather

Preliminary Hazard Ranking

MEDIUM

In Yates County, winter weather includes heavy snow, sleet, blizzards, and ice storms. These events occur frequently during the winter months and has the potential to be life-threatening.

Population Exposed

24,773

(100%)

The entire County is exposed and vulnerable

Blizzard Warning
Severe winter weather is expected within the next **12 to 36 hours** or is occurring -- including whiteout conditions. **Do not travel.**

Winter Storm Warning
Dangerous winter weather is expected within the next **12 to 36 hours** or is occurring. **Considerable travel problems** are expected.

Winter Weather Advisory
Potentially dangerous winter weather is expected within the next **12 to 36 hours** or is occurring. **Travel difficulties** are expected.

take action. take action. be aware.

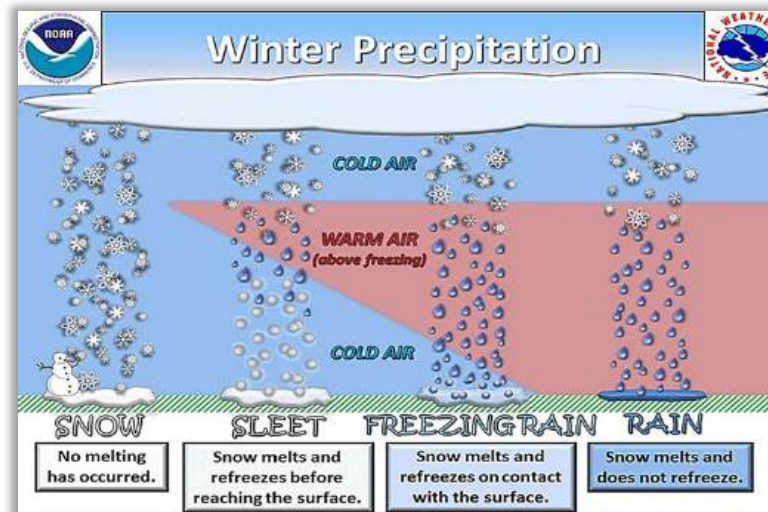
- ## Incidents
- Between 2018 and 2023, 13 winter weather events were recorded by NOAA NCEI.
 - Since 1954, FEMA included Yates County in three declarations.
 - DR-898 (Severe Winter Storm)
 - EM-3107 (Severe Blizzard)
 - DR-1467 (Ice Storm)

General Building Stock and Critical Facilities Exposed

22,096

(100%)

The entire County is exposed and vulnerable; however structural impacts are minimal.



- ## Hazard Types
- Heavy Snow
 - Blizzard
 - Sleet
 - Ice Storm



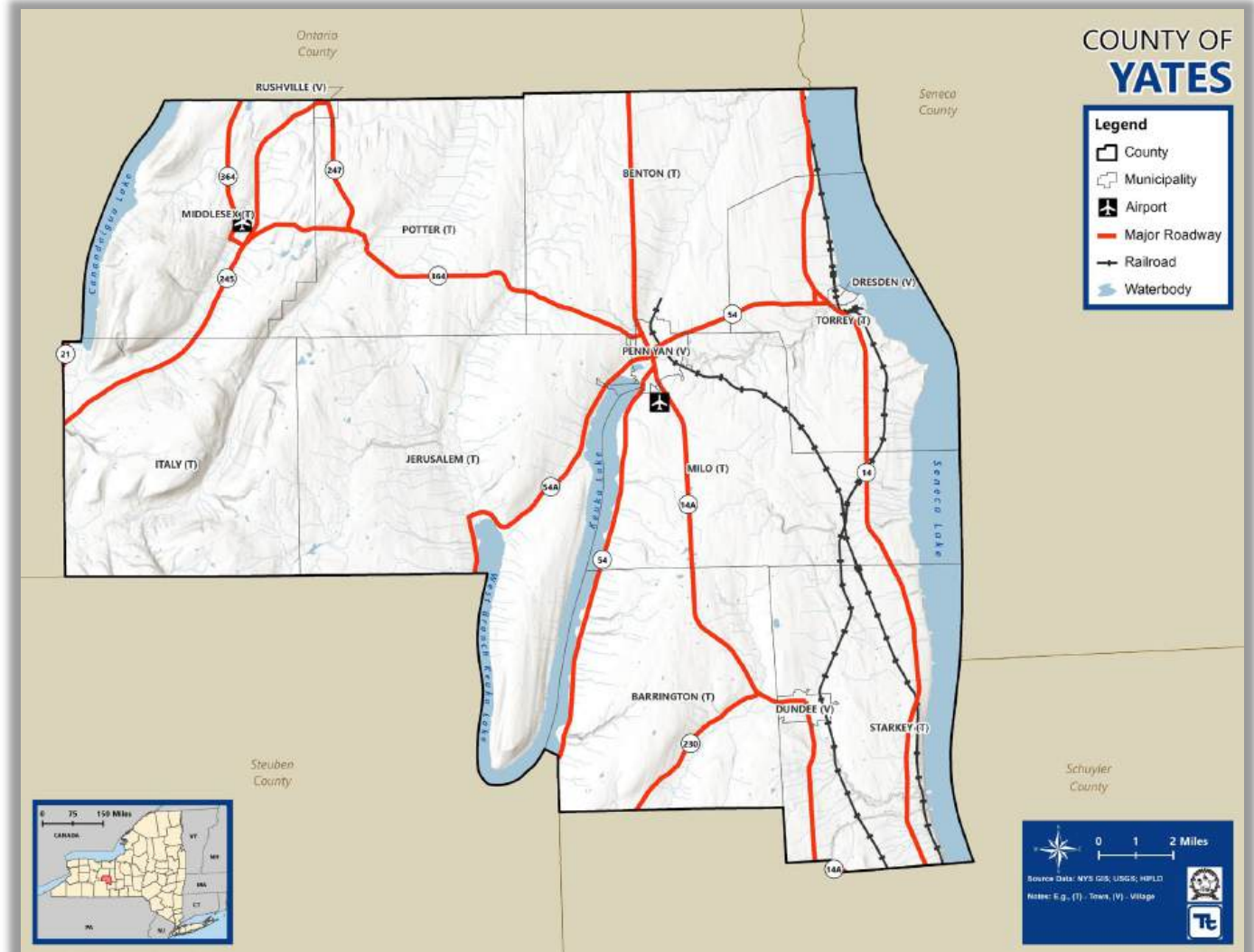
Transportation Accidents

Preliminary Hazard Ranking
LOW

Transportation accidents include, vehicular accidents, aviation accidents, railway accidents, and hazardous materials in transit.

Incidents
Between 2018 and 2023, there have been over 3,900 vehicle crashes report to ITS MR throughout the County. No reports were found related to aviation or rail incidents or hazardous materials in transit.

- Impacts**
- While this is a manmade hazard, natural hazards can increase the potential of accidents to occur.
 - Widespread hazard that can occur anywhere in Yates County.
 - According to NYS Department of Health, Motor vehicle crash injuries are a leading cause of injury related deaths for Yates County residents.

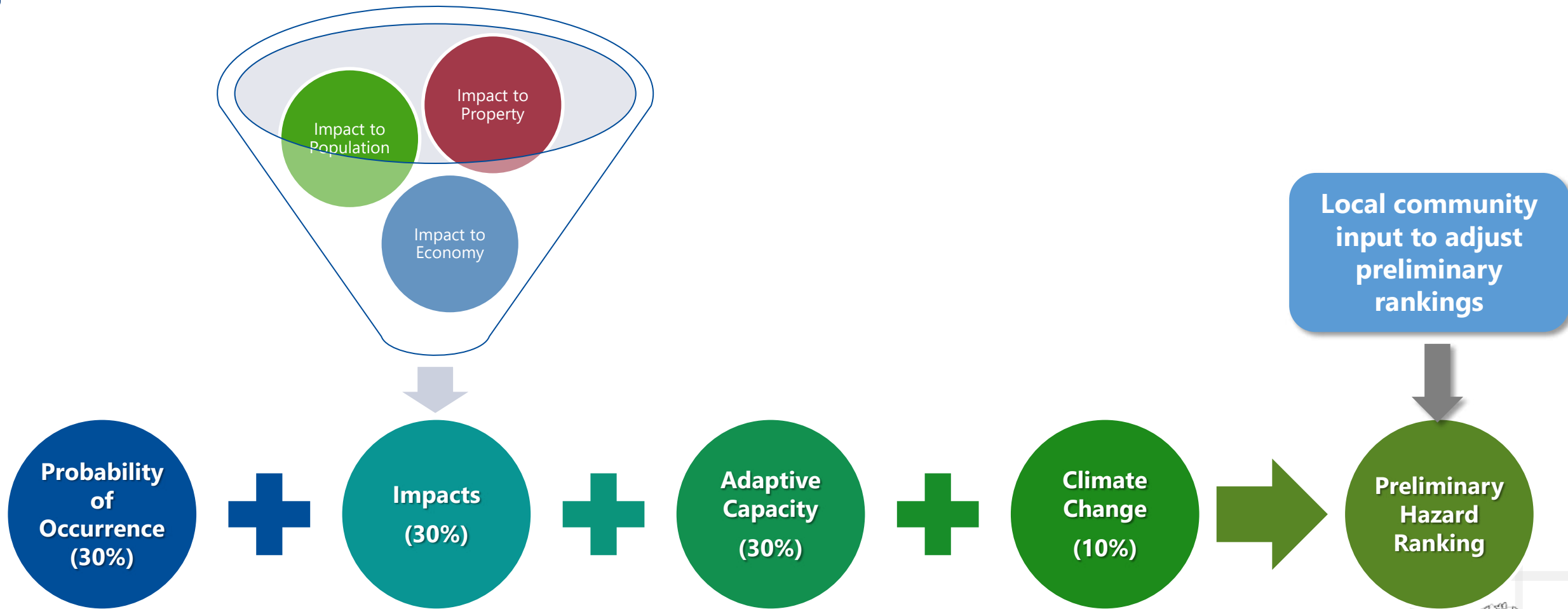


Preliminary Hazard Ranking Methodology

- The calculated probability of a hazard occurring based on historical data
- *Impacts to people, property, and the economy* based on GIS data and analysis of exposure.
- The degree to which climate change will affect future occurrences based on best available data.
- The degree to which existing capabilities (the ability of your community to respond to the hazard based on ordinances, mitigation strategies and procedures, and readiness) decrease overall risk.



Preliminary Hazard Ranking Formula



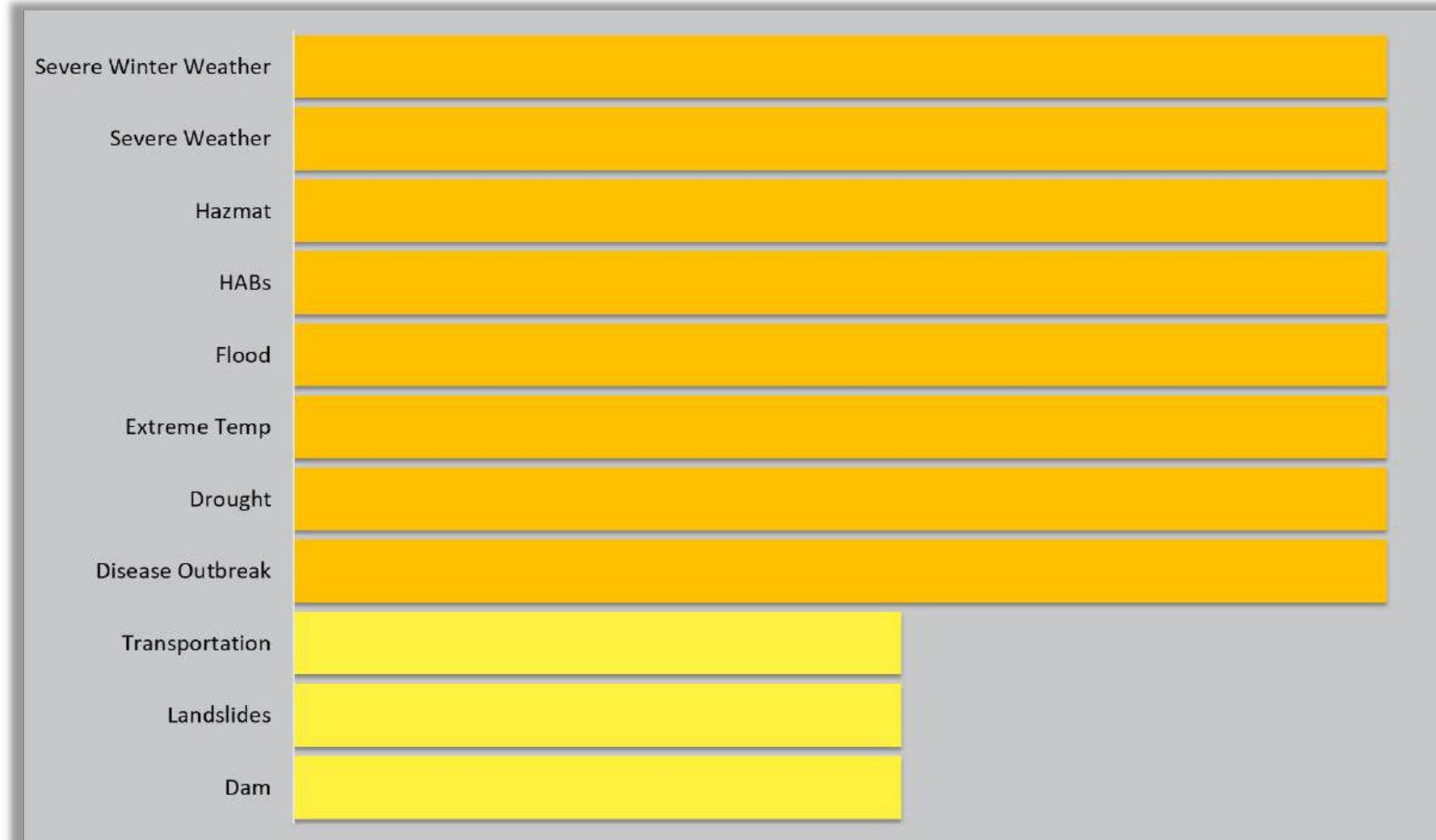
Hazard Ranking (Countywide)

- **Medium**

- Severe Winter Weather
- Severe Weather
- Hazmat
- HABs
- Flood
- Extreme Temp
- Drought
- Disease Outbreak

- **Low**

- Transportation
- Landslides
- Dam Failure



Preliminary Hazard Ranking (Municipal)

Jurisdictions	Hazard Ranking										
	Dam	Disease Outbreak	Drought	Extreme Temp	Flood	HABs	Hazmat	Landslides	Severe Weather	Severe Winter Weather	Transportation
Barrington (T)	Low	Medium	Medium	Medium	Low	Medium	Low	Low	Medium	Medium	Low
Benton (T)	Low	Medium	Medium	Medium	Low	Medium	Low	Low	Medium	Medium	Low
Dresden (V)	Low	Medium	Medium	Medium	Low	Medium	Medium	Low	Medium	Medium	Low
Dundee (V)	Low	Medium	Medium	Medium	Low	Low	Medium	Low	Medium	Medium	Low
Italy (T)	Low	Medium	Medium	Medium	Low	Medium	Low	Low	Medium	Medium	Low
Jerusalem (T)	Low	Medium	Medium	Medium	Low	Medium	Medium	Low	Medium	Medium	Low
Middlesex (T)	Low	Medium	Medium	Medium	Low	Medium	Medium	Low	Medium	Medium	Low
Milo (T)	Low	Medium	Medium	Medium	Medium	Medium	Low	Low	Medium	Medium	Low
Penn Yan (V)	Low	Medium	Medium	Medium	Low	Medium	Medium	Low	Medium	Medium	Low
Potter (T)	Low	Medium	Medium	Medium	Low	Low	Low	Medium	Medium	Medium	Low
Rushville (V)	Low	Medium	Medium	Medium	Low	Low	Low	Medium	Medium	Medium	Low
Starkey (T)	Low	Medium	Medium	Medium	Low	Medium	Low	Low	Medium	Medium	Low
Torrey (T)	Low	Medium	Medium	Medium	Low	Medium	Low	Low	Medium	Medium	Low
Yates County	Low	Medium	Medium	Medium	Medium	Medium	Medium	Low	Medium	Medium	Low



Do you agree with the rankings?

- Use the online form to let us know if you agree with the rankings.
- If you do not agree, what should the ranking be?
- Click the link in the chat or scan the QR code



Yates County - Hazards of Concern (for meeting)

Please use this form to provide feedback about the preliminary hazard rankings for Yates County.

* Required

1. Do you agree with the preliminary rankings for Yates County? *

	Yes	No
Dam Failure - LOW	<input type="radio"/>	<input type="radio"/>
Disease Outbreak - MEDIUM	<input type="radio"/>	<input type="radio"/>
Drought - MEDIUM	<input type="radio"/>	<input type="radio"/>
Extreme Temperature - MEDIUM	<input type="radio"/>	<input type="radio"/>
Flood - MEDIUM	<input type="radio"/>	<input type="radio"/>
HABs - MEDIUM	<input type="radio"/>	<input type="radio"/>
Hazmat - MEDIUM	<input type="radio"/>	<input type="radio"/>
Landslides - LOW	<input type="radio"/>	<input type="radio"/>
Severe Weather - MEDIUM	<input type="radio"/>	<input type="radio"/>
Severe Winter Weather - MEDIUM	<input type="radio"/>	<input type="radio"/>
Transportation Accidents - LOW	<input type="radio"/>	<input type="radio"/>

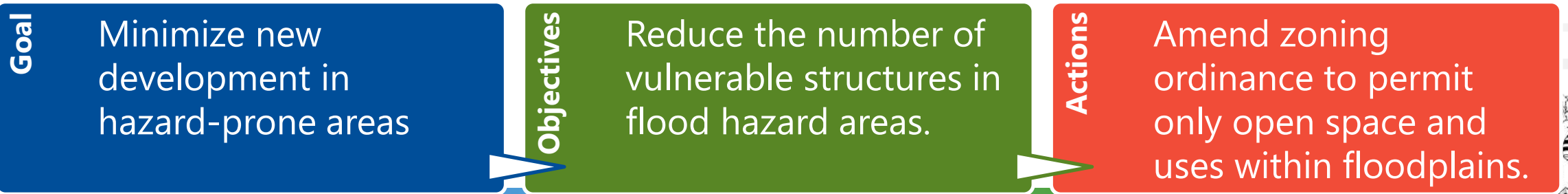




Goals and Objectives

Goals and Objectives – Review and Update

Goal Number	Goal	Modify, Add, or Remove?
1	Reduce the likelihood and impacts of hazards on life, property, and the environment.	
2	Protect life, property, critical infrastructure, the environment, and the economy from hazard impacts.	
3	Educate the public, officials, and other stakeholders about the hazards they face and what can be done to mitigate hazard impacts.	



Goals and Objectives Review and Update

Objective Number	Objectives
1	Develop and/or update local regulations based on current information and best practices.
2	Maintain natural systems to reduce the impacts of hazards.
3	Acquire, retrofit, or relocate structures from flood-prone areas.
4	Retrofit critical infrastructure to protect against hazard impacts.
5	Enhance stormwater management infrastructure.
6	Ensure that critical facilities can continue to function during and after hazard impacts.
7	Encourage residents and business owners to insure their property against hazard impacts, including through flood insurance through the National Flood Insurance Program (NFIP).
8	Work with legislators to develop and enact legislation that reduces long-term vulnerability to hazards.
9	Ensure that local officials attend current training on regulatory issues and best practices.
10	Provide information to individuals throughout the county on the hazards they face and what property protection measures they can take.

Goals for the 2024 HMP

- We need your input!
- Complete this online form to review and comment on the goals/objectives.
- Click the link in the chat or scan the QR code



Yates County HMP | Goals and Objectives

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

For the 2024 Update, we need to look at the previous plan's goals and objectives and update accordingly. They should be in-line with goals and objectives established in other related planning documents and mechanisms.

Review the tables below and indicate whether or not the goals should be kept, changed, or another goal should be added. Conduct the same exercise with the objectives.

* Required

1. Name *

2. Department/Agency: *

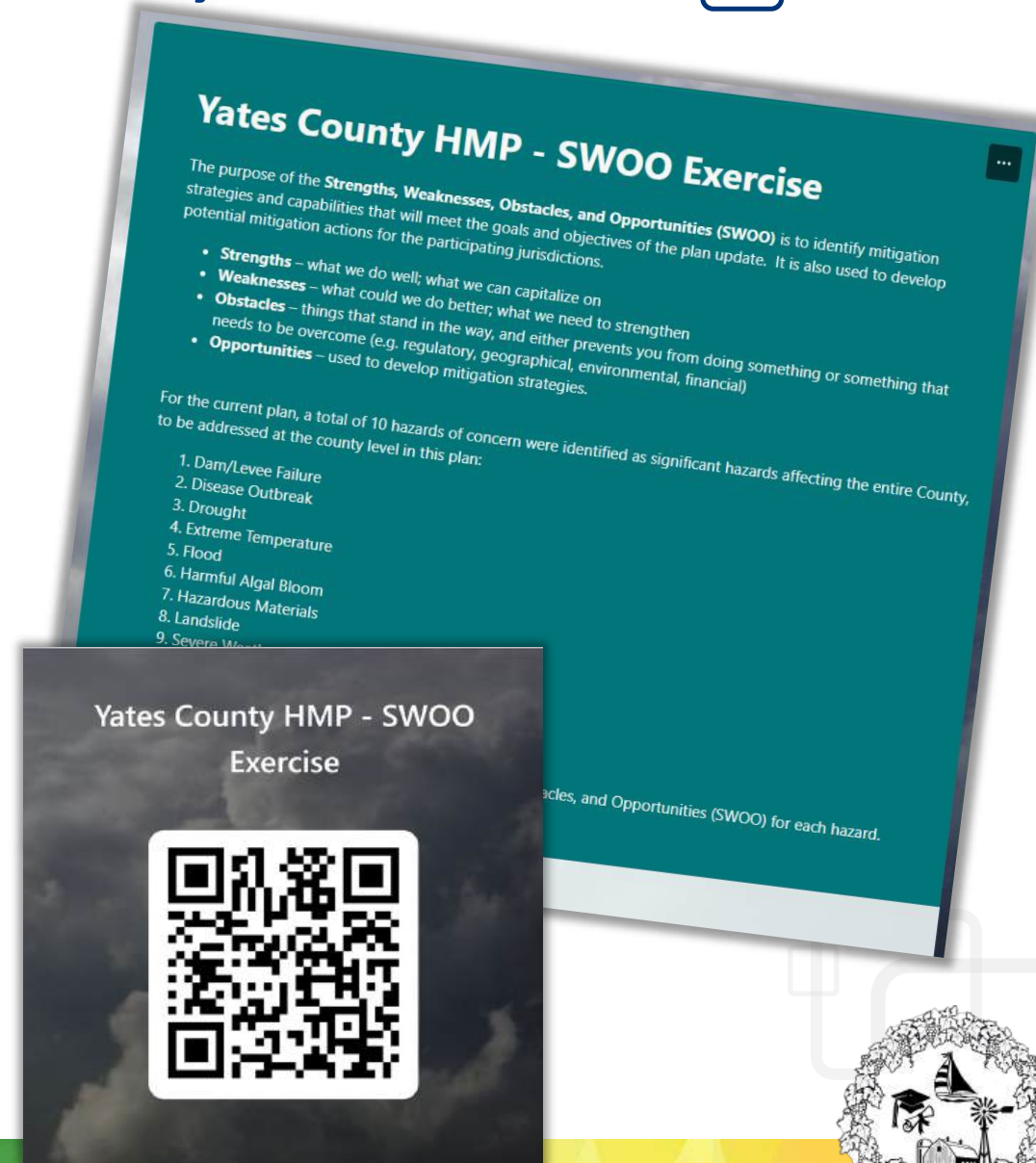




Strengths, Weaknesses, Obstacles, and Opportunities (SWOO)

Strengths, Weaknesses, Obstacles, and Opportunities (SWOO)

- Look at the following for each hazard of concern:
 - **Strengths** – what the County and communities do well; things upon which we can capitalize;
 - **Weaknesses** – what can be done better; what can be strengthened;
 - **Obstacles** – what stands in the way to implementation to prevent mitigation or response (for example regulatory, geographical, environmental, financial issues); and
 - **Opportunities** - actions or projects to mitigate issues or improve resilience.





Questions?

Yates County Project Contacts

Diane Caves, Deputy Director
Yates County Emergency Services
315-536-3000 | dcaves@yatescounty.org

Tetra Tech Project Contacts

Heather Apgar, CFM
(973) 630-8046 | heather.apgar@tetrattech.com



**Thank
You!**

February 22, 2024 Yates County – Planning Partnership

10 a.m. – 11 a.m. EST

Attendees	<ul style="list-style-type: none"> • Heather Apgar, Tetra Tech • Grace Altenburg, Tetra Tech • Doug Sinclair, Yates County Public Health • Jamie L. Sisson, Town of Jerusalem Supervisor • Colby Petersen, YC Soil and Water Conservation District • Brian Winslow, YC OES • Grant Downs, Town of Torrey • Brian Shriver, Town of Starkey • Brett McMichael, Village of Penn Yan • Ryan Bailey, YC OES • Nea Curtis, Village of Rushville
Agenda	<ul style="list-style-type: none"> - In-Kind Tracking - Schedule - Progress Report - Public/Stakeholder Outreach - RA Overview - Questions/Next Steps
In-Kind Tracker Schedule Progress Report	<ul style="list-style-type: none"> - Reminder to track your participation and time through the In-Kind tracker! - Plan to have draft completed by Summer. Draft plan to NYS by June and off to FEMA by late fall. - Working on our public and stakeholder outreach. An email will go out with materials to promote the HMP on social media platforms and offices (StoryMap, graphics and HMP website). Toolkit for public outreach to be sent out to assist with outreach. - Mitigation strategy: working with you to get the annex completed. Next meetings will be to go over mitigation actions and come up with new actions. <p>Planning partnership meetings will continue to be open to the public.</p> <p>Municipal worksheets needed:</p> <ul style="list-style-type: none"> - Hazard Event History - NFIP Questionnaire - Building Permits - Problem areas - New Development - Status of 2019 mitigation actions
RA Overview	<ul style="list-style-type: none"> - Dam Failure: preliminary ranking – Low <ul style="list-style-type: none"> o One HDD. - Extreme Temperature: Preliminary ranking – Medium <ul style="list-style-type: none"> o Entire county is exposed. o 3 USDA declarations. - Disease Outbreak: Preliminary Ranking – Medium <ul style="list-style-type: none"> o Qualitative assessment o Factored in vulnerable populations.

	<ul style="list-style-type: none"> ○ Entire county is exposed. ○ Influenza, West Nile, Lyme Disease, COVID, etc. - HazMat: preliminary ranking – Medium - Man-made hazard. <ul style="list-style-type: none"> ○ Assessed population and buildings located within a ½ mile of major roadways, pipelines, and railroads = 59% of population exposed, 49% buildings exposed. - Landslide: Preliminary ranking – Low <ul style="list-style-type: none"> ○ Assessed population and buildings located in the moderate landslide susceptibility area = 6% of population, 4.4% of buildings. - Severe Winter Storm: Preliminary Ranking – Medium <ul style="list-style-type: none"> ○ Entire population and buildings are exposed in the County. ○ 13 winter weather events since 2018-2023. - Transportation Accidents: Preliminary ranking – Medium <ul style="list-style-type: none"> ○ Qualitative assessment. ○ Assessed major roadways, railways, and airports. ○ 2018-2023 there have been over 3,900 accidents reported. ○ Rail is accidents with trains hitting cars. One train was derailed a couple years ago. - Drought: Preliminary Ranking – Medium - Qualitative assessment. <ul style="list-style-type: none"> ○ Looked at agriculture and reported impacts according to the drought impact reporter. ○ Entire population, more vulnerable populations and those who rely on well water are most at risk. - HABS: Preliminary ranking – Medium <ul style="list-style-type: none"> ○ Qualitative assessment. ○ Considered the municipalities that are located closer to the bodies of water hat have reported HABS. ○ Those who rely on the lakes for drinking water are most at risk. ○ Since 2019 there has been 560 HAB reports. ○ Takes into account water contamination, for what is available. - Severe Storm: Preliminary Ranking – Medium - Entire population and buildings are exposed. <ul style="list-style-type: none"> ○ Factored in power and utility outages, history of occurrence NOAA_NCEI database. ○ 9 FEMA disaster declarations since 1954. - Flood: Preliminary Ranking – Medium <ul style="list-style-type: none"> ○ Quantitative assessment ○ 522 people exposed to the 1% annual chance flood hazard area. ○ Almost 4 % of the county’s land area is in the flood hazard area. ○ Looked at number of NFIP policy to make rankings for each municipality.
<p>Questions</p>	<p>Paul M: Does the dams include the man-made lakes? Concern for stormwater flooding as well.</p> <p>Heather A.: we looked at what was reported on NYS dm list. Feel free to change flooding ranking based on your stormwater flooding concerns.</p>
<p>Next Steps</p>	<p>- SWOO link will be sent out for review of the hazards of concern.</p>

	<ul style="list-style-type: none">- Tetra Tech planners will follow up with worksheets needed and online forms.-
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Tt TETRA TECH

Yates County Hazard Mitigation Plan Update

Planning Partnership Meeting #2 – Review Preliminary Hazard Ranking

February 22, 2024

While waiting for the meeting to start, please enter your name and department/agency in the chat.

1




Today's Agenda

1. In-Kind Tracking
2. Schedule
3. Progress Report
4. Public and Stakeholder Outreach
5. Risk Assessment Overview
6. Questions/Next Steps/Wrap Up

2

In-Kind Tracking




Jurisdiction: _____

Name: _____ Title: _____

Date	Start Time	End Time	# hours	Task Description	Hourly Rate	Total # hours x rate	Comments <small>describe task in more detail</small>
					\$		


Scan the QR code for the online form to enter your time.



-or-


<https://www.surveymonkey.com/r/YatesHMPInKind>

Yates County Hazard Mitigation Plan 2024 Update



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Project Schedule



- **Planning Process**
 - Ongoing
- **Update Risk Assessment**
 - Discuss risk assessment results with Steering Committee – February 8th
 - Discuss risk assessment with municipalities – **TODAY!**
- **Public and Stakeholder Outreach**
 - Ongoing
- **Capability Assessment**
 - Ongoing
- **Mitigation Strategy**
 - Continue working with municipalities
 - Mitigation Strategy Workshop with FEMA and State – **March 26th (in person)**

- **Plan Maintenance**
 - Finalize plan maintenance procedures by **March 2024**
- **Develop Plan**
 - Draft Plan to Steering Committee by **April 2024 (tentative)**
 - Draft Plan Presentation - **May 1st (tentative)**
 - Public Review Period – **May-June 2024 (tentative)**
 - Draft to NYS DHSES – **June 2024 (tentative)**
 - Draft to FEMA – **August/September 2024 (tentative)**
 - Adoption – **October/November 2024 (tentative)**

Yates County Hazard Mitigation Plan 2024 Update



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Public and Stakeholder Outreach



- Public Outreach Toolkit –
 - Social media templates and posts
 - Printable materials
- Surveys
 - Stakeholders
 - Neighboring communities
 - Public
- HMP website - <https://www.yatescountynyhmp.com/>
- StoryMap (coming soon!)
- Planning Partnership meetings open to the public and stakeholders



Yates County Hazard Mitigation Plan 2024 Update



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Municipal Worksheets



- To help us update your annex, we need the following worksheets (or online forms) completed and returned ASAP!
 - Hazard Event History
 - NFIP Questionnaire
 - Building Permits
 - Problem Areas
 - New Development
 - Status of 2019 Mitigation Actions

Yates County Hazard Mitigation Plan 2024 Update



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Worksheet Status



Jurisdiction	Tt Planner	A - HOC and Events	B - NFIP	C - Building Permits	Problem Area Survey	New Development Survey	2019 Mitigation Action Stats
Yates County	Maddie/Heather	X	X				
Barrington (T)	Maddie	X	X		X	X	
Benton (T)	Maddie					X	
Dresden (V)	Maddie				X		
Dundee (V)	Grace		X				
Italy (T)	Grace	X	X			X	
Jerusalem (T)	Grace	X	X			X	
Middlesex (T)	Grace						
Milo (T)	Grace	X	X		X		
Penn Yan (V)	Emily	X	X			X	
Potter (T)	Emily	X					
Rushville (V)	Emily						
Starkey (T)	Emily	X	X				
Torrey (T)	Emily	X	X	X	X	X - thru WS	X



Yates County Hazard Mitigation Plan 2024 Update

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Risk Assessment Overview




*How are the rankings calculated?
What is the preliminary ranking?*


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Hazards of Concern (2024 HMP)







Dam Failure




Disease Outbreak




Drought




Extreme Temperature




Flood




Harmful Algal Bloom




Hazardous Materials




Landslide




Severe Storm



Severe Winter Storm



Transportation Accidents



Yates County Hazard Mitigation Plan 2024 Update

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What is Risk?

- ✓ Hazard
 - Source of potential danger or adverse condition
- ✓ Exposure
 - Manmade or natural features exposed to the hazard
- ✓ Vulnerability
 - Damage susceptibility of the exposed features
- ✓ Adaptive Capacity (or capability)
 - Plans/policies
 - Response/recovery
 - Financial resources



RISK = HAZARD x EXPOSURE

HAZARD

A HAZARD is something that has the potential to harm you



VS

RISK

RISK is the likelihood of a hazard causing harm



Yates County Hazard Mitigation Plan 2024 Update

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Conducting a Risk Assessment

The flowchart consists of five rounded rectangular boxes arranged horizontally from left to right, each containing a step in the risk assessment process. The boxes are colored in a gradient from dark blue to green. A large, light grey arrow points from left to right behind the boxes. In the top right corner, there is a logo for 'TETRA TECH' with a stylized 'Tt' icon. In the bottom right corner, there is a circular seal for 'YATES COUNTY'.

Identify Hazards Describe Hazards Identify Community Assets Analyze Impacts Summarize Vulnerability

Yates County Hazard Mitigation Plan 2024 Update

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A photograph showing a flooded area with several trees and a sidewalk. The water is dark and reflects the trees. The sidewalk is on the right side of the image. The photo is framed by a blue and green geometric border on the left and bottom.

Preliminary Risk Assessment Results

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Dam Failure

Preliminary Hazard Ranking

LOW

Dam failures in Yates County are a low-probability and high-consequence event. A dam failure can have devastating impacts on the County. While most dams have storage volumes small enough that failures would have little or no consequences, dams with large storage amounts could cause significant flooding downstream.

Number of Dams

66

- 24 - Low Hazard (A)
- 2 - Intermediate Hazard (B)
- 1 - High Hazard (C)
- 39 - Negligible Hazard (D)

Impacts

- Dam failure can cut evacuation routes, limit emergency access, and/or create isolation issues.
- Severe flooding that follows a dam failure can cause extensive structural damage and withhold essential services.
- The environmental impacts of a dam failure can include significant water-quality and debris-disposal issues or severe erosion that can impact local ecosystems.



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Disease Outbreak

Preliminary Hazard Ranking

MEDIUM

Disease outbreaks can impact the entirety of Yates County. Emerging diseases are difficult to contain or treat and present significant challenges to risk communication since the mechanics of transmission, laboratory identification, and effective treatment protocols may be unknown.

Population Exposed

24,773

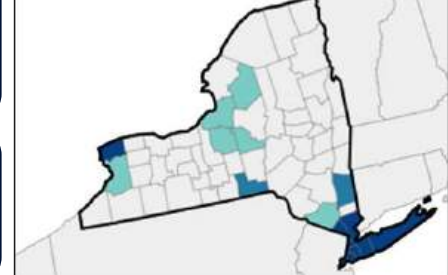
(100%)

The entire County is exposed and vulnerable

Hazard Types

- Influenza
- West Nile Virus
- Lyme Disease
- Coronavirus

West Nile Virus Cases, 2023

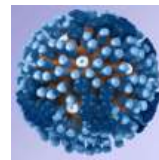


History

- Between 1999 and 2022, two human infections was reported.
- In 2020, there were 13 reported cases of Lyme disease
- For the 2023-2024 flu season, as of January 27th, there have been 126 confirmed cases of influenza.
- Since 2020, Yates County reported 4,544 positives cases of Covid-19 and 45 deaths related to Covid-19.

Impacts

- Public health threats
- Economy
- Long-term health issues
- Fatalities



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Drought

Preliminary Hazard Ranking

MEDIUM

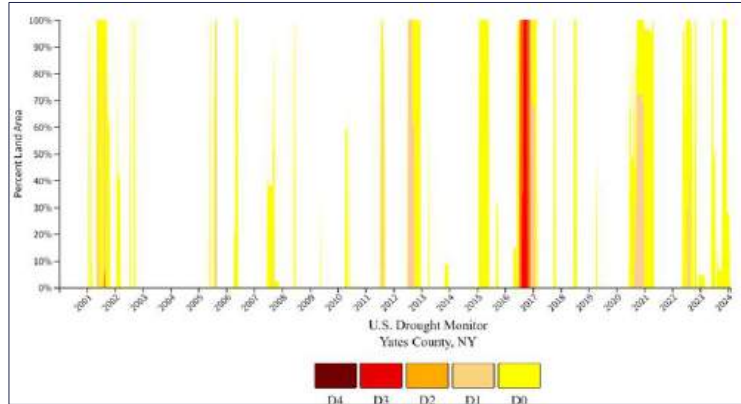
Droughts can affect Yates County's industries and make day to day tasks more difficult to complete when water usage must be monitored.

Population Exposed
24,773
(100%)
The entire County is exposed and vulnerable

Agriculture
867 farms
\$114.6 million in sales

Drought History (2000 to 2023)
17 reported impacts

Historical Drought Conditions for Yates County



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Extreme Temperature

Preliminary Hazard Ranking

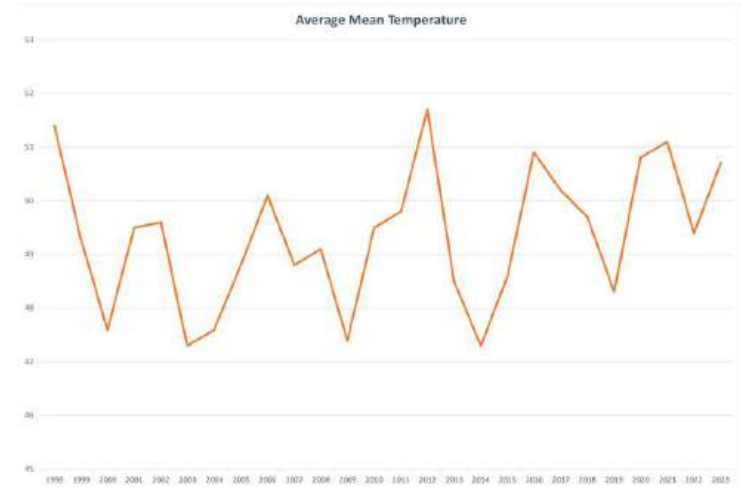
MEDIUM

Extreme temperature includes both heat and cold events, which affects the entire County including, human health and commercial/agricultural businesses. Extreme temperature events can have primary and secondary effects on infrastructure.


Population Exposed
24,773
(100%)
The entire County is exposed and vulnerable

USDA Declarations
3
3 frost/freeze events

Agriculture
867 farms
\$114.6 million in sales



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Flood

Preliminary Hazard Ranking
MEDIUM

Floods are one of the costliest natural hazards in Yates County, leading to displaced residents and economic hardships, especially to communities located within floodprone areas or floodplains.

Population Exposed

522

(2.1%)

In 1% Annual Chance Flood Hazard Area

Vulnerable Population

235

(1.8%)

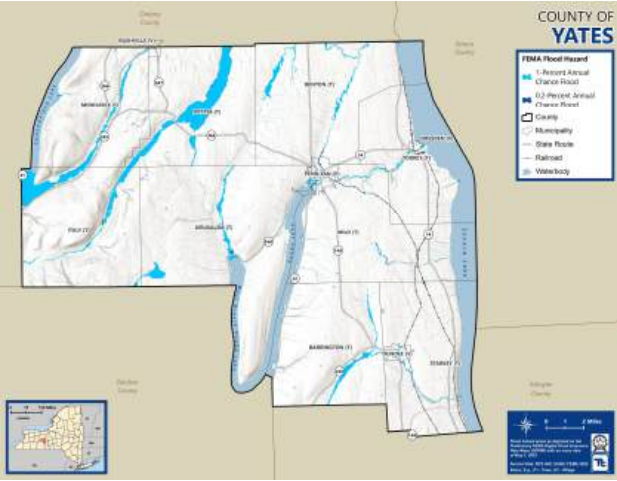
In 1% Annual Chance Flood Hazard Area

Buildings

465

(2.1%)

In 1% Annual Chance Flood Hazard Area



Total Land In Flood Hazard Area

8,277 acres


(3.8%)

Incidents

Since 1954, FEMA included Yates County in 8 declarations.

- DR-487 (Storms, Rain, Flooding)
- DR-725 (Severe Storms and Flooding)
- DR-1095 (Severe Storms and Flooding)
- DR-1335 (Severe Storms and Flooding)
- DR-1486 (Severe Storms, Flooding, Tornadoes)
- DR-1534 (Severe Storms and Flooding)
- DR-1993 (Severe Storms, Flooding, Tornadoes, Wind)
- DR-4180 (Severe Storms and Flooding)

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Harmful Algal Bloom

Preliminary Hazard Ranking
MEDIUM

Harmful algal blooms (HABs) in freshwater (lakes, ponds, rivers, and streams) generally consist of visible patches of cyanobacteria, also called blue-green algae. Several types of cyanobacteria can produce toxins and other harmful compounds that can pose health risks to people and animals through ingestion, skin contact, or inhalation.

Population Exposed

24,773

(100%)

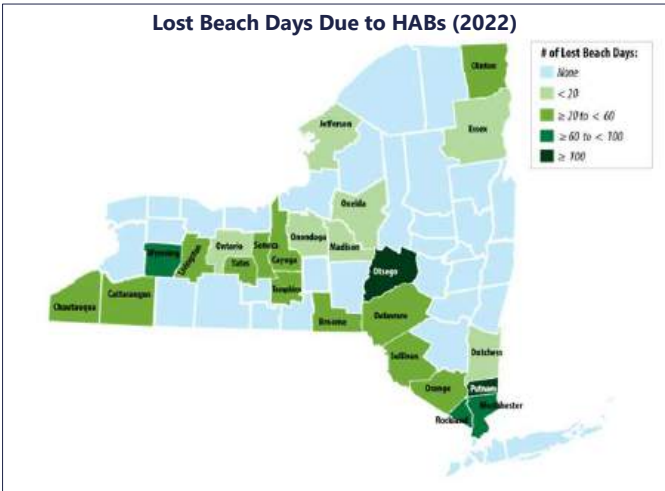
Entire population exposed; however, those that are located near impacted waters or rely on lakes for drinking water are more at risk

Event History


Since 2019, there have been 560 HAB reports in Yates County. Canandaigua Lake, Half Moon Lake, Keuka Lake, and Seneca Lake have all been impacted by HABs. In 2022, Beaches on Keuka Lake reported closure for a total of 32 days as a result of HABs.

Impacts

- Drinking water contamination
- Water quality
- Health issues (skin irritation, stomach issues)
- Depleting oxygen in water
- Economic losses from fisheries and recreational areas



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Hazardous Materials

Preliminary Hazard Ranking
MEDIUM

Hazardous material releases may happen during manufacturing, storage, transportation, or usage, both along transportation routes and at fixed-site facilities. These releases can cause harm to humans, wildlife, properties, and also lead to air, water, and soil contamination.

Population Exposed

14,553

(58.7%)

Population located within 0.5 miles of pipelines, major roadways, or railroads

Buildings Exposed


10,722

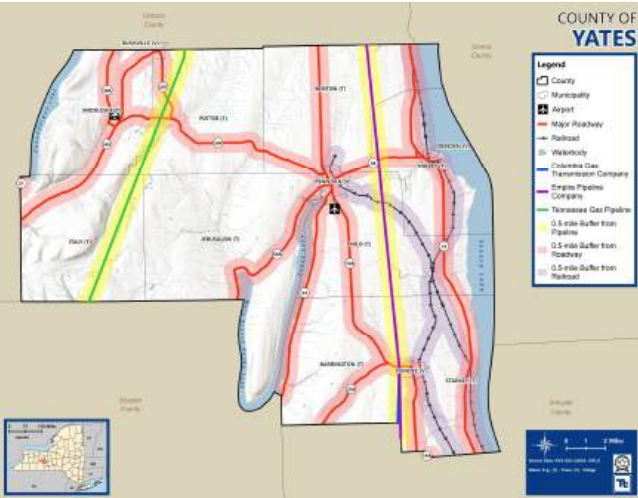
(48.5%)

Buildings located within 0.5 miles of pipelines, major roadways, or railroads


Potential Impacts

- Death
- Serious injury
- Long-lasting health effects
- Property damage
- Air and water contamination
- Closed or damaged transportation routes
- Loss of natural resources





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Landslides

Preliminary Hazard Ranking
LOW

Landslides are composed of natural rock, soil, artificial fill, or a combination and move along a downward slope. 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.

Population Exposed

1,490

(6%)

People living in moderate landslide susceptibility areas

Buildings Exposed


966

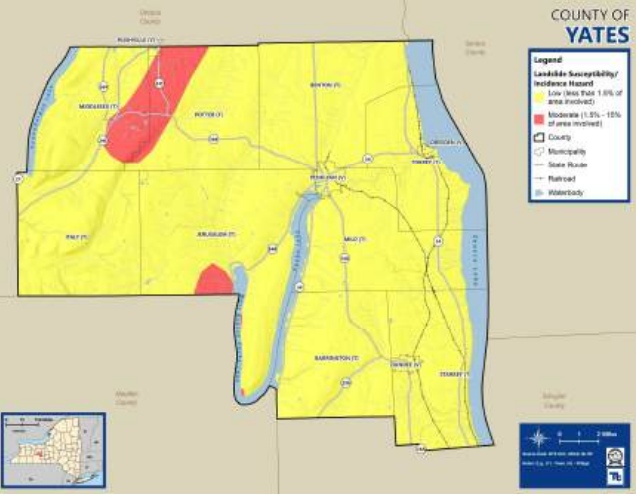
(4.4%)

Buildings located in moderate landslide susceptibility areas


Potential Impacts

- Utility disruptions and outages
- Loss of life
- Damaged infrastructure
- Loss of natural resources
- Flooding
- Block or damage transportation routes





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Severe Weather

Preliminary Hazard Ranking

MEDIUM


Severe storm events are a common occurrence in Yates County. A variety of severe storm types, such as thunderstorms, lightning, hail, tornadoes, high winds, and tropical cyclones have damaged property and infrastructure, disrupt power, downing trees, and power lines, and causing injuries and fatalities.

Population Exposed

24,773

(100%)

The entire County is vulnerable



Incidents

- Between 2018 and 2023, 49 severe weather events were recorded by NOAA NCEI.
- Since 1954, FEMA included Yates County in 11 declarations.
 - DR-338 (Tropical Storm Agnes)
 - DR-487 (Storms, Rain, Flooding)
 - DR-725 (Severe Storms and Flooding)
 - DR-1095 (Severe Storms and Flooding)
 - DR-1335 (Severe Storms and Flooding)
 - DR-1486 (Severe Storms, Flooding, Tornadoes)
 - DR-1534 (Severe Storms and Flooding)
 - DR-1993 (Severe Storms, Flooding, Tornadoes, Wind)
 - EM-3351 (Hurricane Sandy)
 - DR-4180 (Severe Storms and Flooding)
 - DR-4625 (Remnants of Tropical Storm Fred)

Buildings Exposed

22,096


(100%)

The entire County is vulnerable

Potential Impacts

- Essential Services Interruptions
- Power Outages
- Traffic Accidents
- Downed Trees
- Property Damage
- Personal Injury / Loss of Life

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Severe Winter Weather

Preliminary Hazard Ranking

MEDIUM


In Yates County, winter weather includes heavy snow, sleet, blizzards, and ice storms. These events occur frequently during the winter months and has the potential to be life-threatening.

Population Exposed

24,773

(100%)

The entire County is exposed and vulnerable



Incidents

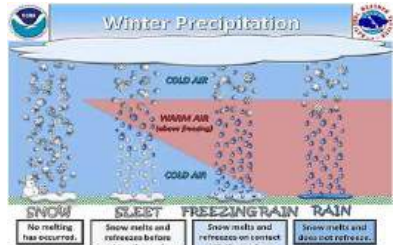
- Between 2018 and 2023, 13 winter weather events were recorded by NOAA NCEI.
- Since 1954, FEMA included Yates County in three declarations.
 - DR-898 (Severe Winter Storm)
 - EM-3107 (Severe Blizzard)
 - DR-1467 (Ice Storm)

General Building Stock and Critical Facilities Exposed

22,096

(100%)

The entire County is exposed and vulnerable; however structural impacts are minimal.



Hazard Types

- Heavy Snow
- Blizzard
- Sleet
- Ice Storm

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Transportation Accidents

Preliminary Hazard Ranking

LOW

Transportation accidents include, vehicular accidents, aviation accidents, railway accidents, and hazardous materials in transit.

Incidents

Between 2018 and 2023, there have been over 3,900 vehicle crashes report to ITSMR throughout the County. No reports were found related to aviation or rail incidents or hazardous materials in transit.

Impacts

- While this is a manmade hazard, natural hazards can increase the potential of accidents to occur.
- Widespread hazard that can occur anywhere in Yates County.
- According to NYS Department of Health, Motor vehicle crash injuries are a leading cause of injury related deaths for Yates County residents.



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Preliminary Hazard Ranking Methodology

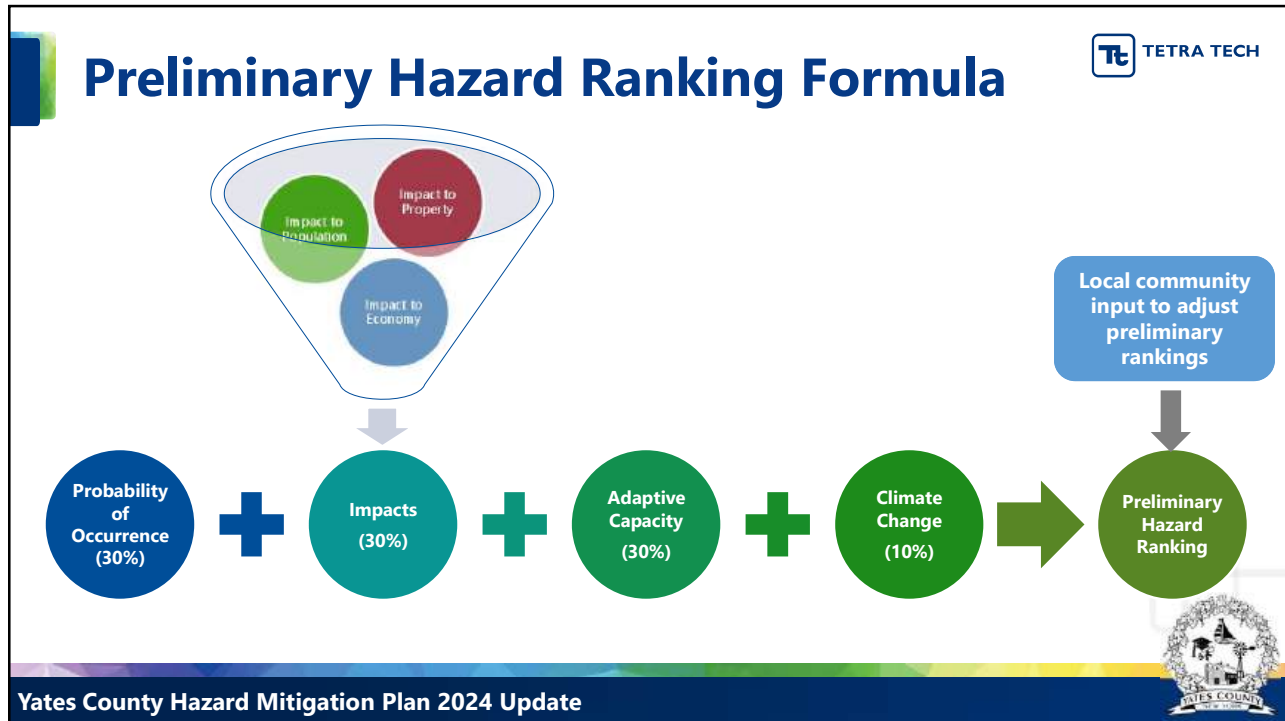


- The calculated probability of a hazard occurring based on historical data
- *Impacts to people, property, and the economy* based on GIS data and analysis of exposure.
- The degree to which *climate change* will affect future occurrences based on best available data.
- The degree to which existing *capabilities* (the ability of your community to respond to the hazard based on ordinances, mitigation strategies and procedures, and readiness) decrease overall risk.

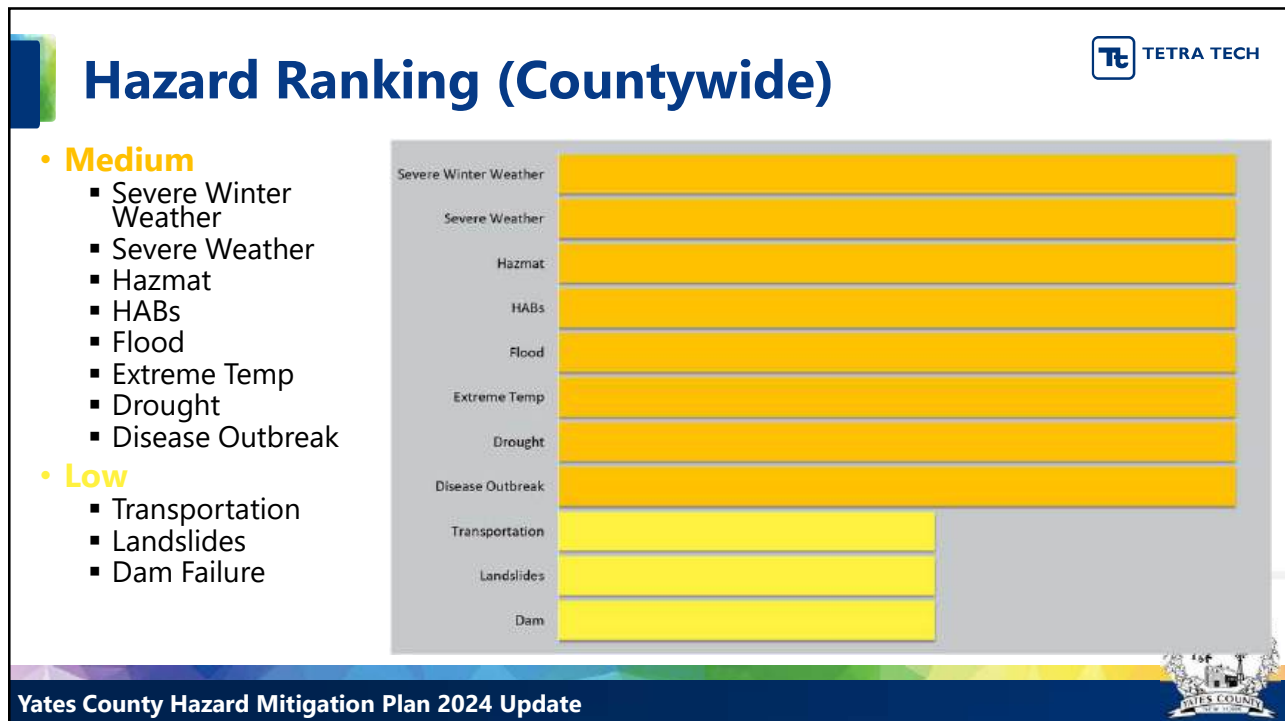
Yates County Hazard Mitigation Plan 2024 Update



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Preliminary Hazard Ranking (Municipal)




Jurisdictions	Hazard Ranking										
	Dam	Disease Outbreak	Drought	Extreme Temp	Flood	HABs	Hazmat	Landslides	Severe Weather	Severe Winter Weather	Transportation
Barrington (T)	Low	Medium	Medium	Medium	Low	Medium	Low	Low	Medium	Medium	Low
Benton (T)	Low	Medium	Medium	Medium	Low	Medium	Low	Low	Medium	Medium	Low
Dresden (V)	Low	Medium	Medium	Medium	Low	Medium	Medium	Low	Medium	Medium	Low
Dundee (V)	Low	Medium	Medium	Medium	Low	Low	Medium	Low	Medium	Medium	Low
Italy (T)	Low	Medium	Medium	Medium	Low	Medium	Low	Low	Medium	Medium	Low
Jerusalem (T)	Low	Medium	Medium	Medium	Low	Medium	Medium	Low	Medium	Medium	Low
Middlesex (T)	Low	Medium	Medium	Medium	Low	Medium	Medium	Low	Medium	Medium	Low
Milo (T)	Low	Medium	Medium	Medium	Medium	Medium	Low	Low	Medium	Medium	Low
Penn Yan (V)	Low	Medium	Medium	Medium	Low	Medium	Medium	Low	Medium	Medium	Low
Potter (T)	Low	Medium	Medium	Medium	Low	Low	Low	Medium	Medium	Medium	Low
Rushville (V)	Low	Medium	Medium	Medium	Low	Low	Low	Medium	Medium	Medium	Low
Starkey (T)	Low	Medium	Medium	Medium	Low	Medium	Low	Low	Medium	Medium	Low
Torrey (T)	Low	Medium	Medium	Medium	Low	Medium	Low	Low	Medium	Medium	Low
Yates County	Low	Medium	Medium	Medium	Medium	Medium	Medium	Low	Medium	Medium	Low

Yates County Hazard Mitigation Plan 2024 Update


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Review Preliminary Ranking



Yates County | Hazard Mitigation Plan 2024 Update
Hazard Ranking Review

Please send all electronic Word versions of this worksheet to Heather Aggar (Tetra Tech) by March 14th
Email: heather.aggar@tetratech.com

Municipality: _____
Name: _____
Title: _____
Email: _____

What is a Hazard Ranking?
Hazard Ranking is used to understand your community's vulnerabilities to hazards and to prioritize projects and activities for mitigation.

Hazard Ranking is determined by quantitative and qualitative factors including:

- The calculated probability of a hazard occurring based on historical data.
- Impacts to people, property, and the economy based on GIS data and analysis of exposure.
- The degree to which climate change will affect future occurrences based on best available data.
- Adaptive Capacity, which is the ability your community has to respond to the hazard based on ordinances, intelligence strategies and procedures, and readiness.

What is my Hazard Ranking?
The following table represent the calculated rankings for the hazards of concern for your community. Please review the calculated rankings and notice whether or not you want to adjust the ranking. If you are changing the ranking, please provide detail as to why you are changing the ranking. **REMEMBER, for every hazard of concern, you need at least one mitigation action.**

Table 1. 2024 HMP Municipal Hazard Rankings

Hazard	Draft 2024 Ranking Based on RA Results		Agree with draft hazard ranking (Y/N) If No, indicate preferred ranking.		What changes in mitigation or other conditions have resulted in the change in hazard ranking since 2022?	
	Low	Medium	Y	N		
Extreme Temp		Medium				
Disease Outbreak		Medium				
Drought		Medium				

Yates County | Hazard Mitigation Plan 2024 Update
Hazard Ranking Review




Hazard	Draft 2024 Ranking Based on RA Results		Agree with draft hazard ranking (Y/N) If No, indicate preferred ranking.		What changes in mitigation or other conditions have resulted in the change in hazard ranking since 2022?	
	Low	Medium	Y	N		
Extreme Temperature		Medium				
Disease Outbreak		Medium				
Drought		Medium				
Hazmat		Medium				
Landslides		Low				
Severe Weather		Medium				
Severe Winter Weather		Medium				
Transportation		Low				
Utility Failure		Medium				

What is Adaptive Capacity?
Adaptive capacity describes a jurisdiction's current ability to protect from or withstand a hazard event.

- Weak** adaptive capacity means the jurisdiction does not have the capability to effectively respond, which leads to an increase in vulnerability. Examples include sea level rise/increased storm surge, policies, codes/ordinances in place, no red undrain, limited to no deployable resources, limited capabilities to respond, long recovery.
- Moderate** adaptive capacity means minimum requirements are in place; moderate capabilities; mitigation measures are identified but not implemented; widespread; jurisdiction can recover but needs outside resources.
- Strong** adaptive capacity means the jurisdiction does have the capability to effectively respond; plan/policies exceed minimum requirements; deployable resources; all of which decreases vulnerability.


Table 2. 2023 HMP Municipal Adaptive Capacity

Hazard	Preferential Ranking	What should we indicate for your community's adaptive capacity for each hazard?
Storm Public	Moderate	
Disease Outbreak	Moderate	
Drought	Moderate	
Extreme Temperature	Moderate	
Flood	Moderate	
HABs	Moderate	
Hazmat	Strong	
Landslides	Moderate	
Severe Weather	Moderate	
Severe Winter Weather	Moderate	
Transportation	Moderate	
Utility Failure	Moderate	


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Review Preliminary Rankings




Hazard	Draft 2024 Ranking Based on RA Results	Agree with draft hazard ranking (Y/N)? If No, indicate preferred ranking.	What changes in mitigation or other conditions have resulted in the change in hazard ranking since 2018?
Dam Failure	Low	Yes	
Disease Outbreak	Medium	Yes	
Drought	Medium	Yes	
Extreme Temperature	Medium	Yes	
Flood	Medium	No - High	Stormwater flooding causes significant damage; flood should be ranked as high
HABs	Medium	Yes	
Hazmat	Medium	No - Low	No facilities or major roadways that would lead to hazmat incidents; change to low
Landslides	Low	Yes	
Severe Weather	Medium	Yes	
Severe Winter Weather	Medium	Yes	
Transportation	Low	Yes	
Utility Failure	Medium	Yes	


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Review Preliminary Adaptive Capacity



Hazard	Preliminary Ranking	What should we indicate for your community's adaptive capacity for each hazard?
Dam Failure	Moderate	
Disease Outbreak	Moderate	
Drought	Moderate	Weak – many residents rely on surface water and we do not have backup water sources in the event of a severe drought
Extreme Temperature	Moderate	
Flood	Moderate	
HABs	Moderate	
Hazmat	Strong	
Landslides	Moderate	
Severe Weather	Moderate	
Severe Winter Weather	Moderate	Strong – the City experiences winter weather every year and we have programs and resources to decrease our vulnerability
Transportation	Moderate	
Utility Failure	Moderate	

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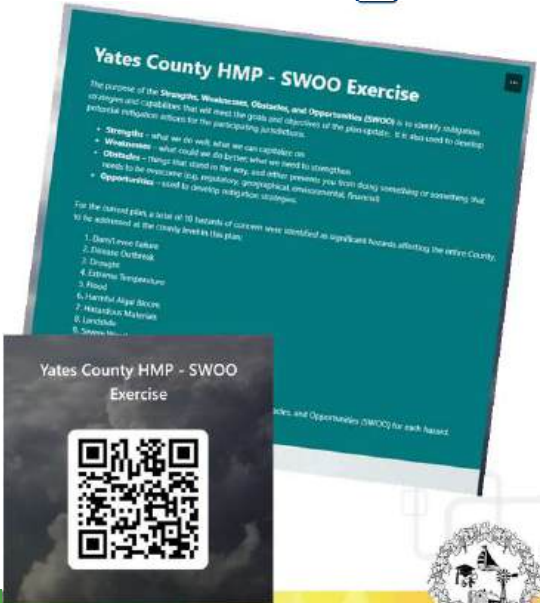
Strengths, Weaknesses, Obstacles, and Opportunities (SWOO)

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Strengths, Weaknesses, Obstacles, and Opportunities (SWOO)

Tt TETRA TECH

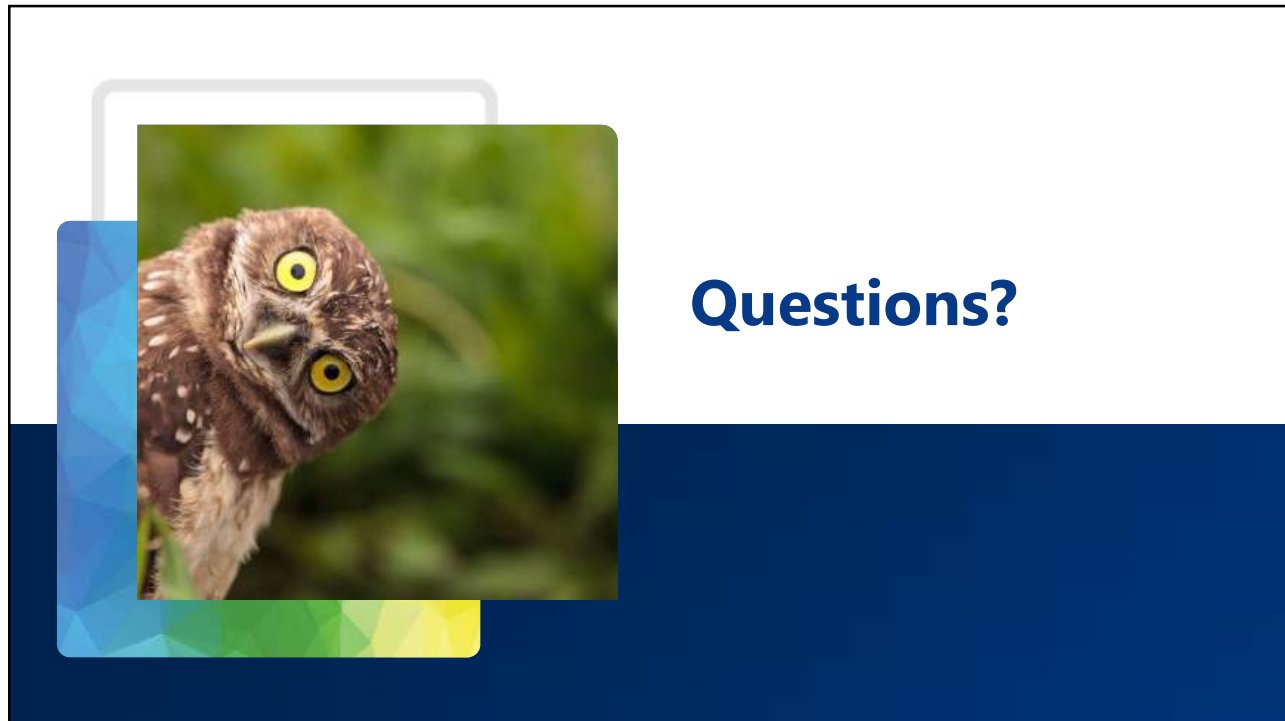
- Look at the following for each hazard of concern:
 - **Strengths** – what the County and communities do well; things upon which we can capitalize;
 - **Weaknesses** – what can be done better; what can be strengthened;
 - **Obstacles** – what stands in the way to implementation to prevent mitigation or response (for example regulatory, geographical, environmental, financial issues); and
 - **Opportunities** - actions or projects to mitigate issues or improve resilience.



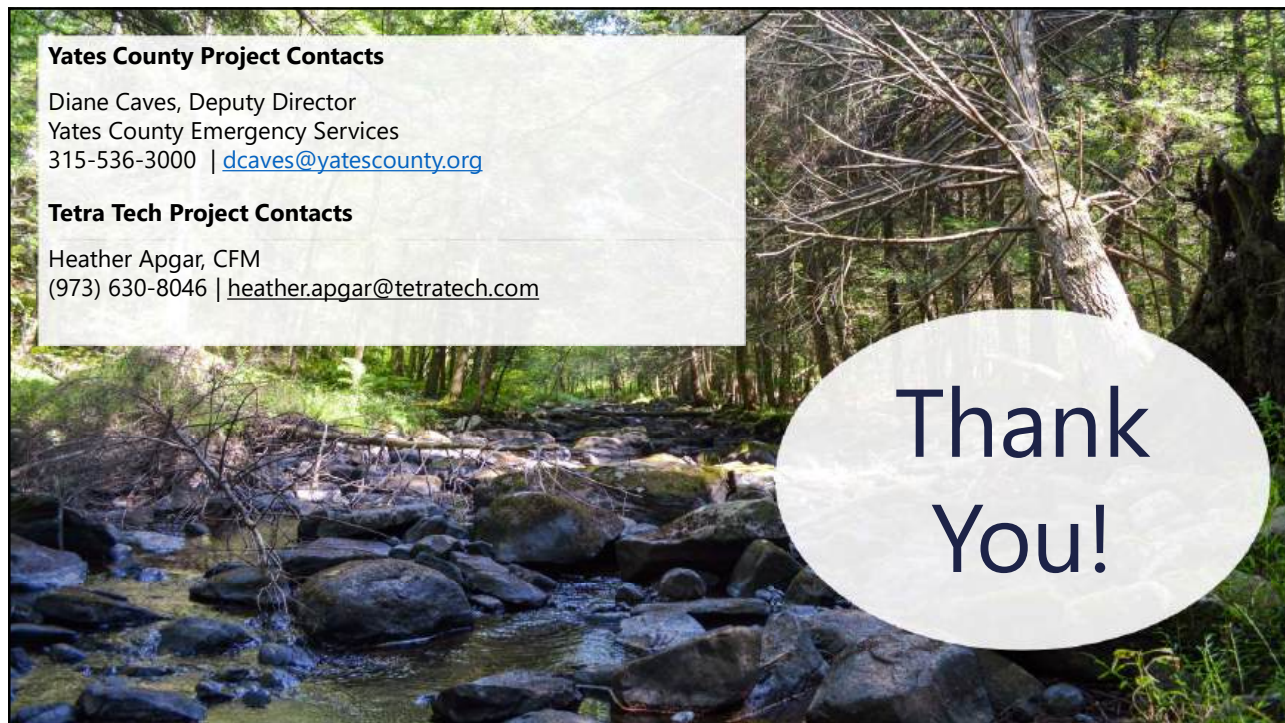
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Yates County Project Contacts

Diane Caves, Deputy Director
Yates County Emergency Services
315-536-3000 | dcaves@yatescounty.org

Tetra Tech Project Contacts

Heather Apgar, CFM
(973) 630-8046 | heather.apgar@tetrattech.com

Thank
You!

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**Yates County, NJ – Hazard Mitigation Plan 2025 Update
 Planning Partnership Mitigation Strategy Workshop | Meeting Minutes**



Purpose of Meeting:	Planning Partnership Mitigation Strategy Workshop
Location of Meeting:	Yates County Auditorium (417 Liberty Street, Penn Yan, NY)
Date of Meeting:	May 30, 2024 @ 9:00 A.M.

<p>Attendees:</p> <ul style="list-style-type: none"> • Yates County <ul style="list-style-type: none"> ○ Jessica Mullins, Yates County Administrator ○ George A. Roets, Director, Yates County Community Services Department ○ Leigh Battin, Director of Finance, Yates County Department of Finance ○ Amy D. Miller, Commissioner, Yates County Department of Social Services ○ Doug Rapalee, Highway Superintendent, Yates County Highway Department ○ Tim Groth, Director of Information Technology (IT), Yates County IT ○ Diane Caves, Deputy Director, Yates County Office of Emergency Services (OES) ○ Ryan Bailey, Emergency Medical System (EMS) Coordinator, Yates County OES ○ Jeff Ayers, Yates County Planner, Yates County Planning and Development Department ○ Alyssa Palmer, Probation Director, Yates County Probation Department ○ Doug Sinclair, Director of Public Health, Yates County Public Health Department ○ Francis Ryan, Sheriff, Yates County Sheriff's Office ○ Robert Cilino, Communications Support Specialist, Yates County Sheriff's Office ○ Brandon Jensen, Undersheriff, Yates County Sheriff's Office • Barrington (T) <ul style="list-style-type: none"> ○ Steve Wheeler, Highway Superintendent • Benton (T) <ul style="list-style-type: none"> ○ None • Dresden (V) <ul style="list-style-type: none"> ○ William Hall, Mayor • Dundee (V) <ul style="list-style-type: none"> ○ Fred Cratsley, Mayor • Italy (T) <ul style="list-style-type: none"> ○ Andy Best, Highway Superintendent ○ Richard Craig, Supervisor • Jerusalem (T) <ul style="list-style-type: none"> ○ Tony Hurd, Highway Superintendent ○ James McKinley, Code Enforcement ○ Jamie L. Sisson, Supervisor 	<ul style="list-style-type: none"> • Middlesex (T) <ul style="list-style-type: none"> ○ None • Milo (T) <ul style="list-style-type: none"> ○ Anthony Validzic, Codes Enforcement Officer • Penn Yan (V) <ul style="list-style-type: none"> ○ Chris Brand, Village of Penn Yan Street Department • Potter (T) <ul style="list-style-type: none"> ○ Tim Pagel, Code Enforcement Officer • Rushville (V) <ul style="list-style-type: none"> ○ Tim Pagel, Code Enforcement Officer • Starkey (T) <ul style="list-style-type: none"> ○ Ralph Warren, Highway Superintendent • Torrey (T) <ul style="list-style-type: none"> ○ Tim Chambers, Highway Superintendent ○ Grant Downs, Councilman • Cornell Cooperative Extension Yates County <ul style="list-style-type: none"> ○ Sandi Bastedo, Executive Director ○ Caroline Boutard-Hunt, Agricultural Educator • Keuka College <ul style="list-style-type: none"> ○ Jim Cunningham, Director of Campus Safety • Ontario County Planning Department <ul style="list-style-type: none"> ○ Linda Phillips, Planner • New York State Department of Health <ul style="list-style-type: none"> ○ Albert Cheverie, Preparedness Representative • New York State Department of Transportation, Region 6 <ul style="list-style-type: none"> ○ Timothy Alimosy, Regional Emergency Manager • New York State Division of Homeland Security and Emergency Services <ul style="list-style-type: none"> ○ Kevin Clapp, Supervisor, Hazard Mitigation Planning ○ Scott Feuerstein, Planning Manager • New York State Police <ul style="list-style-type: none"> ○ Brian Bernard, EM Supervisor • Tetra Tech <ul style="list-style-type: none"> ○ Tony Subbio, Project Manager, Tetra Tech ○ Emily Vassallo, Planner, Tetra Tech
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Agenda Summary: The purpose of the meeting was to describe the contents of the mitigation strategy, provide an opportunity for jurisdictions to review their previous mitigation actions, complete outstanding worksheets with assistance from Tetra Tech planners, discuss what makes a good mitigation action, and identify potential 2025 mitigation actions.



Item No.	Description	Action item(s):
1	Introductions	-
2	Project Status <ul style="list-style-type: none"> • Tetra Tech provided an overview on the status of the project, including the anticipated timeline. • Tetra Tech reminded attendees to log their time on the project using the In-Kind Tracking tool. 	Planning Partnership <ul style="list-style-type: none"> • Attendees will log their time in the In-Kind Tracking tool.
3	Identifying and Developing Mitigation Strategies <ul style="list-style-type: none"> • The Mitigation Strategy is the County’s roadmap to reduce the risk of hazards identified in the HMP. The strategy is based on hazard impacts, asset vulnerability, and the County’s capabilities. • Mitigation Actions are specific activities, such as policies, projects, and studies, that stakeholders identify to reduce risk. <ul style="list-style-type: none"> ○ Forward-looking and incorporates changing conditions for the life of the County’s assets. ○ Consider changing demographics, development patterns, and impacts of climate change. ○ Examples of actions may include elevating electrical and HVAC equipment to reduce the likelihood of damage from floodwaters or planting trees to lower temperatures exacerbated by pavement. ○ Actions in the plan are eligible for certain types of FEMA funding. • What is a Mitigation Strategy? <ul style="list-style-type: none"> ○ A group of projects or actions to reduce the impacts of the hazards of concern on your community <ul style="list-style-type: none"> ▪ Plans and Regulations ▪ Structure and Infrastructure Studies and Projects ▪ Natural Systems Protection Studies and Projects ▪ Education and Awareness Programs • Terms to describe the Mitigation Strategy include: <ul style="list-style-type: none"> ○ Mitigation Action Plan or Action Plan ○ Mitigation Projects or Initiatives or Actions • Need a clear connection between vulnerabilities identified in the risk assessment and proposed mitigation actions. • The capability assessment can provide insight into challenges and opportunities for the mitigation strategy. • All actions proposed in the mitigation strategy must have a factual basis tied to the results of the risk and capability assessments. <i>This should not be a wish list!</i> • Hazards of concern include dam failure, disease outbreak, drought, extreme temperature, flood, harmful algal blooms, hazardous materials, landslide, transportation accident, severe weather, severe winter weather, and utility failure. Attendees reported having varying 	-



	<p>experiences with the power company regarding clearing trees from power lines.</p> <ul style="list-style-type: none"> • Jurisdictions can leverage their capabilities to reduce risk to hazards. • Actions should align with the goals and objectives of the updated HMP. 	
4	<p>Review Previous Actions</p> <ul style="list-style-type: none"> • Review the mitigation actions your jurisdiction identified in the previous HMP by providing a brief status narrative. Begin by providing the status headings below and then add details (what has been accomplished, what funding was used, anything holding back progress): <ul style="list-style-type: none"> ○ IN PROGRESS: Started but not complete ○ ONGOING CAPABILITY: An action you now complete on a regular basis (maintenance, annual outreach, etc.). These actions will be included in your capabilities moving forward. ○ NO PROGRESS: Not started ○ COMPLETE: Finished • Actions that are COMPLETE or ONGOING will not be carried forward. 	<p>Planning Partnership</p> <ul style="list-style-type: none"> • Complete outstanding worksheets and submit to assigned Tetra Tech planner.
5	<p>Developing New Potential Actions</p> <ul style="list-style-type: none"> • Quality not quantity <ul style="list-style-type: none"> ○ Each action needs detailed information on the why, who, what, and when of the action. • 2020 projects <ul style="list-style-type: none"> ○ If a project is not finished and is still a priority, include it in 2025 HMP. ○ Remove general projects or make them more specific. ○ Remove ongoing capabilities like maintenance or annual outreach. • Each hazard needs at least one mitigation action unless a municipality has no risk from a particular hazard of concern. • If your jurisdiction has Repetitive Loss Properties, an action is needed to mitigate the properties (elevation or acquisition) with specifics (street or neighborhood names, not specific addresses). • Improvements to the 2025 HMP from the 2020 HMP include a stronger connection between the risk assessment and mitigation strategy, including more specific, achievable actions, and having at least one action for each hazard of concern. Individual actions can address more than one hazard. • Four types of Mitigation Actions: <ul style="list-style-type: none"> ○ Plans and regulations ○ Structure and Infrastructure ○ Natural systems protection ○ Education and awareness 	-
6	<p>Next Steps</p> <ul style="list-style-type: none"> • Complete your worksheets, ask questions, and provide to Tetra Tech staff. 	<p>Planning Partnership</p> <ul style="list-style-type: none"> • Complete your worksheets, ask questions, and



	<ul style="list-style-type: none"> • Provide an update to Tetra Tech staff on any missing worksheets, when you will submit them, and how Tetra Tech can assist you. • Continue to share information about the HMP Update via social media, community groups, and networks. Let Tetra Tech know who you share information with. • Work with Tetra Tech planners to complete annexes and finalize actions. 	<p>provide to Tetra Tech staff.</p> <ul style="list-style-type: none"> • Provide an update to Tetra Tech staff on any missing worksheets, when you will submit them, and how Tetra Tech can assist you. • Continue to share information about the HMP Update via social media, community groups, and networks. Let Tetra Tech know who you share information with. • Work with Tetra Tech planners to complete annexes and finalize actions.
7	<p>Questions</p> <ul style="list-style-type: none"> • Attendees had no questions at this time. 	-
8	<p>Breakouts</p> <ul style="list-style-type: none"> • Attendees split into breakout groups to discuss and develop mitigation actions for inclusion in the HMP. 	-

Connecting to the Mitigation Strategy

- Need a clear connection between vulnerabilities identified in the risk assessment and proposed mitigation actions.
- The capability assessment can provide insight into challenges and opportunities for the mitigation strategy.
- All actions proposed in the mitigation strategy must have a factual basis tied to hazards (*this shouldn't be a wish list!*)

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Hazards of Concern

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Capability Assessment

- Capabilities
 - What does your jurisdiction use to reduce risk to hazards?

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Mitigation Strategy

- Goals
 - What outcomes do you want to achieve?
- Actions
 - What specific actions will be taken to reduce hazard risk?
- Action Plan
 - How will the actions be prioritized and implemented?

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Goals and Objectives – Review and Update

Goal Number	Goal
1	Reduce the likelihood and impacts of hazards on life, property, and the environment.
2	Protect life, property, critical infrastructure, the environment, and the economy from hazard impacts.
3	Educate the public, officials, and other stakeholders about the hazards they face and what can be done to mitigate hazard impacts.

Goal	Objectives	Actions
Minimize new development in hazard-prone areas	Reduce the number of vulnerable structures in flood hazard areas.	Amend zoning ordinance to permit only open space and uses within floodplains.

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Goals and Objectives Review and Update

Objective Number	Objectives
1.1	Develop and/or update local regulations based on current information and best practices.
1.2	Maintain natural systems to reduce the impacts of hazards.
2.1	Acquire, retrofit, or relocate structures from flood-prone areas.
2.2	Retrofit critical infrastructure to protect against hazard impacts.
2.3	Enhance stormwater management infrastructure.
2.4	Ensure that critical facilities can continue to function during and after hazard impacts.
2.5	Encourage residents and business owners to insure their property against hazard impacts, including through flood insurance through the National Flood Insurance Program (NFIP).
3.1	Work with legislators to develop and enact legislation that reduces long-term vulnerability to hazards.
3.2	Ensure that local officials attend current training on regulatory issues and best practices.
3.3	Provide information to individuals throughout the county on the hazards they face and what property protection measures they can take.

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Review Previous Actions

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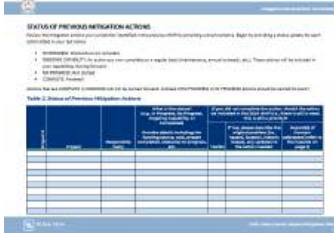
Previous Actions Review

If you have not done so:

Review the mitigation actions your jurisdiction identified in the previous HMP by providing a brief status narrative. Begin by providing the status:


- **IN PROGRESS:** Started but not complete
- **ONGOING CAPABILITY:** An action you now complete on a regular basis (maintenance, annual outreach, etc.). These actions will be included in your capabilities moving forward.
- **NO PROGRESS:** Not started
- **COMPLETE:** Finished!

Actions that are **COMPLETE** or **ONGOING** will not be carried forward.



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Developing New Potential Actions

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Requirements for the Mitigation Strategy Update

- **Quality not quantity**
 - Each action needs detailed information on the why, who, what, and when of the action.
- **2020 projects**
 - If a project is not finished and still a priority, include in 2025 HMP
 - Remove general projects or make more specific
 - Remove ongoing capabilities like maintenance or annual outreach
- **Each hazard needs at least one mitigation action**
- If your jurisdiction has Repetitive Loss Properties - an action is needed to mitigate the properties (elevation or acquisition) with specifics (street or neighborhood names, not specific addresses)

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Where do you need to focus?

- **Stronger connection** between the risk assessment and mitigation strategy
- **More specific, achievable actions**
 - Specific projects, in specific locations, in a specific timeframe
 - Focus on socially vulnerable populations and underserved communities
- **Diverse actions**
 - You need at least **one action per hazard of concern**. Think about actions that can cover multiple hazards.
 - Include a variety of action types (e.g., plans, floodproof critical facilities, outreach programs, etc.)

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Other Mitigation Actions to Consider



- Local Disaster Debris Management Plans
- Substantial Damage Management Plan
- Actions to address high-hazard or significant-hazard dams
- Public education and outreach programs
- Generators at critical facilities and community lifelines
- Floodproofing critical facilities and community lifelines
- Addressing repetitive and severe repetitive loss properties

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Mitigation Action Types



Plans and regulations include government authorities, policies, or codes that encourage risk reduction, such as building codes and state planning regulations. This may also include planning studies.

Structure and infrastructure projects involve modifying existing structures and infrastructure or constructing new structures to reduce the impact of hazards.


Natural systems protection projects minimize losses while also preserving or restoring the function of natural systems.

Education and awareness programs include long-term, sustained programs to inform and educate citizens and stakeholders about hazards and mitigation options. This category could also include training.

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Next Steps



- **NOW:** Complete your worksheets, ask questions, and provide to Tetra Tech staff
- **NOW:** Provide update to Tetra Tech staff on any missing worksheets, when you will submit them, and how Tetra Tech can assist you
- **AFTER WORKSHOP:** Continue to share information about the HMP Update via social media, community groups, and networks. Let us know who you share information with!
- **NEXT MONTH:** Work with Tetra Tech planners to complete annexes and finalize actions.


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Questions?

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Workshop


Review previous mitigation actions, identify new actions, complete missing areas in your annex.

Before you leave, check in with Tetra Tech staff!

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Yates County Project Contact
Diane Caves, Deputy Director
315-536-3000 | dcaves@yatescounty.org

Tetra Tech Project Contact
Tony Subbio, CEM, CFM, PMP
(717) 839-5654 | tony.subbio@tetratech.com



Thank You!

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YATES COUNTY HAZARD MITIGATION PLAN UPDATE
Mitigation Action Workshop – AGENDA
MEETING DATE/TIME: May 30, 2024 – 9:00 a.m. – 12:00 p.m.
Yates County Auditorium
417 Liberty Street, Penn Yan, NY



- 1. Opening Remarks**
- 2. Project Status** - where we are in the process, public outreach
- 3. Identifying and Developing Mitigation Strategies**
- 4. Review Previous Actions**
- 5. Developing New Potential Actions**
- 6. Next Steps** – continue developing actions and work with Tetra Tech staff to complete outstanding worksheets prior to leaving today
- 7. Questions**
- 8. Breakouts**

Yates County Project Contacts

Diane Caves, Deputy Director
Yates County Emergency Services
315-536-3000 | dcaves@yatescounty.org

Tetra Tech Project Contact

Tony Subbio, CEM, CFM, PMP
(717) 839-5654 | tony.subbio@tetrattech.com

Types of Mitigation Actions

A mitigation action is a specific action, project, activity, or process taken to reduce or eliminate long-term risk to people and property from hazards and their impacts. Implementing mitigation actions helps achieve the plan's mission and goals. The actions to reduce vulnerability to threats and hazards form the core of the plan and are a key outcome of the planning process.

The primary types of mitigation actions to reduce long-term vulnerability are:

- Local Plans and Regulations (LPR)
- Natural Systems Protection (NSP)
- Structure and Infrastructure Projects (SIP)
- Education and Awareness Programs (EAP)

Mitigation Type	Description	Examples
Local Plans and Regulations	These actions include government authorities, policies, or codes that influence the way land and buildings are developed and built.	<ul style="list-style-type: none"> ▪ Comprehensive plans ▪ Land use ordinances ▪ Subdivision regulations ▪ Development review ▪ Building codes and enforcement ▪ NFIP Community Rating System ▪ Capital improvement programs ▪ Open space preservation ▪ Stormwater management regulations and master plans
Structure and Infrastructure Projects	<p>These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure.</p> <p>This type of action also involves projects to construct manmade structures to reduce the impact of hazards.</p> <p>Many of these types of actions are projects eligible for funding through the FEMA Hazard Mitigation Assistance program.</p>	<ul style="list-style-type: none"> ▪ Acquisitions and elevations of structures in flood prone areas ▪ Utility undergrounding ▪ Structural retrofits ▪ Floodwalls and retaining walls ▪ Detention and retention structures ▪ Culverts ▪ Safe rooms
Natural Systems Protection	These are actions that minimize damage and losses and also preserve or restore the functions of natural systems.	<ul style="list-style-type: none"> ▪ Sediment and erosion control ▪ Stream corridor restoration ▪ Forest management ▪ Conservation easements ▪ Wetland restoration and preservation
Education and Awareness Programs	These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady or Firewise Communities. Although this type of mitigation reduces risk less directly than structural projects or regulation, it is an important foundation. A greater understanding and awareness of hazards and risk among local officials, stakeholders, and the public is more likely to lead to direct actions.	<ul style="list-style-type: none"> ▪ Radio or television spots ▪ Websites with maps and information ▪ Real estate disclosure ▪ Presentations to school groups or neighborhood organizations ▪ Mailings to residents in hazard-prone areas ▪ StormReady ▪ Firewise Communities



DAM FAILURE		
Personal Scale	Corporate Scale	Government Scale
<ul style="list-style-type: none">• Manipulate the hazard:<ul style="list-style-type: none">○ None• Reduce exposure to the hazard:<ul style="list-style-type: none">○ Relocate out of dam failure inundation areas.• Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ Elevate home to appropriate levels.• Increase Capability:<ul style="list-style-type: none">○ Learn about risk reduction for the dam failure hazard.○ Learn the evacuation routes for a dam failure event.○ Educate yourself on early warning systems and the dissemination of warnings.	<ul style="list-style-type: none">• Manipulate the hazard:<ul style="list-style-type: none">○ Remove dams.○ Harden dams.• Reduce exposure to the hazard:<ul style="list-style-type: none">○ Replace earthen dams with hardened structures.○ Relocate facilities out of dam failure inundation areas.• Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ Floodproof facilities within dam failure inundation areas.• Increase Capability:<ul style="list-style-type: none">○ Educate employees on the probable impacts of a dam failure.○ Develop a continuity of operations plan.	<ul style="list-style-type: none">• Manipulate the hazard:<ul style="list-style-type: none">○ Remove dams.○ Harden dams.• Reduce exposure to the hazard:<ul style="list-style-type: none">○ Replace earthen dams with hardened structures.○ Relocate critical facilities out of dam failure inundation areas.○ Consider open space land use in designated dam failure inundations areas.• Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ Adopt higher floodplain standards in mapped dam failure inundation areas.○ Retrofit critical facilities within dam failure inundation areas.• Increase Capability:<ul style="list-style-type: none">○ Map dam failure inundation areas.○ Enhance emergency operations plans to include a dam failure component.○ Institute monthly communications checks with dam operators.○ Inform the public on risk reduction techniques.○ Adopt real-estate disclosure requirements for the re-sale of property located within dam failure inundation areas.○ Consider the probable impacts of climate change in assessing the risk associated with the dam failure hazard.



DAM FAILURE		
Personal Scale	Corporate Scale	Government Scale
		<ul style="list-style-type: none">○ Establish early warning capability downstream of listed high-hazard dams.○ Consider the residual risk associated with protection provided by dams in future land use decisions.



DISEASE OUTBREAK		
Personal Scale	Corporate Scale	Government Scale
<ul style="list-style-type: none">• Manipulate the Hazard:<ul style="list-style-type: none">○ None• Reduce exposure to the hazard:<ul style="list-style-type: none">○ Proper hygiene.○ PPE.○ Social distancing.• Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ Focus on personal health.• Increase Capability:<ul style="list-style-type: none">○ Storage of PPE.○ Storage of supplies and food to reduce need to enter public spaces.	<ul style="list-style-type: none">• Manipulate the Hazard:<ul style="list-style-type: none">○ None• Reduce exposure to the hazard:<ul style="list-style-type: none">○ PPE.○ Social distancing.• Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ Distanced work environment.○ Regular cleaning of work environment.• Increase Capability:<ul style="list-style-type: none">○ Storage of PPE.○ Equipment for monitoring.○ Trainings for staff.	<ul style="list-style-type: none">• Manipulate the Hazard:<ul style="list-style-type: none">○ None• Reduce exposure to the hazard:<ul style="list-style-type: none">○ PPE.○ Social distancing.• Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ Distanced work environment.○ Regular cleaning of work environment.• Increase Capability:<ul style="list-style-type: none">○ Storage of PPE.○ Equipment for monitoring/treatment.○ Trainings for staff.○ Public outreach.



DROUGHT		
Personal Scale	Corporate Scale	Government Scale
<ul style="list-style-type: none">• Manipulate the Hazard:<ul style="list-style-type: none">○ None• Reduce exposure to the hazard:<ul style="list-style-type: none">○ Consider stored water/captured water techniques during dry seasons.○ Establishing an irrigation time/scheduling program or process so that all agricultural land gets the required amount of water. Through incremental timing, each area is irrigated at different times so that all water is not consumed at the same time. Spacing usage may also help with recharge of groundwater.• Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ Drought resistant landscapes.○ Reduce water system losses.○ Regularly check for leaks to minimize water supply losses.○ Install low-flow water saving showerheads and toilets.○ Turn water flow off while brushing teeth or during other cleaning activities.○ Adjust sprinklers to water the lawn and not the sidewalk or street.○ Run the dishwasher and washing machine only when they are full.○ Check for leaks in plumping or dripping faucets.○ Install rain-capturing devices for irrigation.	<ul style="list-style-type: none">• Manipulate the Hazard:<ul style="list-style-type: none">○ None• Reduce exposure to the hazard:<ul style="list-style-type: none">○ Consider stored water/captured water techniques during dry seasons.• Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ Drought resistant landscapes.○ Reduce private water system losses.○ Identify alternate water supply sources.○ Install low-flow water saving showerheads and toilets.○ Adjust sprinklers to water the lawn and not the sidewalk or street.• Increase Capability:<ul style="list-style-type: none">○ Practice active water conservation.○ Develop a COOP.○ Create a water conservation plan.	<ul style="list-style-type: none">• Manipulate the Hazard:<ul style="list-style-type: none">○ Ground Water Recharge through stormwater management.○ Implement cloud seeding techniques during dry seasons.• Reduce exposure to the hazard:<ul style="list-style-type: none">○ Identify and create ground water back up sources.○ Create /identify new impounded water supply points.○ Developing new or upgrading existing water delivery systems to eliminate breaks and leaks.• Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ Water use conflict regulations.○ Reduce water system losses.○ Distribute water saving kits.○ Identify sites ideally suited for ground water recharge.○ Implement stormwater retention in regions ideally suited for groundwater recharges.○ Utilize drought resistant landscapes on community owned facilities.○ Encourage citizens to take water-saving measures.• Increase Capability:<ul style="list-style-type: none">○ Public education on drought resistance.○ Identify alternative water supplies for time of drought. Mutual aid



DROUGHT

<ul style="list-style-type: none">○ Install graywater systems in homes to encourage water reuse.○ Rotate crops by growing a series of different types of crops on the same fields every season to reduce soil erosion.○ Planting “cover crops,” such as oats, wheat, and buckwheat, to prevent soil erosion.● Increase Capability:<ul style="list-style-type: none">○ Practice active water conservation techniques.○ Seek ways to operate wells in such a way to enhance their functional longevity and supply capability.		<ul style="list-style-type: none">○ agreements with alternative suppliers.○ Develop a drought contingency plan.○ Develop criteria-"triggers" for drought related actions.○ Improve accuracy of water supply forecasts.○ Provide incentives to influence active water conservation techniques such as water user rate reductions.○ Consider providing incentives to property owners that utilize drought resistant landscapes in the design of their homes.○ Use of water buffalo tankers.○ Promote well usage techniques that strive to enhance functional longevity and supply capability of private water supply wells.○ Develop an ordinance to restrict the use of public water resources for non-essential usage, such as landscaping, washing cars, filling swimming pools, etc.
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EXTREME TEMPERATURE		
Personal Scale	Corporate Scale	Government Scale
<ul style="list-style-type: none">• Manipulate the Hazard:<ul style="list-style-type: none">○ Increase tree plantings○ Installation of green roofs to provide shade and remove heat○ Use cool roofing products that reflect sunlight and heat away from a building• Reduce exposure to the hazard:<ul style="list-style-type: none">○ None• Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ Retrofit pipes including locating water pipes on the inside of building insulation or keeping them out of vulnerable spaces to extreme cold• Increase Capability<ul style="list-style-type: none">○ None	<ul style="list-style-type: none">• Manipulate the Hazard:<ul style="list-style-type: none">○ Increase tree plantings○ Installation of green roofs to provide shade and remove heat○ Use cool roofing products that reflect sunlight and heat away from a building• Reduce exposure to the hazard:<ul style="list-style-type: none">○ None• Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ Retrofit pipes including locating water pipes on the inside of building insulation or keeping them out of vulnerable spaces to extreme cold• Increase Capability:<ul style="list-style-type: none">○ Set rules restricting outdoor work during extreme temperature events	<ul style="list-style-type: none">• Manipulate the Hazard:<ul style="list-style-type: none">○ Increase tree plantings○ Encourage installation of green roofs to provide shade and remove heat○ Encourage the use of cool roofing products that reflect sunlight and heat away from a building• Reduce exposure to the hazard:<ul style="list-style-type: none">○ None• Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ Require minimum temperatures in housing/landlord codes• Increase Capability:<ul style="list-style-type: none">○ Educate citizens regarding the dangers of extreme heat and cold and the steps they can take to protect themselves when extreme temperatures occur○ Establish warming and cooling centers○ Establish extreme temperature planning in emergency operation plans○ Create a database to track those individuals at high risk of death such as the elderly, homeless, etc.



FLOOD		
Personal Scale	Corporate Scale	Government Scale
<ul style="list-style-type: none">• Manipulate the Hazard:<ul style="list-style-type: none">○ Clear stormwater drains and culverts.• Reduce exposure to the hazard:<ul style="list-style-type: none">○ Locate or re-locate outside of hazard area.○ Institute low impact development techniques on property.• Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ Retrofit existing structures and utilities above Base Flood Elevation (BFE).○ Floodproof existing structures (wet- or dry floodproofing).○ Store hazardous materials above BFE or outside of floodprone areas.• Increase Capability:<ul style="list-style-type: none">○ Develop household mitigation plan, such as retrofit savings, communication capability with outside, 72-hr. self-sufficiency during and after an event.○ Buy flood insurance.	<ul style="list-style-type: none">• Manipulate the Hazard:<ul style="list-style-type: none">○ Clear stormwater drains and culverts.• Reduce exposure to the hazard:<ul style="list-style-type: none">○ Locate business critical facilities or functions outside hazard area.○ Institute low impact development techniques on property.• Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ Build redundancy for critical functions/ retrofit critical buildings.○ Provide flood-proofing measures when new critical infrastructure must be located in floodplains.○ Harden structures and infrastructure (wet and dry-floodproofing).○ Store hazardous materials above BFE or outside of floodprone areas.• Increase Capability:<ul style="list-style-type: none">○ Increase capability by having cash reserves for reconstruction.○ Develop and adopt a Continuity of Operations Plan (COOP).○ Solicit 'cost-sharing" through partnerships with private sector stakeholders on projects with multiple benefits.○ Dam owner/operators should continue to be aware of and understand dam inspection and reporting requirements.○ Ensure that all dam EAP's are kept in compliance with State Regulations.	<ul style="list-style-type: none">• Manipulate the Hazard:<ul style="list-style-type: none">○ Clear stormwater drains and culverts○ Dredging, levee construction, providing retention areas.○ Structural flood control: levee's, dams, channelization, revetments.○ Construct regional stormwater control facilities.○ Lead and develop a county-wide stream clearing strategy including the development of thresholds for response/action.• Reduce exposure to the hazard:<ul style="list-style-type: none">○ Locate/re-locate critical facilities outside of hazard area.○ Acquire or relocate identified repetitive loss properties.○ Promote open space uses in identified high hazard areas via techniques such as: PUD's, easements, setbacks, greenways, sensitive area tracks.○ Adopt land development criteria such as PUD's, Density transfers, clustering.○ Institute low impact development techniques on property.○ Acquire vacant land or promote open space uses in developing watersheds to control increases in runoff.○ Pass an ordinance to incorporate additional zoning classifications into flood zones within each municipality.



FLOOD		
Personal Scale	Corporate Scale	Government Scale
		<ul style="list-style-type: none">○ Increase floodplain standards within municipal ordinances and include provisions for enforcing best practice standards.○ Consider increasing minimum freeboard beyond state requirements.○ Continue development application reviews by County Planning Board to reduce risky development practices.● Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ Harden structures and infrastructure (wet and dry-floodproofing).○ Provide redundancy for critical functions and infrastructure.○ Adopt appropriate regulatory standards such as cumulative substantial improvement/damage, freeboard, lower substantial damage threshold, compensatory storage.○ Stormwater management regulations and master planning.○ Adopt "no-adverse impact" floodplain management policies that strive to not increase the flood risk on down-stream communities.○ Participate in the Community Rating System (CRS).○ Implement as-built regulatory requirements.○ Implement site review ordinances/requirements.



FLOOD		
Personal Scale	Corporate Scale	Government Scale
		<ul style="list-style-type: none">○ Establish stream maintenance programs with stakeholders (e.g. Soil and Water Conservation District) - support county leads of such efforts.○ Incorporate retrofitting/replacement of critical facilities and infrastructure in Capital Improvement Plans (CIPs).○ Promote the use of vegetation/plants as green erosion control measures to reduce localized flooding.○ Work with environmental groups to address removal of debris, log jams, etc. in flood vulnerable stream sections.● Increase Capability:<ul style="list-style-type: none">○ Produce better hazard maps, and improve access to flood hazard mapping○ Capture/survey "high-water" marks during flood events.○ Provide technical information and guidance on appropriate mitigation options available to businesses and homeowners.○ Enact tools to help manage development in hazard areas (stronger controls, tax incentives, information).○ Establish an additional layer of zoning within flood hazard areas.○ Develop strategy to take advantage of post disaster opportunities.○ Improve compliance with and enforcement of the NFIP.



FLOOD		
Personal Scale	Corporate Scale	Government Scale
		<ul style="list-style-type: none">○ Develop mitigation partnerships with regional stakeholders.○ Join Community Rating System (CRS) program, or improve level of participation in CRS.○ Develop and implement a public information strategy for flood hazard awareness, flood insurance (NFIP) and mitigation.○ Maintain existing data as well as gather new data needed to define risks and vulnerability.○ Create a building and elevation inventory of structures in the floodplain○ Identify flood prone areas that may be in need of new flood studies.○ Establish a program to identify and educate owners of flood-prone properties of potential mitigation options (e.g. elevations, relocations).○ Charge a hazard mitigation fee on all new permits to create a hazard mitigation funding source for initiatives or grant cost share requirements.○ Integrate floodplain management policies into other planning mechanisms within the planning area.○ Establish a Stormwater Utility to deal with urban drainage/flooding issues.○ Establish incentives to promote flood hazard mitigation of private property (e.g. permit fee waivers).



FLOOD		
Personal Scale	Corporate Scale	Government Scale
		<ul style="list-style-type: none">○ Adopt ordinances/standards for cumulative damages and/or improvements.○ Upgrade NFIP Floodplain ordinance, as well as other ordinances to current or above current state and federal standards.○ Develop and adopt a COOP.○ Join "Storm Ready" Program.○ Participate in county and regional training programs.○ Provide additional training/certification to NFIP floodplain administrators and code officials.○ Implement annual training to account for turnover of municipal officials.○ Maintain and enhance flood forecasting ability, including the establishment and maintenance of critical stream gages.○ Explore grant funding opportunities and potential partnerships to help maintain existing gages and install additional gages to improve forecasting and flood warning ability.○ Promote awareness and participation in alert systems.○ Support and participate in regional flood management efforts.○ Support and implement hazard disclosure for the sale/re-sale of property in identified risk zones.



FLOOD		
Personal Scale	Corporate Scale	Government Scale
		<ul style="list-style-type: none">○ Provide continued and enhanced training for emergency responders.○ Establish a revolving "bank" or budget line item to fund grant application support.○ Continue to review updated Flood Insurance Rate Maps to ensure accuracy as well as maintaining lines of communication with homeowners to make them aware of potential changes related to their property status.○ Provide trainings for FPA's on the NFIP/Floodplain Best Practices and also pursue CFM accreditation for municipal FPA's.○ Build and maintain relationships to develop regional watershed/floodplain mitigation solutions.○ Pursue grant funding opportunities to fund repairs of catchments and infrastructure on a proactive basis.○ Explore grant funding opportunities related to climate change to fund mitigation projects.



HARMFUL ALGAL BLOOMS		
Personal Scale	Corporate Scale	Government Scale
<ul style="list-style-type: none">• Manipulate the Hazard:<ul style="list-style-type: none">○ Participate in quarantine, control, or eradication programs.• Reduce exposure to the hazard:<ul style="list-style-type: none">○ Comply with harmful algal bloom rules and regulations to minimize the exposure to HAB.• Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ Form citizen action groups to promote awareness and best practices on local levels.• Increase Capability:<ul style="list-style-type: none">○ Regularly check the NJ DEP HAB information page for updated information.○ Broaden collaborations focused on ecosystem restoration and ecosystem-based management.	<ul style="list-style-type: none">• Manipulate the Hazard:<ul style="list-style-type: none">○ None• Reduce exposure to the hazard:<ul style="list-style-type: none">○ None• Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ None• Increase Capability:<ul style="list-style-type: none">○ Build and maintain partnerships with government agencies, academia, and stakeholders to coordinate information sharing, and response for Invasive Species and Harmful Algal Blooms throughout the county/region.	<ul style="list-style-type: none">• Manipulate the Hazard:<ul style="list-style-type: none">○ Work with Federal/State agencies on quarantine, control, or eradication programs.• Reduce exposure to the hazard:<ul style="list-style-type: none">○ Create/disseminate planting guides which explain which types of plants and vegetation are safe to plant within the county.• Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ Pass municipal ordinances to enforce best practices for HAB at the local level.• Increase Capability:<ul style="list-style-type: none">○ Build and maintain partnerships with other stakeholders to coordinate information sharing, and response for HAB throughout the county/region.○ Work with federal/state agencies to disseminate information to local municipalities regarding HAB from the NJ DEP and US EPA.○ Disseminate information to the general public to educate them on HAB.○ Work with stakeholders to identify and expand resources for prevention and early detection of HAB.○ Broaden collaborations focused on ecosystem restoration and ecosystem-based management.



HARMFUL ALGAL BLOOMS		
Personal Scale	Corporate Scale	Government Scale
		<ul style="list-style-type: none">○ Build ecological restoration planning into IS management projects.



HAZARDOUS MATERIALS		
Personal Scale	Corporate Scale	Government Scale
<ul style="list-style-type: none">• Manipulate the Hazard:<ul style="list-style-type: none">○ Identify and eliminate sources of potential hazardous material spills.• Reduce exposure to the hazard:<ul style="list-style-type: none">○ Increase distance between hazardous material sites and development.• Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ None• Increase Capability:<ul style="list-style-type: none">○ Personal planning for potential event.	<ul style="list-style-type: none">• Manipulate the Hazard:<ul style="list-style-type: none">○ Identify and eliminate sources of potential hazardous material spills.• Reduce exposure to the hazard:<ul style="list-style-type: none">○ None• Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ None• Increase Capability:<ul style="list-style-type: none">○ Increase inspection of hazardous material facilities and transport vehicles.○ Conduct training for response.	<ul style="list-style-type: none">• Manipulate the Hazard:<ul style="list-style-type: none">○ Identify and eliminate sources of potential hazardous material spills.• Reduce exposure to the hazard:<ul style="list-style-type: none">○ Increase inspection of hazardous material facilities and transport vehicles.• Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ None• Increase Capability:<ul style="list-style-type: none">○ Increase inspection of hazardous material facilities and transport vehicles.○ Conduct training for response.○ Public outreach.



LANDSLIDE		
Personal Scale	Corporate Scale	Government Scale
<ul style="list-style-type: none">• Manipulate the Hazard:<ul style="list-style-type: none">○ Apply soil stabilization measures, such as planting soil stabilizing vegetation on steep slopes.• Reduce exposure to the hazard:<ul style="list-style-type: none">○ None• Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ None• Increase Capability:<ul style="list-style-type: none">○ None	<ul style="list-style-type: none">• Manipulate the Hazard:<ul style="list-style-type: none">○ None• Reduce exposure to the hazard:<ul style="list-style-type: none">○ None• Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ None• Increase Capability:<ul style="list-style-type: none">○ None	<ul style="list-style-type: none">• Manipulate the Hazard:<ul style="list-style-type: none">○ Implement reinforcement measures in high-risk areas.○ Use debris flow measures that may reduce damage in sloping areas, such as stabilization, emergency dissipation, and flow control measures.○ Apply soil stabilization measures, such as planting soil stabilizing vegetation on steep, publicly owned slopes.• Reduce exposure to the hazard:<ul style="list-style-type: none">○ Consider hazard areas in land-use planning, zoning, and development siting.○ Acquire structures in highest hazard areas (demolish and convert to restricted open space).○ Relocation of Structures.○ Open Space Preservation.○ Create or increase setback limits on parcels near high-risk parcels.• Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ Consider hazard areas in land-use planning and development siting.○ Stabilize vulnerable slopes near structures and infrastructure.○ Work with stakeholders such as USGS to develop appropriate risk reduction strategies.○ Install catch-fall nets for rocks at steep slopes near roadways.



LANDSLIDE		
Personal Scale	Corporate Scale	Government Scale
		<ul style="list-style-type: none">• Increase Capability:<ul style="list-style-type: none">○ Increase understanding of hazard areas (e.g. Landslide Susceptibility Maps) -geotechnical surveys, LIDAR and mapping.○ Assessing vegetation in wildfire-prone areas to prevent landslides after fires (e.g. encourage plants with strong root systems).○ Work with stakeholders such as USGS to develop appropriate risk reduction strategies.○ Support and implement hazard disclosure for the sale/re-sale of property in identified risk zones.○ Develop county-level programs to document slide events (landslide inventory), and maintain its currency.



SEVERE STORM		
Personal Scale	Corporate Scale	Government Scale
<ul style="list-style-type: none">• Manipulate the Hazard:<ul style="list-style-type: none">○ Increase tree plantings.○ Installation of green roofs to provide shade and remove heat.○ Use cool roofing products that reflect sunlight and heat away from a building.• Reduce exposure to the hazard:<ul style="list-style-type: none">○ None• Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ Retrofit structures (improved roofing, glazing, insulation, etc.).○ Provide for redundant heat and power.○ Contact municipality or utilities to trim or remove trees that could affect power lines.○ Plant appropriate trees near home and power lines ("Right tree, right place" National Arbor Day Foundation Program.○ Retrofit pipes including locating water pipes on the inside of building insulation or keeping them out of vulnerable spaces to extreme cold.• Increase Capability<ul style="list-style-type: none">○ Improve awareness of impending severe weather (e.g. obtain a NOAA weather radio).○ Promote 72-hour self-sufficiency.○ Provide for redundant heat and power.	<ul style="list-style-type: none">• Manipulate the Hazard:<ul style="list-style-type: none">○ Increase tree plantings.○ Installation of green roofs to provide shade and remove heat.○ Use cool roofing products that reflect sunlight and heat away from a building.• Reduce exposure to the hazard:<ul style="list-style-type: none">○ None• Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ Relocate critical infrastructure, such as power lines, underground.○ Reinforce or relocate critical infrastructure such as powerlines so that it meets performance expectations.○ Retrofit pipes including locating water pipes on the inside of building insulation or keeping them out of vulnerable spaces to extreme cold.• Increase Capability:<ul style="list-style-type: none">○ Contact municipality or utilities to trim or remove trees that could affect power lines.○ Create redundancy (e.g. backup generators).○ Improve awareness of impending severe weather (e.g. obtain a NOAA weather radio).○ Develop a Continuity of Operations Plan (COOP).	<ul style="list-style-type: none">• Manipulate the Hazard:<ul style="list-style-type: none">○ Increase tree plantings.○ Encourage installation of green roofs to provide shade and remove heat.○ Encourage the use of cool roofing products that reflect sunlight and heat away from a building.• Reduce exposure to the hazard:<ul style="list-style-type: none">○ None• Reduce vulnerability to the hazard:<ul style="list-style-type: none">○ Harden infrastructure such as locating utilities underground.○ Trimming trees back from power lines.○ Designate and strengthen critical road sections and bridges.○ Adopt ordinances that regulate the type and quantity of trees planted near utility lines.○ Relocate critical infrastructure, such as power lines, underground.○ Require minimum temperatures in housing/landlord codes.• Increase Capability:<ul style="list-style-type: none">○ Support programs such as "Tree Watch" that proactively manage problem areas by use of selective removal of hazardous trees, tree replacement, etc.○ Enforce building codes.○ Increase communication alternatives.



SEVERE STORM		
Personal Scale	Corporate Scale	Government Scale
	<ul style="list-style-type: none">○ Monitor impending storm events so that you can release employees in such a manner as to not negatively impact emergency response personnel/services.○ Set rules restricting outdoor work during extreme temperature events.	<ul style="list-style-type: none">○ Modify land use and environmental regulations to support vegetation management activities that improve reliability in utility corridors.○ Modify landscape and other ordinances to encourage appropriate planting near overhead power, cable, and phone lines.○ Promote awareness and participation in alert systems.○ Provide NOAA weather radios to the public.○ Create/Enhance "mutual aid" agreements for response to all emergencies.○ Create/identify evacuation routes to be utilized during severe storm events.○ Develop debris management plans.○ Join "Storm-Ready" program.○ Provide early warning of impending severe storm events to identified critical or essential facilities. This would include facilities such as large employments centers, schools, hospitals.○ Promote emergency power supplies to private property.○ Improve, expand, or harden communications facilities and services.



SEVERE STORM		
Personal Scale	Corporate Scale	Government Scale
		<ul style="list-style-type: none">○ Recruit additional emergency personnel or use mutual aid agreements.○ Increase sheltering capabilities.○ Increase capability to respond to power outages and downed power lines. Establish partnerships with utility providers through pro-active planning.○ Educate citizens regarding the dangers of extreme heat and cold and the steps they can take to protect themselves when extreme temperatures occur.○ Establish warming and cooling centers.○ Establish extreme temperature planning in emergency operation plans.○ Create a database to track those individuals at high risk of death such as the elderly, homeless, etc.



WINTER STORM		
Personal Scale	Corporate Scale	Government Scale
<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ None • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ Plant appropriate trees near home and power lines (“Right tree, right place” National Arbor Day Foundation). • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Insulate House to provide greater thermal efficiency and reduce heat loss. ○ Provide redundant heat and power. ○ Insulate Structure. ○ Ensure natural gas input/release valves do not get covered in snow. • Increase Capability: <ul style="list-style-type: none"> ○ Trim or remove trees that could affect power lines. ○ Prepare emergency food and supplies to be self-sufficient for at least 72 hours in the event of a severe winter storm. ○ Be aware of inclement weather conditions and move your vehicles off of the street as severe weather systems approach. ○ Retrofit structures. 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ None • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Relocate critical infrastructure, such as power lines, underground. ○ Reinforce or relocate critical infrastructure such as powerlines so that it meets performance expectations. ○ Install tree wire. • Increase Capability: <ul style="list-style-type: none"> ○ Trim or remove trees that could affect power lines. ○ Create redundancy in utilities and communications. ○ Develop a Continuity of Operations Plan (COOP) to address operations before, during and after coastal storm events. ○ Utilize weather radios at the work place to keep your employees aware of severe weather conditions. 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ None • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Harden infrastructure such as locating utilities underground where appropriate. ○ Trimming trees back from power lines. ○ Designate snow routes and strengthen critical road sections and bridges. ○ Adopt codes and regulations that address the issues of parking of vehicles along roadways during severe weather events. ○ Develop or enhance the capacity/capability of stormwater conveyance systems. ○ Provide backup power sources at vital critical facilities. • Increase Capability: <ul style="list-style-type: none"> ○ Support programs that proactively manage problem areas by use of selective removal of hazardous trees, tree replacement, etc. ○ Establish and enforce building codes that require all roofs to withstand snow loads-- Develop/Improve/Enforce building Codes in Hazard Areas.



WINTER STORM		
Personal Scale	Corporate Scale	Government Scale
		<ul style="list-style-type: none">○ Increase communication alternatives.○ Modify land use and environmental regulations to support vegetation management activities that improve reliability in utility corridors.○ Modify landscape and other ordinances to encourage appropriate planting near overhead power, cable, and phone lines.○ Provide weather radios to vulnerable populations.○ Enhance public awareness campaigns to address those issues of alert and warning and actions to take during severe weather events.○ Utilize the best available technology to enhance the warning systems for all severe weather events (i.e.: tornado warning systems).○ Coordinate severe weather warning capabilities and the dissemination of warning amongst those agencies within the planning are with the highest degree of capability.○ Encourage local ordinances for planting tree near lines and join Tree City USA.○ Increase tree management programs.○ Join the Community Rating System.○ Join "Storm-Ready".



WINTER STORM		
Personal Scale	Corporate Scale	Government Scale
		<ul style="list-style-type: none">○ Retrofit critical structures and promote hazard resistant construction.○ Keep open communications and education of hazards for mobile home communities.○ Retrofit above-ground utilities to underground facilities if appropriate.○ Create a salt reserve or research alternates to stretch salt reserve.○ Ensure accessibility to hospitals.○ Provide better debris logistics and removal.○ Provide better communication systems and back-up communication systems to inform public of hazards and to communicate during the hazard event.



Yates County 2025 Hazard Mitigation Plan
 Topic: Planning Partnership Mitigation Strategy Workshop
 Date: May 30, 2024
 Time: 9:00 AM



Name	Jurisdiction	Title	Email
George A. Rads	Yates Community Center	Dir CS	groets@yatescountyny.org
Alyssa Palmer	Yates Co. Probation	Probation Director	apalmer@yatescountyny.org
Doug Sinclair	Yates County Public Health	Health Director	dsinclair@yatescountyny.org
Sando Baskedo	CCE Yates	Executive Director	sb932@cornell.edu
Brandon Jenson	YATES COUNTY SHERIFF'S OFFICE	UNDERSHERIFF	bjensen@yatescountyny.org
FRANCIS RYAN	Yates County Sheriff	Sheriff	FRYAN@YatesCounty.org
Diane Caves	Yates County OES	Deputy Director	dcaves@yatescountyny.org
Ryan Bailey	Yates County OES	EMS Coordinator	rbailey@yatescountyny.org
Doug Repsher	Yates County Highway	Highway Syst.	Drepsher@yatescountyny.org
TIM GROTH	YATES COUNTY I.T.	DIRECTOR OF I.T.	TGROTH@YATESCOUNTY.ORG



Yates County 2025 Hazard Mitigation Plan
Topic: Planning Partnership Mitigation Strategy Workshop
Date: May 30, 2024
Time: 9:00 AM



Name	Jurisdiction	Title	Email
Caroline Beard Hunt	CCE of Yates County	agriculture educator	cb239@ccoroll.edu
Jim Cunningham	Keuka College	Director of Campus Safety	JCUNNING@KEUKA.EDU
Jamie Sisson	Town of Jerusalem	Deputy	
Jessica Mullins	YC Admin	YC	Jmullins1@yatescounty.org
Scott Feuerstein	NYS DHSES	Planning Manager	scott.feuerstein@dhses.ny.gov
Ligh Battin	YC Director of Finance →		lbattin@yatescounty.org
Jens Mertenley	Code Enforcement Town of Jerusalem		—
Robert Cilino	VCSO Comm-		
William H. Day	Village of Dresden		
Marilyn Davis	Town of Torrey	Councilman	jdavis1986@gmail.com



Yates County 2025 Hazard Mitigation Plan
Topic: Planning Partnership Mitigation Strategy Workshop
Date: May 30, 2024
Time: 9:00 AM



Name	Jurisdiction	Title	Email
Tim Page	U. Village of Rushville Town of Pothier	CEO	cebp@villageofrushville.com topceo@pethier.com
Steve Wheeler	T/O Barrington	Hwy Supt	townband@townofbarrington.net
Ralph Warner	T/O Starling	Hwy Spl.	Starling Hwy & Fraction wact.mnt
Freddie Crutsley	V/O Dundee	MAYOR	Mayorofdundee@gmail.com
Tony Hurd	T/O Seneca	Hwy Spt	
Andy Best	T/O Italy	Hwy Supt.	
Albert Chervic	nysDDH	Supervisor Hwy	albert.chervic@nysddh.ny.gov
Richard CRAIG	Town of Italy	SUPERVISOR	PECCAZIG1953@GMAIL.COM
Chris Brand	Village of Fenner	Streets	Streets@VillageofFenner.com
Anthony Valente	Town of Milo	Code Enforcement	codeofen@townofmilo.com



Yates County 2025 Hazard Mitigation Plan
Topic: Planning Partnership Mitigation Strategy Workshop
Date: May 30, 2024
Time: 9:00 AM



Name	Jurisdiction	Title	Email
Vett Hayes	Yates Co	Planner	vayes@yatescountyny.gov
Lem Chambers	Yates Co	Highway Superintendent	L.Chambers31@yahoo.com
Linda Phillips	Ontario Co	Planner	Linda.Phillips@ontario.ny.gov
Amy Dinde	Yan	DSS	amymelle@dfc.state.ny.us
Jamie L Sisson	Tenurex Inc	Supervisor	Supervisor@tenurex.com
Brian Bernard	NY State Police	EM Supervisor	brian.bernard@troopers.ny.gov
Timothy Alimossy	NYS DOT REGION 6	REGIONAL EMERGENCY MANAGER	Timothy.Alimossy@dot.ny.gov
Kevin Clapp	NYS DITSER	Supervisor - Hazard Planning	KEVIN.CLAPP@DITSER.NY.GOV
Tony Subbio / PM	Tetra Tech	PM	tony.subbio@tetratech.com
Emily Vessallo	Tetra Tech	Planner	emily.vessallo@tetratech.com

**APPENDIX C: PUBLIC AND STAKEHOLDER
OUTREACH**



This appendix provides documentation of public and stakeholder outreach. Stakeholder involvement in this planning process was broad and productive as discussed and further documented in Chapter 2 (Planning Process). Public and stakeholder input has been incorporated throughout this HMP as appropriate, as identified in Chapter 2, as well as within specific mitigation initiatives identified within the jurisdictional annexes (Volume II). Respondent feedback filtered by jurisdiction is included in each jurisdictional annex as available to provide an indication of community resident concerns related to the identified hazards.

WEBSITE AND SOCIAL MEDIA POST

The following provides screenshots of websites, news articles, and social media posts.

Table C-1. Website and Social Media Posts

Date of Post	Jurisdiction	Format



STAKEHOLDER SURVEYS

This section contains information and results gathered from the Yates County HMP Stakeholder Survey. Unlike steering committee or planning partnership members, stakeholders may not be involved in all stages of the planning process, but they may have information or input to provide. In order to gather that information, the surveys were sent to the following stakeholders that provide various services to the Planning Area (emergency services, academic/research, public works, utility providers, business/commerce, hospitals/medical services, and transportation). Results of the surveys are provided below, with personal information redacted.

Stakeholder Survey Results

The stakeholder survey was designed to help identify general needs for hazard mitigation and resiliency within Yates County from its perspective, as well as to identify specific projects that may be included in the mitigation plan. It was distributed to identified stakeholders, including the various county and municipal departments and agencies in the county. As of July 26, 2024, nine stakeholders completed the survey, with respondents coming from the following sectors: academic/research, emergency services, health and human services, hospitals/medical services, transportation and public works. The majority of respondents represented groups that served Yates County as a whole (77.8 percent) or the Town of Jerusalem (33.3 percent).

Neighbor Survey Results

The neighbor survey was sent to the surrounding municipalities of the Yates County due to their proximity to and because effects of hazard events that impact the Planning Area would be similar to that of their neighbors. As of July 26, 2024, three neighboring counties submitted the survey (Ontario, Schuyler, and Seneca County)

PUBLIC SURVEY RESULTS

This section contains information and results gathered from the Yates County Public Survey. The main objective of this survey was to gather information from citizens regarding their level of knowledge regarding hazard vulnerability and knowledge of hazard mitigation information for their local communities. Fifty-four respondents completed this survey over a period of four months during the planning process. The survey was available on Yates County's HMP website (<https://www.yatescountynyhmp.com/>) and participants posted a link to the survey through their social media accounts. Full survey responses are provided at the end of the appendix.



Public Survey Results

Responses were collected and provided back to plan participants for consideration in the mitigation action development (72 responses in total).

- Survey respondents indicated they were from the Towns of Barrington, Benton, Jerusalem, Middlesex, Milo, Potter, Stakey, and Torrey; the Villages of Dundee and Penn Yan; and surrounding jurisdictions including the Towns of Geneva, Canandaigua, and Urbana.
- The majority of respondents have lived in Yates County for over 20 years (58 percent), own their residence (90 percent), and live in a single-family home (94 percent).
- The majority of residents were over the age of 60 (45.1 percent).
- Of the 72 respondents who answered this question, only nine (13.4 percent) indicated that their property is located in a designated floodplain. Of those residents just two (2.9 percent) indicated their home is covered by flood insurance.
- A majority of respondents (66.6 percent) indicated that they receive emergency information through the internet and social media, followed by mass notification systems (65.3 percent).
- 77.4 percent of respondent said 'no' when asked if their home was damaged from a hazard event. Damages reported were related to hail, wind, flooding, and extreme temperature (heat and cold).

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APPENDIX D: PARTICIPTION MATRIX

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The matrix in Appendix B is intended to give a broad overview of FEMA, the State of New York, county, municipal, and stakeholder personnel that participated in the Yates County HMP update planning process. Meeting attendees and input provided are also included. During the planning process the consultant contacted each participant to offer support, explain the process, and facilitate the submittal and review of critical documents.

Participation is defined as having input to the hazard analysis (providing critical facility, hazard event, vulnerability data, etc.), and as having participated in the mitigation workshop or alternate annex meetings as described in the HMP for the purpose of creating a mitigation strategy to be included in each jurisdictional annex in Volume II. A list of participating jurisdiction and stakeholder representatives is found in Table D-1.

In preparation for the draft plan public review, each jurisdiction was asked to have their 'mitigation team' review their annex to ensure it was complete and accurate for posting to Yates County's HMP website (<https://www.yatescountynyhmp.com/>).

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Table D-1. Participation Matrix

Name	Title / Position	Attended Steering Committee Kick-Off Meeting (08/22/23)	Attended Planning Partnership Kick-Off Meeting (08/22/23)	Attended Steering Committee Risk Assessment Meeting (02/08/24)	Attended Planning Partnership / Public Risk Assessment Meeting (02/22/24)	Mitigation Strategy Workshop (05/08/24)	Attended Draft Review Meeting (02/15/24)	Attended Public Draft Plan Review Meeting (02/20/24)	Feedback provided	Steering Committee Member	Planning Partnership Member	Primary Point of Contact	Alternate Point of Contact	NFIP Administrator
County of Yates														
Brian Winslow	Director, Office of Emergency Services			X	X					X	X		X	
Diane Caves	Deputy Director, Office of Emergency Services	X	X	X		X				X	X	X		
Ryan Bailey	EMS Coordinator, Office of Emergency Services	X	X	X	X	X				X	X			
Jeff Ayers	County Planner, Planning Department	X	X			X				X	X			
Colby Peterson	Director, Soil and Water Conservation District	X	X		X					X	X			
Joe Reed	Supervisor, Building and Grounds	X	X							X	X			
Amy Miller	Commissioner, Social Services Department	X	X	X		X				X	X			
Tim Groth	Director, Information and Technology	X	X	X		X				X	X			
Kerry Brennan	Personnel Officer, Personnel Office		X							X	X			
Alyssa Palmer	Director, Probation Department	X	X			X				X	X			



Name	Title / Position	Attended Steering Committee Kick-Off Meeting (08/22/23)	Attended Planning Partnership Kick-Off Meeting (08/22/23)	Attended Steering Committee Risk Assessment Meeting (02/08/24)	Attended Planning Partnership / Public Risk Assessment Meeting (02/22/24)	Mitigation Strategy Workshop (05/08/24)	Attended Draft Review Meeting (02/15/24)	Attended Public Draft Plan Review Meeting (02/20/24)	Feedback provided	Steering Committee Member	Planning Partnership Member	Primary Point of Contact	Alternate Point of Contact	NFIP Administrator
Douglas Sinclair	Director, Public Health Department	X	X		X	X				X	X			
George Roets	Director, Community Services Department	X	X			X				X	X			
Jessica Mullins	Yates County Administrator					X				X	X			
Leigh Batton	Director of Finance, Finance Department					X				X	X			
Doug Rapalee	Highway Superintendent, Highway Department					X				X	X			
Francis Ryan	Sheriff, Sheriff's Office					X				X	X			
Robert Cilino	Communications Support Specialist, Sheriff's Office					X				X	X			
Brandon Jensen	Undersheriff, Sheriff's Office					X				X	X			
Town of Barrington														
Steven Wheeler	Highway Superintendent	X	X			X				X	X	X		
Steven Perry	Town Supervisor										X		X	
Jesse Jayne	Code Enforcement Officer										X			X
Joy L. C. Perry	Town Clerk										X			
Town of Benton														
Jayson Hoover	Highway Superintendent	X	X							X	X			



Name	Title / Position	Attended Steering Committee Kick-Off Meeting (08/22/23)	Attended Planning Partnership Kick-Off Meeting (08/22/23)	Attended Steering Committee Risk Assessment Meeting (02/08/24)	Attended Planning Partnership / Public Risk Assessment Meeting (02/22/24)	Mitigation Strategy Workshop (05/08/24)	Attended Draft Review Meeting (02/15/24)	Attended Public Draft Plan Review Meeting (02/20/24)	Feedback provided	Steering Committee Member	Planning Partnership Member	Primary Point of Contact	Alternate Point of Contact	NFIP Administrator
John Prendergast	Supervisor		X								X	X		
Richard Harper	Deputy Supervisor										X		X	
Thomas Fulkrod	Zoning Officer										X			X
Jeremy Delyser	Engineer										X			
Bobbi Wolfe	Town Clerk/Tax Collector, RMC										X			
Village of Dresden														
Colleen Riviello	Clerk, Treasurer, Administration										X	X		
William Hall	Mayor – Board of Trustees					X					X		X	
Tim Steed	Engineer – Hunt Engineers										X			
Brian Ellis	DPW Superintendent										X			
Thomas Fulkrod	Code Enforcement Officer										X			X
Kathy Whitney	Deputy Clerk Admin										X			
Village of Dundee														
Steven Dean	Superintendent of Public Works										X	X		
Frederick Cratsley, Jr.	Mayor					X					X		X	



Name	Title / Position	Attended Steering Committee Kick-Off Meeting (08/22/23)	Attended Planning Partnership Kick-Off Meeting (08/22/23)	Attended Steering Committee Risk Assessment Meeting (02/08/24)	Attended Planning Partnership / Public Risk Assessment Meeting (02/22/24)	Mitigation Strategy Workshop (05/08/24)	Attended Draft Review Meeting (02/15/24)	Attended Public Draft Plan Review Meeting (02/20/24)	Feedback provided	Steering Committee Member	Planning Partnership Member	Primary Point of Contact	Alternate Point of Contact	NFIP Administrator
Alec Miller	Fire Chief										X			
Thomas Grady	Code Enforcement Officer										X			X
Christine Sutherland	Clerk/Treasurer										X			
Town of Italy														
Richard Craig	Town Supervisor					X					X	X		
Andy Best	Highway Superintendent					X					X		X	
Steve Faulker	Former Highway Superintendent										X			
Chris Whipple	Code Enforcement Officer										X			X
Debbie Craig	Town Clerk										X			
Town of Jerusalem														
Tony Hurd	Highway Superintendent					X					X	X		
Jamie Sisson	Supervisor				X	X					X		X	
Bill Gerhardt	Former Code Enforcement Officer										X			
James McKinley	Code Enforcement Officer					X					X			X
Sheila McMichael	Town Clerk										X			
Tim Cutler	Planning Board Chair										X			



Name	Title / Position	Attended Steering Committee Kick-Off Meeting (08/22/23)	Attended Planning Partnership Kick-Off Meeting (08/22/23)	Attended Steering Committee Risk Assessment Meeting (02/08/24)	Attended Planning Partnership / Public Risk Assessment Meeting (02/22/24)	Mitigation Strategy Workshop (05/08/24)	Attended Draft Review Meeting (02/15/24)	Attended Public Draft Plan Review Meeting (02/20/24)	Feedback provided	Steering Committee Member	Planning Partnership Member	Primary Point of Contact	Alternate Point of Contact	NFIP Administrator
Daryl Jones	Deputy Supervisor										X			
Ginny Fenton	Water/Sewer Department										X			
Terry Kwiecinski	Assessor										X			
Town of Middlesex														
David C. Adams	Supervisor										X	X		
Dawn M. Kane	Code Enforcement Officer										X		X	X
Alan Williams	Water Superintendent										X			
Joshua Burnett	Highway Superintendent										X			
Lynnette F. Miller	Town Clerk										X			
Town of Milo														
Anthony Validzic	Code Enforcement Officer	X	X	X		X				X	X			X
Leslie Church	Supervisor										X	X		
Patricia Christensen	Town Clerk										X		X	
Eric Wiles	Town Engineer/CPL										X			
Lance Yonge	Highway Superintendent										X			
Kasey Christensen	Sewer and Water Superintendent										X			
Village of Penn Yan														



Name	Title / Position	Attended Steering Committee Kick-Off Meeting (08/22/23)	Attended Planning Partnership Kick-Off Meeting (08/22/23)	Attended Steering Committee Risk Assessment Meeting (02/08/24)	Attended Planning Partnership / Public Risk Assessment Meeting (02/22/24)	Mitigation Strategy Workshop (05/08/24)	Attended Draft Review Meeting (02/15/24)	Attended Public Draft Plan Review Meeting (02/20/24)	Feedback provided	Steering Committee Member	Planning Partnership Member	Primary Point of Contact	Alternate Point of Contact	NFIP Administrator
Melissa Gerhardt	Director of Public Works										X	X		
Brett McMichael	Deputy Director of Public Works				X						X		X	
Jamie Kincaid	Code Enforcement Officer										X			X
Robert Elliott	Village Engineer										X			
Chris Brand	Streets Supervisor					X					X			
Danny Condella	Mayor										X			
Holly Easling	Clerk/Treasurer										X			
Justin Hamm	Lieutenant										X			
Jonathan MacKerchar	Athletic Director at SD										X			
Town of Potter														
Art Parsons	Highway Superintendent	X	X							X	X			
Paul Moberg	Town Councilperson	X	X							X	X		X	
Larry Lewis	Town Supervisor										X	X		
Ed Moberg	Zoning Board										X			
Brian Bootes	Deputy Supervisor										X			
Tim Pagel	Code Enforcement		X			X					X			X
Deborah Adams	Town Clerk										X			



Name	Title / Position	Attended Steering Committee Kick-Off Meeting (08/22/23)	Attended Planning Partnership Kick-Off Meeting (08/22/23)	Attended Steering Committee Risk Assessment Meeting (02/08/24)	Attended Planning Partnership / Public Risk Assessment Meeting (02/22/24)	Mitigation Strategy Workshop (05/08/24)	Attended Draft Review Meeting (02/15/24)	Attended Public Draft Plan Review Meeting (02/20/24)	Feedback provided	Steering Committee Member	Planning Partnership Member	Primary Point of Contact	Alternate Point of Contact	NFIP Administrator
Chris Mumby	Town Councilperson										X			
Village of Rushville														
Art Rilands	Public Works Supervisor										X	X		
Dave LeClair	Mayor										X		X	
Tim Pagel	Code Enforcement		X			X					X			X
Greg Hoteling	Village Engineer										X			
Jim Adams	Fire Chief										X			
Jeannie Kesel	Clerk										X			
Neal Curtis	Temporary Public Works Supervisor				X						X			
Town of Starkey														
Ralph Warren	Highway Superintendent	X	X			X				X	X			
Brian Shriver	Code Enforcement				X						X			X
Geroge E. Lawson	Supervisor		X								X	X		
Candace J. Iszard	Town Clerk										X		X	
Town of Torrey														
Grant Dawns	Town Councilman	X	X	X	X	X				X	X			
Brice Henderson	Town Councilman	X	X							X	X			



Name	Title / Position	Attended Steering Committee Kick-Off Meeting (08/22/23)	Attended Planning Partnership Kick-Off Meeting (08/22/23)	Attended Steering Committee Risk Assessment Meeting (02/08/24)	Attended Planning Partnership / Public Risk Assessment Meeting (02/22/24)	Mitigation Strategy Workshop (05/08/24)	Attended Draft Review Meeting (02/15/24)	Attended Public Draft Plan Review Meeting (02/20/24)	Feedback provided	Steering Committee Member	Planning Partnership Member	Primary Point of Contact	Alternate Point of Contact	NFIP Administrator
Tim Chambers	Highway Superintendent					X					X	X		
Josh Wood	Deputy Highway Superintendent										X		X	
Dwight James	Town Code and Zoning Officer										X			X
Warren Zimmerman	Dresden Fire Chief										X			
Peter Martini	Town Supervisor										X			
Betty Daggett	Town Clerk										X			
Colby Petersen	Deputy Supervisor										X			
Stakeholders														
Kevin Clapp	New York State Department of Homeland Security and Emergency Services - Hazard Mitigation	X	X	X						X	X			
Dyan Maybee	New York State Department of Homeland Security and Emergency Services - R-5 Coordinator	X	X							X	X			
Scott Feuerstein	New York State Department of Homeland Security and Emergency Services - Planning Manager			X						X	X			



Name	Title / Position	Attended Steering Committee Kick-Off Meeting (08/22/23)	Attended Planning Partnership Kick-Off Meeting (08/22/23)	Attended Steering Committee Risk Assessment Meeting (02/08/24)	Attended Planning Partnership / Public Risk Assessment Meeting (02/22/24)	Mitigation Strategy Workshop (05/08/24)	Attended Draft Review Meeting (02/15/24)	Attended Public Draft Plan Review Meeting (02/20/24)	Feedback provided	Steering Committee Member	Planning Partnership Member	Primary Point of Contact	Alternate Point of Contact	NFIP Administrator
Roland Paperman	New York State Department of Homeland Security and Emergency Services - Hazard Mitigation	X	X	X						X	X			
Michael Tarasoff	New York State Department of Homeland Security and Emergency Services - Hazard Mitigation			X										
Timothy Alimossy	New York Department of Transportation, Region 6 – Regional Emergency Manager					X					X			
Albert Cheverie	New York State Department of Health – Preparedness Representative					X					X			
Lori Miller	New York State Electric and Gas - Supervisor	X	X							X	X			
Josh Colton	Finger Lakes Community Health - Manager	X	X							X	X			
Alan Storey	Keuka College - Associate Vice President for Facilities	X	X							X	X			
Amy Cotner	Keuka College - Associate Vice President for Student Life and Dean of Students, Title IX Coordinator	X	X							X	X			



Name	Title / Position	Attended Steering Committee Kick-Off Meeting (08/22/23)	Attended Planning Partnership Kick-Off Meeting (08/22/23)	Attended Steering Committee Risk Assessment Meeting (02/08/24)	Attended Planning Partnership / Public Risk Assessment Meeting (02/22/24)	Mitigation Strategy Workshop (05/08/24)	Attended Draft Review Meeting (02/15/24)	Attended Public Draft Plan Review Meeting (02/20/24)	Feedback provided	Steering Committee Member	Planning Partnership Member	Primary Point of Contact	Alternate Point of Contact	NFIP Administrator
Jim Cunningham	Keuka College - Director of Campus Safety					X				X	X			
Sandi Perl	The Living Well Mission - Executive Director	X	X	X						X	X			
Debra Teickey	Ontario City		X								X			
Linda Phillips	Ontario County Planning Department - Senior Planner		X			X				X	X			
Jonathan MacKerchar	Penn Yan Central Schools - Athletic Director		X								X			
Justin Hamm	Penn Yan Police Department - Lieutenant		X								X			
Sandi Bastedo	Cornell Cooperative Extension Yates County - Executive Director					X					X			
Caroline Boutard-Hunt	Cornell Cooperative Extension Yates County - Agricultural Educator					X					X			

**APPENDIX E: ACTION WORKSHEET
TEMPLATE**

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This appendix includes the instructions and template provided for the development of Mitigation Strategy Action Worksheets. These worksheets are included in each jurisdictional annex of the plan in compliance with NYS DHSES Mitigation Guidance.

GUIDANCE TO COMPLETE THE MITIGATION ACTION WORKSHEET

The following provides additional guidance on how to complete the Mitigation Action Worksheet. Please note that NYS DHSES requires a minimum of TWO proposed mitigation activities.

Action Worksheet

Project Name: Each action must have a unique project number referenced here and in the Action Tables.

Project Number: Each action must have a unique project name referenced here and in the Action Tables.

Assessing the Risk and Vulnerability

Hazard(s) of Concern: Please identify the hazard(s) being addressed with this action. The Hazards of Concern included in the Yates County Hazard Mitigation Plan include:

- Dam Failure
- Disease Outbreak
- Drought
- Extreme Temperature
- Flood
- Harmful Algal Blooms
- Hazardous Materials
- Landslide
- Severe Storm
- Transportation Accident
- Winter Storm
- Utility Failure



Description of the Problem: Provide a detailed narrative of the problem. Describe the natural hazard you wish to mitigate, its impacts to the jurisdiction, past damages, and loss of service, etc. Include the street address of the property/project location (if applicable), adjacent streets, and easily identified landmarks such as water bodies and well-known structures, and end with a brief description of existing conditions (topography, terrain, hydrology) of the site.

Action/Project Intended for Implementation

Description of the Solution: Provide a detailed narrative of the solution. Describe the physical area (project limits) to be affected, both by direct work and by the project's effects; how the action would address the existing conditions previously identified; proposed construction methods, including any excavation and earth-moving activities; where you are in the development process (e.g., are studies and/or drawings complete), etc., the extent of any analyses or studies performed (attach any reports or studies).

Critical Facility: Please indicate whether or not the identified project is related to a critical facility in your community. If a critical facility, indicate whether or not it is located in the 1% annual chance flood area.

Level of Protection: Please identify the level of protection the proposed project will provide. For example, 100-year (1%) flood.

Useful Life: Identify the number of years the project will provide protection against the hazard.

Estimated Cost: Provide an estimated cost for implementation; rough dollar figures are preferred, but if unknown, a specified range is acceptable. Consider all costs associated with implementation. (Low <\$10,000, Medium \$10,000-\$100,000, High >\$100,000).

Estimated Benefits: Identify the benefits that implementation of this project will provide. If dollar amounts are known, include them. If dollar amounts are unknown or are unquantifiable, describe the losses that will be avoided.

Mitigation Action Type:

- Local Plans and Regulations (LPR) – These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project (SIP) - These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.



- Natural Systems Protection (NSP) – These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- Education and Awareness Programs (EAP) – These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities.

Goals Met:

- Goal 1: Reduce the likelihood and impacts of hazards on life, property, and the environment.
- Goal 2: Protect life, property, critical infrastructure and community lifelines, the environment, and the economy from hazard impacts.
- Goal 3: Educate the public, officials, and other stakeholders about the hazards they face and what can be done to mitigate hazard impacts.
- Goal 4: Reduce the risk of natural hazards for socially vulnerable populations.
- Goals 5: Address long-term vulnerabilities from High Hazard Dams.

Plan for Implementation

Prioritization: Please enter High/Medium/Low. Refer to the prioritization exercise and table.

Estimated Time Required for Project Implementation: Provide the estimated time required to complete the project from start to end. (Short-term, Long-term, or On-going/Continuous)

Responsible Organization: Identify the name of a department or agency responsible for implementation, not the jurisdiction.

Desired Timeline for Implementation: Identify the desired start time for this project. For example, within six months.

Potential Funding Source(s): Multiple sources of potential funding should be listed when appropriate.

Local Planning Mechanism to be Used in Implementation (if any): Consider the use of local planning mechanisms that will be used to implement the project.

Evaluation of Potential Actions/Projects

Actions/Projects Considered: Please consider three different options to mitigate the problem identified. One alternative is always to accept the current level or risk (tolerate the



vulnerability/problem) by deciding to take no action at this time. If you choose to take no action, please complete the worksheet up to and including this section and this will be noted in the Plan.

Please include the name of the action considered and a brief reason as to why the action was not selected. The reasoning documents the consideration of these alternatives.

Reporting on Progress (for Plan Maintenance)

Date of Status Report: This section should be completed during yearly plan maintenance/evaluation.

Report of Progress: Describe what progress, if any, has been made on this project. If it has been determined the jurisdiction no longer wishes to pursue implementation, state that here and indicate why.

Update Evaluation of the Problem and/or Solution: Provide an updated description of the problem and solution, and what has happened since initial consideration/development.

Actions which are not complete may be dropped with a rationale provided (e.g., project deemed unfeasible...). Other incomplete actions should clearly be indicated as continuing; indicate percent complete and identify any hurdles/obstacles/reasons for change in schedule. Even actions that have had no progress to date can be identified as continuing. For any action that is not yet complete and will continue, always consider modifying the action to promote implementation.

Please note this report on progress should be done, at minimum, each year prior to the annual Planning Committee update outlined in the plan maintenance procedures in Chapter 21 (Plan Maintenance).

Guidance to Complete the Prioritization Table

Complete this table to help evaluate and prioritize each mitigation action being considered by your municipality. Please use these 14 criteria to assist in evaluating and prioritizing new mitigation actions identified. Specifically, for each new mitigation action, assign a numeric rank (-1, 0, or 1) for each of the 14 evaluation criteria in the provided table, defined as follows:

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

Use the numerical results of this exercise to help prioritize your actions as “Low”, “Medium” or “High” priority. Your municipality may recognize other factors or considerations that affect your overall prioritization; these should be identified in narrative in the Priority field of the worksheet. The 14 evaluation/prioritization criteria are:



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

APPENDIX F: PLAN MAINTENANCE TOOLS

This appendix includes tools and worksheets to facilitate plan maintenance and review by the Yates County Steering Committee and Planning Partnership.

In the first year of the performance period, an online performance progress reporting system, the BAToolSM will provide municipal and county representatives direct access to their mitigation initiatives to easily update the status of each project, document successes or obstacles to implementation, add or delete projects to maintain mitigation project implementation. This online program will capture information and roll all input into a report to summarize mitigation strategy progress.



Figure F-1. BAToolSM Screenshot



The FEMA 386-4 guidance worksheets are also available to assist with progress reporting. These worksheets are provided in this section for ease of access to the HMP Coordinator and Planning Partnership to maintain the 2025 HMP throughout its period of performance.



Plan Goal(s)/Objective(s) Addressed:

Goal: _____

Objective: _____

Indicator of Success (e.g., losses avoided as a result of the acquisition program):

In most cases, you will list losses avoided as the indicator. In cases where it is difficult to quantify the benefits in dollar amounts, you will use other indicators, such as the number of people who now know about mitigation or who are taking mitigation actions to reduce their vulnerability to hazards.

Status (Please check pertinent information and provide explanations for items with an asterisk. For completed or canceled projects, see Worksheet #2 — to complete a project evaluation):

Project Status

Project on schedule

Project completed

Project delayed*

*explain: _____

Project canceled

Project Cost Status

Cost unchanged

Cost overrun*

*explain: _____

Cost underrun*

*explain: _____

Summary of progress on project for this report:

A. What was accomplished during this reporting period?

B. What obstacles, problems, or delays did you encounter, if any?

C. How was each problem resolved?



Next Steps: What is/are the next step(s) to be accomplished over the next reporting period?

Other comments:



Worksheet #2 Evaluate Your Planning Team **step 3**

When gearing up for the plan evaluation, the planning team should reassess its composition and ask the following questions:

	YES	NO
Have there been local staffing changes that would warrant inviting different members to the planning team?		
Comments/Proposed Action:		
Are there organizations that have been invaluable to the planning process or to project implementation that should be represented on the planning team?		
Comments/Proposed Action:		
Are there any representatives of essential organizations who have not fully participated in the planning and implementation of actions? If so, can someone else from this organization commit to the planning team?		
Comments/Proposed Action:		
Are there procedures (e.g., signing of MOAs, commenting on submitted progress reports, distributing meeting minutes, etc.) that can be done more efficiently?		
Comments/Proposed Action:		
Are there ways to gain more diverse and widespread cooperation?		
Comments/Proposed Action:		
Are there different or additional resources (financial, technical, and human) that are now available for mitigation planning?		
Comments/Proposed Action:		

If the planning team determines the answer to any of these questions is "yes," some changes may be necessary.



Worksheet #3 Evaluate Your Project Results

step 3

page 1 of 2

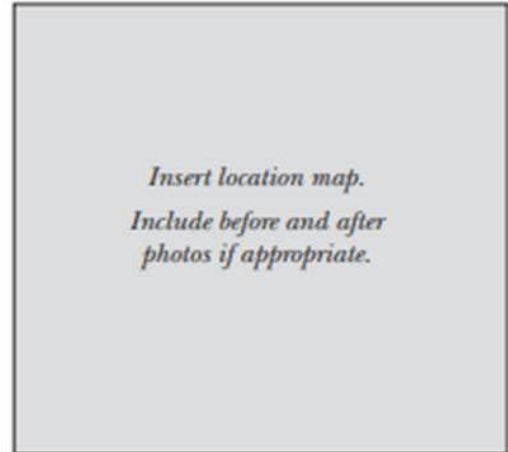
Project Name and Number: _____

Project Budget: _____

Project Description: _____

Associated Goal and Objective(s): _____

Indicator of Success (e.g., losses avoided): _____



Was the action implemented? YES NO



Why not?

Was there political support for the action?

Were enough funds available?

Were workloads equitably or realistically distributed?

Was new information discovered about the risks or community that made implementation difficult or no longer sensible?

Was the estimated time of implementation reasonable?

Were sufficient resources (for example staff and technical assistance) available?

YES NO



What were the results of the implemented action? _____



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	YES	NO
Were the outcomes as expected? If No, please explain:		
Did the results achieve the goal and objective(s)? Explain how:		
Was the action cost-effective? Explain how or how not:		
What were the losses avoided after having completed the project?		
If it was a structural project, how did it change the hazard profile?		
Additional comments or other outcomes:		

Date: _____

Prepared by: _____



Worksheet #4 Revisit Your Risk Assessment **step 4**

Risk Assessment Steps	Questions	YES	NO	COMMENTS
Identify hazards	Are there new hazards that can affect your community?			
Profile hazard events	Are new historical records available?			
	Are additional maps or new hazard studies available?			
	Have chances of future events (along with their magnitude, extent, etc.) changed?			
	Have recent and future development in the community been checked for their effect on hazard areas?			
Inventory assets	Have inventories of existing structures in hazard areas been updated?			
	Is future land development accounted for in the inventories?			
	Are there any new special high-risk populations?			
Estimate losses	Have loss estimates been updated to account for recent changes?			

If you answered "Yes" to any of the above questions, review your data and update your risk assessment information accordingly.



Worksheet #5

Revise the Plan

step 4

page 1 of 4

Prepare to update the plan.

When preparing to update the plan:

Check the box when addressed:

1. Gather information, including project evaluation worksheets, progress reports, studies, related plans, etc.	
Comments:	
2. Reconvene the planning team, making changes to the team composition as necessary (see results from Worksheet #2).	
Comments:	

Consider the results of the evaluation and new strategies for the future.

When examining the community consider:

Check the box when addressed:

1. The results of the planning and outreach efforts.	
Comments:	
2. The results of the mitigation efforts.	
Comments:	



3. Shifts in development trends.	
Comments:	
4. Areas affected by recent disasters.	
Comments:	
5. The recent magnitude, location, and type of the most recent hazard or disaster.	
Comments:	
6. New studies or technologies.	
Comments:	
7. Changes in local, state, or federal laws, policies, plans, priorities, or funding.	
Comments:	



8. Changes in the socioeconomic fabric of the community.	
Comments:	
9. Other changing conditions.	
Comments:	

Incorporate your findings into the plan.

When examining the plan consider:

Check the box when addressed:

1. Revisit the risk assessment. <i>(See Worksheet #4)</i>	
Comments:	
2. Update your goals and strategies.	
Comments:	
3. Recalculate benefit-cost analyses of projects to prioritize action items.	
Comments:	

**APPENDIX G: CRITICAL FACILITY
INVENTORY**



This information is redacted for the public document. A full list of critical facilities identified for the vulnerability analysis is available at the Yates County Office of Emergency Services. Contact the Hazard Mitigation Coordinator, Yates County Office of Emergency Services, to view the list.

DRAFT

**APPENDIX H: RISK ASSESSMENT
SUPPLEMENTARY DATA**



This appendix contains information and details to support information provided in Chapters 6 through 17 (Hazard Profiles).

HISTORY OF HAZARD EVENTS WITHIN THE COUNTY

To supplement the information provided in this plan, events prior to the update of this plan are included below by hazard of concern type. Many sources provided historical information regarding previous occurrences and losses associated with hazards throughout New York and Yates County. It is noted that, with several sources reviewed for the purpose of this HMP, loss and impact information for many events could vary depending on the sources.

For more information on past events and impacts, refer to the 2020 Yates County Hazard Mitigation Plan.

Dam Failure

There are no known records of dam failure events that have impacted Yates County between 1868 and 2018 (ASDSO 2018, Stanford University 2018).

Disease Outbreak

Known disease outbreak events that have impacted The State of New York and Yates County between 1918 and 2018 are identified in Table H-2. Many sources were researched for historical information regarding disease outbreak events in Yates County; therefore, Table H-2 may not include all disease outbreak events that have impacted the County.

Table H-1. Disease Outbreak Events in Yates County Between 1918 and 2018

Date(s) of Event	FEMA Declaration Number	County Designated?	Location Impacted	Losses / Impacts
1918	N/A	N/A	Countywide	The worldwide Spanish influenza outbreak struck Yates County. Schools were closed; civic gatherings and church services canceled. By mid-October, about 250 cases were reported in Penn Yan alone. Dresden and Rushville were especially hard hit. The Spanish influenza outbreak was the catalyst for building the Soldiers and Sailors Hospital.
2009	N/A	N/A	Countywide	Flu-like illness reported in emergency rooms in the Yates County Department of Public Health conducted several vaccination clinics in the County. Schools in the County also vaccinated approximately 1,000 children.



Sources: MacAlpine 2014; Observer-Review.com 2009

Drought

Known drought events that have impacted The State of New York and Yates County between 1999 and 2018 are identified in Table H-3. Many sources were researched for historical information regarding drought events in Yates County; therefore, Table H-3 may not include all drought events that have impacted the County.

Table H-2. Drought Events in Yates County Between 1999 and 2018

Date(s) of Event	FEMA Declaration Number	County Designated?	Location Impacted	Losses / Impacts
August 10, 1999	N/A	N/A	Countywide	The U.S. Department of Agriculture declared all of New Jersey and 34 counties in New York as agricultural disaster areas in August 1999 for what President Clinton described as a "severe drought." The declaration made farmers in these areas eligible for emergency, low-interest loans because of losses due to excessive heat and drought" (USDA "News Release No. 0329.99" August 10, 1999). The declared counties in New York included Yates County.
September 1-30, 1999	N/A	N/A	Countywide	A very dry spring and summer season caused major crop failures and some wells to run dry. Many streams and rivers were also brought to their lowest levels. The most affected crops were corn and hay, which had a significant impact on dairy farmers. Crop damage was estimated at \$2,941,176.
April 1, 2001	N/A	N/A	Countywide	Monthly precipitation totals were well over 2.00 inches below normal at some locations, and it was the driest April on record at both Walton and the NWS office and the Binghamton Regional Airport.
July 1-30, 2016	N/A	N/A	Countywide	A significant lack of rain since May 2016 found many areas in the Finger Lakes and South Tier New York regions with as little as 25 percent of normal rainfall through the end of July. Dryness due to lack of rainfall saw short-term drought conditions deteriorate from Moderate to Severe Drought.
August 1-September 30, 2016	N/A	N/A	Countywide	Rainfall since the late spring was only recording up to 50 to 80 percent of normal. Portions of the area deteriorated from severe to extreme drought. Agricultural interests reported significant stress to non-irrigated crops, and several communities began to place voluntary and mandatory water restrictions on their residents. The USDA designated Yates County and fourteen other New York counties as primary natural disaster areas due to losses caused by drought.



Date(s) of Event	FEMA Declaration Number	County Designated?	Location Impacted	Losses / Impacts
October 1-31, 2016	N/A	N/A	Countywide	A moderate to heavy rain event on Oct 21st helped to ease the drought. Drought classification was improved to Severe Drought.

Sources: USDA 2017; U.S. Drought Monitor 2017

Note (1): Monetary figures within this table were U.S. Dollar (USD) figures calculated during or within the approximate time of the event. If such an event would occur in the present day, monetary losses would be considerably higher in USDs as a result of increased U.S. Inflation Rates.

FEMA Federal Emergency Management Agency

N/A Not applicable

NRCC Northeast Regional Climate Center

NWS National Weather Service

USDA U.S. Department of Agriculture

Extreme Temperature

Known extreme temperature events that have impacted The State of New York and Yates County between 2009 and 2018 are identified in Table H-4. Many sources were researched for historical information regarding extreme temperature events in Yates County; therefore, Table H-4 may not include all extreme temperature events that have impacted the County.

Table H-3. Extreme Temperature Events in Yates County Between 2009 and 2018

Date(s) of Event	FEMA Declaration Number	County Designated?	Location Impacted	Losses / Impacts
January 2009	N/A	N/A	Countywide	The January temperature averaged more than 5°F colder than normal, with 18 of the first 23 days recorded below freezing, breaking the previous 30-year record of 16.4 of 30 days in January. USDA crop losses reported in Yates County for 2009 related to frost and freeze totaled \$47,780.
July 5-8, 2010	N/A	N/A	Countywide	Four days of 90-degree temperatures and higher in the region prompted USDA crop losses reported in Yates County for 2010 related to heat totaled \$94,807, with the greatest losses affecting the sweet corn crop.



Date(s) of Event	FEMA Declaration Number	County Designated?	Location Impacted	Losses / Impacts
March–April, 2012	N/A	N/A	Countywide	<p>After a winter of record high temperatures, many crops in New York blossomed earlier than usual and were destroyed when exposed to early spring freezing temperatures occurring between March 1 and April 30.</p> <p>In March 2012, Yates County was designated a primary county in USDA Disaster (S3250) which resulted from frosts and freezes. USDA crop losses reported in Yates County for 2012 related to freeze and frost totaled \$527,811.</p>
June 2012	N/A	N/A	Countywide	<p>Temperatures averaged above normal in June for the Great Lakes climate division of New York State, where it was the 18th warmest June since 1895. At the same time, the climate division posted below normal rainfall for the fourth out of the five previous months.</p> <p>This event resulted in a USDA Disaster Declaration (S3427), and Yates County was included as a primary county in this declaration. Yates County was considered to be abnormally dry for this time of year. USDA crop losses reported in Yates County for 2012 related to excessive heat totaled \$35,229.</p>
December 2013–March 2014	N/A	N/A	Countywide	<p>The winter of 2013-2014 was one of the coldest in recent history for New York State. Temperatures finished below normal every month for the Rochester climate station, with the average temperature between November and April being 30.3°F, which was 3.4°F below normal. The January through March timeframe finished more than 4 degrees below normal. The Rochester station recorded seven new daily low temperature records: November 13 and 24, December 17, January 3 (low max and low min records), January 7, and March 6.</p> <p>The long winter of sub-zero temperatures led to deep winter freezes, severely damaging farms, orchards, and vineyards across upstate New York. A survey of damaged farms by Cornell University reported primary bud damage as high as 85 percent in the Finger Lakes region and 97 percent in Lake Erie region.</p> <p>This event resulted in a USDA Disaster Declaration (S3666), and Yates County was included as a primary county in this declaration. USDA reported 2014 indemnity losses in Yates County of more than \$102,259 to its grape crop caused by frosts and freezes. Another \$16,886 was paid to grape crops as a result of the freeze in 2013, which may have been a result of the 2013–2014 winter season.</p>

Sources: NOAA-NCEI 2017; USDA 2017



Note (1): Monetary figures within this table were U.S. Dollar (USD) figures calculated during or within the approximate time of the event. If such an event would occur in the present day, monetary losses would be considerably higher in USDs as a result of increased U.S. Inflation Rates.

- N/A Not Applicable
- FEMA Federal Emergency Management Agency
- NOAA-NCEI National Oceanic Atmospheric Administration – National Centers for Environmental Information
- NYS New York State
- NYSDEC New York State Department of Conservation
- NWS National Weather Service
- USDA United States Department of Agriculture

Flood

Known flood events that have impacted The State of New York and Yates County between 1972 and 2018 are identified in Table H-5. Many sources were researched for historical information regarding flood events in Yates County; therefore, Table H-5 may not include all flood events that have impacted the County.

Table H-4. Flood Events in Yates County Between 1972 and 2018

Date(s) of Event	FEMA Declaration Number	County Designated?	Location Impacted	Losses / Impacts
June 23-26, 1972	DR-338	Yes	Countywide	Tropical Storm Agnes.
October 2, 1975	DR-487	Yes	Countywide	Severe Storms, Heavy Rain, Landslides, Flooding.
September 1984	DR-725	Yes	Countywide	Severe Storms and Flooding.
November 12, 1995	N/A	N/A	Countywide	\$5,000 in property damages.
January 19, 1996	DR-1095	Yes	Countywide	Severe Storms and Flooding resulted in \$7.9 million in property damages.
April 30, 1996	N/A	N/A	Jerusalem (T), Penn Yan (V)	Flash flooding of many creeks and small streams throughout the County. The hardest-hit areas were in the Town of Jerusalem where County Route 29 was flooded between Route 54A and Belknap Road, and also in the Village of Penn Yan where several roads were closed due to flooding. \$10,000 in property damages were reported.



Date(s) of Event	FEMA Declaration Number	County Designated?	Location Impacted	Losses / Impacts
July 31, 2000	DR-1335	Yes	Penn Yan (V)	Thunderstorm rain resulted in numerous reports of flooding across Yates County. Culver Hill Road was washed out and Pre-Emption Road was flooded. Soldiers and Sailors Hospital in the Village of Penn Yan reported flooding in the main hallway. Crop losses were also caused by the magnitude of the flooding.
September 23, 2000	N/A	N/A	Jerusalem (T)	4 to 5 inches of rain caused washed out roads and flooded basements mostly in the Town of Jerusalem, which includes Bluff Point, Branchport, Keuka Park, and Keuka Lake State Park.
August 5, 2003	DR-1486	Yes	Dundee (V), Barrington (T), Starkey (T)	Very heavy rainfall from slow-moving thunderstorms caused flash flooding of small streams leading to numerous road closures in southeast Yates County. Rainfall amounts were on the order of 3 to 4 inches in a 3-hour period. Several roads were undermined and damaged by the flood waters. At one point, most roads in the Village of Dundee, and the Towns of Barrington and Starkey were either closed or impassable. \$100,000 in property damages were reported.
May 20, 2004	DR-1534	Yes	Countywide	Heavy rain caused extensive flooding on roads; water, mudslides, and debris on roads; and numerous road closures. \$30,000 in property damages were reported.
April 2, 2005	N/A	N/A	Jerusalem (T), Italy (T), Penn Yan (V), Dundee (V)	Some road closures. The areas affected the most were the Town of Jerusalem, Town of Italy, Village of Penn Yan, and Village of Dundee. Several streams and creeks came out of their banks. \$100,000 in property damages were reported.
July 21, 2009	N/A	N/A	Italy (T)	A culvert flooded, causing two different driveways to be washed out and covered with rock debris. This occurred at the intersection of the driveway and Sliter Hill Road at the Vagabond Inn. \$3,000 in property damages.
April 27, 2011	DR-1993	Yes	Barrington (T), Benton (T), Italy (T), Jerusalem (T), Middlesex (T), Penn Yan (V)	A total of seven towns and one village reported significant roadway damages. In most cases, the damages were related to either shoulder washouts or significant debris buildup on roadways. In one case, the road was fully washed out. Several other roads had deep, newly formed pot holes and voids. In addition to roadway damage, several cases of mass wasting and sediment transport were reported. In the Town of Middlesex, one home had soil and debris build-up as high as the door knob level. Another area along South Lake Road had the downward movement of an entire portion of a hillside with localized water damages to several homes. A voluntary evacuation was in place for the area along South Lake Road. Some of the harder-hit areas included Barrington, Benton, Italy, Jerusalem, Middlesex, and Penn Yan. \$800,000 in property damages.



Date(s) of Event	FEMA Declaration Number	County Designated?	Location Impacted	Losses / Impacts
May 13-22, 2014	DR-4180	Yes	Penn Yan (V)	Radar rainfall estimates indicated that a narrow band of 4 to 5 inches of rain occurred over the central portion of Yates and Seneca Counties. This rainfall resulted in devastating flash flooding in Penn Yan where roads and buildings were destroyed by flood waters. Jacobs Brook became a raging torrent of water as it traveled into and under the center of the Village. The hardest-hit areas were in the vicinity of Elm Street and Champlin Avenue where roads buckled, parking lots caved in, and the Owl's Nest Community Center collapsed. Tractor-trailer container boxes were seen floating down the streets where they collided into the Wagner Restaurant causing significant structural damage. Foundations of several homes were washed away during the flood. Total public damages were estimated between \$10-12 million. One motorist was trapped in their vehicle and required rescue.
May 16, 2014	N/A	N/A	Rushville (V), Penn Yan (V), Middlesex (T), Jerusalem (T)	A slow-moving, steady area of heavy rainfall brought 1 to 3 inches of rain to the region causing areas of flash flooding. Water was reported to be rushing into a house in the Village of Rushville. Water was running rapidly over several streets in Penn Yan. Sandbagging operations were undertaken by the local fire department. \$150,000 in property damages were reported in the Villages of Penn Yan and Rushville, and the Towns of Middlesex, and Jerusalem (Branchport).
July 28, 2014	N/A	N/A	Rushville (V)	Flooding occurred across several State highways with considerable damage to the road shoulders and culverts. Numerous basements were pumped out in the Village of Rushville. \$100,000 in property damages were reported.
August 3, 2014	N/A	N/A	Penn Yan (V), Jerusalem (T)	Numerous road washouts were reported in the Town of Jerusalem, Branchport (Jerusalem) and Village of Penn Yan. \$275,000 in property damages were reported.
June 14, 2015	N/A	N/A	Countywide	A tropical-like air mass was in place allowing for 2-4 inches of very heavy rain to fall in a narrow band extending from near Watkins Glen to areas north of Binghamton. Severe flash flooding was encountered, and numerous roads and culverts destroyed by raging water. In some areas, homes, schools and other businesses were flooded. Cumulative damage estimates across the affected areas were about \$10 million. \$650,000 in damages were reported in Yates County.
July 18, 2015	N/A	N/A	Jerusalem (T)	Heavy rain and flooding caused the closure of County Route 245 from the County line to Flint Hill Road. There were numerous reports of road flooding and closures in the Town of Jerusalem. \$75,000 in property damages were reported.



Date(s) of Event	FEMA Declaration Number	County Designated?	Location Impacted	Losses / Impacts
April 20, 2017	N/A	N/A	Countywide	An area of moderate to heavy rain with embedded thunderstorms moved through Central New York causing areas of common urban flooding and ponding of water in a few locations. \$3,000 in property damages were reported.
July 13, 2017	N/A	N/A	Countywide	Flash flooding had caused debris to collect on several roads in the area. \$8,000 in property damages.

Sources: FEMA 2017, NYS DHSES 2014, NCEI 2017, NWS 2010

Note (1): Monetary figures within this table were U.S. Dollar (USD) figures calculated during or within the approximate time of the event. If such an event would occur in the present day, monetary losses would be considerably higher in USDs as a result of increased U.S. Inflation Rates.

- DHSES Division of Homeland Security and Emergency Services
- DPW Department of Public Works
- DR Federal Disaster Declaration
- FEMA Federal Emergency Management Agency
- HMGF Hazard Mitigation Grant Program
- mph Miles per hour
- N/A Not applicable
- NYS New York State

Harmful Algal Blooms

Known harmful algal bloom events that have impacted The State of New York and Yates County between 2015 and 2018 are identified in Table H-6. Many sources were researched for historical information regarding harmful algal bloom events in Yates County; therefore, Table H-6 may not include all harmful algal bloom events that have impacted the County.

Table H-5. Harmful Algal Bloom Events in Yates County Between 2015 and 2018

Date(s) of Event	FEMA Declaration Number	County Designated?	Location Impacted	Losses / Impacts
August 21-October 21, 2015	N/A	N/A	Benton (T), Torrey (T), Milo (T), Starkey (T), Dresden (V)	Water sampling results from Seneca Lake confirmed the presence of a cyanobacteria HAB, which may produce toxins or other harmful compounds.
September 4-18, 2015	N/A	N/A	Middlesex (T), Italy (T)	Water sampling results from Canandaigua Lake confirmed that toxins were present in quantities to potentially cause health effects if people or animals came in contact with the water.



Date(s) of Event	FEMA Declaration Number	County Designated?	Location Impacted	Losses / Impacts
September 2-23, 2016	N/A	N/A	Benton (T), Torrey (T), Milo (T), Starkey (T), Dresden (V)	Water sampling results from Seneca Lake confirmed that toxins were present in quantities to potentially cause health effects if people or animals came in contact with the water.
September 9-23, 2016	N/A	N/A	Middlesex (T), Italy (T)	Water sampling results from Canandaigua Lake confirmed the presence of a cyanobacteria HAB, which may produce toxins or other harmful compounds.
August 4-October 13, 2017	N/A	N/A	Jerusalem (T), Milo (T), Penn Yan (V), Barrington (T)	Water sampling results from Keuka Lake confirmed that toxins were present in quantities to potentially cause health effects if people or animals came in contact with the water.
September 15-October 6, 2017	N/A	N/A	Middlesex (T), Italy (T)	Water sampling results from Canandaigua Lake confirmed that toxins were present in quantities to potentially cause health effects if people or animals came in contact with the water.
September 22-October 20, 2017	N/A	N/A	Benton (T), Torrey (T), Milo (T), Starkey (T), Dresden (V)	Water sampling results from Seneca Lake confirmed that toxins were present in quantities to potentially cause health effects if people or animals came in contact with the water.

Sources: NYSDEC 2017

HAB Harmful Algal Bloom

N/A Not Applicable

Hazardous Materials

Known hazardous material events that have impacted The State of New York and Yates County between 2000 and 2018 are identified below. Many sources were researched for historical information regarding hazardous material events in Yates County; therefore, the summary below may not include all hazardous material events that have impacted the County.

The U.S. Department of Transportation (USDOT) Pipeline and HazMat Safety Administration (PHMSA) provides an incident report database with information on incidents throughout the United States. The data are from HazMat incident reports. According to this database, between 2000 and April 2018, seven incidents occurred in Yates County (all highway), releasing over 3,200 gallons of fuel oil, gasoline, or diesel fuel; and 210 gallons of propane (PHMSA 2018). These incidents were typically small, localized events.



The NYSDEC Spill Incidents Database lists 368 spill incidents throughout the County from January 1, 2000, through April 19, 2018 (NYSDEC 2018). US EPA maintains records of amounts of chemicals released at facilities each year through its Toxic Release Inventory (TRI) Program. In 2016, two TRI facilities in Yates County collectively contributed to 32,600 pounds of on- and off-site disposals or other releases (US EPA 2018). Yates County’s map of industrial/business sites that file Tier II Reports in compliance with SARA Title III is not included for security purposes.

Landslide

Known landslide events that have impacted The State of New York and Yates County between 1975 and 2018 are identified in Table H-7. Many sources were researched for historical information regarding landslide events in Yates County; therefore, Table H-7 may not include all landslide events that have impacted the County.

Table H-6. Landslide Events in Yates County Between 1975 and 2018

Date(s) of Event	FEMA Declaration Number	County Designated?	Location Impacted	Losses / Impacts
October 2, 1975	DR-487	Yes	Countywide	Severe Storms, Heavy Rain, Landslides, Flooding

Sources: NCEI 2017

Severe Storm

Known severe storm events that have impacted The State of New York and Yates County between 1954 and 2018 are identified in Table H-9. Many sources were researched for historical information regarding severe storm events in Yates County; therefore, Table H-9 may not include all severe storm events that have impacted the County.

Table H-7. Severe Storm Events in Yates County Between 1954 and 2018

Date(s) of Event	FEMA Declaration Number	County Designated?	Location Impacted	Losses / Impacts
July 14, 1954	N/A	N/A	Countywide	\$2.5 million in property damages
June 27, 1978	N/A	N/A	Countywide	\$2.5 million in property damages



Date(s) of Event	FEMA Declaration Number	County Designated?	Location Impacted	Losses / Impacts
June 13, 1994	N/A	N/A	Countywide	\$50,000 in property damages
January 27, 1996	N/A	N/A	Countywide	There were many reports of downed trees and wires, as winds gusted over 60 mph. \$12,000 in property damages were reported.
May 10, 1996	N/A	N/A	Countywide	Severe thunderstorms downed trees and wires throughout Yates County. \$10,000 in property damages were reported.
June 22, 1996	N/A	N/A	Middlesex (T)	Vine Valley in the town of Middlesex in Yates County shortly after noon. There was considerable damage in this community. Several mobile homes were damaged due to fallen trees or flying debris. An outer wall of a community center, constructed of cinder block, was also blown out. The tornado was rated as F1, with a damage path of one and a half miles long, and 50 yards wide. \$75,000 in property damages were reported.
May 31, 1998	N/A	N/A	Countywide	Hail as large as 3 to 4 inches in diameter accompanied some of the tornadic supercells across New York's southern tier; smashing windows, severely denting cars, and causing crop losses. New York State Electric and Gas Company estimated that hundreds of thousands of customers were without power during the height of the storms late that afternoon and evening. Some of the more remote locations did not have power restored for the better part of a week. Trees were blown down on top of cars and trailers in Vine Valley and Middlesex. \$150,000 in property damages were reported.
May 31, 1998	N/A	N/A	Countywide	A severe thunderstorm moved across Yates County during the early afternoon. Trees and wires were reported down in Penn Yan. Hail as large as 3 to 4 inches in diameter accompanied some of the tornadic supercells across New York's southern tier; smashing windows, severely denting cars, and causing crop losses. New York State Electric and Gas Company estimated that hundreds of thousands of customers were without power during the height of the storms late that afternoon and evening. Some of the more remote locations did not have power restored for the better part of a week. \$15,000 in property damages were reported in the County.



Date(s) of Event	FEMA Declaration Number	County Designated?	Location Impacted	Losses / Impacts
June 2, 1998	N/A	N/A	Countywide	Damage was fairly widespread from a combination of intense squall line and bow echo complexes as well as isolated supercells. One such supercell cut a lengthy path of wind damage over the Finger Lakes region early in the evening from western Yates County all the way through southern Cayuga County. Hail as large as golf balls was also observed with these storms. Trees were uprooted and a few utility poles were toppled in and near Penn Yan. \$10,000 in property damages were reported.
November 10, 1998	N/A	N/A	Countywide	Sustained wind speeds of 25 to 35 mph were common, but gusts exceeded 50 mph at times over the higher terrain. These gusts caused trees, large branches, and utility poles to come down on a widely scattered basis. Most of the damage occurred on hilltop areas. \$10,000 in property damages were reported.
July 9, 1999	N/A	N/A	Countywide	Numerous trees and powerlines downed. One tree fell on a house. \$20,000 in property damages were reported.
November 2, 1999	N/A	N/A	Countywide	New York State Electric and Gas officials reported losing three major transmission lines, which knocked out power for approximately 10,000 to 15,000 central New York customers. \$33,000 in property damages were reported.
December 12, 2000	N/A	N/A	Countywide	Numerous power lines and trees were brought down. Power outages were widespread. Other damage included roofs collapsed and blown off, signs were blown over, a mobile home was moved off its pad, a mobile home was flipped onto its side while being moved, a barn collapsed, a silo was damaged, and trees falling onto houses, cars, and wires. \$50,000 in property damages were reported.
September 19, 2003	N/A	N/A	Countywide	Scattered reports of trees and wires down were common. Tens of thousands of electric customers were without power. A few trees and wires fell on cars and houses, and closed roads. \$50,000 in property damages were reported.
September 22, 2003	N/A	N/A	Penn Yan (V)	Thunderstorm winds blew over a popup camper and several trees in the Village of Penn Yan. The camper was turned upside down. \$30,000 in property damages were reported.
October 15, 2003	N/A	N/A	Countywide	Numerous trees and power lines were down area wide. A few trees fell on houses and cars. Tens of thousands of electric customers were without power. \$50,000 in property damages were reported.
November 13, 2003	N/A	N/A	Countywide	Most counties had scattered trees and wires down. Tens of thousands of electric customers lost power due to wires and utility poles coming down. Wind pushed over a tractor trailer in Benton. \$20,000 in damages were reported.



Date(s) of Event	FEMA Declaration Number	County Designated?	Location Impacted	Losses / Impacts
June 6, 2005	N/A	N/A	Starkey (T), Barrington (T)	Thunderstorm winds downed numerous trees and wires in the towns of Barrington and Starkey. \$20,000 in property damages were reported.
June 13, 2005	N/A	N/A	Countywide	Thunderstorm winds downed numerous trees, wires, and utility poles. One tree fell on a house injuring a person inside. \$50,000 in property damages were reported.
October 29, 2006	N/A	N/A	Countywide	Wind gusts were measured between 45 and 55 mph during the event. Numerous trees and wires fell across the area. The storm caused \$10,000 in property damages.
February 18, 2011	N/A	N/A	Countywide	High winds occurred across the region with gusts between 50 and 60 mph. Numerous trees were blown down and many customers were without power. \$30,000 in property damages were reported.
June 28, 2011	N/A	N/A	Countywide	Showers and thunderstorms developed ahead of and along a cold front that pushed through the region in the afternoon. Some of the thunderstorms produced damaging wind gusts and large hail. On Keuka Lake, 12-14-foot boats were moved about 100 feet, 20 boats were tipped over and a large tree was blown down. \$20,000 in damages were reported.
February 24, 2012	N/A	N/A	Penn Yan (V)	High winds, in addition to causing a measured 55 mph gust in Penn Yan, resulted in trees down in the area. One tree fell down on a house. \$15,000 in property damages were reported.
June 17, 2014	N/A	N/A	Milo (T), Jerusalem (T)	Trees and lines were blown down in town and also the towns of Jerusalem and Milo. \$15,000 in property damages were reported.
July 3, 2014	N/A	N/A	Countywide	Thunderstorm winds uprooted a swath of trees, causing \$10,000 in property damages.
July 8, 2014	N/A	N/A	Countywide	Severe thunderstorms resulted in widespread wind damage along with several tornadoes. A tree was blown onto a car, causing \$10,000 in property damages.

Sources: NCEI 2017; FEMA 2017

Note: Monetary figures within this table were U.S. Dollar (USD) figures calculated during or within the approximate time of the event. If such an event would occur in the present day, monetary losses would be considerably higher in USDs as a result of increased U.S. Inflation Rates.

- ASOS Automated Surface Observing System
- E East
- EG Estimated Gusts
- FAA Federal Aviation Administration
- KT/KTS Knot(s)
- mph miles per hour



N/A Not Applicable
 S South
 SE Southeast
 W West

Transportation Accident

Known transportation accident events that have impacted The State of New York and Yates County between 1996 and 2018 are identified in Table H-10. Many sources were researched for historical information regarding transportation accident events in Yates County; therefore, Table H-10 may not include all transportation accident events that have impacted the County.

Table H-8. Transportation Accident Events in Yates County Between 1996 and 2018

Date(s) of Event	FEMA Declaration Number	County Designated?	Location Impacted	Losses / Impacts
1996	N/A	N/A	Countywide	There were a reported five fatalities, 115 personal injuries, 365 occurrences of property damage associated with vehicle accidents in Yates County.
1997	N/A	N/A	Countywide	There were a reported four fatalities, 122 personal injuries, 366 occurrences of property damage associated with vehicle accidents in Yates County. There was also one railroad incident.
1998	N/A	N/A	Countywide	There were a reported two fatalities, 99 personal injuries, 329 occurrences of property damage associated with vehicle accidents in Yates County.
1999	N/A	N/A	Countywide	There were a reported ten fatalities, 111 personal injuries, 392 occurrences of property damage associated with vehicle accidents in Yates County. There were also two railroad incidents.
2000	N/A	N/A	Countywide	There were a reported five fatalities, 55 personal injuries, 336 occurrences of property damage associated with vehicle accidents in Yates County.
2001	N/A	N/A	Countywide	There were a reported three fatalities, 165 personal injuries, 398 occurrences of property damage associated with vehicle accidents in Yates County.
2002	N/A	N/A	Countywide	There were a reported three fatalities, 123 personal injuries, 249 occurrences of property damage associated with vehicle accidents in Yates County.
2003	N/A	N/A	Countywide	There were a reported three fatalities, 96 personal injuries, 236 occurrences of property damage associated with vehicle accidents in Yates County.



Date(s) of Event	FEMA Declaration Number	County Designated?	Location Impacted	Losses / Impacts
2004	N/A	N/A	Countywide	There were a reported three fatalities, 96 personal injuries, 219 occurrences of property damage associated with vehicle accidents in Yates County.
2005	N/A	N/A	Countywide	There were a reported one fatalities, 86 personal injuries, 215 occurrences of property damage associated with vehicle accidents in Yates County. There were also two aircraft accidents.
2006	N/A	N/A	Countywide	There were a reported two fatalities, 90 personal injuries, 197 occurrences of property damage associated with vehicle accidents in Yates County.
2007	N/A	N/A	Countywide	There were a reported four fatalities, 89 personal injuries, 215 occurrences of property damage associated with vehicle accidents in Yates County. There was also one railroad incident.
2008	N/A	N/A	Countywide	There were a reported two fatalities, 83 personal injuries, 255 occurrences of property damage associated with vehicle accidents in Yates County. There was also one railroad incident.
2009	N/A	N/A	Countywide	There were a reported 481 vehicle accidents resulting in one fatality, 118 personal injuries, and 362 occurrences of property damage.
2010	N/A	N/A	Countywide	There were a reported 518 vehicle accidents resulting in three fatalities, 104 personal injuries, and 411 occurrences of property damage. There was also one aircraft accident.
2011	N/A	N/A	Countywide	There were a reported 465 vehicle accidents resulting in one fatality, 116 personal injuries, and 348 occurrences of property damage.
2012	N/A	N/A	Countywide	There were a reported 516 vehicle accidents resulting in six fatalities, 121 personal injuries, and 389 occurrences of property damage.
2013	N/A	N/A	Countywide	There were a reported 557 vehicle accidents resulting in two fatalities, 114 personal injuries, and 441 occurrences of property damage.
2014	N/A	N/A	Countywide	There were a reported 556 vehicle accidents resulting in four fatalities, 112 personal injuries, and 440 occurrences of property damage. There was also one railroad incident.
2015	N/A	N/A	Countywide	There were a reported 516 vehicle accidents resulting in one fatality, 87 personal injuries, and 428 occurrences of property damage. There was also one aircraft accident.
2016	N/A	N/A	Countywide	There were a reported 557 vehicle accidents resulting in one fatality, 100 personal injuries, and 456 occurrences of property damage.

Sources: NYS DMV 2017



Note:

N/A Not Applicable

Utility Failure

Known utility failure events that have impacted The State of New York and Yates County between 1996 and 2018 are identified in Table H-11. Many sources were researched for historical information regarding utility failure events in Yates County; therefore, Table H-11 may not include all utility failure events that have impacted the County.

Table H-9. Utility Failure Events in Yates County Between 1996 and 2018

Date(s) of Event	FEMA Declaration Number	County Designated?	Location Impacted	Losses / Impacts
January 27, 1996	N/A	N/A	Countywide	There were many reports of downed trees and wires, as winds gusted over 60 mph.
May 10, 1996	N/A	N/A	Countywide	Severe thunderstorms downed trees and wires throughout Yates County.
May 31, 1998	N/A	N/A	Countywide	A severe thunderstorm moved across the County during the early afternoon. NYSEG estimated that hundreds of thousands of customers were without power during the height of the storm late that afternoon and evening. At some more remote locations, restoration of power did not occur for the better part of a week. In Yates County, trees and wires were reported down in Penn Yan.
June 2, 1998	DR-1222	No	Penn Yan (V)	Trees were uprooted and a few utility poles were toppled in and near Penn Yan.
November 10, 1998	N/A	N/A	Countywide	Sustained wind speeds of 25 to 35 mph were common, but gusts exceeded 50 mph at times over the higher terrain. These gusts downed trees, large branches, and utility poles in widely scattered areas.
July 9, 1999	N/A	N/A	Countywide	Numerous trees and powerlines downed.
November 2, 1999	N/A	N/A	Countywide	NYSEG officials reported losing three major transmission lines, which knocked out power for approximately 10,000 to 15,000 central New York customers.
December 12, 2000	N/A	N/A	Countywide	Numerous power lines and trees were brought down. Power outages were widespread.



Date(s) of Event	FEMA Declaration Number	County Designated?	Location Impacted	Losses / Impacts
January 3, 2003	EM-3173	No	Countywide	Weight of snow combined with weight of ice from the New Year's Day storm caused power outages. At least 20,000 customers were without power at some time.
August 14, 2003	EM-3186	Yes	Countywide	A widespread power outage affected the entire northeast United States, including New York State and Yates County. Millions of people lost power during the event.
September 19, 2003	N/A	N/A	Countywide	Scattered reports of trees and wires down were common. Tens of thousands of electric customers were without power.
October 15, 2003	N/A	N/A	Countywide	Numerous trees and power lines were down area-wide. Tens of thousands of electric customers were without power.
November 13, 2003	N/A	N/A	Countywide	Most counties, including Yates County, had scattered trees and wires down. Tens of thousands of electric customers lost power due to wires and utility poles coming down.
June 6, 2005	N/A	N/A	Starkey (T), Barrington (T)	Thunderstorm winds downed numerous trees and wires in the Towns of Barrington and Starkey.
June 13, 2005	N/A	N/A	Countywide	Thunderstorm winds downed numerous trees, wires, and utility poles.
February 18, 2011	N/A	N/A	Countywide	High winds occurred across the region with gusts between 50 and 60 mph. Numerous trees were blown down and many customers were without power.
January 3, 2017	N/A	N/A	Countywide	911 communications systems failed and led to an outage; local fire departments were staffed during the outage.
August 8, 2017	N/A	N/A	Countywide	911 communications systems failed and led to an outage; local fire departments were staffed during the outage.

Sources: NOAA-NCEI 2017

Note:

- DR Major Disaster Declaration (FEMA)
- EM Emergency Declaration (FEMA)
- FEMA Federal Emergency Management Agency
- mph Miles per hour
- NCEI National Centers for Environmental Information
- NOAA National Oceanic and Atmospheric Administration
- NYSEG New York State Gas and Electric Corporation
- N/A Not Applicable



Winter Storm

Known winter storm events that have impacted The State of New York and Yates County between 1990 and 2018, which caused at least \$1,000 in property damages, are identified in Table H-12. Many sources were researched for historical information regarding winter storm events in Yates County; therefore, Table H-12 may not include all winter storm events that have impacted the County.

Table H-10. Winter Storm Events in Yates County Between 1990 and 2018

Date(s) of Event	FEMA Declaration Number	County Designated?	Location Impacted	Losses / Impacts
March 3-4, 1990	DR-898	Yes	Countywide	Severe winter storm
March 13-17, 1993	EM-3107	Yes	Countywide	Severe blizzard
January 2, 1996	N/A	N/A	Countywide	Amounts of 8 to 12 inches were widely observed, but as much as 16 inches fell across the Finger Lakes, in a band from Baldwinsville to Auburn and Dryden. \$3,000 in property damages was reported.
January 3, 2003	EM-3173	No	Countywide	Snowfall amounts were 8 to 14 inches in the central southern tier, Finger Lakes region, and northern Oneida County and 10 to 20 inches elsewhere. The weight of the snow combined with the weight of ice from the New Year's Day storm caused additional power outages. At least 20,000 customers were without power at some time. The storm caused \$300,000 in property damages across the state.
February 17, 2003	EM-3184	No	Countywide	\$25,000 in property damages was reported.
April 4, 2003	DR-1467	Yes	Countywide	During the evening of April 4th colder air spread further south into the Finger Lakes and northern Susquehanna Region. This changed moderate rain to freezing rain in these areas especially at the higher elevations. Nearby Schuyler County Emergency Manager reported an inch of ice across most of the County. Tens of thousands of electricity customers in central NYS were without power, some for up to a week. \$2 million in property damages was reported.
December 14, 2003	N/A	N/A	Countywide	Across south central New York, sleet and freezing rain mixed in with snow. The snow caused numerous automobile accidents and closed schools. \$30,000 in property damages was reported.



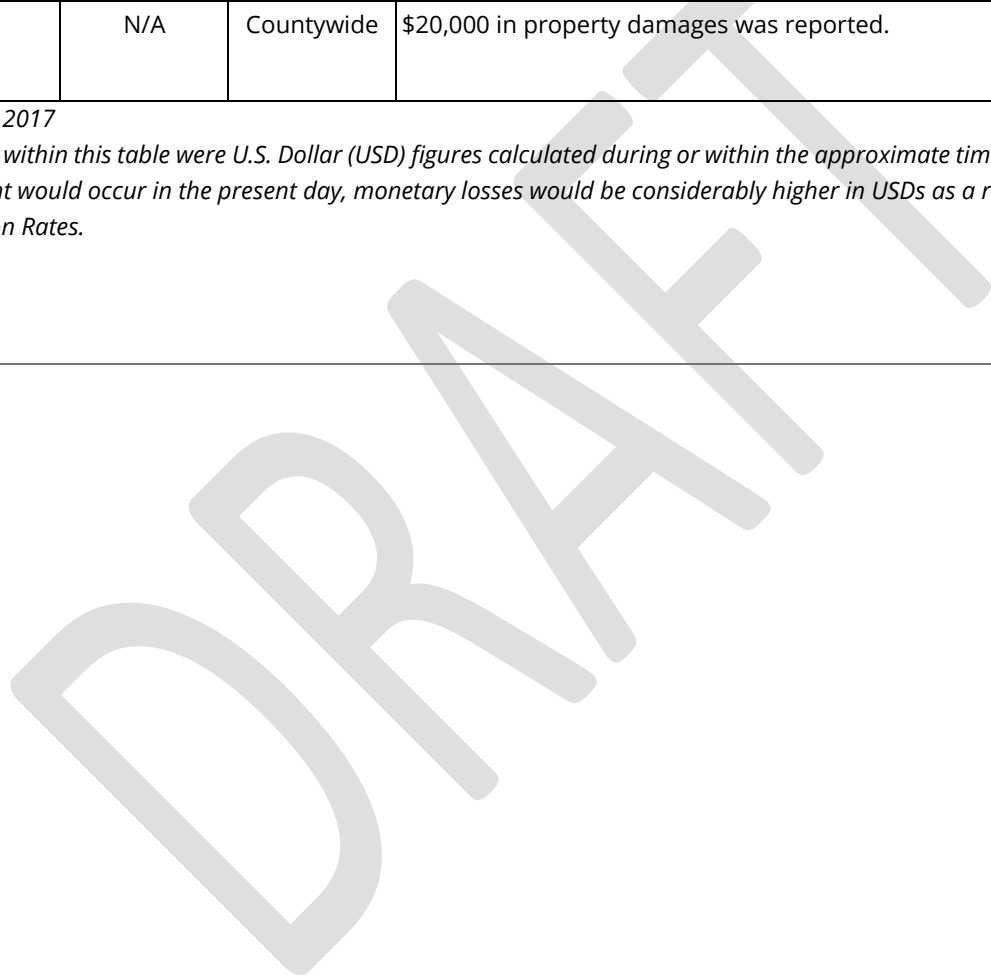
Date(s) of Event	FEMA Declaration Number	County Designated?	Location Impacted	Losses / Impacts
February 3, 2004	N/A	N/A	Countywide	Numerous accidents occurred in the afternoon and evening when people tried to return home from work. \$10,000 in property damages was reported.
March 16, 2004	N/A	N/A	Countywide	\$20,000 in property damages was reported.
January 22, 2005	N/A	N/A	Countywide	\$20,000 in property damages was reported.
March 1, 2005	N/A	N/A	Countywide	\$20,000 in property damages was reported.

Sources: NCEI 2017; FEMA 2017

Note: Monetary figures within this table were U.S. Dollar (USD) figures calculated during or within the approximate time of the event. If such an event would occur in the present day, monetary losses would be considerably higher in USDs as a result of increased U.S. Inflation Rates.

N/A Not Applicable

NYS New York State



**APPENDIX I: MITIGATION STRATEGY
SUPPLEMENTARY DATA**



This appendix summarizes additional activities and resources provided to plan participants to support the update of the mitigation strategy.

2020 GOALS AND OBJECTIVES REVIEW

The goals and associated objectives for Yates County and municipalities included in the plan were developed based in part on a review of the hazard mitigation goals and objectives established in the 2023 NYS HMP, the 2020 Yates County HMP, as well as the current or expired municipal hazard mitigation plans within the county. Further, these goals were selected to be compatible with the needs and goals expressed in other available County and local community planning documents. Achievement of these goals helps to define the effectiveness of a mitigation strategy.

Table I-1 and Table I-2 summarize the goals and objectives for the 2025 HMP update, respectively. Changes to the 2020 Yates County HMP goals and objectives are indicated by italicized font.

Table I-1. 2025 Goals

Goal Number	2025 Goals
1	Goal 1: Reduce the likelihood and impacts of hazards on life, property, and the environment.
2	Goal 2: Protect life, property, critical infrastructure <i>and community lifelines</i> , the environment, and the economy from hazard impacts.
3	Goal 3: Educate the public, officials, and other stakeholders about the hazards they face and what can be done to mitigate hazard impacts.
4	<i>Goal 4: Reduce the risk of natural hazards for socially vulnerable populations.</i>
5	<i>Goals 5: Address long-term vulnerabilities from High Hazard Dams.</i>

Table I-2. 2025 Objectives

Objective Number	2025 Objectives
1	Develop and/or update local regulations based on current information and best practices.
2	Maintain natural systems to reduce the impacts of hazards.
3	Acquire, retrofit, or relocate structures from flood-prone areas.
4	Retrofit critical infrastructure to protect against hazard impacts.
5	Enhance stormwater management infrastructure.
6	Ensure that critical facilities can continue to function during and after hazard impacts.
7	Encourage residents and business owners to insure their property against hazard impacts, including through flood insurance through the national Flood Insurance Program (NFIP).



Objective Number	2025 Objectives
8	Work with legislators to develop and enact legislation that reduces long-term vulnerability to hazards.
9	Ensure that local officials attend current training on regulatory issues and best practices.
10	Provide information to individuals throughout the county on the hazards they face and what property protection measures they can take.
11	<i>Encourage the establishment of policies to help ensure the prioritization and implementation of mitigation actions and/or projects designed to benefit socially vulnerable populations and underserved communities.</i>
12	<i>Ensure dam infrastructure is maintained.</i>
13	<i>Support the identification and access to funding to repair/rehabilitate/replace dams.</i>
14	<i>Ensure Emergency Action Plans are developed and updated.</i>

MITIGATION STRATEGY WORKSHOP RESOURCES

On May 30, 2024, a Mitigation Strategy Workshop was held for all plan participants. The workshop was held in-person and was led by the contract consultant. Following the meeting, participating jurisdictions had the opportunity to work in-person with the contracting consultant. Furthermore, this meeting was supplemented by emails and phone calls between Yates County and the contract consultant, for all participants to support the development of focused problem statements based on the impacts of natural hazards in the county and their communities. These problem statements were intended to provide a detailed description of the problem area, including its impacts to the jurisdiction; past damages; loss of service; etc. An effort was made to include the street address of the property/project location, adjacent streets, water bodies, and well-known structures as well as a brief description of existing conditions (topography, terrain, hydrology) of the site. These problem statements formed a bridge between the hazard risk assessment which quantifies impacts to each community with the development of actionable mitigation strategies. Resources available at the workshop and follow up discussions included the following to assist with the identification of mitigation alternatives and the development of the mitigation strategy workshops found in Section 9 (Annexes).

1. FEMA Local Mitigation Handbook
2. Public Survey Results
3. FEMA Mitigation Action Types (Table I-3)
4. FEMA Mitigation Ideas
5. FEMA Project Useful Life Factsheet
6. Mitigation Funding Sources at the Federal, State, and Local levels (Table I-4)
7. FEMA Region 2 Funding Sources for New York
8. FEMA Ecosystem Services
9. Mitigation Catalog



Types of Mitigation Actions

A mitigation action is a specific action, project, activity, or process taken to reduce or eliminate long-term risk to people and property from hazards and their impacts. Implementing mitigation actions helps achieve the plan’s mission and goals. The actions to reduce vulnerability to threats and hazards form the core of the plan and are a key outcome of the planning process.

The primary types of mitigation actions to reduce long-term vulnerability are:

- Local Plans and Regulations (LPR)
- Structure and Infrastructure Projects (SIP)
- Natural Systems Protection (NSP)
- Education and Awareness Programs (EAP)

Table I-3. FEMA Mitigation Action Types

Mitigation Type	Description	Examples
Local Plans and Regulations	These actions include government authorities, policies, or codes that influence the way land and buildings are developed and built.	<ul style="list-style-type: none"> • Comprehensive plans • Land use ordinances • Subdivision regulations • Development review • Building codes and enforcement • NFIP Community Rating System • Capital improvement programs • Open space preservation • Stormwater management regulations and master plans
Structure and Infrastructure Projects	<p>These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure.</p> <p>This type of action also involves projects to construct manmade structures to reduce the impact of hazards.</p> <p>Many of these types of actions are projects eligible for funding through the FEMA Hazard Mitigation Assistance program.</p>	<ul style="list-style-type: none"> • Acquisitions and elevations of structures in flood prone areas • Utility undergrounding • Structural retrofits • Floodwalls and retaining walls • Detention and retention structures • Culverts • Safe rooms
Natural Systems Protection	These are actions that minimize damage and losses and also preserve or restore the functions of natural systems.	<ul style="list-style-type: none"> • Sediment and erosion control • Stream corridor restoration • Forest management • Conservation easements • Wetland restoration and preservation



Mitigation Type	Description	Examples
Education and Awareness Programs	These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady or Firewise Communities. Although this type of mitigation reduces risk less directly than structural projects or regulation, it is an important foundation. A greater understanding and awareness of hazards and risk among local officials, stakeholders, and the public is more likely to lead to direct actions.	<ul style="list-style-type: none">• Radio or television spots• Websites with maps and information• Real estate disclosure• Presentations to school groups or neighborhood organizations• Mailings to residents in hazard-prone areas• StormReady• Firewise Communities

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Potential Mitigation Funding Sources

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

Table I-4. New York Mitigation Funding Sources

Program	Description	Lead Agency	Website
Federal			
Hazard Mitigation Assistance (HMA)	Grants to provide funding for eligible mitigation activities that reduce disaster losses and protect life and property from future disaster damages – includes FMA, HMGP, PDM	FEMA	https://www.fema.gov/hazard-mitigation-assistance
Flood Mitigation Assistance (FMA)	Program Grants to States and communities for pre-disaster mitigation planning and projects to help reduce or eliminate the long-term risk of flood damage to structures insurable under the National Flood Insurance Program	FEMA	https://www.fema.gov/flood-mitigation-assistance-grant-program
Hazard Mitigation Grant Program (HMGP)	Grants to States and communities for planning and projects providing long-term hazard mitigation measures following a major disaster declaration	FEMA	https://www.fema.gov/hazard-mitigation-grant-program
Building Resilient Infrastructure and Communities (BRIC)	Supports states, local communities, tribes, and territories to undertake hazard mitigation projects by reducing the risks they face from disasters and natural hazards. BRIC is a new FEMA pre-disaster hazard mitigation program that replaces the existing Pre-Disaster Mitigation (PDM) program.	FEMA	https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities



Program	Description	Lead Agency	Website
Individual Assistance	FEMA's Individual Assistance (IA) program provides financial assistance and direct services to eligible individuals and households who have uninsured and underinsured necessary expenses and serious needs. FEMA makes these funds available after any major disaster declarations and some programs available under emergency declarations. IA supports seven types of activities through the following programs: Mass Care/Emergency Services, Individuals and Households Program, Disaster Case Management, Crisis Counseling Assistance and Training Program, Disaster Legal Services, Disaster Unemployment Assistance, and Voluntary Agency Coordination.	FEMA	https://www.fema.gov/individual-disaster-assistance
Public Assistance	FEMA's Public Assistance (PA) provides cost reimbursement aid to local governments (state, county, local, municipal authorities, and school districts) and certain non-profit agencies that were involved in disaster response and recovery programs or that suffered loss or damage to facilities or property used to deliver government-like services. This program is largely funded by FEMA with both local and state matching contributions required.	FEMA	https://www.fema.gov/public-assistance-local-state-tribal-and-non-profit
Assistance to Firefighters Grant Program	The primary goal of the Assistance to Firefighters Grants (AFG) is to enhance the safety of the public and firefighters with respect to fire-related hazards by providing direct financial assistance to eligible fire departments, nonaffiliated Emergency Medical Services organizations, and State Fire Training Academies. This funding is for critically needed resources to equip and train emergency personnel to recognized standards, enhance operations efficiencies, foster interoperability, and support community resilience.	FEMA	https://www.fema.gov/welcome-assistance-firefighters-grant-program
High Hazard Potential Dams (HHPD) Rehabilitation Grant	The Rehabilitation of High Hazard Potential Dams Grant Program (HHPD) provides technical, planning, design, and construction assistance in the form of grants to non-Federal governmental organizations or nonprofit organizations for rehabilitation of eligible high hazard potential dams.	FEMA	https://www.grants.gov/web/grants/view-opportunity.html?oppld=316238
Fire Management Assistance Grant Program	Assistance for the mitigation, management, and control of fires on publicly or privately-owned forests or grasslands that threaten such destruction as would constitute a major disaster. Provides a 75% Federal cost share and the State pay the remaining 25% for actual cost.	FEMA	https://www.fema.gov/fire-management-assistance-grant-program



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



Program	Description	Lead Agency	Website
Emergency Loan Program	USDA's Farm Service Agency (FSA) provides emergency loans to help producers recover from production and physical losses due to drought, flooding, other natural disasters, or quarantine	USDA	https://www.fsa.usda.gov/programs-and-services/farm-loan-programs/emergency-farm-loans/index
Emergency Watershed Protection (EWP) Program	Provide assistance to relieve imminent hazards to life and property caused by floods, fires, drought, windstorms, and other natural occurrences	NRCS	https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/landscape/ewpp/
Financial Assistance	Financial assistance to help plan and implement conservation practices that address natural resource concerns or opportunities to help save energy, improve soil, water, plant, air, animal and related resources on agricultural lands and non-industrial private forest land	NRCS	https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/
Emergency Management Performance Grants (EMPG) Program	Assist local, tribal, territorial, and state governments in enhancing and sustaining all-hazards emergency management capabilities	FEMA, U.S. DHS	https://www.fema.gov/emergency-management-performance-grant-program
Reimbursement for Firefighting on Federal Property	Provides reimbursement only for direct costs and losses over and above normal operating costs.	U.S. DHS	https://www.usfa.fema.gov/grants/firefighting_federal_property.html
Department of Homeland Security Grant Program (HSGP)	HSGP is composed of three interconnected grant programs including the State Homeland Security Program (SHSP), Urban Areas Security Initiative (UASI), and the Operation Stonegarden (OPSG). Together, these competitive grant programs fund a range of preparedness activities, including planning, organization, equipment purchase, training, exercises, and management and administration.	U.S. DHS	https://www.dhs.gov/homeland-security-grant-program-hsgp
Land & Water Conservation Fund	Matching grants to states and local governments for the acquisition and development of public outdoor recreation areas and facilities (as well as funding for shared federal land acquisition and conservation strategies)	National Park Service	https://www.nps.gov/subjects/lwcf/index.htm
Land and Water Conservation Fund	Funding to states, local and conservation organizations for outdoor recreational development, renovation, land acquisition, and planning.	U.S. Department of the Interior	https://www.doi.gov/lwcf



Program	Description	Lead Agency	Website
Small Business Administration Loan	Small Business Administration (SBA) provides low-interest disaster loans to homeowners, renters, business of all sizes, and most private nonprofit organizations. SBA disaster loans can be used to repair or replace the following items damaged or destroyed in a declared disaster: real estate, personal property, machinery and equipment, and inventory and business assets.	Small Business Administration (SBA)	https://www.sba.gov/funding-programs/disaster-assistance
Community Development Block Grant Program	Community Development Block Grants (CDBG) are federal funds intended to provide low- and moderate-income households with viable communities, including decent housing, a suitable living environment, and expanded economic opportunities. Eligible activities include community facilities and improvements, roads and infrastructure, housing rehabilitation and preservation, development activities, public services, economic development, and planning and administration. Public improvements could include flood and drainage improvements. In limited instances and during the times of "urgent need" (e.g., post-disaster) as defined by the CDBG National Objectives, CDBG funding could be used to acquire a property located in a floodplain that was severely damaged by a recent flood, demolish a structure severely damaged by an earthquake, or repair a public facility severely damaged by a hazard event.	U.S. Department of Housing and Urban Development	https://www.hudexchange.info/programs/cdbg-entitlement/
Federal Transit Administration—Emergency Relief	Federal Transit Authority Emergency Relief is a grant program that funds capital projects to protect, repair, reconstruct, or replace equipment and facilities of public transportation systems.	Federal Transit Authority at the U.S. DOT	https://www.transit.dot.gov/funding/grant-programs/emergency-relief-program/emergency-relief-program
State, Local, and Private			



Program	Description	Lead Agency	Website
Acres for America	The National Fish and Wildlife Foundation's Acres for America program works to permanently conserve wildlife habitat. Since 2005, the Acres for America program has conserved almost 1.5 million acres across the United States and provided almost \$4 million in emergency funding to protect fish and wildlife after the 2010 Gulf of Mexico oil spill and Hurricane Sandy. The Acres for America program prioritizes conserving critical wildlife habitats, minimizing habitat fragmentation, providing public access, and maintaining natural resource-based economic activities. Eligible projects conserve a substantial amount of land and/or land of critical importance to its region. The program prioritizes applications for projects that are endorsed by national, state, and/or nonprofit entities as being a conservation priority.	National Fish and Wildlife Foundation	https://www.nfwf.org/programs/acres-america-program
Environmental Protection Fund: Local Waterfront Revitalization Program Grants	The NYS Department of State awards funding to local governments to revitalize coasts and inland waterways by preparing, updating, or implementing an LWRP. LWRPs serve as an opportunity to plan for coastal climate resilience to flooding, sea level rise, and storm surge via natural resource protection and waterfront land use.	NYS Department of State	https://dos.ny.gov/local-waterfront-revitalization-program
Partners for Places Funding Program	The Partners for Place program supports local government efforts toward climate preparedness and mitigation in the United States and Canada. Funding is given to teams including at least one local government sustainability office and one local place-based foundation.	Funders' Network for Smart Growth and Livable Communities and the Urban Sustainability Directors Network	https://www.fundersnetwork.org/partners-for-places/
Climate Adaptation Fund	The Wildlife Conservation Society's Climate Adaptation Fund provides grant awards to conservation non-profits across the United States to catalyze innovative, science-driven projects responding to the impacts of climate change on wildlife and people.	Wildlife Conservation Society	https://www.wcsclimateadaptationfund.org/



MITIGATION CATALOG

The tables below provide a list of potential personal, corporate, and government scale mitigation actions for each of the identified natural hazards in the Yates County HMP. Please note that these tables are not intended to be a comprehensive list, but rather a starting point to help identify potential actions for participating jurisdictions. This catalog of potential actions was provided to participating jurisdictions at the Mitigation Strategy Workshop.

Table I-5. Yates County Mitigation Catalog

Personal Scale	Dam Failure Corporate Scale	Government Scale
<ul style="list-style-type: none"> • Manipulate the hazard: <ul style="list-style-type: none"> • None • Reduce exposure to the hazard: <ul style="list-style-type: none"> • Relocate out of dam failure inundation areas. • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Elevate home to appropriate levels. • Increase Capability: <ul style="list-style-type: none"> • Learn about risk reduction for the dam failure hazard. • Learn the evacuation routes for a dam failure event. • Educate yourself on early warning systems and the dissemination of warnings. 	<ul style="list-style-type: none"> • Manipulate the hazard: <ul style="list-style-type: none"> • Remove dams. • Harden dams. • Reduce exposure to the hazard: <ul style="list-style-type: none"> • Replace earthen dams with hardened structures. • Relocate facilities out of dam failure inundation areas. • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Floodproof facilities within dam failure inundation areas. • Increase Capability: <ul style="list-style-type: none"> • Educate employees on the probable impacts of a dam failure. • Develop a continuity of operations plan. 	<ul style="list-style-type: none"> • Manipulate the hazard: <ul style="list-style-type: none"> • Remove dams. • Harden dams. • Reduce exposure to the hazard: <ul style="list-style-type: none"> • Replace earthen dams with hardened structures. • Relocate critical facilities out of dam failure inundation areas. • Consider open space land use in designated dam failure inundations areas. • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Adopt higher floodplain standards in mapped dam failure inundation areas. • Retrofit critical facilities within dam failure inundation areas. • Increase Capability: <ul style="list-style-type: none"> • Map dam failure inundation areas. • Enhance emergency operations plans to include a dam failure component. • Institute monthly communications checks with dam operators. • Inform the public on risk reduction techniques.



Personal Scale	Dam Failure Corporate Scale	Government Scale
		<ul style="list-style-type: none">• Adopt real-estate disclosure requirements for the re-sale of property located within dam failure inundation areas.• Consider the probable impacts of climate change in assessing the risk associated with the dam failure hazard.• Establish early warning capability downstream of listed high-hazard dams.• Consider the residual risk associated with protection provided by dams in future land use decisions.

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Personal Scale	Disease Outbreak Corporate Scale	Government Scale
<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • None • Reduce exposure to the hazard: <ul style="list-style-type: none"> • Proper hygiene. • PPE. • Social distancing. • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Focus on personal health. • Increase Capability: <ul style="list-style-type: none"> • Storage of PPE. • Storage of supplies and food to reduce need to enter public spaces. 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • None • Reduce exposure to the hazard: <ul style="list-style-type: none"> • PPE. • Social distancing. • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Distanced work environment. • Regular cleaning of work environment. • Increase Capability: <ul style="list-style-type: none"> • Storage of PPE. • Equipment for monitoring. • Trainings for staff. 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • None • Reduce exposure to the hazard: <ul style="list-style-type: none"> • PPE. • Social distancing. • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Distanced work environment. • Regular cleaning of work environment. • Increase Capability: <ul style="list-style-type: none"> • Storage of PPE. • Equipment for monitoring/treatment. • Trainings for staff. • Public outreach.

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Personal Scale	Drought Corporate Scale	Government Scale
<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • None • Reduce exposure to the hazard: <ul style="list-style-type: none"> • Consider stored water/captured water techniques during dry seasons. • Establishing an irrigation time/scheduling program or process so that all agricultural land gets the required amount of water. Through incremental timing, each area is irrigated at different times so that all water is not consumed at the same time. Spacing usage may also help with recharge of groundwater. • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Drought resistant landscapes. • Reduce water system losses. • Regularly check for leaks to minimize water supply losses. • Install low-flow water saving showerheads and toilets. • Turn water flow off while brushing teeth or during other cleaning activities. • Adjust sprinklers to water the lawn and not the sidewalk or street. • Run the dishwasher and washing machine only when they are full. • Check for leaks in plumping or dripping faucets. • Install rain-capturing devices for irrigation. • Install graywater systems in homes to encourage water reuse. • Rotate crops by growing a series of different types of crops on the same fields every season to reduce soil erosion. 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • None • Reduce exposure to the hazard: <ul style="list-style-type: none"> • Consider stored water/captured water techniques during dry seasons. • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Drought resistant landscapes. • Reduce private water system losses. • Identify alternate water supply sources. • Install low-flow water saving showerheads and toilets. • Adjust sprinklers to water the lawn and not the sidewalk or street. • Increase Capability: <ul style="list-style-type: none"> • Practice active water conservation. • Develop a COOP. • Create a water conservation plan. 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • Ground Water Recharge through stormwater management. • Implement cloud seeding techniques during dry seasons. • Reduce exposure to the hazard: <ul style="list-style-type: none"> • Identify and create ground water back up sources. • Create /identify new impounded water supply points. • Developing new or upgrading existing water delivery systems to eliminate breaks and leaks. • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Water use conflict regulations. • Reduce water system losses. • Distribute water saving kits. • Identify sites ideally suited for ground water recharge. • Implement stormwater retention in regions ideally suited for groundwater recharges. • Utilize drought resistant landscapes on community owned facilities. • Encourage citizens to take water-saving measures. • Increase Capability: <ul style="list-style-type: none"> • Public education on drought resistance. • Identify alternative water supplies for time of drought. Mutual aid agreements with alternative suppliers. • Develop a drought contingency plan. • Develop criteria-"triggers" for drought related actions. • Improve accuracy of water supply forecasts.



Personal Scale	Drought Corporate Scale	Government Scale
<ul style="list-style-type: none">• Planting “cover crops,” such as oats, wheat, and buckwheat, to prevent soil erosion.• Increase Capability:<ul style="list-style-type: none">• Practice active water conservation techniques.• Seek ways to operate wells in such a way to enhance their functional longevity and supply capability.		<ul style="list-style-type: none">• Provide incentives to influence active water conservation techniques such as water user rate reductions.• Consider providing incentives to property owners that utilize drought resistant landscapes in the design of their homes.• Use of water buffalo tankers.• Promote well usage techniques that strive to enhance functional longevity and supply capability of private water supply wells.• Develop an ordinance to restrict the use of public water resources for non-essential usage, such as landscaping, washing cars, filling swimming pools, etc.

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Personal Scale	Extreme Temperature Corporate Scale	Government Scale
<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • Increase tree plantings • Installation of green roofs to provide shade and remove heat • Use cool roofing products that reflect sunlight and heat away from a building • Reduce exposure to the hazard: <ul style="list-style-type: none"> • None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Retrofit pipes including locating water pipes on the inside of building insulation or keeping them out of vulnerable spaces to extreme cold • Increase Capability: <ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • Increase tree plantings • Installation of green roofs to provide shade and remove heat • Use cool roofing products that reflect sunlight and heat away from a building • Reduce exposure to the hazard: <ul style="list-style-type: none"> • None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Retrofit pipes including locating water pipes on the inside of building insulation or keeping them out of vulnerable spaces to extreme cold • Increase Capability: <ul style="list-style-type: none"> • Set rules restricting outdoor work during extreme temperature events 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • Increase tree plantings • Encourage the installation of green roofs to provide shade and remove heat • Encourage the use of cool roofing products that reflect sunlight and heat away from a building • Reduce exposure to the hazard: <ul style="list-style-type: none"> • None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Require minimum temperatures in housing/landlord codes • Increase Capability: <ul style="list-style-type: none"> • Educate citizens regarding the dangers of extreme heat and cold and the steps they can take to protect themselves when extreme temperatures occur • Establish warming and cooling centers • Establish extreme temperature planning in emergency operation plans • Create a database to track those individuals at high risk of death such as the elderly, homeless, etc.

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Personal Scale	Flood Corporate Scale	Government Scale
<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • Clear stormwater drains and culverts. • Reduce exposure to the hazard: <ul style="list-style-type: none"> • Locate or re-locate outside of hazard area. • Institute low impact development techniques on property. • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Retrofit existing structures and utilities above Base Flood Elevation (BFE). • Floodproof existing structures (wet- or dry floodproofing). • Store hazardous materials above BFE or outside of floodprone areas. • Increase Capability: <ul style="list-style-type: none"> • Develop household mitigation plan, such as retrofit savings, communication capability with outside, 72-hr. self-sufficiency during and after an event. • Buy flood insurance. 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • Clear stormwater drains and culverts. • Reduce exposure to the hazard: <ul style="list-style-type: none"> • Locate business critical facilities or functions outside hazard area. • Institute low impact development techniques on property. • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Build redundancy for critical functions/ retrofit critical buildings. • Provide flood-proofing measures when new critical infrastructure must be located in floodplains. • Harden structures and infrastructure (wet and dry-floodproofing). • Store hazardous materials above BFE or outside of floodprone areas. • Increase Capability: <ul style="list-style-type: none"> • Increase capability by having cash reserves for reconstruction. • Develop and adopt a Continuity of Operations Plan (COOP). • Solicit 'cost-sharing" through partnerships with private sector stakeholders on projects with multiple benefits. • Dam owner/operators should continue to be aware of and understand dam inspection and reporting requirements. • Ensure that all dam EAP's are kept in compliance with State Regulations. 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • Clear stormwater drains and culverts • Dredging, levee construction, providing retention areas. • Structural flood control: levee's, dams, channelization, revetments. • Construct regional stormwater control facilities. • Lead and develop a county-wide stream clearing strategy including the development of thresholds for response/action. • Reduce exposure to the hazard: <ul style="list-style-type: none"> • Locate/re-locate critical facilities outside of hazard area. • Acquire or relocate identified repetitive loss properties. • Promote open space uses in identified high hazard areas via techniques such as: PUD's, easements, setbacks, greenways, sensitive area tracks. • Adopt land development criteria such as PUD's, Density transfers, clustering. • Institute low impact development techniques on property. • Acquire vacant land or promote open space uses in developing watersheds to control increases in runoff. • Pass an ordinance to incorporate additional zoning classifications into flood zones within each municipality. • Increase floodplain standards within municipal ordinances and include provisions for enforcing best practice standards.



Personal Scale	Flood Corporate Scale	Government Scale
		<ul style="list-style-type: none">• Consider increasing minimum freeboard beyond state requirements.• Continue development application reviews by County Planning Board to reduce risky development practices.• Reduce vulnerability to the hazard:<ul style="list-style-type: none">• Harden structures and infrastructure (wet and dry-floodproofing).• Provide redundancy for critical functions and infrastructure.• Adopt appropriate regulatory standards such as cumulative substantial improvement/damage, freeboard, lower substantial damage threshold, compensatory storage.• Stormwater management regulations and master planning.• Adopt "no-adverse impact" floodplain management policies that strive to not increase the flood risk on down-stream communities.• Participate in the Community Rating System (CRS).• Implement as-built regulatory requirements.• Implement site review ordinances/requirements.• Establish stream maintenance programs with stakeholders (e.g. Soil and Water Conservation District) - support county leads of such efforts.• Incorporate retrofitting/replacement of critical facilities and infrastructure in Capital Improvement Plans (CIPs).



Personal Scale	Flood Corporate Scale	Government Scale
		<ul style="list-style-type: none">• Promote the use of vegetation/plants as green erosion control measures to reduce localized flooding.• Work with environmental groups to address removal of debris, log jams, etc. in flood vulnerable stream sections.• Increase Capability:<ul style="list-style-type: none">• Produce better hazard maps, and improve access to flood hazard mapping• Capture/survey "high-water" marks during flood events.• Provide technical information and guidance on appropriate mitigation options available to businesses and homeowners.• Enact tools to help manage development in hazard areas (stronger controls, tax incentives, information).• Establish an additional layer of zoning within flood hazard areas.• Develop strategy to take advantage of post disaster opportunities.• Improve compliance with and enforcement of the NFIP.• Develop mitigation partnerships with regional stakeholders.• Join Community Rating System (CRS) program or improve level of participation in CRS.• Develop and implement a public information strategy for flood hazard awareness, flood insurance (NFIP) and mitigation.• Maintain existing data as well as gather new data needed to define risks and vulnerability.



Personal Scale	Flood Corporate Scale	Government Scale
		<ul style="list-style-type: none">• Create a building and elevation inventory of structures in the floodplain• Identify flood prone areas that may be in need of new flood studies.• Establish a program to identify and educate owners of flood-prone properties of potential mitigation options (e.g. elevations, relocations).• Charge a hazard mitigation fee on all new permits to create a hazard mitigation funding source for initiatives or grant cost share requirements.• Integrate floodplain management policies into other planning mechanisms within the planning area.• Establish a Stormwater Utility to deal with urban drainage/flooding issues.• Establish incentives to promote flood hazard mitigation of private property (e.g. permit fee waivers).• Adopt ordinances/standards for cumulative damages and/or improvements.• Upgrade NFIP Floodplain ordinance, as well as other ordinances to current or above current state and federal standards.• Develop and adopt a COOP.• Join "Storm Ready" Program.• Participate in county and regional training programs.• Provide additional training/certification to NFIP floodplain administrators and code officials.• Implement annual training to account for turnover of municipal officials.



Personal Scale	Flood Corporate Scale	Government Scale
		<ul style="list-style-type: none">• Maintain and enhance flood forecasting ability, including the establishment and maintenance of critical stream gages.• Explore grant funding opportunities and potential partnerships to help maintain existing gages and install additional gages to improve forecasting and flood warning ability.• Promote awareness and participation in alert systems.• Support and participate in regional flood management efforts.• Support and implement hazard disclosure for the sale/re-sale of property in identified risk zones.• Provide continued and enhanced training for emergency responders.• Establish a revolving "bank" or budget line item to fund grant application support.• Continue to review updated Flood Insurance Rate Maps to ensure accuracy as well as maintaining lines of communication with homeowners to make them aware of potential changes related to their property status.• Provide trainings for FPA's on the NFIP/Floodplain Best Practices and also pursue CFM accreditation for municipal FPA's.• Build and maintain relationships to develop regional watershed/floodplain mitigation solutions.• Pursue grant funding opportunities to fund repairs of catchments and infrastructure on a proactive basis.



Personal Scale	Flood Corporate Scale	Government Scale
		<ul style="list-style-type: none">• Explore grant funding opportunities related to climate change to fund mitigation projects.

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Personal Scale	Harmful Algal Blooms Corporate Scale	Government Scale
<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • None • Reduce exposure to the hazard: <ul style="list-style-type: none"> • Comply with harmful algal bloom rules and regulations to minimize the exposure to HAB • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Form citizen action groups to promote awareness and best practices on local levels. • Increase Capability <ul style="list-style-type: none"> • Regularly check the NJ DEP HAB and Invasive Species information page for updated information. • Broaden collaborations focused on ecosystem restoration and ecosystem-based management. 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • None • Reduce exposure to the hazard: <ul style="list-style-type: none"> • None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • None • Increase Capability: <ul style="list-style-type: none"> • Build and maintain partnerships with government agencies, academia, and stakeholders to coordinate information sharing, and response for Invasive Species and Harmful Algal Blooms throughout the county/region. 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • None • Reduce exposure to the hazard: <ul style="list-style-type: none"> • Create/disseminate planting guides which explain which types of plants and vegetation are safe to plant within the county. • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • None • Increase Capability: <ul style="list-style-type: none"> • Work with federal/state agencies to disseminate information to local municipalities regarding HABs from the NJ DEP and US EPA • Disseminate information to the general public to educate them on HABs • Work with stakeholders to identify and expand resources for prevention and early detection of HABs • Broaden collaborations focused on ecosystem restoration and ecosystem-based management. • Build ecological restoration planning into IS management projects.

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Personal Scale	Hazardous Materials Corporate Scale	Government Scale
<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • Identify and eliminate sources of potential hazardous material spills. • Reduce exposure to the hazard: <ul style="list-style-type: none"> • Increase distance between hazardous material sites and development. • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • None • Increase Capability: <ul style="list-style-type: none"> • Personal planning for potential event. 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • Identify and eliminate sources of potential hazardous material spills. • Reduce exposure to the hazard: <ul style="list-style-type: none"> • None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • None • Increase Capability: <ul style="list-style-type: none"> • Increase inspection of hazardous material facilities and transport vehicles. • Conduct training for response. 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • Identify and eliminate sources of potential hazardous material spills. • Reduce exposure to the hazard: <ul style="list-style-type: none"> • Increase inspection of hazardous material facilities and transport vehicles. • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • None • Increase Capability: <ul style="list-style-type: none"> • Increase inspection of hazardous material facilities and transport vehicles. • Conduct training for response. • Public outreach.

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Personal Scale	Landslide Corporate Scale	Government Scale
<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • Apply soil stabilization measures, such as planting soil stabilizing vegetation on steep slopes. • Reduce exposure to the hazard: <ul style="list-style-type: none"> • None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • None • Increase Capability: <ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • None • Reduce exposure to the hazard: <ul style="list-style-type: none"> • None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • None • Increase Capability: <ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • Implement reinforcement measures in high-risk areas. • Use debris flow measures that may reduce damage in sloping areas, such as stabilization, emergency dissipation, and flow control measures. • Apply soil stabilization measures, such as planting soil stabilizing vegetation on steep, publicly owned slopes. • Reduce exposure to the hazard: <ul style="list-style-type: none"> • Consider hazard areas in land-use planning, zoning, and development siting. • Acquire structures in highest hazard areas (demolish and convert to restricted open space). • Relocation of Structures. • Open Space Preservation. • Create or increase setback limits on parcels near high-risk parcels. • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Consider hazard areas in land-use planning and development siting. • Stabilize vulnerable slopes near structures and infrastructure. • Work with stakeholders such as USGS to develop appropriate risk reduction strategies. • Install catch-fall nets for rocks at steep slopes near roadways. • Increase Capability: <ul style="list-style-type: none"> • Increase understanding of hazard areas (e.g. Landslide Susceptibility Maps) - geotechnical surveys, LIDAR and mapping.



Personal Scale	Landslide Corporate Scale	Government Scale
		<ul style="list-style-type: none">• Assessing vegetation in wildfire-prone areas to prevent landslides after fires (e.g. encourage plants with strong root systems).• Work with stakeholders such as USGS to develop appropriate risk reduction strategies.• Support and implement hazard disclosure for the sale/re-sale of property in identified risk zones.• Develop county-level programs to document slide events (landslide inventory) and maintain its currency.

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Personal Scale	Severe Storm Corporate Scale	Government Scale
<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • None • Reduce exposure to the hazard: <ul style="list-style-type: none"> • None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Retrofit structures (improved roofing, glazing, insulation, etc.). • Provide for redundant heat and power. • Contact municipality or utilities to trim or remove trees that could affect power lines. • Plant appropriate trees near home and power lines ("Right tree, right place" National Arbor Day Foundation Program. • Increase Capability: <ul style="list-style-type: none"> • Improve awareness of impending severe weather (e.g. obtain a NOAA weather radio). • Promote 72-hour self-sufficiency. 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • None • Reduce exposure to the hazard: <ul style="list-style-type: none"> • None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Relocate critical infrastructure, such as power lines, underground. • Reinforce or relocate critical infrastructure such as powerlines so that it meets performance expectations. • Retrofit pipes including locating water pipes on the inside of building insulation or keeping them out of vulnerable spaces to extreme cold. • Increase Capability: <ul style="list-style-type: none"> • Contact municipality or utilities to trim or remove trees that could affect power lines. • Create redundancy (e.g. backup generators). • Improve awareness of impending severe storm (e.g. obtain a NOAA weather radio). • Develop a Continuity of Operations Plan (COOP). • Monitor impending severe storm events so that you can release employees in such a manner as to not negatively impact emergency response personnel/services. 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • None • Reduce exposure to the hazard: <ul style="list-style-type: none"> • None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Harden infrastructure such as locating utilities underground. • Trimming trees back from power lines. • Designate and strengthen critical road sections and bridges. • Adopt ordinances that regulate the type and quantity of trees planted near utility lines. • Relocate critical infrastructure, such as power lines, underground. • Increase Capability: <ul style="list-style-type: none"> • Support programs such as "Tree Watch" that proactively manage problem areas by use of selective removal of hazardous trees, tree replacement, etc. • Enforce building codes. • Increase communication alternatives. • Modify land use and environmental regulations to support vegetation management activities that improve reliability in utility corridors. • Modify landscape and other ordinances to encourage appropriate planting near overhead power, cable, and phone lines. • Promote awareness and participation in alert systems. • Provide NOAA weather radios to the public. • Create/Enhance "mutual aid" agreements for response to all emergencies.



Personal Scale	Severe Storm Corporate Scale	Government Scale
		<ul style="list-style-type: none">• Create/identify evacuation routes to be utilized during severe storm events.• Develop debris management plans.• Join "Storm-Ready" program.• Provide early warning of impending severe storm events to identified critical or essential facilities. This would include facilities such as large employments centers, schools, hospitals.• Promote emergency power supplies to private property.• Improve, expand, or harden communications facilities and services.• Recruit additional emergency personnel or use mutual aid agreements.• Increase sheltering capabilities.• Increase capability to respond to power outages and downed power lines. Establish partnerships with utility providers through pro-active planning.

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Personal Scale	Transportation Accidents Corporate Scale	Government Scale
<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • None • Reduce exposure to the hazard: <ul style="list-style-type: none"> • None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Utilize public transportation • Increase Capability: <ul style="list-style-type: none"> • Be aware of conditions that may cause transportation accidents 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • None • Reduce exposure to the hazard: <ul style="list-style-type: none"> • Remove over-hanging and dead trees that have potential to fall in roadways • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Travel outside of high-trafficked times • Increase Capability: <ul style="list-style-type: none"> • Incorporate standardized trainings in standard operating procedures • Educate operators on safety protocols 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • None • Reduce exposure to the hazard: <ul style="list-style-type: none"> • None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Evaluate speed limits • Increase Capability: <ul style="list-style-type: none"> • Perform traffic studies • Incorporate standardized trainings in standard operating procedures • Educate operators on safety protocols

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Personal Scale	Winter Storm Corporate Scale	Government Scale
<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • None • Reduce exposure to the hazard: <ul style="list-style-type: none"> • Plant appropriate trees near home and power lines (“Right tree, right place” National Arbor Day Foundation). • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Insulate House to provide greater thermal efficiency and reduce heat loss. • Provide redundant heat and power. • Insulate Structure. • Ensure natural gas input/release valves do not get covered in snow. • Increase Capability: <ul style="list-style-type: none"> • Trim or remove trees that could affect power lines. • Prepare emergency food and supplies to be self-sufficient for at least 72 hours in the event of a winter storm. • Be aware of inclement weather conditions and move your vehicles off the street as winter storm systems approach. • Retrofit structures. 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • None • Reduce exposure to the hazard: <ul style="list-style-type: none"> • None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Relocate critical infrastructure, such as power lines, underground. • Reinforce or relocate critical infrastructure such as powerlines so that it meets performance expectations. • Install tree wire. • Increase Capability: <ul style="list-style-type: none"> • Trim or remove trees that could affect power lines. • Create redundancy in utilities and communications. • Develop a Continuity of Operations Plan (COOP) to address operations before, during and after winter storm events. • Utilize weather radios at the work place to keep your employees aware of severe weather conditions. 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> • None • Reduce exposure to the hazard: <ul style="list-style-type: none"> • None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Harden infrastructure such as locating utilities underground where appropriate. • Trimming trees back from power lines. • Designate snow routes and strengthen critical road sections and bridges. • Adopt codes and regulations that address the issues of parking of vehicles along roadways during winter storm events. • Develop or enhance the capacity/capability of stormwater conveyance systems. • Provide backup power sources at vital critical facilities. • Increase Capability: <ul style="list-style-type: none"> • Support programs that proactively manage problem areas by use of selective removal of hazardous trees, tree replacement, etc. • Establish and enforce building codes that require all roofs to withstand snow loads-- Develop/Improve/Enforce building Codes in Hazard Areas. • Increase communication alternatives. • Modify land use and environmental regulations to support vegetation management activities that improve reliability in utility corridors. • Modify landscape and other ordinances to encourage appropriate planting near overhead power, cable, and phone lines. • Provide weather radios to vulnerable populations.



Personal Scale	Winter Storm Corporate Scale	Government Scale
		<ul style="list-style-type: none"> • Enhance public awareness campaigns to address issues of alert and warning and actions to take during winter storm events. • Utilize the best available technology to enhance the warning systems for all winter storm events. • Coordinate winter storm warning capabilities and the dissemination of warning amongst those agencies within the planning are with the highest degree of capability. • Encourage local ordinances for planting tree near lines and join Tree City USA. • Increase tree management programs. • Join the Community Rating System. • Join "Storm-Ready". • Retrofit critical structures and promote hazard resistant construction. • Keep open communications and education of hazards for mobile home communities. • Retrofit above-ground utilities to underground facilities if appropriate. • Create a salt reserve or research alternates to stretch salt reserve. • Ensure accessibility to hospitals. • Provide better debris logistics and removal. • Provide better communication systems and back-up communication systems to inform public of hazards and to communicate during the hazard event.

Personal Scale	Utility Failure Corporate Scale	Government Scale
<ul style="list-style-type: none"> • Manipulate the Hazard: 	<ul style="list-style-type: none"> • Manipulate the Hazard: 	<ul style="list-style-type: none"> • Manipulate the Hazard:



Personal Scale	Utility Failure Corporate Scale	Government Scale
<ul style="list-style-type: none"> • None • Reduce exposure to the hazard: <ul style="list-style-type: none"> • None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Purchase personal home generators • Install solar panels at homes • Have preparedness kits for power outages (candles, flashlights, solar batteries, non-perishable foods, etc.) • Increase Capability: <ul style="list-style-type: none"> • Be aware of conditions that may cause utility failures 	<ul style="list-style-type: none"> • Have redundancies within the power grid • Reduce exposure to the hazard: <ul style="list-style-type: none"> • Remove trees that have potential to impact power lines • Bury power lines • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Maintain power infrastructure to high standards • Increase Capability: <ul style="list-style-type: none"> • Utility providers to collaborate with government and customers 	<ul style="list-style-type: none"> • None • Reduce exposure to the hazard: <ul style="list-style-type: none"> • None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> • Backup power for municipal facilities • Increase Capability: <ul style="list-style-type: none"> • Build strong relationships with Utility providers • Educate and public outreach about proper generator use

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**APPENDIX J: NYS DHSES PLANNING
GUIDANCE**



This appendix includes the 2022 NYS DHSES planning standards and guidelines for hazard mitigation planning.

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2022 New York State Hazard Mitigation Planning Standards

(Supersedes the 2017 NYS Hazard Mitigation Planning Standards)

Congratulations on taking the first steps to update a multi-hazard mitigation plan for your community!

The goal of both the New York State Division of Homeland Security and Emergency Services (NYS DHSES) and FEMA is that all jurisdictions develop robust mitigation plans and tangible mitigation actions that will contribute to long-term risk reduction.

The 2022 NYS Hazard Mitigation Planning Standards reduce the 2017 Hazard Mitigation Planning Standards. Any plan currently in development, regardless of date funded, will be held *only* to these reduced standards.

PLEASE NOTE:

On April 19, 2023, FEMA's new Local Mitigation Planning Policy will take effect. Plans approved on or after this date **must meet requirements** as outlined in the linked [Policy Guide](#).

https://www.fema.gov/sites/default/files/documents/fema_local-mitigation-planning-policy-guide_042022.pdf

The additional state requirements detailed below are intended to improve the quality of hazard mitigation plans and encourage the development of the most appropriate and effective mitigation projects for your community. It is recognized that many jurisdictions have inherent constraints and certain information may be difficult to provide. NYS DHSES and FEMA will work with you throughout the entire planning process to ensure the successful development of your community's hazard mitigation plan.

There are a multitude of resources that exist to provide guidance and support throughout the planning process, developed by Federal and State agencies, as well as private and research-based groups. We urge you to contact us so that we may direct you to additional resources and provide you with the most comprehensive technical assistance possible.

For questions and comments, please call our offices at 518-292-2304.

Additional contact information will be provided to sub-recipients for more direct assistance.

**Please note:**

Jurisdiction is used to describe all government entities within the boundaries set forth in the Multi-Jurisdictional Plan (typically County-wide), including the County itself, as well as cities, towns, villages and potentially tribes that choose to join a multi-jurisdictional plan.

Special Flood Hazard Area (SFHA) is defined as the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in a given year (previously known as the 100-year flood event).

1. Assess Critical Facilities

Critical facilities must remain accessible and functional before, during and after disasters to meet the jurisdictions Continuity of Government (COG) and Continuity of Operations (COOP) standards, and to support important emergency, government and sheltering functions.

Jurisdictions must identify all critical facilities, assess their vulnerabilities, and evaluate and ensure they are protected to a 0.02% chance (500-year) flood event. Critical facilities that are located in an SFHA and/or have been previously flooded, must be protected against a repeat of that flood or to the 0.02% chance flood event, which ever provides the greater protection.

- The plan must document the name of facility, type of facility, jurisdictional location, and exposure to a 1% (100-year) and 0.02% chance event.
- The plan must document those critical facilities are protected to a 0.02% flood event, or previous worst case flood event. For those that do not meet this level of protection, the plan must include an action to meet or go beyond this criterion or explain why it is not feasible to do so. Going beyond this criterion is optional but may be wise to protect against a future worst case due to climate change.

2. Include Jurisdictional Annexes

Jurisdictional annexes provide a unique, stand-alone guide to mitigation planning for each jurisdiction.

The plan must be organized so that there is an annex for every jurisdiction within the county's borders, including the County.

- The plan must include a table in the Introduction section clearly identifying all jurisdictions and which are seeking FEMA approval.
- The annex for each jurisdiction seeking FEMA approval must include the following:
 - Contact Information;
 - Jurisdiction Profile;
 - Hazard Identification (specific to the jurisdiction);
 - Hazard Event History;
 - National Flood Insurance Program (NFIP) Summary (to meet Federal Standards);
 - Critical Facilities Information (to meet F1);
 - Jurisdiction/public identified vulnerabilities;
 - Additional public involvement;
 - Capabilities Assessment;
 - Mitigation Strategy:
 - All identified previous mitigation activities with current status;
 - All proposed mitigation activities (both new and carried forward, to meet F3)
- The annex for each non-participating jurisdiction (those not seeking FEMA approval at this time), must include a cover sheet and should include as much information as is available.



3. Develop Mitigation Actions

Projects that are well developed and documented in one place are more quickly identifiable for selection when grants become available, making implementation that much more likely.

Within each jurisdictional annex, jurisdictions must develop a minimum of two (2) new or carryover (not started) proposed mitigation actions that include all information requested in the NYS DHSES LHMP Proposed Action spreadsheet. For jurisdictions containing an SFHA, one (1) of these actions must be for a project that addresses flooding.

4. Post Draft Plan Online

Allowing the public to comment on the draft plan increases awareness about how mitigation saves lives and reduces risk and allows a final opportunity for public input.

The public must have an opportunity to view and comment on the draft plan prior to submittal.

- The draft plan must be posted in full (except for discretionary sensitive information) on an existing county/jurisdiction website, or one created for the purpose of soliciting comments, for 30 days or the time prescribed by local law, whichever is greater, and the plan must describe efforts made to solicit public comments from potentially underserved areas where residents may not have access to a computer to view the website. The website must clearly identify how the public can comment on the plan, to include either specific contact information to send comments or a user-friendly form or survey.

After NYS DHSES and FEMA Approval

- Once designated Approvable Pending Adoption (APA) or Approved by FEMA, the final plan must be placed on the same website (cited above) in its entirety (except for discretionary sensitive information).
- Final payment will occur only after 50% of the participating jurisdictions have adopted the plan and provided adoption resolutions to NYS DHSES. For county-led hazard mitigation planning efforts, the county must be one of the adopting jurisdictions.

The chart below shows the requirements as they appear on the plan review tool used by NYS DHSES and FEMA Region II to determine whether a submitted plan meets federal and state requirements.

1. REGULATION CHECKLIST	Location in Plan	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)	(section and/or page number)		
ELEMENT F. ADDITIONAL STATE REQUIREMENTS – NYS HAZARD MITIGATION PLANNING STANDARDS			
These are required actions for plans developed with NYS DHSES-administered funds.			
H1. Do jurisdictions identify critical facilities, assess vulnerabilities, and ensure protection to a 0.02% flood event or worst-case scenario?			
H2. Does the plan include an annex for every jurisdiction within the County's boundaries?			
H3. Within each jurisdictional annex, are projects developed in accordance with the NYS DHSES Proposed Projects Table?			
H4. Was the draft plan posted for public comment?			
Note: The applicant is required to address the 2022 NYS Hazard Mitigation Planning Standards as required actions for a hazard mitigation plan developed with funds administered by NYS DHSES.			
<u>ELEMENT H: REQUIRED REVISIONS</u>			
<u>Please see opportunities for improvement</u>			

APPENDIX K: LINKAGE PROCEDURES



This Appendix contains the linkage procedures for the Yates County Hazard Mitigation Plan.

ADMINISTRATIVE PROCESS FOR “LINKAGE” TO THE YATES COUNTY HAZARD MITIGATION PLAN

The development of the Yates County Hazard Mitigation Plan 2025 Update (the Plan) included the County and all eligible local governments within the defined planning area are included in this plan. Completed jurisdictional annexes are presented in Volume II. Any non-participating local jurisdictions such as Fire Districts, Utility Districts, School Districts, and any other eligible local government as defined in 44 CFR 201.2 within the Yates County planning area can join this plan as a participating jurisdiction and to ultimately achieve approved status by following the linkage procedures defined in this appendix.

It is assumed that some or all these local jurisdictions may choose to "link" to the Plan at some point in time to gain eligibility for programs under the DMA. In addition, some of the current partnership may not continue to meet eligibility requirements due to the lack of active participation as prescribed by the plan. These "linkage" procedures will define the requirements established by the Yates County HMP Steering Committee and all planning partners for dealing with the increase or decrease in planning partners linked to this plan. It should be noted that currently non-participating jurisdictions within the defined planning area are not obligated to link to this plan. These jurisdictions can choose to do their own "complete" plan that addresses all required elements of section 201.6 of 44CFR.

Increasing the Partnership Through Linkage

Eligibility

Eligible jurisdictions located in the planning area may link to this plan at any point during the plan's performance period. Eligible jurisdictions located in the planning area may link to this plan at any point during the plan's performance period (5 years after final approval). Eligibility will be determined by the following factors:

- The linking jurisdiction is a local government as defined by the Disaster Mitigation Act.
- The boundaries or service area of the linking jurisdiction is completely contained within the boundaries of the planning area established during the 2025 hazard mitigation plan development process.
- The linking jurisdiction's critical facilities were included in the critical facility and infrastructure risk assessment completed during the 2025 plan development process.



Requirements

It is expected that linking jurisdictions will complete the requirements outlined below and submit their completed template to the lead agency Yates County Office of Emergency Services for review within six months of beginning the linkage process:

1. The Yates County Hazard HMP Steering Committee has established an annual window for which linkage to the plan can occur. Linking jurisdictions are instructed to complete the following procedures during this time frame.
2. The current non-participating jurisdiction contacts the Yates County HMP Coordinator for the Plan and requests a "Linkage Package". The Yates County HMP Coordinator is:

Diane Caves, Deputy Director
Yates County Emergency Services
227 Main Street
Penn Yan, NY 14527
(315) 536-3000
dcaves@yatescounty.org

3. The Yates County HMP Coordinator will provide a linkage package that includes:
 - Copy of Volume I and II of the Plan (CDROM).
 - Planning Partner's Expectations Sheet.
 - A Sample "Letter of Intent" to Link to the Plan.
 - A Jurisdictional Template and Instructions.
 - Catalog of Hazard Mitigation Alternatives or the Mitigation Catalog.
 - A copy of Section 201.6 of Chapter 44, the Code of Federal Regulations (44CFR), which defines the federal requirements for a local hazard mitigation plan.
4. The new jurisdiction will be required to review both volumes of the Plan which includes the following key components for the planning area:
 - The Yates County risk assessment;
 - The plan's goals and objectives;
 - Plan implementation and maintenance procedures;
 - Catalog of potential mitigation actions; and
 - County-wide initiatives.

Once this review is complete, the jurisdiction will complete its specific jurisdictional annex by following the template and its instructions for completion provided by the Yates County HMP



Coordinator. Technical assistance can be provided upon request by completing the request for technical assistance (TA) form provided in the linkage package. This TA may be provided by the Yates County HMP Coordinator or any other resource within the Planning Partnership such as a member of the HMP Steering Committee or a currently participating jurisdiction. The Yates County HMP Coordinator will determine who will provide the TA and the possible level of TA based on resources available at the time of the request.

5. The new jurisdiction will also be required to develop a public involvement strategy that ensures their public's ability to participate in the plan development process. At a minimum, the new jurisdiction must make an attempt to solicit public opinion on hazard mitigation at the onset of this linkage process and a minimum of one public meeting to present their draft jurisdiction specific annex for comment, prior to adoption by the governing body. The Planning Partnership will have available resources to aid in the public involvement strategy such as the Plan website. However, it will be the new jurisdiction's responsibility to implement and document this strategy for incorporation into their annex.

It should be noted that the Jurisdictional Annex templates do not include a section for the description of the public process. This is because the original partnership was covered under a uniform public involvement strategy that covered the operational area that is described in Volume I of the plan. Since the new partner was not addressed by that strategy, they will have to initiate a new strategy, and add a description of that strategy to their annex. For consistency, new partners are encouraged to follow the public involvement format utilized by the initial planning effort as described in Volume I of the Plan.

6. Once their public involvement strategy is completed and they have completed their template, the new jurisdiction will submit the completed package to the Yates County HMP Coordinator for a pre-adoption review to ensure conformance with the regional plan format.
7. The Yates County HMP Coordinator will review for the following:
 - Documentation of public involvement and mitigation action development strategies;
 - Conformance of template entries with guidelines outlined in instructions;
 - Chosen actions are consistent with goals, objectives, and mitigation catalog of Yates County Hazard Mitigation Plan; and
 - Designated point of contact.

The Yates County HMP Coordinator may utilize members of the HMP Steering Committee or other resources to complete this review. All proposed linked annexes will be submitted to the HMP Planning Committee for their review and comment prior to submittal to the New York State Division of Homeland Security and Emergency Services (NYS DHSES).



8. Plans approved and accepted by the HMP Steering Committee will then be forwarded to NYS DHSES for review with cover letter stating the forwarded plan meets local approved plan standards and whether the plan is submitted with local adoption or for criteria met/plan not adopted review.
9. NYS DHSES will review plans for state and federal compliance. Non-compliant plans are returned to the jurisdiction for correction. Compliant plans are forwarded to FEMA Region II office for review with annotation as to the adoption status.
10. FEMA Region II reviews the new jurisdiction's plan in association with the approved plan to ensure DMA compliance. Region II notifies new jurisdiction of results of review with copies to NYS DHSES and approved planning authority.
11. New jurisdiction corrects plan's shortfalls (if necessary) and resubmits to NYS DHSES through the approved plan lead agency.
12. For plans with no shortfalls that have not been adopted from the Region II review or outstanding corrected shortfalls, the new jurisdiction governing authority adopts the plan (if not already accomplished) and forwards adoption resolution to Region II with copies to lead agency and NYS DHSES.
13. Region II Director notifies new jurisdiction governing authority of plan approval.

The new jurisdiction plan is then included with the Yates County HMP, and the linking jurisdiction is committed to participate in the ongoing plan implementation and maintenance identified in Volume I of the HMP.

APPENDIX L: DAM SUPPLEMENT



This section contains information and details to support information provided in Chapter 3 (County Profile) and Chapter 6 (Dam Failure), which provide the distribution of dams located within Yates County and its municipalities, along with potential impacts of high hazard dams as discussed in the Emergency Action Plans (EAP) for those dams. Due to the sensitive nature of this information, details have been redacted. Contact the HMP Coordinator, Diane Caves, Office of Emergency Services at dcaves@yatescounty.org for more information.

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