



APPENDIX C. MEETING DOCUMENTATION

Appendix C includes meeting agendas, sign-in sheets, and meeting notes (where applicable and available) for meetings convened during the development of the Erie County Hazard Mitigation Plan.





MEETING NOTES

Meeting	Erie County Hazard Mitigation Plan (HMP) Update Steering Committee Kickoff Meeting		
Date	November 2, 2020	Time	9:30 – 11:15 a.m.
Location	Webinar		
Attendees	Daniel Neaverth, Commissioner, Erie County Department of Homeland Security and Emergency Services (DHSES)		
	Gregory J. Butcher, Deputy Commissioner, Erie County DHSES		
	Melissa Calhoun, Public Safety Officer - Special Assistant Erie County, Erie County DHSES		
	Ryan Sheedy, Senior MERS Coordinator, Erie County DHSES		
	Daniel Castle, Deputy Commissioner, Planning & Economic Development, Erie County Department of Environment and Planning		
	Josh Wilson, Coordinator - Pollution Prevention Program, Erie County Department of Environment and Planning		
	Matthew W. Barrett, Security Officer, Erie County Water Authority		
	Don Poletto, Senior Operations Engineer, City of Buffalo		
	R.J. Nieman, Emergency Manager, Village of Depew		
	Sean Crotty, Emergency Manager, Town of Hamburg; Chair, Erie County Emergency Managers Association		
	Jane Rice, Principal, Director of Planning, Environmental Design & Research, Landscape Architecture, Engineering & Environmental Services, D.P.C. (EDR)		
	Erica Tauzer, Planner, EDR		
	Matthew Butwin, Planner, Prospect Hill Consulting		
	Michael Kane, Planner, Prospect Hill Consulting		
	Brian Kehoe, Planner, Tetra Tech, Inc. (Tetra Tech)		
Tony Subbio, Project Manager, Tetra Tech, Inc. (Tetra Tech)			

Discussion Points

This section summarizes each discussion point addressed during the Steering Committee Kickoff Meeting.

Introductions

Mr. Subbio welcomed the group. Attendees introduced themselves. Mr. Wilson stated that the county is undergoing a climate assessment that may be relevant for the HMP. Mr. Crotty is particularly interested in mitigation along the shore of Lake Erie.

Overview of Hazard Mitigation

Mr. Subbio provided a brief overview of hazard mitigation and the funding available from the Federal Emergency Management Agency (FEMA). He described the requirements of the Disaster



MEETING NOTES

Mitigation Act of 2000 (DMA 2000) and the New York State Division of Homeland Security and Emergency Services (NYS DHSES) for HMPs.

Project Scope Review

This section summarizes each phase of the project discussed at the meeting.

Phase 1 – Planning Process

Mr. Subbio discussed the nature of the Steering Committee as providing strategic oversight of the planning process, and the series of Steering Committee meetings that will be conducted over the course of the planning process. He then described the formation of the Planning Partnership (the Partnership), which consists of the group of representatives from jurisdictions and stakeholder agencies involved with the HMP update process. Mr. Butcher reported that Jim Zymanek from the Town of Amherst will be part of the Steering Committee.

The Planning Partnership Kickoff Meeting will be held to introduce the members to the planning process and explain the data-gathering worksheets to be completed by each jurisdiction. The following organizations were discussed and will be invited to participate in the planning process:

- County departments
- All municipalities
- Soil and Water Conservation District
- The Erie County Water Authority
- Schools and higher education facilities
- The first response community, consisting of police, fire, and ambulance companies
- New York State (NYS) Agencies
- The business community and chambers of commerce
- Neighboring counties
 - Planning departments
 - Offices of emergency management
- The general public

Mr. Castle recommended including personnel from the Department of Sewage Management, as they operate six or seven sewage treatment plants in the county. He also recommended including representatives from the Office of Geographic Information Systems (GIS).

Phase 2 – Update the Risk Assessment

The group discussed the hazards that were profiled in the 2015 version of the HMP and what will be profiled in the updated plan. Reliability of the electrical grid was discussed. The need to examine areas that have had major transportation accidents was also discussed, as was vector-borne diseases. Mr. Subbio identified other hazards that had been examined in other counties, including epidemic/pandemic, agricultural product spills, harmful algal blooms, and dam failures. Ms. Calhoun



MEETING NOTES

shared the list of high-priority hazards from the County Emergency Preparedness Assessment (CEPA).

The following hazards will be profiled in the updated HMP:

- Coastal Erosion
- Flood
- Severe Winter Storm
- Cyber Attack
- Hazardous Materials
- Utility Failure
- Earthquake
- Landslide
- Wildfire
- Expansive Soils
- Pandemic
- Extreme Temperatures
- Severe Storm

Mr. Subbio described the vulnerability analysis that will be conducted for each of the hazards.

Upon completion of the hazard profiles, Tetra Tech will review the risk assessment with the Partnership and the public.

Phase 3 – Public Involvement Strategy

Municipalities will complete a Letter of Intent to Participate (LOI) to acknowledge that they will be plan participants and to confirm their understanding of their roles and responsibilities in the planning process. Mr. Butcher reported that he has received 27 LOIs so far. Mr. Butcher confirmed that, since the county already met with the municipalities and has been collecting LOIs, the proposed set of municipal introductory meetings was not necessary.

Tetra Tech will conduct a series of information-gathering meetings with participating jurisdictions after the Planning Partnership Kickoff Meeting. These information-gathering meetings will be held to answer questions and gather information to feed the planning process. They will be conducted via webinar, with possible in-person follow up.

Mr. Subbio briefly introduced the set of information-gathering worksheets that Tetra Tech will use to collect information from the municipalities. The worksheets will be discussed in greater detail at the Planning Partnership Kickoff Meeting.

Mr. Subbio then described the project website that will be developed to provide information on the planning process. Additionally, a set of SurveyMonkey surveys will be deployed to get feedback from members of the general public and stakeholder organizations (e.g., emergency responders, healthcare facilities, schools, and higher education, etc.). Tetra Tech will also develop a simple online survey tool for individuals to identify problem areas caused by different hazards in the county.

Mr. Subbio then stated that there will be two public information meetings at the beginning of the planning process to provide information to the general public. There will be two Partnership meetings open to the general public as well- one to review the results of the risk assessment, and the other to review the completed draft HMP.

Phase 4 – Mitigation Strategy

The Steering Committee will set the goals and objectives for the HMP and will share them with the Partnership. Tetra Tech will use the information reported by the municipalities regarding their



MEETING NOTES

capabilities and will also review the status of the mitigation actions identified in the 2015 version of the HMP to identify and prioritize new and existing mitigation actions for inclusion in the updated HMP.

Tetra Tech and NYS DHSES will conduct a Mitigation Strategy Workshop to assist in developing new mitigation actions for inclusion in the plan.

Tetra Tech will compile the information from the worksheets, risk assessment, capability assessment, and mitigation actions into a jurisdictional annex for the county and each of its municipalities. The annexes detail the analysis and information of the HMP for the respective jurisdictions to make the document easier to use for local officials. The Erie County Water Authority will participate as a separate jurisdiction, and will have its own annex in the plan.

Phase 5 – Plan Maintenance

Tetra Tech will work with the Steering Committee to develop procedures for maintaining the HMP over the next 5 years. These procedures will be documented in the Plan Maintenance section of the HMP. This section will also describe the ways in which the HMP will be integrated with other planning mechanisms, such as comprehensive and master plans, local regulations, etc.

Mitigation actions will be loaded into Tetra Tech’s plan review tool to allow for ongoing plan maintenance.

Phase 6 – Plan Update and Deliverables

Throughout the planning process, Tetra Tech will develop the HMP document. The main body will profile the county, explain the planning process, include the risk assessment and mitigation strategy, and discuss maintenance of the plan. Each jurisdiction will have its own annex in the HMP, which will provide information specific to that jurisdiction.

The draft plan will be shared with the Steering Committee for review and comment throughout the planning process.

Phase 7 – Plan Review and Adoption

After making any required changes, Tetra Tech will post the HMP for public review. The public review period will be advertised and will last for 30 days. Tetra Tech will then conduct a public meeting with the Planning Partnership to gather feedback on the draft plan and make any required changes.

Tetra Tech will then submit the draft for the State’s formal review. NYS DHSES will review the draft. If changes are required, Tetra Tech will make the changes and resubmit the document to the State. After the State is satisfied with the draft, the State will forward it to Federal Emergency Management Agency (FEMA) Region II for review. FEMA Region II will review the draft within 45 days, and Tetra Tech will make any required changes upon receipt of FEMA review comments. When FEMA is satisfied with the HMP, FEMA will grant the HMP “approvable pending adoption” status to indicate that it meets all requirements.



MEETING NOTES

The county and participating jurisdictions will formally adopt the HMP by resolution. After adoption, each jurisdiction will receive a letter from FEMA stating that the HMP is formally approved.

Project Team

Mr. Subbio discussed how the three firms on Tetra Tech's project team will integrate to carry out the project. Tetra Tech's planners will lead the plan update, work with municipal officials, conduct analysis, and develop the document. EDR will perform the capabilities assessment and the plan and regulatory review, and will discuss capabilities with local officials. Prospect Hill will lead municipal engagement, work with municipalities, help gain participation, and provide local support as needed.

All three firms will participate in the planning meetings and municipal information gathering sessions.

Project Schedule Review

Mr. Subbio reviewed the project schedule. The Planning Partnership Kickoff Meetings have been scheduled for November 18 and 19, 2020. The Municipal Information Gathering Sessions and Public Information Meetings will be conducted in mid-December 2020. The jurisdictional annexes will be complete by April 9, 2021, and the rest of the plan will be complete by the following week. This allows for the public review, NYS DHSES review, and federal review to occur to receive "approvable pending adoption" (APA) status by November 2021, and for the plan to be adopted and approved in December 2021. The timeline depends heavily on how quickly Tetra Tech can obtain GIS data from the county and how quickly the project team receives all required information from the municipalities.

Next Steps

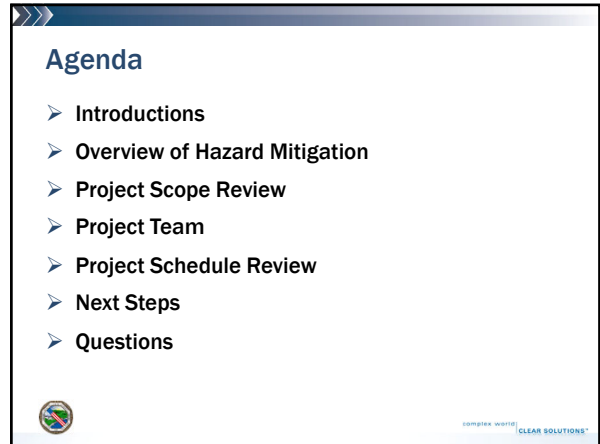
- The county will execute the project contract as soon as possible.
- Steering Committee members will send any relevant plans, studies, or documents to Mr. Subbio.
- County officials will complete the GIS Wishlist and send it to Mr. Butcher and Mr. Subbio.
- Tetra Tech will develop the project website and stakeholder surveys.
- The Planning Partnership Kickoff Meetings will be conducted on November 18 and 19, 2020.
- Tetra Tech and the county will schedule the municipal information gathering sessions and public information meetings in the coming weeks.
- Tetra Tech will continue to update the risk assessment.
- Ms. Calhoun will provide the blank status tracker from NYS DHSES to Mr. Subbio.

Mr. Butcher confirmed that Tetra Tech may reach out directly to Steering Committee members to address issues, with copies of any emails to Mr. Butcher and Ms. Calhoun.

The meeting adjourned at 11:15 a.m.



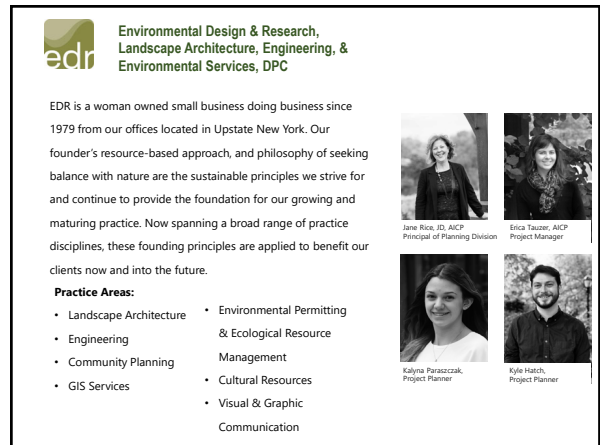
2



3



4



5



6



7

What is hazard mitigation?

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

"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).

8

Mitigation Works!

➤ The nation saves \$6 for every \$1 spent through mitigation grants funded via select federal agencies.

National Benefit-Cost Ratio (BCR) Per Peril <small>*BCR numbers in this study have been rounded</small>	Beyond Code Requirements	Federally Funded
Overall Hazard Benefit-Cost Ratio	\$4:1	\$6:1
Riverine Flood	\$5:1	\$7:1
Hurricane Surge	\$7:1	Too few grants
Wind	\$5:1	\$5:1
Earthquake	\$4:1	\$3:1
Wildland-Urban Interface Fire	\$4:1	\$3:1

9

Federal Requirements

➤ Disaster Mitigation Act of 2000

- Risk assessment
- Public outreach and participation
- Process for update
- Formal state and FEMA review
- Documentation of acceptance by the community

10

New York State Requirements

- Develop jurisdictional teams
- Assess critical facilities
- Plan for displaced residents
- Plan for evacuation needs and sheltering
- Document past mitigation accomplishments
- Include jurisdictional annexes
- Develop mitigation actions
- Identify funding sources
- Plan for climate change

11

Project Scope Review

12

Project Scope Review



➤ Phase 1 – Planning Process

- Steering Committee
 - Strategic oversight
 - Meetings
 - With municipal information gathering sessions
 - With Risk Assessment Review and Strengths, Weaknesses, Opportunities, and Obstacles (SWOO) Meeting
 - To confirm updated goals and objectives
 - With Mitigation Strategy Workshop
 - Prior to the public comment period of the draft
 - With Plan Draft Review Meeting
 - Other meetings as needed

13

Project Scope Review



- **Phase 1 – Planning Process**
 - **Planning Partnership**
 - County Departments
 - State Agencies
 - Emergency Responders
 - Municipalities
 - Neighboring Counties
 - General Public
 - Soil and Water Conservation District
 - Chamber of Commerce
 - Schools and Higher Education
 - Tourism Groups

14

Project Scope Review (Continued)



- **Phase 2 – Update the Risk Assessment**
 - **Hazards of Concern (2015)**
 - Coastal Erosion
 - Earthquake
 - Expansive Soils
 - Extreme Temperatures
 - Extreme Wind
 - Flood
 - Ice Jams
 - Landslide
 - Tornado
 - Wave Action
 - Wildfire
 - Winter Storm

15

Project Scope Review (Continued)

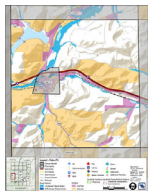


- **Phase 2 – Update the Risk Assessment (continued)**
 - **Hazards of Concern – Suggested**
 - Coastal Erosion (includes wave action)
 - Earthquake
 - Extreme Temperature
 - Flood (includes ice jams)
 - Landslide
 - Severe Storm (includes extreme wind and tornadoes)
 - Severe Winter Storm
 - Wildfire
 - **Keep Expansive Soils?**
 - **Add Up to Four Others – hazmat, utility failure, etc.?**

16

Project Scope Review (Continued)



- **Phase 2 – Update the Risk Assessment (Continued)**
 - **HAZUS-MH Analysis**
 - Earthquake: 500-year MRP event
 - Flood: 1-percent and 0.2-percent annual chance floodplains
 - Wind: 100-year and 500-year MRP events
 - **Quantitative Analysis for Geographic Hazards**
 - **Review Risk Assessment with Planning Partnership (open to the public)**

17

Project Scope Review (Continued)


- **Phase 3 – Public Involvement Strategy**
 - **Letter of Intent to Participate**
 - **Information Gathering Meetings**
 - Six webinars
 - In-person follow up

18

Project Scope Review (Continued)

- **Phase 3 – Public Involvement Strategy (continued)**
 - **Jurisdictional Worksheets**
 - Evaluation of Identified Hazards and Risk
 - Capability Assessment and Integration
 - NFIP Floodplain Administrator Questionnaire
 - Mitigation Action Review
 - New Development and Building Permits
 - Shelters, Evacuation Routes, Temporary Housing, and Long-Term Housing

19

Project Scope Review (Continued)

- Phase 3 – Public Involvement Strategy (continued)
 - Stakeholder Outreach
 - Project Website
 - Surveys
 - Individuals
 - Stakeholders
 - Problem Areas
 - Public Information Meetings
 - Planning Partnership Meetings (Open to the Public)
 - Risk Assessment Review
 - Plan Draft Review

20

Project Scope Review (Continued)

- Phase 4 – Mitigation Strategy
 - Develop Goals and Objectives
 - Develop with Steering Committee
 - Review with Planning Partnership
 - Assess Capabilities
 - Conduct Mitigation Strategy Workshop
 - Develop Annexes

21

Project Scope Review (Continued)

- Phase 5 – Plan Maintenance
 - Annual Review
 - Integration with Other Planning Mechanisms
 - BAToolSM
- Phase 6 – Plan Update and Deliverables
 - Develop the Document
 - Develop and finalize main body
 - Finalize jurisdictional annexes
 - Draft Plan Reviewed by the Steering Committee throughout the process

22

Project Scope Review (Continued)

- Phase 7 – Plan Review and Adoption
 - Public Review
 - Draft Plan Review Meeting (open to the public)
 - Submittal to the New York State Division of Homeland Security and Emergency Services (NYS DHSES) and FEMA
 - Update as Necessary
 - “Approvable Pending Adoption”

23

Tt TETRA TECH

Project Team

Tt

edr

PROSPECT HILL
CONSULTING LLC

24

Tt TETRA TECH


Project Schedule Review

25

Project Schedule Review

Task	Milestones
Phase 1 - Planning Process	<ul style="list-style-type: none"> Conduct a Steering Committee Kickoff Meeting on November 2, 2020 Conduct Planning Partnership kickoff meetings on November 26 and 28, 2020 Conduct Steering Committee Meetings in conjunction with other planning meetings through submittal of the draft to NYS DSHHS
Phase 2 - Update the Risk Assessment	<ul style="list-style-type: none"> Perform a thorough risk assessment of each hazard by the middle of February 2021 Conduct a Risk Assessment Review and Strengths, Weaknesses, Obstacles, and Opportunities (SWO) Meeting on or about February 25, 2021
Phase 3 - Public Involvement Strategy	<ul style="list-style-type: none"> Implement public outreach throughout the planning process Conduct two Public Information Meetings during the week of December 7-11, 2020 Conduct municipal information gathering sessions during the week of December 14-18, 2020 Amend local legislation by the middle of February 2021
Phase 4 - Mitigation Strategy	<ul style="list-style-type: none"> Conduct the SWO Discussion during the Risk Assessment Review and SWO Meeting on or about February 25, 2021 Identify goals and objectives by the beginning of March 2021 Conduct a Mitigation Strategy Workshop on or about March 18, 2021 Complete the jurisdictional annex by April 9, 2021
Phase 5 - Plan Maintenance	<ul style="list-style-type: none"> Develop plan maintenance procedures by the end of November 2020 Repeal the old SHMP Risk Review Tool upon receiving ARA notice Begin plan development at the start of the project
Phase 6 - Plan Update and Deliverables	<ul style="list-style-type: none"> Complete the draft SHMP by April 13, 2021 Allow public review from April 14-May 14, 2021 Conduct the draft review meeting on or about May 17, 2021 Finalize the draft SHMP by May 20, 2021
Phase 7 - Plan Review and Adoption	<ul style="list-style-type: none"> Submit the draft SHMP to NYS DSHHS for review by May 21, 2021 Review and finalize the SHMP to ensure compliance with state and federal requirements through mid-November 2021 Receive ARA Notice in late November 2021 (anticipated) Facilitate adoption of the updated SHMP in December 2021
Phase 8 - Project Management	<ul style="list-style-type: none"> Develop monthly status reports and reviews Conduct project close-out in January 2022

26



Next Steps

27

Next Steps

- Document Request
- GIS Data
- Develop Website and Surveys
- Planning Partnership Kickoff Meetings
- Information Gathering Sessions
- Risk Assessment Update


28

Questions?


Thank you for your time!

29

Contacts



Gregory Butcher
 gregory.butcher@erie.gov
 (716) 858-2944



Tony Subbio
tony.subbio@tetrattech.com
 (717) 839-5654

30



AGENDA

ERIE COUNTY HAZARD MITIGATION PLAN UPDATE Steering Committee Kickoff Meeting

Monday, November 2, 2020 | 9:30 – 11:30 a.m.

1. Introductions

2. Overview of Hazard Mitigation

3. Project Scope Review

- a. Phase 1 – Planning Process
- b. Phase 2 – Update the Risk Assessment
- c. Phase 3 – Public Involvement Strategy
- d. Phase 4 – Mitigation Strategy
- e. Phase 5 – Plan Maintenance
- f. Phase 6 – Plan Update and Deliverables
- g. Phase 7 – Plan Review and Adoption

4. Project Team

5. Project Schedule Review

6. Next Steps

- a. Document Request
- b. GIS Data
- c. Develop Website and Surveys
- d. Planning Partnership Kickoff Meetings
- e. Information Gathering Sessions
- f. Risk Assessment Update

7. Questions



Project Schedule

Subject to Change

Task	Timeframe
Phase 1 – Planning Process	<ul style="list-style-type: none"> ▶ Conduct a Steering Committee Kickoff Meeting on November 2, 2020 ▶ Conduct Planning Partnership Kickoff Meetings on November 18 and 19, 2020 ▶ Conduct Steering Committee Meetings in conjunction with other planning meetings through submittal of the HMP to NYS DHSES
Phase 2 - Update the Risk Assessment	<ul style="list-style-type: none"> ▶ Perform a thorough risk assessment of each hazard by the middle of February 2021 ▶ Conduct a Risk Assessment Review and Strengths, Weaknesses, Obstacles, and Opportunities (SWOO) Meeting on or about February 15, 2021
Phase 3 - Public Involvement Strategy	<ul style="list-style-type: none"> ▶ Implement public outreach throughout the planning process ▶ Conduct two Public Information Meetings during the week of December 7-11, 2020 ▶ Conduct municipal information gathering sessions during the week of December 14-18, 2020
Phase 4 - Mitigation Strategy	<ul style="list-style-type: none"> ▶ Assess local capabilities by the middle of February 2021 ▶ Conduct the SWOO discussion during the Risk Assessment Review and SWOO Meeting on or about February 15, 2021 ▶ Identify goals and objectives by the beginning of March 2021 ▶ Conduct a Mitigation Strategy Workshop on or about March 18, 2021 ▶ Complete the jurisdictional annexes by April 9, 2021
Phase 5 - Plan Maintenance	<ul style="list-style-type: none"> ▶ Develop plan maintenance procedures by the end of November 2020 ▶ Populate the BAToolSM Plan Review Tool upon receiving APA status
Phase 6 - Plan Update and Deliverables	<ul style="list-style-type: none"> ▶ Begin plan development at the start of the project ▶ Complete the draft HMP by April 13, 2021 ▶ Allow public review from April 14-May 14, 2021 ▶ Conduct the draft review meeting on or about May 17, 2021 ▶ Finalize the draft HMP by May 20, 2021
Phase 7 - Plan Review and Adoption	<ul style="list-style-type: none"> ▶ Submit the draft HMP to NYS DHSES for review by May 21, 2021 ▶ Revise and finalize the HMP to ensure compliance with state and federal requirements through mid-November 2021 ▶ Receive APA status in late November 2021 (estimated) ▶ Facilitate adoption of the updated HMP in December 2021
Phase 8 - Project Management	<ul style="list-style-type: none"> ▶ Develop monthly status reports and invoices ▶ Conduct project close-out in January 2022



MEETING NOTES

Meeting	Erie County Hazard Mitigation Plan (HMP) Update Planning Partnership Kickoff Meeting #1		
Date	November 18, 2020	Time	6:00 – 7:10 p.m.
Location	Webinar		
Attendees	Dan Castle, Deputy Commissioner, Erie County Department of Environment and Planning		
	Greg Butcher, Deputy Commissioner, Erie County Department of Homeland Security and Emergency Services		
	Melissa Calhoun, Public Safety Officer - Special Assistant Erie County, Erie County Department of Homeland Security and Emergency Services		
	Daniel Neaverth, Commissioner, Erie County Department of Homeland Security and Emergency Services		
	Ryan Sheedy, Senior MERS Coordinator, Erie County Department of Homeland Security and Emergency Services		
	Brian Rose, Senior Project Manager, Erie County Department of Public Works Division of Highways		
	Adam Kneis, Senior Safety Analyst; Health, Safety Risk Management, Erie 1 Board of Cooperative Extension Services		
	Sean Crotty, Emergency Manager, Chair Erie County Emergency Managers Association		
	Christine Ljungberg, School Business Administrator, Holland Central School District		
	Karis Manning, Professional Engineer 2 (Environmental), Division of Water; Chief, Western Flood Protection and Dam Safety Hub Section, New York State Department of Environmental Conservation		
	Albert Cheverie, Hospital Emergency Preparedness Representative, Western Region, New York State Department of Health; Office of Health Emergency Preparedness		
	Chris Renschler, Professor - Department of Geography, State University at Buffalo/Erie County Local Emergency Planning Association		
	Daniel Kowalik, Emergency Manager, Chair Village of Akron & Town of Newstead		
	Joe Fox, Emergency Manager, Chair Village of Blasdell		
	Dave Baumler, Deputy Coordinator of Emergency Management, Town of Clarence		
	Dave Bissonette, Emergency Manager, Chair Town of Clarence		
	Kenneth Martin, Supervisor, Town of Collins		
	Brian Burgstahler, Emergency Manager, Chair Town of Eden		
	Robert Stickney, Emergency Manager, Chair Town of Eden		
	Rick Davis, Mayor, City of Tonawanda		
Eric Conley, OEM, Town of West Seneca			
Erica Tauzer, Planner, Consultant - EDR			
Jane Rice, Principal, Director of Planning, Consultant - EDR			
Kyle Hatch, Planner, Consultant - EDR			



MEETING NOTES

Matthew Butwin, Planner, Consultant - Prospect Hill Consulting
Michael Kane, Planner, Consultant - Prospect Hill Consulting
Brian Kehoe, Planner, Consultant - Tetra Tech
Tony Subbio, Project Manager, Consultant - Tetra Tech

Discussion Points

This section summarizes each discussion point addressed during Planning Partnership Kickoff Meeting #1. This was the first of two identical sessions conducted to kick off the planning process.

Introductions

Mr. Subbio opened the meeting. As attendees entered the virtual meeting, they were prompted to provide their name and affiliation either verbally or via the webinar chat function. Mr. Neaverth and Mr. Butcher then welcomed all attendees and emphasized the importance of active participation from municipal representatives.

Mr. Subbio noted that the meeting will be recorded. He asked if there were any specific issues in the county that attendees would like to address during the planning process. The following issues were noted:

- Mr. Crotty noted that Grand Island has experienced flooding. He stated that any municipality along Lake Erie can experience damage from high water levels and storm surge and these events have occurred recently. Mr. Crotty is interested in tapping into any available mitigation grants.
- Mr. Cheverie identified (1) infectious disease and (2) the public health impacts of the water level of Lake Ontario as concerns for the Health Department.

Overview of Hazard Mitigation

Mr. Subbio introduced hazard mitigation planning. He encouraged each municipal representative at the meeting to work with a team of officials within their municipality to provide information for the HMP update. Mr. Subbio defined types of mitigation activities and described the Federal Emergency Management Agency (FEMA) Hazard Mitigation Assistance (HMA) grant program. In addition, Mr. Subbio provided a brief overview of federal and New York State (NYS) planning requirements for HMPs. For the plan to be finalized, review and approval are required by the NYS Division of Homeland Security and Emergency Services (DHSES) as well as FEMA. In order to be eligible for certain types of funding, the participation of a municipality must be documented in the HMP.

Project Scope Review

Mr. Subbio reviewed the planning process and the ways in which each phase meets a state and/or FEMA requirement.



MEETING NOTES

Phase 1 – Planning Process

Mr. Subbio discussed the formation of the Steering Committee and the Planning Partnership, and their respective roles in forwarding and completing the HMP. Each partnership member has shown their commitment to the HMP process by attending this meeting. Members are further encouraged to work with stakeholders to provide information about community-specific hazards. Members are asked to recommend actions that can be taken to mitigate the impact of the identified hazards of concern.

Phase 2 – Update the Risk Assessment

The following hazards of concern will be profiled in the updated HMP. This list reflects input from the HMP Steering Committee:

- Coastal Erosion
- Flood (including ice jams)
- Wildfire
- Cyber Attack
- Hazardous Materials
- Earthquake
- Landslide
- Epidemic/Pandemic
- Severe Storm
- Expansive Soils
- Severe Winter Storm
- Extreme Temperatures
- Utility Failure

The 500-year earthquake, the 1-percent and 0.2-percent annual chance floods, and the 100-year and 500-year wind events will be examined using FEMA's Hazards-U.S. (HAZUS) software. Quantitative analysis will be conducted for geographic hazards; qualitative analysis will be completed for other hazards. Upon completion of the hazard profiles, Tetra Tech will review the risk assessment with the Planning Partnership and the public.

Phase 3 – Public Involvement Strategy

Municipalities have been requested to complete a Letter of Intent to Participate (LOI) to acknowledge that they will actively participate in the HMP update process. The LOI confirms that the municipality understands its roles and responsibilities throughout the planning process. The template LOI has been provided by the Erie County Department of Homeland Security and Emergency Services.

Tetra Tech will conduct six information-gathering meetings with participating jurisdictions in early 2021. Specific dates are to be determined. These meetings provide a targeted venue to gather information crucial to creating a high-quality HMP and to address any questions from municipalities. Mr. Subbio stated that information will be gathered from participating municipalities via a set of jurisdictional worksheets, and he provided an overview of each.

Mr. Subbio described the multi-faceted stakeholder outreach efforts that are an important part of the HMP planning process. Tetra Tech will create and maintain a project-specific website to lessen data upload requirements on county staff and to provide information quickly. This website will be launched very soon. Tetra Tech has developed an innovative yet simple online mapping tool that



MEETING NOTES

can be used by all stakeholders. The graphic and geographically-referenced tool guides respondents through a process of identifying specific hazards that concern them. These digital platforms will be promoted through social media.

Tetra Tech will prepare a distinct online survey targeted to elicit meaningful hazard-related data from residents, members of academia, business members, and other stakeholders. A pair of Public Information Meetings will be held to introduce people to the planning process, at dates to be determined. The public is also welcome to participate in the Risk Assessment Review Meeting and the Plan Draft Review Meeting.

Mr. Butcher noted that he invited stakeholders interested in water quality and watershed management to participate in the HMP process via a contact list maintained by the Erie County Department of Environment and Planning. Mr. Butcher has reached out to the Local Emergency Planning Committee to draw in local expertise about hazardous materials. Mr. Castle offered to reach out with invitations to municipal planning officials, planning boards, zoning boards of appeal, code enforcement officers, and highway superintendents. Mr. Castle offered to make available a mailing list maintained by the Association of Erie County Governments. Outreach could potentially be facilitated via the One Region Forward distribution partner (<http://www.oneregionforward.org/>).

Mr. Subbio reviewed HMP information-gathering worksheets with the attendees. He recommended that each attendee work with a team of local officials to complete these worksheets. It is not expected that any one official will have the knowledge to complete all six of the worksheets. The targeted deadline for completion of the worksheets is December 15, 2020. The project consultant team will follow up with municipalities to facilitate worksheet completion, and upcoming meetings will provide additional opportunities to refine municipal-specific input. The six jurisdictional worksheets are:

- Evaluation of Identified Hazards and Risk
- Capability Assessment and Integration
- NFIP Floodplain Administrator Questionnaire
- Mitigation Action Review
- New Development and Building Permits
- Shelters, Evacuation Routes, Temporary Housing, and Long-Term Housing

Phase 4 – Mitigation Strategy

Tetra Tech has designed a robust program that guides municipalities in determining strategic actions going forward that address hazard threats. Tetra Tech will work with the Steering Committee to set the goals and objectives for the HMP, and will share them with the Planning Partnership.

Municipalities will be asked to confirm the status of mitigation actions from the most-recent version (2015) of the Erie County HMP. Municipalities will then be guided to plan the next round of mitigation actions to be included in the updated HMP.

Municipal capability is an important element of hazard mitigation planning. The consultant project team will catalogue municipal capabilities for implementing hazard mitigation. Tetra Tech and NYS



MEETING NOTES

DHSES will also conduct a Mitigation Strategy Workshop to assist municipalities with developing strategic mitigation actions to include in the final HMP.

Information gathered from participating jurisdictions about their capabilities will be used to develop implementable mitigation actions. As part of this process, the consultant project team will examine the ways in which regulations work together, as well as how other programs, such as capital improvement plans, can be leveraged to implement hazard mitigation. Problems and capabilities will be discussed at a Mitigation Strategy Workshop to assist in developing strategic mitigation actions for inclusion in the final HMP.

Phase 5 – Plan Maintenance

Tetra Tech and the Steering Committee will develop procedures for maintaining the HMP over the next 5 years. These procedures will be documented in the Plan Maintenance section of the HMP. This section will also describe integration of the HMP with other planning mechanisms, such as comprehensive and master planning, local regulations, etc. Mitigation actions will be loaded into Tetra Tech’s plan review tool to streamline ongoing plan maintenance.

Phase 6 – Plan Update and Deliverables

Throughout the planning process, Tetra Tech will compile and refine the HMP document. Tetra Tech has already begun developing the HMP. The draft plan will be shared with the Steering Committee and Planning Partnership for review and comment throughout the planning process.

Phase 7 – Plan Review and Adoption

Tetra Tech will also provide the draft HMP through various digital platforms to encourage public review and comment. The public review period will be advertised and will last for 30 days. In addition, Tetra Tech and the Planning Partnership will conduct a public meeting to gather feedback on the draft plan and to make required changes.

After the HMP draft is reviewed and updated, Tetra Tech will oversee submission of the formal draft to NYS DHSES for agency review. In the event that NYS DHSES identifies needed changes, Tetra Tech will make these changes and subsequently resubmit the document for final NYS review. After determining that requirements have been satisfied, NYS DHSES will forward the HMP to FEMA Region II for review. FEMA is required to review a submitted HMP within 45 days of receipt. If FEMA indicates that any changes are needed, Tetra Tech will make these changes and resubmit to FEMA. At this point, the HMP will be granted “approvable pending adoption” status to indicate that it meets all requirements.

The county and participating jurisdictions will formally adopt the HMP by resolution. After such adoption, each jurisdiction will receive a letter from FEMA stating that the HMP is formally approved.

Project Team

The consultant project team is led by Tetra Tech. The project is also supported by team members from EDR and from Prospect Hill Consulting. Several consultant team members participated in this



MEETING NOTES

meeting and briefly reviewed how and when they would engage with partnership members to elicit and refine municipal input. Planners from Tetra Tech and Prospect Hill will directly support municipalities in completing worksheets. EDR will coordinate the data received from municipalities and prepare the municipal capability assessments. The team aims to facilitate an efficient and productive planning process that provides value to municipalities.

Project Schedule Review

Mr. Subbio reviewed the project schedule. If all municipalities complete required worksheets expeditiously, the draft HMP should be ready for public review by the April 2021. The Steering Committee and Tetra Tech will strive to complete the HMP according to this project schedule.

Next Steps

The following next steps were discussed at the meeting:

- The consultant project team requested that the county and municipalities complete information-gathering worksheets by December 15, 2020. Partnership members will receive digital versions of the worksheets to be distributed via e-mail.
- Partnership members are requested to provide copies of local plans, regulations, or studies that may be relevant to hazard mitigation in their municipality. These documents can be emailed to Mr. Subbio.
- The information-gathering sessions will soon be scheduled; the date has not yet been determined.
- A pair of public information meetings will be soon be scheduled; the date has not yet been determined.
- Tetra Tech will continue updating the risk assessment.

Mr. Subbio and then Mr. Butcher ended the meeting by thanking participants for their attendance and forthcoming active engagement.

The meeting adjourned at 7:10 p.m.



MEETING NOTES

Meeting	Erie County Hazard Mitigation Plan (HMP) Update Planning Partnership Kickoff Meeting #2	
Date	November 19, 2020	Time 10:00 – 11:15 a.m.
Location	Webinar	
Attendees	Amy Alduino, Recycling Coordinator, Erie County Department of Environment and Planning	
	Mike Gangemi, Senior Planner - GIS, Erie County Department of Environment and Planning	
	John Hood, Chief Environmental Compliance Specialist, Erie County Department of Environment and Planning	
	Bonnie Lawrence, Deputy Commissioner, Erie County Department of Environment and Planning	
	Joanna Panasiewicz, Watershed Coordinator, Erie County Department of Environment and Planning	
	Lisa Matthies-Wiza, Director, Erie County Office of Geographic Information Services	
	Greg Butcher, Deputy Commissioner, Erie County Department of Homeland Security and Emergency Services	
	Melissa Calhoun, Public Safety Officer - Special Assistant, Erie County Department of Homeland Security and Emergency Services	
	Tracy Falco Chalmers, Erie County Department of Public Health	
	Jonathan DePlanche, Senior Civil Engineer, Erie County Department of Public Works Division of Highways	
	Matthew W. Barrett, Security Officer, Erie County Water Authority	
	Terry Wachowiak, Village Administrator/Treasurer, Village Alden	
	Jim Zymanek, Director, Emergency Services, Town of Amherst, Village of Williamsville	
	Jason Keding, Supervisor, Town of Boston	
	Mike Mazarowski, Emergency Manager, Town of Cheektowaga	
	Lynn Rybak, Assistant to the Supervisor, Town of Cheektowaga	
	Clyde Drake, Supervisor, Town of Concord	
	John Whitney, Supervisor, Town of Grand Island	
	Sean Crotty, Emergency Manager, Town of Hamburg	
	Geoffrey Hack, Emergency Manager, Town of Holland	
	Ronald Rozler, Disaster Coordinator, Town of Lancaster	
	David L. Cummings, Supervisor, Town of Newstead	
	Robert Lutz, Emergency Services Coordinator, Town of Tonawanda	
RJ Nieman, Emergency Manager, Village of Depew		
Tony Fischione, Code Enforcement Officer, Village of Depew		



MEETING NOTES

Scott Kuhlmeier, Director of Emergency Management, Village of Lancaster
Vincent George, Mayor, Village of North Collins
Richard Mrugalski, Emergency Manager, Town & Village of Orchard Park
Debra Smith, Clerk/Treasurer, Village of Sloan
Liz Melock, Village Administrator, Village of Spring Valley
Bill Krebs, Mayor, Village of Springville
Greg Stowell, Emergency Manager, Village of Springville
Mark Banks, Deputy Director, OEM, City of Tonawanda
Charles Stuart, Fire Chief, City of Tonawanda
Chief Dan Denz, Police Department, West Seneca Police Department
James Unger, Patrol Captain / Public Information Officer, West Seneca Police Department
Walter Rachel, Emergency Manager, Town of Wales
Christina Norman, Administrator, Buffalo Ambulatory Surgery Center
Dave DeLorenzo, Vice President, Security/Emergency Management, Catholic Health
Cindy Shelton, Environmental Health & Safety Manager, Chemical Distributors, Incorporated
Daniel McCartan, Emergency Manager, Erie County Medical Center
David McKnight, Emergency Manager, Kaleida Health
Laura Dewey, Health, Safety & Environment Manager, Mount St. Mary's Hospital
John Waszak, Supervisory Chemical Security Inspector, Region 2, Cybersecurity and Infrastructure Security Agency
Jason Tolsma, Emergency Response Manager, National Fuel Gas
Michael Fries, Warning Coordination Meteorologist, National Weather Service
Mary McIntosh, Regional Spill Geologist, New York State Department of Environmental Conservation
Theodore Myers, Regional Flood Control Engineer, Region 9, NYS Department of Environmental Conservation
Lynn Sigeti, Regional Emergency Preparedness Coordinator, Western New York Healthcare Association
Jillian Brown, Health, Safety & Environment Manager, Sisters of Charity Hospital, Main St. & St. Joseph Campus
Kyle Hatch, Planner, Consultant - EDR
Jane Rice, Planning Director, Consultant - EDR
Erica Tauzer, Project Manager, Consultant - EDR
Christine Gunn, Planner, Consultant - Prospect Hill



MEETING NOTES

	Matthew Butwin, Planner, Consultant - Prospect Hill
	Brian Kehoe, Planner, Consultant - Tetra Tech
	Subbio, Tony, Project Manager, Consultant - Tetra Tech

Discussion Points

This section summarizes each discussion point addressed during the Planning Partnership Kickoff Meeting #2. This was the second of two identical sessions conducted to kick off the planning process.

Introductions

Mr. Subbio opened the meeting. As attendees entered the virtual meeting, they were prompted to provide their name and affiliation either verbally or via the webinar chat function. Mr. Butcher then welcomed all attendees and emphasized the importance of active participation from municipal representatives.

Mr. Subbio noted that the meeting will be recorded. He asked if there were any specific issues in the county that attendees would like to address during the planning process. The following issues were noted:

- Ms. Alduino (*Erie County Recycling Coordinator*) indicated that she was specifically concerned or wanted to bring up debris clean-up and disposal – especially for woody debris.
- Mr. Zymanek (*Town of Amherst*) also wanted to see if and how flood management projects are being incorporated into the HMP and wanted to make sure they were evaluated and included.
- Mr. Myers (*NYS DEC*) brought up two items:
 - Would like to make sure flood protection program projects being done with NYSDEC and local jurisdictions, in conjunction with the USACE, would be included – especially as it relates to operations and management.
 - Would like dam safety included in the HMP.
- Ms. Panasiewicz (*Lake Erie Watershed Protection Alliance*) would like to be sure water quality and quantity are both included. In addition, watershed management plans are being developed and overlap with this planning and should be coordinated, as well as some Resilient New York projects. Also inquired about current status and reliability of FIRMs.
- Mr. DePlanche (*Erie County DPW – Highways*) would like both roads and bridges to be included in the HMP, as they pursued some FEMA funding recently and were not eligible because the projects were not in the previous HMP. They have an informal list or collection of roads and bridges and could pull something together.

Overview of Hazard Mitigation

Mr. Subbio provided an introduction to hazard mitigation planning. He encouraged each municipal representative at the meeting to work with a team of officials within their municipality to provide



MEETING NOTES

information for the HMP update. Mr. Subbio defined types of mitigation activities and described the Federal Emergency Management Agency (FEMA) Hazard Mitigation Assistance (HMA) grant program. In addition, Mr. Subbio provided a brief overview of federal and New York State (NYS) planning requirements for HMPs. For the plan to be finalized, review and approval are required by NYS Division of Homeland Security and Emergency Services (DHSES) as well as FEMA. In order to be eligible for certain types of funding, the participation of a municipality must be documented in the HMP.

Project Scope Review

Mr. Subbio reviewed the planning process and the ways in which each phase meets a state and/or FEMA requirement.

Phase 1 – Planning Process

Mr. Subbio discussed the formation of the Steering Committee and the Planning Partnership, and their respective roles in forwarding and completing the HMP. Each partnership member has shown their commitment to the HMP process by attending this meeting. Members are further encouraged to work with stakeholders to provide information about community-specific hazards. Members are asked to recommend actions that can be taken to mitigate the impact of the identified hazards of concern.

Phase 2 – Update the Risk Assessment

The following hazards of concern will be profiled in the updated HMP. This list reflects input from the HMP Steering Committee:

- Coastal Erosion
- Flood (including ice jams)
- Wildfire
- Cyber Attack
- Hazardous Materials
- Earthquake
- Landslide
- Epidemic/Pandemic
- Severe Storm
- Expansive Soils
- Severe Winter Storm
- Extreme Temperatures
- Utility Failure

The 500-year earthquake, the 1-percent and 0.2-percent annual chance floods, and the 100-year and 500-year wind events will be examined using FEMA's Hazards-U.S. (HAZUS) software. Quantitative analysis will be conducted for geographic hazards; qualitative analysis will be completed for other hazards. Upon completion of the hazard profiles, Tetra Tech will review the risk assessment with the Planning Partnership and the public. Attendee comments included the following:

- Mr. Whitney (*Grand Island*) indicated leaving storm surge as a hazard is essential, as it is a problem facing many communities along the lake and river.



MEETING NOTES

Phase 3 – Public Involvement Strategy

Municipalities have been requested to complete a Letter of Intent to Participate (LOI) to acknowledge that they will actively participate in the HMP update process. The LOI confirms that the municipality understands its roles and responsibilities throughout the planning process. The template LOI has been provided by the Erie County Department of Homeland Security and Emergency Services.

Tetra Tech will conduct six information-gathering meetings with participating jurisdictions in early 2021. Specific dates are to be determined. These meetings provide a targeted venue to gather information crucial to creating a high-quality HMP and to address any questions from municipalities. Mr. Subbio stated that information will be gathered from participating municipalities via a set of jurisdictional worksheets.

Mr. Subbio described the multi-faceted stakeholder outreach efforts that are an important part of the HMP planning process. Information and outreach will be shared throughout the course of the project via Erie County's website. In addition, Tetra Tech will create and maintain a project-specific website to lessen data upload requirements on county staff, and to provide information quickly. This website will be launched very soon. Tetra Tech has developed an innovative yet simple online mapping tool that can be used by all stakeholders. The graphic and geographically referenced tool guides respondents through a process of identifying specific hazards that concern them. These digital platforms will be promoted through social media.

Tetra Tech will prepare a distinct online survey targeted to elicit meaningful hazard related data from residents, members of academia, business members and other stakeholders. A pair of Public Information Meetings will be held to introduce people to the planning process, at dates to be determined. The public is also welcome to participate in the Risk Assessment Review Meeting and the Plan Draft Review Meeting.

Mr. Subbio reviewed HMP information gathering worksheets with the attendees. He recommended that each attendee work with a team of local officials to complete these worksheets. It is not expected that any one official will have the knowledge to complete all six of the worksheets. The targeted deadline for completion of the worksheets is December 15, 2020. The project consultant team will follow up with municipalities to facilitate worksheet completion, and upcoming meetings will provide additional opportunities to refine municipal-specific input. The six jurisdictional worksheets are:

- Evaluation of Identified Hazards and Risk
- Capability Assessment and Integration
- NFIP Floodplain Administrator Questionnaire
- Mitigation Action Review
- New Development and Building Permits
- Shelters, Evacuation Routes, Temporary Housing and Long-Term Housing



MEETING NOTES

Phase 4 – Mitigation Strategy

Tetra Tech has designed a robust program that guides municipalities in determining strategic actions going forward that address natural hazard threats. Tetra Tech will work with the Steering Committee to set the goals and objectives for the HMP with input from the Planning Partnership. Municipalities will be asked to confirm the status of mitigation actions from the most recent version (2015) of the Erie County HMP. Municipalities will then be guided to plan the next round of mitigation actions to be included in the updated HMP.

Municipal capability is an important element of hazard mitigation planning. The consultant project team will catalogue municipal capabilities for implementing hazard mitigation. Tetra Tech and NYS DHSES will also conduct a Mitigation Strategy Workshop to assist municipalities with developing strategic mitigation actions to include in the final HMP.

Crucial information from jurisdictional worksheets, risk assessment, capability assessment, and mitigation actions will be compiled into a jurisdictional annex for each municipality and the county. These annexes are a detailed compendium of municipality-specific data with analyses specific to the hazards of concern. The annexes facilitate access by local officials.

Phase 5 – Plan Maintenance

Tetra Tech and the Steering Committee will develop procedures for maintaining the HMP over the next 5 years (to 2025). These procedures will be documented in the Plan Maintenance section of the HMP. This section will also describe integration of the HMP with other planning mechanisms, such as comprehensive and master planning, local regulations, etc. Mitigation actions will be loaded into Tetra Tech’s plan review tool to streamline ongoing plan maintenance.

Phase 6 – Plan Update and Deliverables

Throughout the planning process, Tetra Tech will compile and refine the HMP document. The main body of the HMP will profile the county, explain the planning process, describe the risk assessment and mitigation strategy, and discuss maintenance of the plan. Jurisdictional annexes and additional information provide context and depth to a final HMP. Draft versions of the plan will be shared with the Steering Committee and Planning Partnership for review and comment throughout the planning process.

Phase 7 – Plan Review and Adoption

Tetra Tech will also provide the draft HMP through various digital platforms to encourage public review and comment. The public review period will be advertised and will last for 30 days. In addition, Tetra Tech and the Planning Partnership will conduct a public meeting to gather feedback on the draft plan and to make required changes.

After the HMP draft is reviewed and updated, Tetra Tech will oversee submission of the formal draft to NYS DHSES for agency review. In the event that NYS DHSES identifies needed changes, Tetra Tech will make these changes and subsequently resubmit the document for final NYS review. After determining that requirements have been satisfied, NYS DHSES will forward the HMP to FEMA



MEETING NOTES

Region II for review. FEMA is required to review a submitted HMP within 45 days of receipt. If FEMA indicates that any changes are needed, Tetra Tech will make these changes and resubmit to FEMA. At this point, the plan will be granted “approvable pending adoption” status to indicate that it meets all requirements.

The county and participating jurisdictions will formally adopt the HMP by resolution. After such adoption, each jurisdiction will receive a letter from FEMA stating that the HMP is formally approved.

Project Team

The consultant project team is led by Tetra Tech. The project is also supported by team members from EDR and from Prospect Hill Consulting. Several consultant team members participated in this meeting and briefly reviewed how and when they would engage with partnership members to elicit and refine municipal input. Planners from Tetra Tech and Prospect Hill will directly support municipalities in completing worksheets. EDR will coordinate the data received from municipalities and prepare the municipal capability assessments. The team aims to facilitate an efficient and productive planning process that provides value to municipalities.

Project Schedule Review

Mr. Subbio reviewed the project schedule. If all municipalities complete required worksheets expeditiously, then the draft HMP should be ready for public review by the April 2021. The Steering Committee and Tetra Tech will strive to complete the Plan according to this project schedule.

Next Steps

The following next steps were discussed at the meeting:

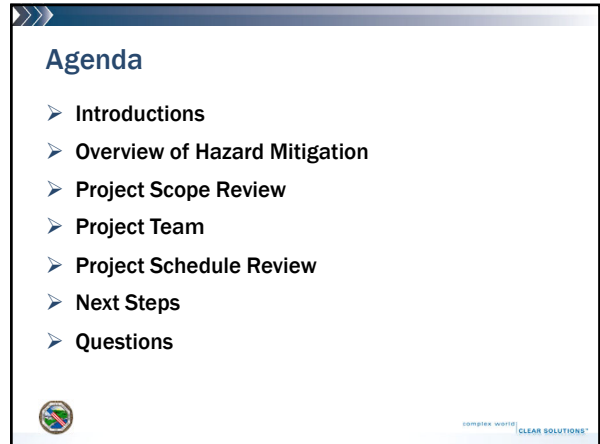
- The consultant project team requested that the county and municipalities complete information-gathering worksheets by December 15, 2020. Partnership members will receive digital versions of the worksheets to be distributed via e-mail.
- Partnership members are requested to provide copies of local plans, regulations, or studies that may be relevant to hazard mitigation in their municipality. These documents can be emailed to Mr. Subbio.
- The information-gathering sessions will soon be scheduled; the date has not yet been determined.
- A public information meeting will soon be scheduled; the date has not yet been determined.
- Tetra Tech will continue developing hazard profiles, risk assessment, and other plan sections for the hazards of concern analyzed in the HMP.

Mr. Subbio and then Mr. Butcher ended the meeting by thanking participants for their attendance and forthcoming active engagement.

The meeting adjourned at 11:15 a.m.



2



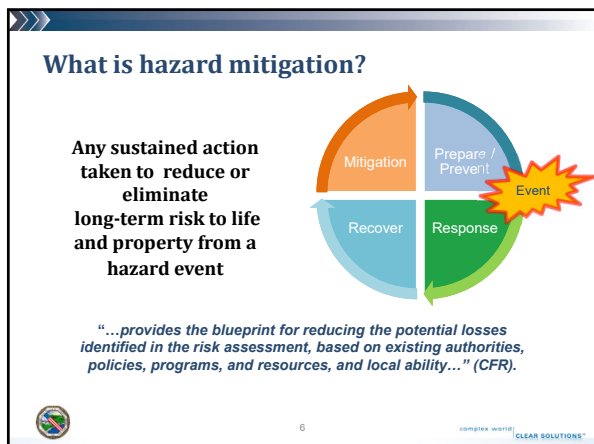
3



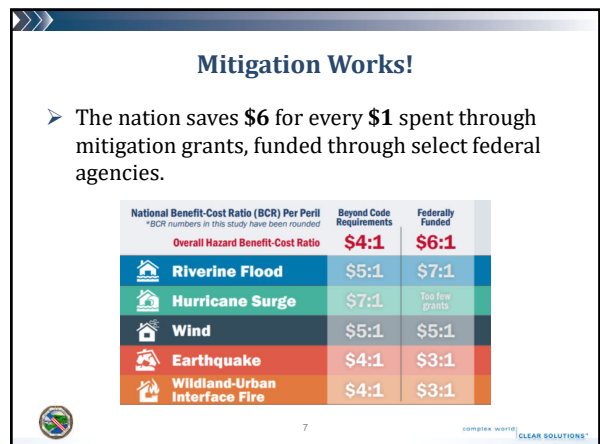
4



5



6





7

Federal Requirements

Disaster Mitigation Act of 2000



- Risk assessment
- Public outreach and participation
- Process for update
- Formal state and FEMA review
- Documentation of acceptance by the community

8

New York State Requirements

- Develop jurisdictional teams
- Assess critical facilities
- Plan for displaced residents
- Plan for evacuation needs and sheltering
- Document past mitigation accomplishments
- Include jurisdictional annexes
- Develop mitigation actions
- Identify funding sources
- Plan for climate change

9





Project Scope Review



10

Project Scope Review

- Phase 1 – Planning Process
 - Steering Committee - Strategic oversight
 - Planning Partnership
 - Municipal officials
 - Stakeholders
 - General Public






11

Project Scope Review (Continued)

- Phase 2 – Update the Risk Assessment
 - Hazards of Concern

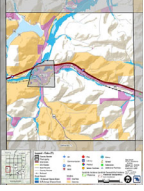


▪ Coastal Erosion	▪ Flood	▪ Severe Winter Storm
▪ Cyber Attack	▪ Hazardous Materials	▪ Utility Failure
▪ Earthquake	▪ Landslide	▪ Wildfire
▪ Expansive Soils	▪ Pandemic	
▪ Extreme Temperatures	▪ Severe Storm	

12

Project Scope Review (Continued)



- Phase 2 – Update the Risk Assessment (Continued)
 - HAZUS-MH Analysis
 - Earthquake: 500-year MRP event
 - Flood: 1-percent and 0.2-percent annual chance floodplains
 - Wind: 100-year and 500-year MRP events
 - Quantitative Analysis for Geographic Hazards
 - Review Risk Assessment with Planning Partnership (open to the public)

13

Project Scope Review (Continued)

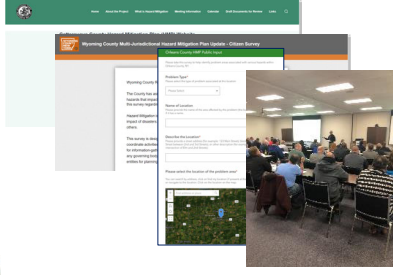


- Phase 3 – Public Involvement Strategy
 - Letter of Intent to Participate
 - Six Information Gathering Meetings – Webinars
 - Jurisdictional Worksheets
 - Evaluation of Identified Hazards and Risk
 - Capability Assessment and Integration
 - NFIP Floodplain Administrator Questionnaire
 - Mitigation Action Review
 - New Development and Building Permits
 - Shelters, Evacuation Routes, Temporary Housing, and Long-Term Housing

14

Project Scope Review (Continued)



- Phase 3 – Public Involvement Strategy (Continued)

15

Project Scope Review (Continued)



- Phase 4 – Mitigation Strategy
 - Develop Goals and Objectives
 - Assess Capabilities
 - Conduct Mitigation Strategy Workshop
 - Develop Annexes

16

Project Scope Review (Continued)



- Phase 5 – Plan Maintenance
- Phase 6 – Plan Update and Deliverables
 - Develop the Document
 - Develop and finalize main body
 - Finalize jurisdictional annexes
 - Draft Plan Reviewed throughout the Process

17

Project Scope Review (Continued)

- Phase 7 – Plan Review and Adoption
 - Public Review
 - Draft Plan Review Meeting (open to the public)
 - Submittal to the New York State Division of Homeland Security and Emergency Services (NYS DHSES) and FEMA
 - Update As Necessary
 - “Approvable Pending Adoption”

18

Project Team





19



Project Schedule Review

20

20

Project Schedule Review

Task	Timeline
Phase 1 - Planning Process	<ul style="list-style-type: none"> Conduct a Steering Committee Kickoff Meeting on November 2, 2020 Conduct Planning Partnership Kickoff Meetings on November 24 and 25, 2020 Conduct Steering Committee Meetings in conjunction with other planning meetings through submission of the draft SWOC Drafts
Phase 2 - Update the Risk Assessment	<ul style="list-style-type: none"> Perform a thorough risk assessment of each hazard by the middle of February 2021 Conduct a Risk Assessment Review and Strengths, Weaknesses, Obstacles, and Opportunities (SWOC) Meeting on or about February 25, 2021 Implement public outreach throughout the planning process
Phase 3 - Public Involvement Strategy	<ul style="list-style-type: none"> Conduct two Public Information Meetings during the week of December 7-11, 2020 Conduct municipal information gathering sessions during the week of December 14-20, 2020 Assess local capabilities by the middle of February 2021
Phase 4 - Mitigation Strategy	<ul style="list-style-type: none"> Conduct the SWOC discussion during the Risk Assessment Review and SWOC Meeting on or about February 25, 2021 Identify goals and objectives by the beginning of March 2021 Conduct a Mitigation Strategy Workshop on or about March 18, 2021 Complete the jurisdictional process by April 9, 2021
Phase 5 - Plan Maintenance	<ul style="list-style-type: none"> Develop plan maintenance procedures by the end of November 2020 Register the SWOC plan review tool with meeting ARIE notice Begin plan development at the start of the project
Phase 6 - Plan Update and Deliverables	<ul style="list-style-type: none"> Complete the draft IIRP by April 13, 2021 Allow public review from April 14-May 14, 2021 Conduct the draft review meeting on or about May 17, 2021 Finalize the draft IIRP by May 20, 2021
Phase 7 - Plan Review and Adoption	<ul style="list-style-type: none"> Submit the draft IIRP to NYS DMAS for review by May 21, 2021 Review and finalize the IIRP to ensure compliance with state and federal requirements through mid-December 2021 Receive the IIRP on the 15th of November 2021 (pending) Facilitate adoption of the updated IIRP in December 2021
Phase 8 - Project Management	<ul style="list-style-type: none"> Develop monthly status reports and notices Conduct project close-out in January 2022

21

21



Next Steps

22

22

Next Steps

- Complete worksheets
- Provide reports and plans
- Schedule Public Informational Meetings
- Schedule Municipal Information Gathering Meetings
- Risk Assessment Update

23

23

Questions?

Thank you for your time!

24

24

Contacts

 **Gregory Butcher**
gregory.butcher@erie.gov
 (716) 858-2944

 **Tony Subbio**
tony.subbio@tetrattech.com
 (717) 839-5654

25

25



AGENDA

ERIE COUNTY HAZARD MITIGATION PLAN UPDATE Planning Partnership Kickoff Meeting #1

Wednesday, November 18, 2020 | 6:00 – 8:00 p.m.

1. Introductions

2. Overview of Hazard Mitigation

3. Project Scope Review

- a. Phase 1 – Planning Process
- b. Phase 2 – Update the Risk Assessment
- c. Phase 3 – Public Involvement Strategy
- d. Phase 4 – Mitigation Strategy
- e. Phase 5 – Plan Maintenance
- f. Phase 6 – Plan Update and Deliverables
- g. Phase 7 – Plan Review and Adoption

4. Project Team

5. Project Schedule Review

6. Next Steps

- a. Complete worksheets
- b. Provide reports and plans
- c. Schedule Public Informational Meetings
- d. Schedule Municipal Information Gathering Meetings
- e. Risk Assessment Update

7. Questions





AGENDA

ERIE COUNTY HAZARD MITIGATION PLAN UPDATE Planning Partnership Kickoff Meeting #2

Thursday, November 19, 2020 | 10:00 a.m. – 12:00 p.m.

1. Introductions

2. Overview of Hazard Mitigation

3. Project Scope Review

- a. Phase 1 – Planning Process
- b. Phase 2 – Update the Risk Assessment
- c. Phase 3 – Public Involvement Strategy
- d. Phase 4 – Mitigation Strategy
- e. Phase 5 – Plan Maintenance
- f. Phase 6 – Plan Update and Deliverables
- g. Phase 7 – Plan Review and Adoption

4. Project Team

5. Project Schedule Review

6. Next Steps

- a. Complete worksheets
- b. Provide reports and plans
- c. Schedule Public Informational Meetings
- d. Schedule Municipal Information Gathering Meetings
- e. Risk Assessment Update

7. Questions



Project Schedule

Subject to Change

Task	Timeframe
Phase 1 – Planning Process	<ul style="list-style-type: none"> ▶ Conduct a Steering Committee Kickoff Meeting on November 2, 2020 ▶ Conduct Planning Partnership Kickoff Meetings on November 18 and 19, 2020 ▶ Conduct Steering Committee Meetings in conjunction with other planning meetings through submittal of the HMP to NYS DHSES
Phase 2 - Update the Risk Assessment	<ul style="list-style-type: none"> ▶ Perform a thorough risk assessment of each hazard by the middle of February 2021 ▶ Conduct a Risk Assessment Review and Strengths, Weaknesses, Obstacles, and Opportunities (SWOO) Meeting on or about February 15, 2021
Phase 3 - Public Involvement Strategy	<ul style="list-style-type: none"> ▶ Implement public outreach throughout the planning process ▶ Conduct two Public Information Meetings during the week of December 7-11, 2020 ▶ Conduct municipal information gathering sessions during the week of December 14-18, 2020
Phase 4 - Mitigation Strategy	<ul style="list-style-type: none"> ▶ Assess local capabilities by the middle of February 2021 ▶ Conduct the SWOO discussion during the Risk Assessment Review and SWOO Meeting on or about February 15, 2021 ▶ Identify goals and objectives by the beginning of March 2021 ▶ Conduct a Mitigation Strategy Workshop on or about March 18, 2021 ▶ Complete the jurisdictional annexes by April 9, 2021
Phase 5 - Plan Maintenance	<ul style="list-style-type: none"> ▶ Develop plan maintenance procedures by the end of November 2020 ▶ Populate the BAToolSM Plan Review Tool upon receiving APA status
Phase 6 - Plan Update and Deliverables	<ul style="list-style-type: none"> ▶ Begin plan development at the start of the project ▶ Complete the draft HMP by April 13, 2021 ▶ Allow public review from April 14-May 14, 2021 ▶ Conduct the draft review meeting on or about May 17, 2021 ▶ Finalize the draft HMP by May 20, 2021
Phase 7 - Plan Review and Adoption	<ul style="list-style-type: none"> ▶ Submit the draft HMP to NYS DHSES for review by May 21, 2021 ▶ Revise and finalize the HMP to ensure compliance with state and federal requirements through mid-November 2021 ▶ Receive APA status in late November 2021 (estimated) ▶ Facilitate adoption of the updated HMP in December 2021
Phase 8 - Project Management	<ul style="list-style-type: none"> ▶ Develop monthly status reports and invoices ▶ Conduct project close-out in January 2022



MEETING NOTES

Meeting	Erie County Hazard Mitigation Plan (HMP) Update Municipal Support Meeting #1		
Date	January 21, 2021	Time	2:00–3:30 p.m.
Location	Webinar		
Attendees	Jonathan DePlanche, Senior Civil Engineer, Erie County Highways		
	Greg Butcher, Deputy Commissioner, Erie County Department of Homeland Security and Emergency Services		
	Melissa Calhoun, Public Safety Officer, Erie County Department of Homeland Security and Emergency Services		
	Michael Tuberdylke, Special Operations Division Chief, Buffalo Fire Department		
	Mike Mazurowski, Emergency Services Coordinator, Town of Cheektowaga		
	Lynn Rybak, Supervisor's Office, Town of Cheektowaga		
	Dawn Izydorczak, Clerk, Town of Newstead		
	Vincent George, Mayor, Village of North Collins		
	Jan Hutchinson, Clerk/Treasurer, Village of North Collins		
	Jerry Whittington, Emergency Manager, Town of Sardinia		
	Mark Banks, Deputy Director Emergency Management, City of Tonawanda		
	Captain Fredric Foels, Captain of Patrol Operations, City of Tonawanda		
	Erik Lindhurst, Building Inspector and Flood Plain Administrator, City of Tonawanda		
	Chuck Stuart, Fire Chief, City of Tonawanda		
	Robert Lutz, Emergency Services Coordinator, Town of Tonawanda		
	Tony Subbio, Project Manager, Tetra Tech		
	Brian Kehoe, Planner, Tetra Tech		
	Matt Butwin, Principal, Prospect Hill Consulting		
	Mike Kane, Principal, Prospect Hill Consulting		
	Kyle Hatch, Planner, EDR		
Erica Tauzer, Project Manager, EDR			

Discussion Points

This section summarizes each discussion point addressed during the meeting.

Hazard Mitigation Planning

Mr. Subbio provided an overview of hazard mitigation planning, the Disaster Mitigation Act of 2000 (DMA 2000) and the Federal Emergency Management Agency's (FEMA) suite of Hazard Mitigation Assistance (HMA) funding streams. The Building Resilient Infrastructure and Communities (BRIC) grant program was created in 2020 to replace and expand the existing Pre-Disaster Mitigation grant.



MEETING NOTES

The Hazard Mitigation Grant Program (HMGP) provides funding to reduce long-term risk from disasters, and each state receives funding from allocations for Presidential Disaster Declarations. In order for a community to access these HMA funds, a community should list needed mitigation projects in this HMP update. Projects located on private or public property are eligible.

Mr. Subbio then reviewed the four Hazard Mitigation project types: (1) Local Plans and Regulations, (2) Education and Awareness Programs, (3) Natural Systems Protection, and (4) Structure and Infrastructure Projects.

Project Overview

Mr. Subbio then described the Erie County HMP and the process by which it is being updated, incorporating input and efforts from county staff and municipal representatives.

Problems and Problem Areas

Erie County Highway Department – There is not a significant issue with regular flooding of culverts; the Highway Department aims to address issues quickly. Flooding and erosion are impacting roads and bridges, but repairs to these facilities are expensive, and funds are short. The department will provide a list of county-owned critical facilities that need backup power for inclusion in HMP update.

Buffalo Fire Department – Flooding caused by ice jams is common each year along Cazenovia Creek. The city has a routine for addressing flood events, including citizen evacuations. Recent storms caused erosion and damaged break walls along the lakeshore. The Old First Ward contains a 4–5 block area that floods, during which emergency responders are on standby until floodwaters recede. Most homes are slab construction (no basement), typically residents do not evacuate, and residents do not want to leave their homes anyway. Typically, flooding and sometimes snow fall are the events that trigger emergency response and rescues.

Town of Cheektowaga – Snow storage is an issue each year, particularly after very large snow events. The town would like to dedicate certain areas to snow storage instead of relying upon ad hoc storage at town parks. The town wants the county and state to mitigate their roadways so that their respective roadways do not close during high waters. The HMP can include mitigation actions encouraging coordination between the town, county, and state highway agencies.

Village of North Collins – Each year, an area between Route 249, Park Terrace, and the railroad tracks floods. Mitigation of this area should be included as an action item in the HMP update.

City of Tonawanda – The City Department of Public Works (DPW) facility lacks backup power. A private facility, Tonawanda Towers, is a low-income/high-rise housing that lacks adequate backup power. Firefighters have had to carry residents down 11 flights of stairs in the past. Flooding is not an issue in the city.

Town of Tonawanda – The Police Department/Emergency Operation Center has an older diesel generator, and a new one is needed. The municipal building is also in need of backup power. The town is determining the scale of generator needed. There is little open space in the town, and many properties are historic. The floodplain in the town is open land that does not contain any buildings.



MEETING NOTES

Mitigation Projects Completed

Erie County Highway Department – The county has completed many mitigation projects. These projects were not listed in the 2015 mitigation actions list. Staff will compile mitigation projects completed back to 2015 and will provide this data to Melissa Calhoun or to Tony Subbio at Tetra Tech.

Town of Cheektowaga – Town staff walk the creek beds with New York State Department of Environmental Conservation (NYS DEC) annually to identify obstacles to water flow. Scajauada Creek and Cazenovia Creek are large creeks.

Village of North Collins – The village is implementing mitigation projects; however, after one project is finished, another soon pops up. The village's location among hills means that water flows overland in many directions. Flooding occurred recently on Eagle Drive near North Collins High School, and on High Street, which divides the village. A recently installed turf field at the high school was installed improperly, and water overflows onto side streets, including Harrison Avenue. Drainage is now improved, and water is diverted along Eagle Drive into Eighteen Mile Creek. A new culvert is needed in this area. Storm drain upgrades are being constructed with installation of a new water line. The village is replacing the bridge over Big Sister Creek in Spring 2021, working with New York State Department of Transportation (NYSDOT). The village will try to compile a list of projects.

City of Tonawanda – Shore hardening along Niagara River has been a successful mitigation project and has virtually eliminated flooding in the city. The park floods, but this does not present a hazard since it is a passive recreation area.

Town of Tonawanda – Similar to the City of Tonawanda, the town has only small amounts of flood prone areas, and these are open space.

Information Provided

Mr. Subbio reviewed the information required from each jurisdiction that has not yet been submitted.

Next Steps

The following next steps were discussed at the end of the meeting:

- Municipal officials will complete and submit any missing information-gathering worksheets still owed to the county.
- Attendees will discuss problems and problem areas caused by hazards with their colleagues at their respective municipalities.
- Attendees will discuss solutions to those problems with their colleagues and Tetra Tech's assigned planners.
- Tetra Tech will finish the risk assessment update and will conduct a public meeting to review the results of the risk assessment in the coming weeks.

The webinar adjourned at 3:30 p.m.



MEETING NOTES

Meeting	Erie County Hazard Mitigation Plan (HMP) Update Municipal Support Meeting #3		
Date	January 22, 2021	Time	9:00–10:20 a.m.
Location	Webinar		
Attendees	Joanna Panasiewicz, Planner, Erie County – Department of Environment and Planning, LEWPA		
	Melissa Calhoun, Public Safety Officer, Erie County Department of Homeland Security and Emergency Services		
	Matt Barrett, Security, Erie County Water Authority		
	Martha Librock, Clerk, Town of Aurora		
	Joseph Fox, Fire/Police Department, Village of Blasdell		
	Jason Keding, Supervisor, Town of Boston		
	Don Poletto, Engineer, City of Buffalo Department of Public Works		
	Clyde Drake, Supervisor, Town of Concord		
	Cathie Thomas, Administrator, Village of East Aurora		
	Brian Kehoe, Planner, Tetra Tech		
	Matt Butwin, Principal, Prospect Hill Consulting		
	Mike Kane, Principal, Prospect Hill Consulting		
	Samantha Morrone, Planner, EDR		
	Erica Tauzer, Project Manager, EDR		

Discussion Points

This section summarizes each discussion point addressed during the meeting.

Hazard Mitigation Planning

Mr. Kehoe welcomed participants and invited them to introduce themselves. Mr. Kehoe provided an overview of hazard mitigation planning, the Disaster Mitigation Act of 2000 (DMA 2000), and the Federal Emergency Management Agency’s (FEMA) suite of Hazard Mitigation Assistance (HMA) funding programs. The Building Resilient Infrastructure and Communities (BRIC) grant program was created in 2020 to replace and expand the existing Pre-Disaster Mitigation grant. The Hazard Mitigation Grant Program (HMGP) provides funding to reduce long-term risk from disasters, and each state receives funding from allocations for Presidential Disaster Declarations. In order for a community to access these HMA funds, a community should list needed mitigation projects in this HMP update. Projects located on private or public property are eligible.

Mr. Kehoe then reviewed the four Hazard Mitigation project types: (1) Local Plans and Regulations,



MEETING NOTES

(2) Education and Awareness Programs, (3) Natural Systems Protection, and (4) Structure and Infrastructure Projects.

Project Overview

Mr. Kehoe then described the Erie County HMP and the process by which it is being updated, incorporating input and efforts from county staff and municipal representatives.

Problems and Problem Areas

Erie County Planning/watersheds – Lake Erie Watershed Protection – The Lake Erie beach in Evans was heavily damaged by the October 2019 storm, including washing out bio-gardens. Storms this past November washed debris along the lakeshore, notably in the Town of Evans.

Erie County Water Authority (ECWA) – The ECWA plants (one draws from Lake Erie and one from the Niagara River) are not heavily impacted by flooding. Similarly, there is only minimal concern about flooding around pump stations. The Williams pump station (South Penora Street in the Town of Lancaster) is located in a high water table, which can be an issue when heavy snowmelt combines with rainfall. High winds affect Sturgeon Point because it is thickly wooded. Winds damage fencing at this ECWA facility, which is repaired immediately because security is a highest priority due to the facility's critical nature.

Town of Aurora – The east branch of Cazenovia Creek often jams with trees and changes the course of the creek. This is also true along Olean Creek, which is low-lying. There have not been any big floods recently. The severity of windstorms is increasing, with more gusts above 50 mph. New York State Electric and Gas (NYSEG) is responsible for clearing limbs.

City of Buffalo Department of Public Works – The biggest cause of flooding is during the spring thaw, which causes ice jams. On Cazenovia Creek and the Buffalo River, pieces break off and cause significant and regular flooding in certain areas. Certain creek bends are problematic. Cazenovia Creek has sloped walls that were installed as part of a flood control project that started construction in the 1920s. The final section was installed in the late 1990s. The city is seeking funds to extend these sloped walls further. Scajaquada Creek does not experience heavy ice jamming, but floods occur during Lake Erie seiche events. This creek backs up into the Niagara River, then the Black Rock Canal. Delaware Park and pump stations get overwhelmed during heavy rains, which results in road closings. The Buffalo River is dredged to 22–25 feet. Storm surge from the lake is common; homes and streets flood, and evacuations are necessary.

The New York State Department of Transportation (NYSDOT) Stevenson Bridge was reconstructed in the 1990s because abutments stuck out into the river, and ice jams resulted. The bridge now allows greater water flow underneath, and the deck was raised. The city's current project priority is the Bailey Avenue Bridge between McKinley Parkway and Elk Street – the "Y" where the Buffalo River and Cazenovia Creek split. The cost of the project is estimated at \$20 million. The South Ogden Bridge on West Seneca and South Buffalo border is being repaired.

The 2019 Halloween storm overtopped the Erie Basin Marina, damaged the roadway, and dislodged part of the Rhode Island pier. The city is working with FEMA to acquire funds to repair those



MEETING NOTES

locations. The City Fire Department will be asked for information about hazardous materials transport along rail lines. This information will be passed along to Melissa Calhoun.

National Grid is responsible for keeping power lines clear, but the city addresses this issue on an emergency basis.

Town of Concord – Nuclear waste moves along regional roads (West Valley nuclear site, which is only 5 miles from the town in Cattaraugus County)

Village of East Aurora – Tannery Brook runs through the entire village. Two significant, recent projects were performed by the county and have mitigated some related flooding problems. The town Highway Department replaced two bridges where the brook runs under North Grove, and Whaley Roads and the stream bank was stabilized.

This year, a culvert failed and created a parking lot sinkhole at Mikey D's Cafe. An emergency repair was completed, but a full repair will be done this year. An engineering firm has been selected, and the project will soon go out to bid. The village contains old infrastructure in areas like Oakwood, which requires road drainage and waterline upgrades.

The May 2020 train derailment was a frightening event that luckily did not cause much negative impact. It could have been a disaster since the train was carrying oil tankers. Starting the following day, cleanup of the contained diesel spill commenced. Despite being caused by human error, this event should be documented in the HMP update under the hazardous materials consideration.

Mitigation Projects Completed

Erie County Planning/Lake Erie Watershed Planning Association – Asked how participation in the Community Rating System (CRS) relates to this HMP update. Amherst is an active CRS community, and the Town of Evans is considering participating also. LEWPA is planning on creating a brochure for lakeshore landowners outlining coastal erosion processes and technical assistance. LEWPA provides educational information to the public through distribution at public libraries.

ECWA – The ECWA distributes information via email, through its website, and via alerts.

Town of Aurora – In 2019, the town updated its Flood Damage Prevention Ordinance. Public information, mostly FEMA materials and storm data, is distributed via the town website.

Village of Blasdell – Flooding is not a big problem in this landlocked village. Sometimes flooding occurs on a small creek as it passes under the railroad. Flooding occurs along Rush Creek along Jeffrey Boulevard near the Milestrip Expressway. One village-owned storage facility experiences occasional and minor flooding. National Grid is responsible for tree trimming.

Town of Boston – The town coordinates with Erie County and NYS agencies. Eighteen Mile Creek runs through the town, which is a Municipal Separate Storm Sewer Systems (MS4) community. The town is creating a digital town-wide drainage plan, which will assist with creating grant applications for mitigation project funding. The town takes a proactive approach to hazard mitigation.



MEETING NOTES

City of Buffalo – DPW – The Baily Avenue bridge project is the largest mitigation project in several years; this is a two span to one span conversion.

Information Provided

Mr. Kehoe reviewed the information required from each jurisdiction that has not yet been submitted.

Next Steps

The following next steps were discussed at the end of the meeting:

- Municipal officials will complete and submit any missing information-gathering worksheets still owed to the county.
- Attendees will discuss problems and problem areas caused by hazards with their colleagues at their respective municipalities.
- Attendees will discuss solutions to those problems with their colleagues and Tetra Tech's assigned planners.
- Tetra Tech will finish the risk assessment update and will conduct a public meeting to review the results of the risk assessment in the coming weeks.

The webinar adjourned at 10:20 a.m.



MEETING NOTES

Meeting	Erie County Hazard Mitigation Plan (HMP) Update Municipal Support Meeting #4		
Date	January 25, 2021	Time	2:00–3:15 p.m.
Location	Webinar		
Attendees	Greg Butcher, Deputy Commissioner, Erie County Department of Homeland Security and Emergency Services		
	Melissa Calhoun, Public Safety Officer, Erie County Department of Homeland Security and Emergency Services		
	Brian Rose, Senior Project Manager, Erie County Department of Public Works		
	Mark Hartley, Emergency Manager, Town of Aurora		
	Jim Zymanek, Director Emergency Services, Town of Amherst/Village of Williamsville,		
	Jayne DeTine, Clerk, Village of Akron		
	Randy Taylor, Emergency Manager, Town of Aurora and Village of East Aurora		
	Bill Smith, Planning and Development, Town of Evans		
	Jere Hoisington, Mayor, Village of Farnham		
	Ric Dimpfl, Emergency Manager, Village of Hamburg		
	Geoff Hack, Emergency Operations Manager, Town of Holland		
	Ronald Rozler, Disaster Coordinator, Town of Lancaster		
	Liz Melock, Administrator, Village of Springville		
	Bill Krebs, Mayor, Village of Springville		
	Brian Kehoe, Planner, Tetra Tech		
	Matt Butwin, Principal, Prospect Hill Consulting		
Laura Evans, Planner, Prospect Hill Consulting			
Samantha Morrone, Planner, EDR			

Discussion Points

This section summarizes each discussion point addressed during the meeting.

Hazard Mitigation Planning

Mr. Kehoe welcomed the participants and invited each to introduce themselves. Mr. Kehoe provided an overview of hazard mitigation planning, the Disaster Mitigation Act of 2000 (DMA 2000), and the Federal Emergency Management Agency’s (FEMA) suite of Hazard Mitigation Assistance (HMA) funding programs. The Building Resilient Infrastructure and Communities (BRIC) grant program was created in 2020 to replace and expand the existing Pre-Disaster Mitigation grant. The Hazard Mitigation Grant Program (HMGP) provides funding to reduce long-term risk from disasters, and each state receives funding from allocations for Presidential Disaster Declarations. In order for a



MEETING NOTES

community to access these HMA funds, a community should list needed mitigation projects in this HMP update. Projects located on private or public property are eligible.

Mr. Kehoe then reviewed the four Hazard Mitigation project types: (1) Local Plans and Regulations, (2) Education and Awareness Programs, (3) Natural Systems Protection, and (4) Structure and Infrastructure Projects.

Project Overview

Mr. Kehoe described the Erie County HMP and the process by which it is being updated, incorporating input and efforts from county staff and municipal representatives.

Problems and Problem Areas

Erie County – There are many county roads that parallel streams. High water flows cause erosion. Brian Rose will provide a list of roads that erode.

Town of Amherst – Debris issues occur in Ellicott Creek. The U.S. Army Corps of Engineers (USACE) made some recent changes to move water through the town to Tonawanda Creek and not impact their tributaries. Most recent flooding is an inconvenience, not requiring evacuation. Most soil and foundation issues have been remedied.

Town of Aurora – Route 400 comes through town, and there is concern about potential hazmat spills with tractor trailers. Speeds on that roadway should be reduced. Trimming of trees is needed in many rights-of-way.

Village of East Aurora – Village was lucky to escape serious damage from a recent train derailment; most cars were empty. There were propane tanks involved, but not damaged. Locomotive spilled some diesel fuel, but this was contained before it seeped into Tannery Brook. The railroad paid for the cleanup.

Town of Evans – The town is a coastal community with many tributaries and a heavily developed shoreline community. Stormwater drainage systems upgrade needed in Fern Brook and Muddy Creek portions of town. Coastal flooding due to high water levels and wave runup into tributaries. The town's lower elevations are in the southwest—the Point Breeze and Grandview Bay area. Ice jams and flooding occur on Big Sister Creek and have led to evacuations. The county is undertaking water quality improvements. The October 2019 storm caused much damage to waterfront parks and riprap and retaining walls, breakwater damage, stream bank erosion. Extensive documentation is needed with respect to downed trees and debris removal. The Emerald Ash borer infestation is an issue causing dead trees to fall on electric lines.



MEETING NOTES

Village of Farnham – Hazardous materials on trains is a serious concern. Train traffic has increased. The village is considering moving its emergency operations away from the tracks.

Town of Lancaster – Both the Town and Village of Lancaster have two very active rail lines (CSX & Norfolk Southern), and hazardous materials transit is an issue.

Village of Springville – The village has not experienced much stormwater damage. The wastewater treatment plant only has a small generator to run the digester plant. The village aims to upgrade backup power at the Mill St. facility. Springville has municipal electric. The village would like National Grid to consistently trim trees in order to avoid power outages. Greg Butcher mentioned municipalities should voice their concerns to the NYS Public Service Commission.

Mitigation Projects Completed

Town of Amherst – The town has upgraded the building code to raise standards for foundations. Several bridges and culverts were replaced, and floodplain restoration projects were completed. Public outreach is routine.

Village of East Aurora – Two culverts were replaced, and the creek bed was worked on. The village aims to complete a culvert project at Willow and Oakwood Avenue at Cazenovia Creek.

Town of Evans – The town is working with New York State Department of Environmental Conservation (NYS DEC) on shoreline restoration. Numerous FEMA claims are in process (Sturgeon Point Marina, breakwater reconstruction, and repairs to Lake Erie Beach Park). The town foreclosed on a residential property along Muddy Creek area.

Village of Farnham – The village installed generator backup at municipal buildings, including the designated emergency shelter.

Information Provided

Mr. Kehoe reviewed the information required from each jurisdiction that has not yet been submitted.

Next Steps

The following next steps were discussed at the end of the meeting:

- Municipal officials will complete and submit any missing information-gathering worksheets still owed to the county.
- Attendees will discuss problems and problem areas caused by hazards with their colleagues at their respective municipalities.
- Attendees will discuss solutions to those problems with their colleagues and Tetra Tech's assigned planners.



MEETING NOTES

- Tetra Tech will finish the risk assessment update and will conduct a public meeting to review the results of the risk assessment in the coming weeks.

The webinar adjourned at 3:15 p.m.



MEETING NOTES

Meeting	Erie County Hazard Mitigation Plan (HMP) Update Municipal Support Meeting #5		
Date	January 26, 2021	Time	7:00–8:15 p.m.
Location	Webinar		
Attendees	Kristofer Strauss, Senior Project Manager, Erie County Department of Public Works		
	Greg Butcher, Deputy Director, Erie County Department of Homeland Security and Emergency Services		
	Melissa Calhoun, Public Safety Officer, Erie County Department of Homeland Security and Emergency Services		
	Dan Castle, Deputy Commissioner, Erie County Department of Environment and Planning		
	Connie Miner, Grant Manager, Town of Brant		
	Ken Martin, Supervisor, Town of Collins		
	Brian Burgstahler, Emergency Manager, Town of Eden		
	Glenn Kirwin, Assistant Emergency Manager, Town of Eden		
	Rick Meyers, Emergency Manager, Town of North Collins		
	Eric Conley, Emergency Manager, Town of West Seneca		
	Brian Kehoe, Planner, Tetra Tech		
	Matt Butwin, Principal, Prospect Hill Consulting		
	Laura Evans, Planner, Prospect Hill Consulting		
	Samantha Morrone, Planner, EDR		

Discussion Points

This section summarizes each discussion point addressed during the meeting.

Hazard Mitigation Planning

Mr. Kehoe welcomed the participants and invited them to introduce themselves. Mr. Kehoe provided an overview of hazard mitigation planning, the Disaster Mitigation Act of 2000 (DMA 2000), and the Federal Emergency Management Agency's (FEMA) suite of Hazard Mitigation Assistance (HMA) funding programs. The Building Resilient Infrastructure and Communities (BRIC) grant program was created in 2020 to replace and expand the existing Pre-Disaster Mitigation grant. The Hazard Mitigation Grant Program (HMGP) provides funding to reduce long-term risk from disasters, and each state receives funding from allocations for Presidential Disaster Declarations. In order for a community to access these HMA funds, a community should list needed mitigation projects in this HMP update. Projects located on private or public property are eligible.

Mr. Kehoe then reviewed the four Hazard Mitigation project types: (1) Local Plans and Regulations, (2) Education and Awareness Programs, (3) Natural Systems Protection, and (4) Structure and Infrastructure Projects.



MEETING NOTES

Project Overview

Mr. Kehoe then described the Erie County HMP and the process by which it is being updated, incorporating input and efforts from county staff and municipal representatives.

Problems and Problem Areas

Erie County Department of Environment & Planning – The Springville Dam is county-owned and has structural issues. This is a safety concern, and the U.S. Army Corps of Engineers (USACE) is involved with repairing the dam. The Buffalo Bills stadium is on county-owned property and is adjacent to Smoke Creek. The stadium's stormwater system is old and can manage only a 2–5-year frequency storm. Larger rain events fill up the parking lot with water. The Bills football organization and the county have developed embankment and energy dissipation measures to prevent erosion. Upgrading of the storm system and a larger distribution box are planned.

The county building at 25 Delaware Street was built defectively and pieces fall into the street. During wind events, the Erie Community College (ECC) downtown campus loses shingles. Overhead scaffolding has been installed as a short-term fix. The county owns 240 buildings, all of which require some maintenance.

Town of Collins – The town, including the Village of Gowanda, experiences significant flooding. Cattaraugus Creek is the largest waterway, but the smaller streams feeding into Cattaraugus Creek typically cause flooding. FEMA and USACE are working on a plan to cut a ditch through the village to divert water.

Town of North Collins – A specific dam upstream has the potential to flood a portion of the town were it to fail. Clear Lake Dam is owned and maintained by the New York State Department of Environmental Conservation (NYS DEC) as part of the Clear Lake Wildlife Management Area.

Mitigation Projects Completed

Erie County – The county is updating or replacing many of its aged buildings to address updated building codes, etc. The Fire Training Academy in Cheektowaga, which also serves as the Emergency Operations Center, is being upgraded. The county has been replacing generators in various buildings at Erie Community College campuses that have not been updated since the 1960s.

Town of Collins – The town manages three water districts and two pump houses, one of which flooded in 1998. The berm surrounding this pumphouse was raised to 10 feet high in 2010.

Town of Eden – The town highway department has upgraded culverts and regularly clears ditches in floodprone areas. More highway projects are planned.

Information Provided

Mr. Kehoe reviewed the information required from each jurisdiction that has not yet been submitted.

Next Steps

The following next steps were discussed at the end of the meeting:



MEETING NOTES

- Municipal officials will complete and submit any missing information-gathering worksheets still owed to the county.
- Attendees will discuss problems and problem areas caused by hazards with their colleagues at their respective municipalities.
- Attendees will discuss solutions to those problems with their colleagues and Tetra Tech's assigned planners.
- Tetra Tech will finish the risk assessment update and will conduct a public meeting to review the results of the risk assessment in the coming weeks.

The webinar adjourned at 8:15 p.m.



MEETING NOTES

Meeting	Erie County Hazard Mitigation Plan (HMP) Update Municipal Support Meeting #6		
Date	January 27, 2021	Time	9:00–10:15 a.m.
Location	Webinar		
Attendees	Greg Butcher, Deputy Commissioner, Erie County Department of Homeland Security and Emergency Services		
	Melissa Calhoun, Public Safety Officer, Erie County Department of Homeland Security and Emergency Services		
	Ryan Sheedy, Senior MERS Coordinator, Erie County Department of Homeland Security and Emergency Services		
	Mark Pruitt, OEM Coordinator, Village of Alden		
	Jim Brecker, Code Officer, Town of Brant		
	Mark DeCarlo, Supervisor, Town of Brant		
	Jeffrey Grier, Town of Brant		
	James DePasquale, Town Supervisor, Town of Colden		
	Patty Zurbrick, Councilwoman, Town of Colden		
	Tony Fischione, Building Inspector, Village of Depew		
	RJ Nieman, Emergency Manager, Village of Depew		
	Sean Crotty, Emergency Manager, Town of Hamburg		
	William Cansdale, Superintendent Public Works, Village of Lancaster		
	John Gullo, Building Inspector, Village of Orchard Park		
	Richard Mrugalski, Emergency Manager, Town and Village of Orchard Park		
	Debra Smith, Clerk, Treasurer, Village of Sloan		
	James Unger, Police Department, Town of West Seneca		
	Brian Kehoe, Planner, Tetra Tech		
	Mike Kane, Principal, Prospect Hill Consulting		
	Laura Evans, Planner, Prospect Hill Consulting		
Samantha Morrone, Planner, EDR			

Discussion Points

This section summarizes each discussion point addressed during the meeting.

Hazard Mitigation Planning

Mr. Kehoe welcomed the participants and invited each to introduce themselves. Mr. Kehoe provided an overview of hazard mitigation planning, the Disaster Mitigation Act of 2000 (DMA 2000) and the Federal Emergency Management Agency's (FEMA) suite of Hazard Mitigation Assistance (HMA) funding programs. The Building Resilient Infrastructure and Communities (BRIC) grant program was



MEETING NOTES

created in 2020 to replace and expand the existing Pre-Disaster Mitigation grant. The Hazard Mitigation Grant Program (HMGP) provides funding to reduce long-term risk from disasters and each state receives funding from allocations for Presidential Disaster Declarations. In order for a community to access these HMA funds, a community should list needed mitigation projects in this HMP update. Projects located on private or public property are eligible.

Mr. Kehoe then reviewed the four Hazard Mitigation project types: (1) Local Plans and Regulations, (2) Education and Awareness Programs, (3) Natural Systems Protection, and (4) Structure and Infrastructure Projects.

Project Overview

Mr. Kehoe then described the Erie County HMP and the process by which it is being updated, incorporating input and efforts from county staff and municipal representatives.

Problems and Problem Areas

Town of Brant – When Cattaraugus Creek floods, it pushes debris around. During the large 2009 flood, a mobile home was pushed out into Lake Erie and then landed on Brant Beach. FEMA assisted with cleanup after this 2009 event. Snow is a hazard each year. Raw sewage outfalls are an issue in some of the town's creeks, and the Erie County Health Department is assisting with that problem. The beach in Brant collects a great amount of trash during heavy storms.

Town of Colden – Cazenovia Creek is eroding banks adjacent to residences on Route 240, south of Town Hall. The town is working with Erie County Soil and Water to address erosion issues. The town has obtained a perpetual permit from New York State Department of Environmental Conservation (NYS DEC) to access the creek bed and remove obstacles. Tree removal involves coordination with Erie County. The town has acquired funds to address erosion around the railroad tracks.

Village of Depew – Depew works to keep Scajaquada Creek flowing free by removing branches from the creek bed. The village has to encourage property owners to remove these branches because the village does not have easement access to the creek bed.

Town of Hamburg – Sean Crotty talked about aging infrastructure, which is being addressed by the Engineering/Highway Departments. The town wants to address seven problem areas where tributaries run into Lake Erie; water is backing up and storm sewers are clogging with debris. Sean Crotty will send a list of these locations to Tetra Tech.

Debris from Eighteen Mile Creek washes up on Woodlawn Beach, a New York State (NYS) park. There are erosion issues along the shoreline, and the town has been trying to get assistance from the U.S. Army Corps of Engineers (USACE). Hoover Beach floods every time the lake seiches. Residential areas on the stretch of Hamburg's Lake Erie shoreline are losing lands daily. Hoover Road, a town road, is only 18 feet from the edge of the lake.

The town would like to seek BRIC grant funding for repair of a clock tower damaged by storms. The Town of Hamburg Park boat launch gets dredged twice each year. The boat launch gets filled with debris.



MEETING NOTES

Town of Orchard Park – The town asked if the BRIC program can fund installation of backup power, tree trimming costs, dredging creeks or ponds, or bank stabilization. The utility companies are responsible for tree trimming, but sometimes the town has to remove trees and limbs as needed. The majority of flooding occurs in people’s backyards. Most creeks flow unimpeded. The town has dredging and bank stabilization needs on Freeman Pond and Smoke Creek.

Town of West Seneca – Ice jams occur each year along the Buffalo and Cazenovia Creeks, and the town coordinates with the City of Buffalo to do ice breakups. Some small sections of berms have been constructed, but the town has not been proactive in dealing with flooding. Buffalo Creek flooding resulted in evacuations on that street two years ago.

Mitigation Projects Completed

Village of Alden – Mark Pruitt was on the line but did not have a microphone. He will send us a list of projects completed in the village.

Town of Brant – Some roads have been upgraded and some overpasses rebuilt.

Village of Depew – Road and bridge repairs are a regular part of the capital program.

Town of Hamburg – The town has had a somewhat reactive approach to hazards. On NYS Route 5, the USACE just put up a break wall that will head off some erosion.

Town of Orchard Park – Town has upgraded some roads, just completed dredging Green Lake, and has rehabilitated that dam with a new spillway.

Information Provided

Mr. Kehoe reviewed the information required from each jurisdiction that has not yet been submitted.

Next Steps

The following next steps were discussed at the end of the meeting:

- Municipal officials will complete and submit any missing information-gathering worksheets still owed to the county.
- Attendees will discuss problems and problem areas caused by hazards with their colleagues at their respective municipalities.
- Attendees will discuss solutions to those problems with their colleagues and Tetra Tech’s assigned planners.
- Tetra Tech will finish the risk assessment update and will conduct a public meeting to review the results of the risk assessment in the coming weeks.

The webinar adjourned at 10:15 a.m.



MEETING NOTES

Meeting	Erie County Hazard Mitigation Plan (HMP) Update Municipal Support Meeting #7		
Date	February 2, 2021	Time	2:00–3:00 p.m.
Location	Webinar		
Attendees	Greg Butcher, Deputy Commissioner, Erie County Department of Homeland Security and Emergency Services		
	Melissa Calhoun, Public Safety Officer, Erie County Department of Homeland Security and Emergency Services		
	Mark Cornell, Deputy Commissioner, Erie County Parks Department		
	Nicole Milks, Clerk/Treasurer, Village of Angola		
	Phil Tremblay, Code Enforcement, Village of Angola		
	Carol Sheibley, Deputy Mayor, Village of Gowanda		
	Nick Crassi, Disaster Coordinator, Village of Gowanda		
	Bob Westfall, Engineer, Town of Grand Island		
	John Whitney, Supervisor, Town of Grand Island		
	John Wolf, Director of Public Safety, City of Lackawanna		
	Pat Hayes, Code Enforcement, City of Lackawanna		
	Brian Kehoe, Planner, Tetra Tech		
	Matt Butwin, Planner, Prospect Hill Consulting		
Samantha Morrone, Planner, EDR			

Discussion Points

This section summarizes each discussion point addressed during the meeting.

Hazard Mitigation Planning

Mr. Kehoe welcomed the participants and invited each to introduce themselves. Mr. Kehoe provided an overview of hazard mitigation planning, the Disaster Mitigation Act of 2000 (DMA 2000) and the Federal Emergency Management Agency’s (FEMA) suite of Hazard Mitigation Assistance (HMA) funding programs. The Building Resilient Infrastructure and Communities (BRIC) grant program was created in 2020 to replace and expand the existing Pre-Disaster Mitigation grant. The Hazard Mitigation Grant Program (HMGP) provides funding to reduce long-term risk from disasters, and each state receives funding from allocations for Presidential Disaster Declarations. In order for a community to access these HMA funds, a community should list needed mitigation projects in this HMP update. Projects located on private or public property are eligible.

Mr. Kehoe then reviewed the four Hazard Mitigation project types: (1) Local Plans and Regulations, (2) Education and Awareness Programs, (3) Natural Systems Protection, and (4) Structure and Infrastructure Projects.



MEETING NOTES

Project Overview

Mr. Kehoe then described the Erie County HMP and the process by which it is being updated, incorporating input and efforts from county staff and municipal representatives.

Problems and Problem Areas

Village of Angola – Storms have an impact in the village. The storm this past November was damaging. Freight trains run through village. There was a question on how residents would evacuate if there were a hazmat spill.

Town of Grand Island – The town is not typically impacted by flooding, though sometimes flooding impacts the shoreline due to winds off the Niagara River. The island depends upon safe and dependable bridge connections. Grand Island operates its own water and wastewater treatment capacity, and both facilities have backup generators. The level of the Niagara River is controlled by the power authority.

Village of Gowanda – The village has had a large amount of flooding during its recorded history. The brooks running through the village back up and cause flooding. Since about the 2013 flood, the village has emphasized flood mitigation. A \$6.5 million diversion channel through the village was completed. This has increased safety in the village and retained businesses and residents. The stability of the village reservoir is a concern due to past storm damage. The reservoir is the village's main water source.

City of Lackawanna – There are many rail lines throughout the city. It is not known if critical facilities have backup power.

Mitigation Projects Completed

Village of Gowanda – Persistence has paid off when pursuing funding from FEMA. It is necessary to wait a long time for the funding to come through, and there is extensive paperwork, but the funding has allowed the village to complete important mitigation projects.

Information Provided

Mr. Kehoe reviewed the information required from each jurisdiction that has not yet been submitted.

Next Steps

The following next steps were discussed at the end of the meeting:

- Municipal officials will complete and submit any missing information-gathering worksheets still owed to the county.
- Attendees will discuss problems and problem areas caused by hazards with their colleagues at their respective municipalities.
- Attendees will discuss solutions to those problems with their colleagues and Tetra Tech's assigned planners.



MEETING NOTES

- Tetra Tech will finish the risk assessment update and will conduct a public meeting to review the results of the risk assessment in the coming weeks.

The webinar adjourned at 3:00 p.m.



TETRA TECH
complex world | CLEAR SOLUTIONS™

**Erie County
Hazard Mitigation Plan Update
Municipal Support Meetings**

1

Welcome

- If you are attending the webinar on your computer, please add your name, title, and organization(s) to the Chat.
 - Bring your mouse to the lower part of the screen until a set of buttons appears.
 - Click “Show Conversation.”

2

Agenda

- Welcome and Introductions
- Hazard Mitigation Planning
- Project Overview
- Problems and Problem Areas
- Mitigation Projects Completed
- Information Provided
- Next Steps

Please ask questions at any time.

3

Hazard Mitigation Planning

*Hazard Mitigation is any action taken to reduce or eliminate **long-term risk** to people and property from disasters.*

- Disaster Mitigation Act of 2000
- Hazard Mitigation Assistance

- Building Resilient Infrastructure & Communities (BRIC)

4

Hazard Mitigation Planning

- Local Plans and Regulations**
 - Updating building codes
 - Integrating risk into Master Plans
- Education and Awareness Programs**
 - Flood insurance information
 - Know Your Risk! campaign
- Natural Systems Protection**
 - Preserving natural floodplain functions
 - Protecting well recharge areas
- Structure and Infrastructure Projects**
 - Constructing a levee
 - Elevating a house above the base flood level

5

Project Overview

- Update Erie County’s HMP (2015)
- Organize resources and build the Planning Team
- Develop hazard risk assessments
- Assess local mitigation capabilities
- Develop mitigation strategies
- Determine plan maintenance process
- Approval of HMP by NYS DHSES and FEMA
- Local municipal adoption of the approved HMP

6



Problems and Problem Areas

- Flooding, stormwater drainage
- Lake Erie shoreline
- Hazardous materials releases
- Lack of backup power
- Trees/branches on wires
- Take the survey at:
<https://arccg.is/9bzrr>

Erie County HMP Public Input

Please add the category to your identified problem area associated with your jurisdiction in Erie County, NY.

Problem Type*
Please select the type of problem associated with this location.
Please Select:

Name of Location
Please provide the name of the area affected by the problem (the building name, for instance) if there is one.

Describe the Location*
Please provide a street address for example: 123 Main Street. Also provide the latitude and longitude coordinates if you are able to do so. Please provide the address of the problem area and the location of the problem area.

Please select the location of the problem area*
You can search by address, click on that location if present at the problem area location, or simply click on the location. Click on the location on the map.



7

7

Mitigation Projects Completed

- Regulations updated?
- Plans updated?
- Culverts or bridges upgraded?
- Property buyouts?
- Floodplain restoration?
- Public outreach conducted?



8

8

Information Provided

1. Evaluation of Identified Hazards of Concern
2. Capability Assessment and Integration
3. NFIP Floodplain Administrator Questionnaire
4. Mitigation Actions
5. New Development and Building Permits
6. Shelters, Evacuation Routes, Temporary Housing, and Long-Term Housing



9

9

Information Provided

Jurisdiction	Worksheet 1 - Events and Losses	Worksheet 2 - Cap. Ass.	Worksheet 3 - NFIP Floodplain Admin Questionnaire	Worksheet 4 - New Development Permits	Worksheet 5 - New Development	Worksheet 6 - Shelters
Blasdell V	X	X	X	X	X	X
Boston T			X			
Brant T						
Buffalo C						
Cheektowaga T						
Clarence T						
Colden T						
Collins T						
Concord T	X	X	X	X	X	X
Depew V	X	X	X	X	X	X
East Aurora V	X	X	X	X	X	X
Eden T	X	X	X	X	X	X
Elma T	X	X	X	X	X	X
Evans T						
Farnham V						
Gowanda V						



10

10

Next Steps

- Submit completed worksheets
- Discuss problems and problem areas with your assigned planner
- Discuss solutions with your colleagues and assigned planner
- Complete the risk assessment



11

11

Contacts



Melissa Calhoun
Melissa.Calhoun@erie.gov
(716) 858-8440



Tony Subbio
tony.subbio@tetrattech.com
(717) 545-3580



12

12



AGENDA

ERIE COUNTY HAZARD MITIGATION PLAN UPDATE Municipal Support Meeting #1

Thursday, January 21, 2021 | 2:00–4:00 p.m.

-
1. Welcome and Introductions
 2. Hazard Mitigation Planning
 3. Project Overview
 4. Problems and Problem Areas
 5. Mitigation Projects Completed
 6. Information Provided
 7. Next Steps
-





AGENDA

ERIE COUNTY HAZARD MITIGATION PLAN UPDATE Municipal Support Meeting #3

Friday, January 22, 2021 | 9:00–11:00 a.m.

-
1. Welcome and Introductions
 2. Hazard Mitigation Planning
 3. Project Overview
 4. Problems and Problem Areas
 5. Mitigation Projects Completed
 6. Information Provided
 7. Next Steps
-





AGENDA

ERIE COUNTY HAZARD MITIGATION PLAN UPDATE Municipal Support Meeting #4

Monday, January 25, 2021 | 2:00–4:00 p.m.

-
1. Welcome and Introductions
 2. Hazard Mitigation Planning
 3. Project Overview
 4. Problems and Problem Areas
 5. Mitigation Projects Completed
 6. Information Provided
 7. Next Steps
-





AGENDA

ERIE COUNTY HAZARD MITIGATION PLAN UPDATE Municipal Support Meeting #5

Tuesday, January 26, 2021 | 7:00–9:00 p.m.

-
1. Welcome and Introductions
 2. Hazard Mitigation Planning
 3. Project Overview
 4. Problems and Problem Areas
 5. Mitigation Projects Completed
 6. Information Provided
 7. Next Steps
-





AGENDA

ERIE COUNTY HAZARD MITIGATION PLAN UPDATE Municipal Support Meeting #6

Wednesday, January 27, 2021 | 9:00–11:00 a.m.

-
1. Welcome and Introductions
 2. Hazard Mitigation Planning
 3. Project Overview
 4. Problems and Problem Areas
 5. Mitigation Projects Completed
 6. Information Provided
 7. Next Steps
-





AGENDA

ERIE COUNTY HAZARD MITIGATION PLAN UPDATE Municipal Support Meeting #7

Tuesday, February 2, 2021 | 2:00–4:00 p.m.

-
1. Welcome and Introductions
 2. Hazard Mitigation Planning
 3. Project Overview
 4. Problems and Problem Areas
 5. Mitigation Projects Completed
 6. Information Provided
 7. Next Steps
-



Jurisdiction	Worksheet 1 - Events and Losses	Worksheet 2 - Cap. Ass.	Worksheet 3-NFIP Floodplain Admin Questionnaire	Worksheet 4 - Past Action Progress	Worksheet 5 - New Development	Worksheet 6 - Shelters, etc.
Erie County						
Erie County Water Authority	X	X	X	X	X	X
Akron V	X	X	X	X	X	X
Alden T						
Alden V			X		X	
Amherst T						
Angola V	X			X		X
Aurora T	X	X	X	X	X	X
Blasdell V	X	X	X	X	X	X
Boston T			x		x	
Brant T						
Buffalo C						
Cheektowaga T						
Clarence T	X	X	X	X	X	X
Colden T						
Collins T	X	X	X	X	X	X
Concord T	X	X	X	X	X	X
Depew V	X	X	X	X	X	
East Aurora V	X	X	X	X	X	X
Eden T	X	X		X	X	
Elma T	X	X	X	X	X	X
Evans T	X					
Farnham V						
Gowanda V	X	X	X	X	X	X
Grand Island T						
Hamburg T						
Hamburg V	X	X	X	X	X	X
Holland T	X	X	X	X	X	X
Kenmore V	X	X	X	X	X	X
Lackawanna C						
Lancaster T						
Lancaster V						
Marilla T						
Newstead T	X	X	X	X	X	X
North Collins T						
North Collins V	X	X	X	X	X	X
Orchard Park T	X	X	X	X	X	X
Orchard Park V	X	X	X	X	X	X
Sardinia T		X	X		X	
Sloan V						
Springville V	X	X	X	X	X	X
Tonawanda C	X	X	X	X	X	X
Tonawanda T	X	X	X	X	X	X
Wales T						
West Seneca T	X	X			X	
Williamsville V						



MEETING NOTES

Meeting	Erie County Hazard Mitigation Plan (HMP) Update Public Information Meeting #1		
Date	January 25, 2021	Time	6:00 – 7:30 p.m.
Location	Webinar		
Attendees	Melissa Calhoun, Public Safety Officer, Erie County Department of Homeland Security and Emergency Services		
	Dan Castle, Deputy Commissioner, Erie County Department of Environment and Planning		
	John Hood, Planner, Erie County Department of Environment and Planning		
	Mike Desmond, Reporter, WBFO		
	Kevin Clapp, Planning Manager, NYS Division of Homeland Security and Emergency Services		
	Brian Kehoe, Planner, Tetra Tech		
	Matt Butwin, Principal, Prospect Hill Consulting		
	Mike Kane, Principal, Prospect Hill Consulting		

Discussion Points

This section summarizes each discussion point addressed during the meeting.

Hazard Mitigation Planning

Mr. Kehoe welcomed all attendees and invited each to introduce themselves. Mr. Kehoe provided an overview of hazard mitigation planning, the Disaster Mitigation Act of 2000 (DMA 2000), and the Federal Emergency Management Agency's (FEMA) suite of Hazard Mitigation Assistance (HMA) funding streams. The Building Resilient Infrastructure and Communities (BRIC) grant program was created in 2020 to replace and expand the existing Pre-Disaster Mitigation grant. The Hazard Mitigation Grant Program (HMGP) provides funding to reduce long-term risk from disasters, and each state receives funding from allocations for Presidential Disaster Declarations. In order for a community to access these HMA funds, a community should list needed mitigation projects in this HMP update. Projects located on private or public property are eligible. Mr. Kehoe also shared the benefit-cost ratio for investments by FEMA into specified natural hazards around the country.

Mr. Kehoe then reviewed the four Hazard Mitigation project types: 1) Local Plans and Regulations, 2) Education and Awareness Programs, 3) Natural Systems Protection, and 4) Structure and Infrastructure Projects.

Public Participation

Mr. Kehoe prompted the participants to share what hazard problems are occurring in their community. The following issues were discussed.

Limbs/tree branches cause power outages when they fall on power lines. National Grid/NYSEG is responsible for tree trimming around power lines and rights-of-way (ROW). Emerald Ash Borer has



MEETING NOTES

resulted in many dead or dying ash trees, which is becoming an issue as these trees and branches fall on power lines.

Communications infrastructure is vulnerable to disruption during storms or other hazard events. Cell phone service and the internet are very important. Mr. Kehoe indicated this topic would be considered in the HMP update. Several large communications companies are part of the county's Disaster Team, and they meet regularly and have plans in place.

The Town of Hamburg recently installed rip rap near St. Francis High School.

Next Steps

The HMP project team has been conducting ongoing meetings with municipal contacts. To date, the team has met with 23 municipalities to gather useful information. All of the input from tonight's meeting will be considered as the plan is assembled. Participants were requested to complete the Public Survey; the link is displayed in the PowerPoint and is hosted on the project website. Participants were encouraged to review the project website regularly.

There will be two more public events as this project progresses; both dates TBD. The first will be the Risk Assessment Review meeting and later will be the Draft Plan Review meeting.

The webinar adjourned at 7:30 p.m.



MEETING NOTES

Meeting	Erie County Hazard Mitigation Plan (HMP) Update Public Information Meeting #2		
Date	January 28, 2021	Time	6:00 – 7:30 p.m.
Location	Webinar		
Attendees	Greg Butcher, Deputy Commissioner, Erie County Department of Homeland Security and Emergency Services		
	Melissa Calhoun, Public Safety Officer, Erie County Department of Homeland Security and Emergency Services		
	Amy Alduino, Recycling Coordinator, Erie County		
	Mark Gaston, District Field Manager, Erie County Soil and Water Conservation District		
	Jim Jozwiak, Planning Board, Town of Concord		
	Paul Michalec, Town of Evans		
	Scott Hayes, Code Enforcement Officer (CEO), City of Lackawanna		
	Matthew Fischione, CEO, Town of Lancaster		
	Debbie Smith, Clerk, Village of Sloan		
	Robert Lutz, Emergency Services Coordinator, Town of Tonawanda		
	Jeanne Beiter, Buffalo Niagara Waterkeeper		
	Chris Renschler, SUNY Buffalo, Geography Professor		
	Jackie McLean		
	David Root		
	Kevin Clapp, Planning Manager, NYS Division of Homeland Security and Emergency Services		
	Brian Kehoe, Planner, Tetra Tech		
Matt Butwin, Principal, Prospect Hill Consulting			
Mike Kane, Principal, Prospect Hill Consulting			

Discussion Points

This section summarizes each discussion point addressed during the meeting.

Hazard Mitigation Planning

Mr. Kehoe welcomed all attendees and invited each to introduce themselves. He noted that this was the second of two public information meetings held for the HMP update project. Mr. Kehoe provided an overview of hazard mitigation planning, the Disaster Mitigation Act of 2000 (DMA 2000), and the Federal Emergency Management Agency's (FEMA) suite of Hazard Mitigation Assistance (HMA) funding streams. The Building Resilient Infrastructure and Communities (BRIC) grant program was created in 2020 to replace and expand the existing Pre-Disaster Mitigation grant. The Hazard Mitigation Grant Program (HMGP) provides funding to reduce long-term risk from disasters, and



MEETING NOTES

each state receives funding from allocations for Presidential Disaster Declarations. In order for a community to access these HMA funds, a community should list needed mitigation projects in this HMP update. Projects located on private or public property are eligible. Mr. Kehoe also discussed the benefit-cost ratio for investments by FEMA into specified natural hazards around the country.

Mr. Kehoe reviewed the four hazard mitigation project types: 1) Local Plans and Regulations, 2) Education and Awareness Programs, 3) Natural Systems Protection, and 4) Structure and Infrastructure Projects.

Public Participation

Mr. Kehoe prompted the participants to share what hazard problems are occurring in their community.

Mr. Michalec is on the Town of Evans agriculture and conservation committee and sits on the Erie County Climate Change Task Force. There is a concern about roadside ditches and keeping them free for flow of stormwater. The town has many town roads, state roads, and county roads and is hoping for consistent ditch practices throughout the town.

The town has pursued New York State Department of Environmental Conservation (NYSDEC) funds for tree management. There are three county parks in Evans, and the Emerald Ash Borer is causing many dead tree hazards. He asked if the county can proactively remove dead trees.

The town looks to set aside properties in the flood plain to remain as open space. The town has retained ownership of some parcels after tax foreclosure to further this goal. This policy mitigates stormwater flows and provides fishing access too. He asked if the county can also work to preserve additional floodplain open space.

Greg Butcher stated that the County Parks Recreation and Forestry Department and the Department of Public Works address the above issues.

Matthew Fischione stated that the Town of Lancaster CEO noted the importance of removing encroachments within waterways. The Stony Road Bridge (Pleasant View Dr. and Stony Rd.) was repaired, and debris removed from the creek. Public outreach is effective and better received by the public than is code enforcement. Aim to update the floodplain code and require compensatory storage. Ellicott Creek needs a clean-out of the waterway.

Debbie Smith works for the Village of Sloan and stated that 25% of Sloan's area is railyard. Mr. Kehoe stated that the HMP will address transit of hazardous materials over rail lines.

Chris Renschler stated that rail accidents occur at crossings and junctions. He can provide data to support this.

Amy Alduino asked if the HMP will examine how the freeze/thaw cycle is changing due to climate change and its impact on road and bridge structures. The HMP should look at the impacts of extreme heat and how to mitigate. The impact of invasive species is destroying certain tree species and creating large amounts of dead biomass.



MEETING NOTES

Next Steps

The HMP Project Team has been conducting ongoing meetings with municipal contacts. To date, the team has met with 23 municipalities to gather useful information. All of the input from tonight's meeting will be considered as the plan is assembled. Participants were requested to complete the Public Survey; the link is displayed in the PowerPoint and will be hosted on the project website. Participants were encouraged to review the project website regularly.

The webinar adjourned at 7:30 p.m.



TETRA TECH
complex world | CLEAR SOLUTIONS™

Erie County
Hazard Mitigation Plan Update
Public Information Meeting

1

Agenda

- Welcome
- Hazard Mitigation – The Basics
- Project Overview
- Public Participation
- For More Information...

Please ask questions at any time.

2

Hazard Mitigation – The Basics

Hazard Mitigation is any action taken to reduce or eliminate long-term risk to people and property from disasters.

- Local Plans and Regulations**
 - Updating building codes
 - Integrating risk into Master Plans
- Education and Awareness Programs**
 - Flood insurance information
 - Know your risk! campaign
- Natural Systems Protection**
 - Preserving natural floodplain functions
 - Protecting well recharge areas
- Structure and Infrastructure Projects**
 - Constructing a levee
 - Elevating a house above the base flood level

3

Hazard Mitigation – The Basics

Per FEMA's 2017 National Institute of Building Sciences Report, mitigation saves \$\$\$!

	National Benefit-Cost Ratio Per Peril <small>*50% members of this study have been awarded</small>	Federally Funded
Riverine Flood	7:1	
Hurricane Surge		Too few grants
Wind	5:1	
Earthquake	3:1	
Wildland-Urban Interface Fire	3:1	

4

Hazard Mitigation – The Basics

- Disaster Mitigation Act of 2000
- Hazard Mitigation Assistance

- Building Resilient Infrastructure & Communities (BRIC)

5

Project Overview

- Organize resources and build the planning team
- Update the risk assessment
- Assess local mitigation capabilities
- Develop mitigation strategies
- Determine plan maintenance process
- Approval of the HMP by NYS DHSES and FEMA
- Local municipal adoption of the approved plan

Implementation!

6



Public Participation

- Why doesn't our city/town/village fix _____?
- Why didn't anyone tell me that _____ (hazard) could impact me?
- Where do you see water on the roadway after heavy rains? What storm drains or bridges back up with water?
- Has Lake Erie flooding affected your community?
- How are the effects of severe winter storms mitigated in my community?



7

7

Public Participation

- Public Survey
 - <https://www.surveymonkey.com/r/ErieCountyHMP>
 - Takes less than 15 minutes to complete.
 - Gathers information from throughout Erie County to help coordinate activities and reduce the risk of injury or property damage.
 - Information will be used for planning purposes only.
 - You will be asked if you live in a floodplain - check FEMA for your property location: <https://msc.fema.gov/portal/home>
 - Please share survey link via social media.



8

8

Public Participation

- Problem Area Survey – where do hazards impact?

– <https://arcg.is/9bzzr>

- Public Meetings
 - Risk Assessment Review Meeting – date TBD
 - Draft Review Meeting – at the end of the process



9

9

For More Information...

- Erie County HMP Website
 - Home - Erie County Hazard Mitigation Plan (HMP) Public Website (eriecountynyhmp.com)
- Erie County Department of Homeland Security and Emergency Services
 - Erie County Department of Homeland Security & Emergency Services - Home | Facebook
 - Department of Homeland Security and Emergency Services (erie.gov)
 - Erie Cty Emerg Svces (@ErieCountyESU) / Twitter
- Erie County Department of Environment & Planning
 - Erie County DEP (@ErieCoDEP) / Twitter
 - Environment & Planning (erie.gov)



10

10

Contacts



Melissa Calhoun
Melissa.Calhoun@erie.gov
 (716)858-8440



Tony Subbio
tony.subbio@tetrattech.com
 (717) 545-3580



11

11



AGENDA

ERIE COUNTY HAZARD MITIGATION PLAN UPDATE Public Information Meeting #1

Monday, January 25, 2021 | 6:00–7:30 p.m.

-
1. Welcome
 2. Hazard Mitigation – The Basics
 3. Project Overview
 4. Public Participation
 5. For More Information...
-





AGENDA

ERIE COUNTY HAZARD MITIGATION PLAN UPDATE Public Information Meeting #2

Thursday, January 28, 2021 | 6:00–7:30 p.m.

-
1. Welcome
 2. Hazard Mitigation – The Basics
 3. Project Overview
 4. Public Participation
 5. For More Information...
-





MEETING NOTES

Meeting	Erie County Hazard Mitigation Plan (HMP) Update Risk Assessment Review Meeting		
Date	May 19, 2021	Time	6:00 – 7:15 p.m.
Location	Webinar		
Attendees	Dan Castle, Deputy Commissioner, Erie County Department of Environment and Planning		
	Josh Wilson, Director of Sustainability, Erie County Department of Environment and Planning		
	Greg Butcher, Deputy Commissioner, Erie County Department of Homeland Security and Emergency Services		
	Melissa Calhoun, Public Safety Officer - Special Assistant Erie County, Erie County Department of Homeland Security and Emergency Services		
	Matthew Barrett, Security Officer, Erie County Water Authority		
	RJ Nieman, Emergency Manager, Village of Depew		
	Cathie Thomas, Village of East Aurora, Administrator		
	Daniel Kowalik, Emergency Manager, Chair Village of Akron & Town of Newstead		
	Jordan Kellerman, Engineer, Town of Orchard Park		
	Richard Mrugalski, Town and Village of Orchard Park, Emergency Manager		
	Todd Catalano, Village of Springville, Disaster Coordinator		
	Liz Melock, Village of Springville, Administrator		
	Mark Banks, City of Tonawanda, Office of Emergency Management		
	James Chatham, Office of Emergency Management, Town of Tonawanda		
	Joanna Panasiewicz, Lake Erie Watershed Protection Alliance		
	Jason Tolma, Manager, National Fuel Gas		
	Judith Levan, Administrator, National Weather Service Buffalo		
	William Major, Niagara Frontier Transportation Authority		
Kevin Clapp, Planning Manager, NYS Department of Homeland Security and Emergency Services			
Brian Kehoe, Planner, Consultant - Tetra Tech			
Chris Huch, Planner, Consultant - Tetra Tech			

Discussion Points

This section summarizes each discussion point addressed during the Risk Assessment Review Meeting.

Introductions

Mr. Kehoe opened the meeting. As attendees entered the virtual meeting, they were prompted to provide their name and affiliation either verbally or via the webinar chat function. Mr. Butcher then welcomed and thanked attendees.



MEETING NOTES

Mr. Huch noted that the meeting will be recorded for participants who could not attend.

Risk Assessment Review

Mr. Kehoe reviewed the results of the risk assessment for the following hazards of concern, discussing past events, frequency, and impacts to life, property, and the economy.

- Coastal Erosion
- Extreme Temperatures
- Severe Winter Storm
- Cyber Attack
- Flood (including ice jams)
- Utility Failure
- Earthquake
- Hazardous Materials
- Wildfire
- Epidemic/Pandemic
- Landslide
- Expansive Soils
- Severe Storm

Comments

During the meeting, the following comments were received from participants:

- Ms. Thomas noted that East Aurora is concerned with flooding from Tannery Brook. The village had a recent sinkhole event and is working to replace a culvert.
- Mr. Chatham noted that the Town of Tonawanda has pipeline and rail concerns.
- Mr. Wilson noted that Erie County Department of Environmental Protection is completing a climate vulnerability assessment.
- Mr. Mrugalski noted that Orchard Park likely has need for backup generators at some critical facilities.
- Ms. Panasiewicz asked if hazardous material spill mapping could be overlaid with waterways in order to illustrate risk from spills.
- Mr. Barrett noted that risk to the drinking water supply from hazardous materials is low due to the volume of water flow in the Niagara River.
- Mr. Major noted that the Niagara Frontier Transportation Authority (NFTA) would be looking for funding support to protect from hazardous material spills. Mr. Clapp responded that the Hazard Mitigation Grant Program (HMGP) typically funds mitigations that address non-natural hazard events. Follow-up was recommended to discuss further and identify a strategy to protect NFTA assets.

Next Steps

The following next steps were discussed at the meeting:

- Complete Worksheets (as needed)
- Mitigation Strategy Workshops – June 9, 2021
- Develop Mitigation Actions
- Complete Jurisdictional Annexes
- Complete the HMP



MEETING NOTES

The meeting wrapped up with several questions and comments from participants. Mr. Kehoe and Mr. Butcher thanked the participants.

The meeting adjourned at 7:15 p.m.

TETRA TECH
complex world | CLEAR SOLUTIONS™

Erie County Hazard Mitigation Plan 2021 Update

Risk Assessment Review Meeting
May 19, 2021
6:00 – 8:00 p.m.

The poster features a globe made of puzzle pieces, with a hand placing a piece. The puzzle pieces show various scenes of hazards and mitigation efforts. The Tetra Tech logo and tagline are in the top left. The Erie County seal is in the center. The meeting details are at the bottom left.

1

Agenda

- Welcome/Introductions
- Project Status Update
- Risk Assessment
- Risk Ranking Summary
- SW00
- Next Steps

The diagram shows a circular process with four stages: Mitigation (top left), Prepare / Prevent (top right), Response (bottom right), and Recovery (bottom left). A red starburst labeled 'Event' is in the center, with arrows indicating a clockwise cycle between the stages. The Tetra Tech logo and tagline are in the bottom right.

2

Welcome/Introductions

- Name
- Agency
- Mitigation Experience
- Focus and Concerns

The slide has a blue header with the title. The list items are on the left. The Tetra Tech logo and tagline are in the bottom right.

3

Project Schedule Status Update

✓ November 2020	Steering Committee & Planning Partnership initial meetings
✓ November 2020 - April 2021	Data collection
✓ January - May 2021	Update hazard profiles
✓ May 19, 2021	Risk Assessment Presentation
☐ January - June 2021	Develop problem statements with municipalities and County
☐ June 9, 2021	Mitigation Strategy Workshops
☐ Early July 2021	Complete draft plan
☐ Mid-August 2021	Submit plan to NYS DHSES

The slide has a blue header with the title. The schedule items are in a table. The Tetra Tech logo and tagline are in the bottom right.

4

The screenshot shows the website's navigation menu: Home, About, What is Mitigation, Meetings, Calendar, Municipal Information. Below the menu, there are sections for 'Home', 'Erie County Hazard Mitigation Plan Update', and a 'Public participation and feedback' section with a survey link. The URL <https://www.eriecountynyhmp.com/> is at the bottom. The Tetra Tech logo and tagline are in the bottom right.

5

Risk Assessment

Hazards of Concern:

- Coastal Erosion
- **Cyber Security**
- Earthquake
- Expansive Soils
- Extreme Temperature
- Flood
- **Hazardous Materials**
- Landslide
- **Pandemic**
- Severe Storm
- Severe Winter Storm
- **Utility Failure**
- Wildfire

The slide has a blue header with the title. The hazards are listed in two columns. The Tetra Tech logo and tagline are in the bottom right.



6

Risk Assessment (Continued)

What is Risk?

Risk is a function of:

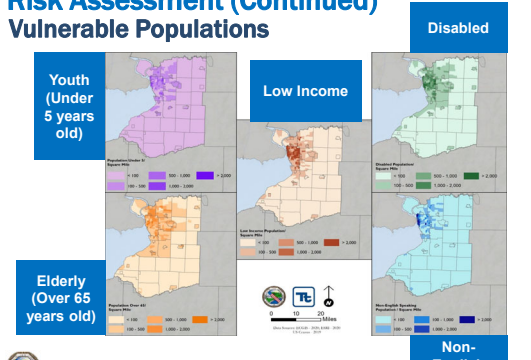


- ✓ Hazard - source of potential danger or adverse condition
- ✓ Exposure - manmade features exposed to the hazard
- ✓ Vulnerability - damage susceptibility exposed features
- ✓ Adaptive Capacity
 - Plans/policies
 - Response/recovery
 - Financial resources

7

Risk Assessment (Continued)

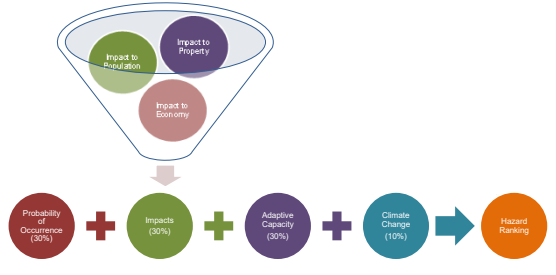


Vulnerable Populations

8

Risk Assessment (Continued)

Hazard Ranking Formula

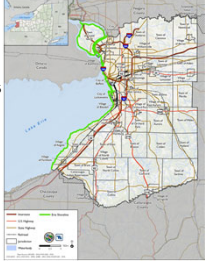




9



Risk Assessment (Continued)

Coastal Erosion

- Recent event history:
 - Associated w/ strong storms
 - 7 recorded coastal erosion events 2000-2020
 - All located along Lake Erie
- Erosion is caused by natural and human activity.
- Town of Hamburg has the most people/buildings in designated coastal risk hazard area.
- Associated w/ strong storms
- Probability = Rare



Risk Ranking Value = Low



10

Risk Assessment (Continued)

Cyber Security

- Theft and modification of information
- Organized cyber-crime, state-sponsored hackers, and cyber espionage
- People/buildings throughout the county are exposed
- Probability = Frequent

Risk Ranking Value = Medium

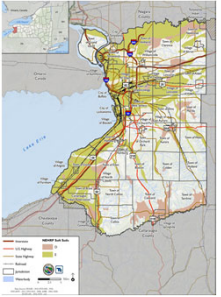



11



Risk Assessment (Continued)

Earthquake

- History
 - 8 smaller earthquakes epi-centered in the county since 1950
 - 1 significant seismic event in the vicinity of Erie County
- Exposure to NEHRP Soils
 - 66% countywide
 - 100% in Villages of Angola, Blasdell, Gowanda, N. Collins, and Sloan
 - 1,000s of critical facilities
- Probability - Rare



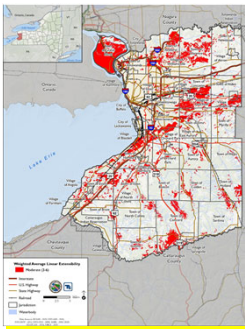
Risk Ranking Value = High

12

Risk Assessment (Continued) Expansive Soils

- History
 - Town of Amherst (1987 and 2005), 3-4% of all residential structures
 - Fewer problems with new development.
 - Town of Amherst: 24,000 residents exposed; highest concentration of damage
 - >20% population exposed: V. Alden, T. Clarence, T. Grand Island, T. Hamburg, T. Lancaster, T. Orchard Park, T. West Seneca
- Probability - Rare



Risk Ranking Value = Low

13

Risk Assessment (Continued) Extreme Temperature

- Extreme heat >10 degrees above the average high temperature that lasts for several weeks
 - A leading weather-related cause of death in USA
- Extreme cold temperatures < 0 degrees
- History
 - 5 recorded events 1999-2020
- Exposure
 - Entire county population exposed
 - Probability - Occasional

Risk Ranking Value = Medium

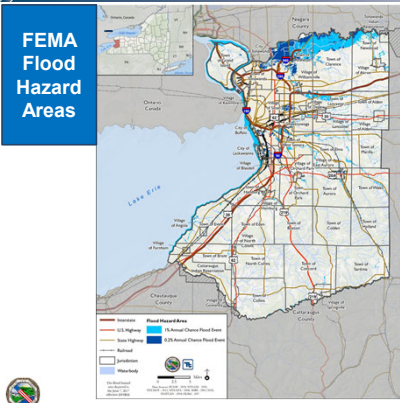
14

Risk Assessment (Continued) Flood

- Impacts
 - \$24 million in reported property damage since 1954
 - \$10 million in reported crop damage
- Exposure 1-Percent Annual Chance Floodplain
 - \$10.7 billion building stock replacement value
 - 496 critical facilities (most are bridges)
 - 40,750 tons of debris

15

FEMA Flood Hazard Areas



>1% buildings exposed – 1% annual chance flood

1. T Amherst
2. T Clarence
3. T E. Aurora
4. V Gowanda
5. T Grand Island
6. V Gowanda
7. T/V Lancaster
8. T Newstead
9. T Marilla
10. T Williamsville

16

Risk Assessment (Continued) Flood

Residents exposed to 1-percent annual chance flood area: 9,633

1.1% of total population

NFIP countywide

2,074 Policies

2,526 Claims

\$12,430,926 Payments

NATIONAL FLOOD INSURANCE PROGRAM

Flood History

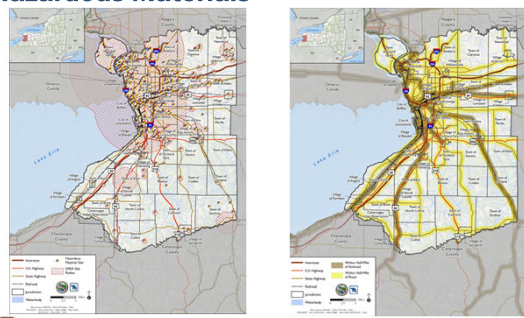
94 events (1950-2020)

7 FEMA flood-related declarations (1954-2019)

Hazard Risk Rank = Low

17

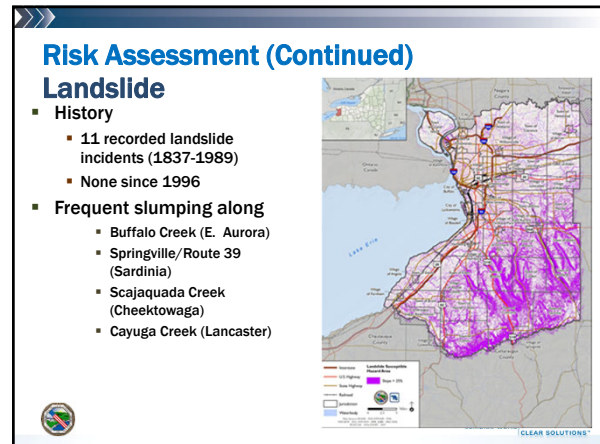
Risk Assessment (Continued) Hazardous Materials



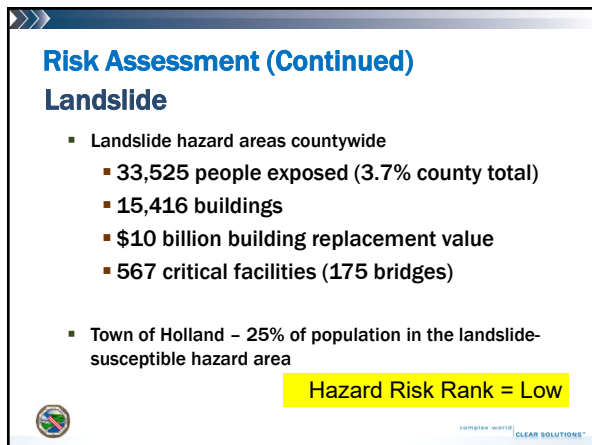
18



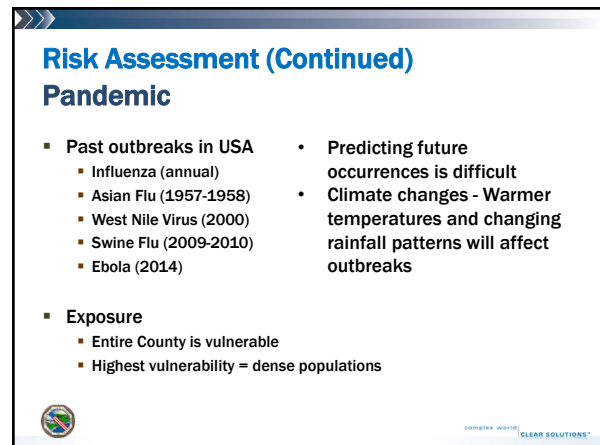
19



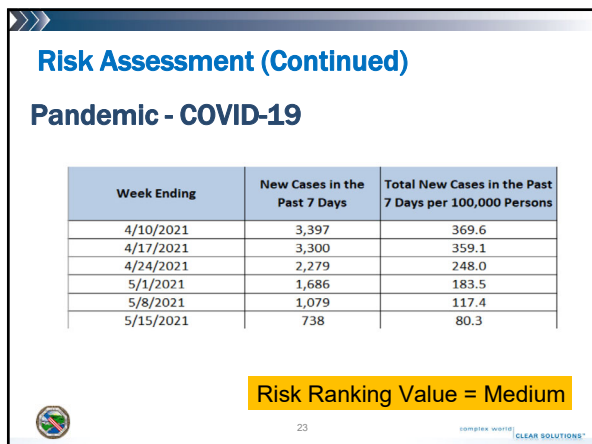
20



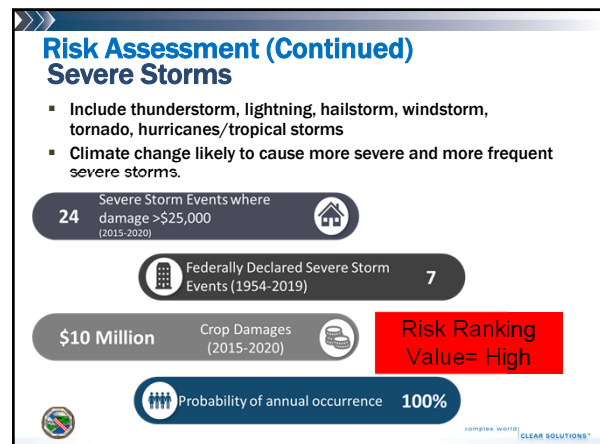
21



22



23





24

Risk Assessment (Continued)

Severe Winter Storms

- Include blizzards, ice storms, snowstorms, sleet, freezing rain
- Entire county is vulnerable
 - Traffic accidents
 - Overexertion
 - Hypothermia
 - Access for emergency vehicles

25

Risk Assessment (Continued)

Severe Winter Storms

11

Winter Storms where damage > \$25,000 (2015-2020)

\$11 billion

Estimated Potential Loss



9

FEMA Declarations (1954 – 2020)

100%

Probability of annual occurrence

Risk Ranking Value= High






26

Risk Assessment (Continued)

Utility Failure

- History
 - Primarily caused by other hazards
 - 1 Presidential Disaster Declaration – Halloween 2019
 - 8 power failure events since 2015.
- Impacts
 - HVAC failure
 - Communications failure
 - Food spoilage
 - Basement flooding
 - Carbon monoxide exposure from generators
 - Individuals dependent on medical equipment
 - Access to potable water



27

Risk Assessment (Continued)

Utility Failure

- High cost to government and community services
- Probability = Frequent minor failures, Occasional Major failure

Risk Ranking Value= High

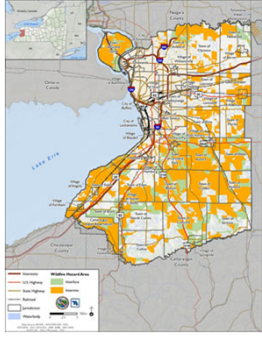
28

Risk Assessment (Continued)

Wildfire

11%

Wildfire Urban intermix





\$36.7 Billion

Building Replacement value

33%

Wildfire Interface



29

Risk Assessment (Continued)

Wildfire

- Exposure to the Wildland-Urban Interface (WUI)
 - 154,141 persons (16.8% of county)
 - 70,429 buildings
 - 16.5% of total building value
- 378 critical facilities in the WUI
- Town of Wales has the most (32) critical facilities in the WUI


Risk Ranking Value= Medium

30

Risk Ranking Summary - countywide

Hazard of Concern	Probability \times 30%	Total Impact \times 30%	Adaptive Capacity \times 30%	Changing Future Conditions \times 10%	Total Risk Ranking Value
Coastal Erosion	0	3	2	1	Low
Cyber Attack	0.9	3	2	3	Medium
Earthquake	0.3	9	6	1	High
Expansive Soils	0.3	3	2	2	Low
Extreme Temperature	0.3	9	2	1	Medium
Flood	0.9	3	2	1	Low
Hazardous Materials	0.9	3	2	2	Low
Landslide	0	3	2	1	Low
Pandemic	0	9	2	3	Medium
Severe Storm	0.9	9	2	1	High
Severe Winter Storm	0.9	9	2	1	High
Utility Failure	0.9	6	4	2	High
Wildfire	0.6	6	4	2	Medium



31

Strengths, Weaknesses, Obstacles, and Opportunities (SWOO)

- **Strengths** – what mitigation actions does our town/village/city already do?
- **Weaknesses** – what could we do better?
- **Obstacles** – what impedes us from taking mitigation action? What is a challenge to overcome?
- **Opportunities** – used to develop mitigation strategies

32

SWOO

Hazard	
Strengths	Weaknesses
What does the county and its communities do well in terms of: <ul style="list-style-type: none"> ➤ Plans and Regulations <ul style="list-style-type: none"> • Codes, Ordinances, Planning Studies, Comprehensive Plans, Adaptation and Resiliency Plans ➤ Structure and Infrastructure Projects ➤ Natural Systems Protection ➤ Education and Awareness Programs ➤ Preparedness ➤ Others? 	What can the county and its communities do better or what are the gaps in terms of: <ul style="list-style-type: none"> ➤ Plans and Regulations <ul style="list-style-type: none"> • Codes, Ordinances, Planning Studies, Comprehensive Plans, Adaptation and Resiliency Plans ➤ Structure and Infrastructure Projects ➤ Natural Systems Protection ➤ Education and Awareness Programs ➤ Preparedness ➤ Others?

33

SWOO

Hazard	
Obstacles	Opportunities
What is preventing the county and its communities to implement: <ul style="list-style-type: none"> ➤ Plans and Regulations <ul style="list-style-type: none"> • Codes, Ordinances, Planning Studies, Comprehensive Plans, Adaptation and Resiliency Plans ➤ Structure and Infrastructure Projects ➤ Natural Systems Protection ➤ Education and Awareness Programs ➤ Preparedness ➤ Others? 	What can the county and its communities implement in terms of: <ul style="list-style-type: none"> ➤ Plans and Regulations <ul style="list-style-type: none"> • Codes, Ordinances, Planning Studies, Comprehensive Plans, Adaptation and Resiliency Plans ➤ Structure and Infrastructure Projects ➤ Natural Systems Protection ➤ Education and Awareness Programs ➤ Preparedness ➤ Others?

34

SWOO

Hazard: Flood	Hazard: Severe Storms																
<table border="1" style="width: 100%;"> <tr><td style="background-color: #4f81bd; color: white;">S</td><td>Minimal exposure to flood risk</td></tr> <tr><td style="background-color: #4f81bd; color: white;">W</td><td>Silt and debris buildup in streams can lead to localized flooding</td></tr> <tr><td style="background-color: #4f81bd; color: white;">Ob</td><td>Funding for culvert and catch basin maintenance</td></tr> <tr><td style="background-color: #4f81bd; color: white;">Opps</td><td>Installing stream gages</td></tr> </table>	S	Minimal exposure to flood risk	W	Silt and debris buildup in streams can lead to localized flooding	Ob	Funding for culvert and catch basin maintenance	Opps	Installing stream gages	<table border="1" style="width: 100%;"> <tr><td style="background-color: #4f81bd; color: white;">S</td><td>Tree thinning programs are in place</td></tr> <tr><td style="background-color: #4f81bd; color: white;">W</td><td>Aging infrastructure; lack of underground utilities</td></tr> <tr><td style="background-color: #4f81bd; color: white;">Ob</td><td>Cost to retrofit existing utility infrastructure</td></tr> <tr><td style="background-color: #4f81bd; color: white;">Opps</td><td>Underground utilities; enhance public outreach program</td></tr> </table>	S	Tree thinning programs are in place	W	Aging infrastructure; lack of underground utilities	Ob	Cost to retrofit existing utility infrastructure	Opps	Underground utilities; enhance public outreach program
S	Minimal exposure to flood risk																
W	Silt and debris buildup in streams can lead to localized flooding																
Ob	Funding for culvert and catch basin maintenance																
Opps	Installing stream gages																
S	Tree thinning programs are in place																
W	Aging infrastructure; lack of underground utilities																
Ob	Cost to retrofit existing utility infrastructure																
Opps	Underground utilities; enhance public outreach program																
<table border="1" style="width: 100%;"> <thead> <tr> <th style="background-color: #4f81bd; color: white;">Hazard: Severe Winter Storm</th> </tr> </thead> <tbody> <tr><td style="background-color: #4f81bd; color: white;">S</td><td>Municipalities have the resources and experience to deal with winter weather</td></tr> <tr><td style="background-color: #4f81bd; color: white;">W</td><td>Aging equipment</td></tr> <tr><td style="background-color: #4f81bd; color: white;">Ob</td><td>Funding; limited staff for prolonged events</td></tr> <tr><td style="background-color: #4f81bd; color: white;">Opps</td><td>Shared services</td></tr> </tbody> </table>		Hazard: Severe Winter Storm	S	Municipalities have the resources and experience to deal with winter weather	W	Aging equipment	Ob	Funding; limited staff for prolonged events	Opps	Shared services							
Hazard: Severe Winter Storm																	
S	Municipalities have the resources and experience to deal with winter weather																
W	Aging equipment																
Ob	Funding; limited staff for prolonged events																
Opps	Shared services																

35

Next Steps

1. Complete Worksheets (as needed)
2. Mitigation Strategy Workshops – June 9, 2021
3. Develop Mitigation Actions
4. Complete Jurisdictional Annexes
5. Complete the Hazard Mitigation Plan

36

Worksheet	Worksheet 1: Data	Worksheet 2: Data	Worksheet 3: Data	Worksheet 4: Data	Worksheet 5: Data	Worksheet 6: Data
Worksheet 1	1	1	1	1	1	1
Worksheet 2	1	1	1	1	1	1
Worksheet 3	1	1	1	1	1	1
Worksheet 4	1	1	1	1	1	1
Worksheet 5	1	1	1	1	1	1
Worksheet 6	1	1	1	1	1	1
Worksheet 7	1	1	1	1	1	1
Worksheet 8	1	1	1	1	1	1
Worksheet 9	1	1	1	1	1	1
Worksheet 10	1	1	1	1	1	1
Worksheet 11	1	1	1	1	1	1
Worksheet 12	1	1	1	1	1	1
Worksheet 13	1	1	1	1	1	1
Worksheet 14	1	1	1	1	1	1
Worksheet 15	1	1	1	1	1	1
Worksheet 16	1	1	1	1	1	1
Worksheet 17	1	1	1	1	1	1
Worksheet 18	1	1	1	1	1	1
Worksheet 19	1	1	1	1	1	1
Worksheet 20	1	1	1	1	1	1
Worksheet 21	1	1	1	1	1	1
Worksheet 22	1	1	1	1	1	1
Worksheet 23	1	1	1	1	1	1
Worksheet 24	1	1	1	1	1	1
Worksheet 25	1	1	1	1	1	1
Worksheet 26	1	1	1	1	1	1
Worksheet 27	1	1	1	1	1	1
Worksheet 28	1	1	1	1	1	1
Worksheet 29	1	1	1	1	1	1
Worksheet 30	1	1	1	1	1	1
Worksheet 31	1	1	1	1	1	1
Worksheet 32	1	1	1	1	1	1
Worksheet 33	1	1	1	1	1	1
Worksheet 34	1	1	1	1	1	1
Worksheet 35	1	1	1	1	1	1
Worksheet 36	1	1	1	1	1	1
Worksheet 37	1	1	1	1	1	1
Worksheet 38	1	1	1	1	1	1
Worksheet 39	1	1	1	1	1	1
Worksheet 40	1	1	1	1	1	1
Worksheet 41	1	1	1	1	1	1
Worksheet 42	1	1	1	1	1	1
Worksheet 43	1	1	1	1	1	1
Worksheet 44	1	1	1	1	1	1
Worksheet 45	1	1	1	1	1	1
Worksheet 46	1	1	1	1	1	1
Worksheet 47	1	1	1	1	1	1
Worksheet 48	1	1	1	1	1	1
Worksheet 49	1	1	1	1	1	1
Worksheet 50	1	1	1	1	1	1
Worksheet 51	1	1	1	1	1	1
Worksheet 52	1	1	1	1	1	1
Worksheet 53	1	1	1	1	1	1
Worksheet 54	1	1	1	1	1	1
Worksheet 55	1	1	1	1	1	1
Worksheet 56	1	1	1	1	1	1
Worksheet 57	1	1	1	1	1	1
Worksheet 58	1	1	1	1	1	1
Worksheet 59	1	1	1	1	1	1
Worksheet 60	1	1	1	1	1	1
Worksheet 61	1	1	1	1	1	1
Worksheet 62	1	1	1	1	1	1
Worksheet 63	1	1	1	1	1	1
Worksheet 64	1	1	1	1	1	1
Worksheet 65	1	1	1	1	1	1
Worksheet 66	1	1	1	1	1	1
Worksheet 67	1	1	1	1	1	1
Worksheet 68	1	1	1	1	1	1
Worksheet 69	1	1	1	1	1	1
Worksheet 70	1	1	1	1	1	1
Worksheet 71	1	1	1	1	1	1
Worksheet 72	1	1	1	1	1	1
Worksheet 73	1	1	1	1	1	1
Worksheet 74	1	1	1	1	1	1
Worksheet 75	1	1	1	1	1	1
Worksheet 76	1	1	1	1	1	1
Worksheet 77	1	1	1	1	1	1
Worksheet 78	1	1	1	1	1	1
Worksheet 79	1	1	1	1	1	1
Worksheet 80	1	1	1	1	1	1
Worksheet 81	1	1	1	1	1	1
Worksheet 82	1	1	1	1	1	1
Worksheet 83	1	1	1	1	1	1
Worksheet 84	1	1	1	1	1	1
Worksheet 85	1	1	1	1	1	1
Worksheet 86	1	1	1	1	1	1
Worksheet 87	1	1	1	1	1	1
Worksheet 88	1	1	1	1	1	1
Worksheet 89	1	1	1	1	1	1
Worksheet 90	1	1	1	1	1	1
Worksheet 91	1	1	1	1	1	1
Worksheet 92	1	1	1	1	1	1
Worksheet 93	1	1	1	1	1	1
Worksheet 94	1	1	1	1	1	1
Worksheet 95	1	1	1	1	1	1
Worksheet 96	1	1	1	1	1	1
Worksheet 97	1	1	1	1	1	1
Worksheet 98	1	1	1	1	1	1
Worksheet 99	1	1	1	1	1	1
Worksheet 100	1	1	1	1	1	1

37

Contacts

 Gregory Butcher, Deputy Comm.
gregory.butcher@erie.gov
 (716) 858-2944

 Tony Subbio, Project Manager
tony.subbio@tetrattech.com
 (717) 545-3580

 Brian Kehoe, Mitigation/Community Planner
brian.kehoe@tetrattech.com
 (585) 354-4216

38



AGENDA

ERIE COUNTY HAZARD MITIGATION PLAN UPDATE Risk Assessment Review Meeting

Wednesday, May 19, 2021 | 6:00 – 8:00 p.m.

1. Welcome/Introductions

2. Project Schedule Status Update

3. Risk Assessment

- a. Coastal Erosion
- b. Cyber Security
- c. Earthquake
- d. Expansive Soils
- e. Extreme Temperature
- f. Flood
- g. Hazardous Materials
- h. Landslide
- i. Pandemic
- j. Severe Storms
- k. Severe Winter Storms
- l. Utility Failure
- m. Wildfire

4. Risk Ranking Summary

5. Strengths, Weaknesses, Obstacles, and Opportunities (SWOO)

6. Next Steps

- a. Complete Worksheets (as needed)
 - b. Mitigation Strategy Workshops – June 9, 2021
 - c. Develop Mitigation Actions
 - d. Complete Jurisdictional Annexes
-



Risk Ranking Score – Countywide

Hazard of Concern	Prob.	Pop.	Built Env.	Econ.	Adapt Cap.	Future Cond.	Risk Ranking Value
Coastal Erosion	0	1	1	1	1	2	Low
Cyber Attack	3	1	1	1	2	1	Medium
Earthquake	1	3	3	1	1	1	High
Expansive Soils	1	3	1	1	1	3	Low
Extreme Temperature	1	1	1	2	1	1	Medium
Flood	3	1	1	1	2	3	Low
Hazardous Materials	3	1	1	2	1	1	Low
Landslide	0	1	1	1	1	1	Low
Pandemic	0	3	1	3	1	2	Medium
Severe Storms	3	3	1	1	1	2	High
Severe Winter Storms	3	3	1	1	1	2	High
Utility Failure	3	2	2	2	1	2	High
Wildfire	2	2	3	2	1	3	Medium

Notes:

Prob. = Probability

Pop. = Impact on the population (Higher numbers reflect a higher percentage of the population at risk.)

Built Env. = Impact on the built environment (Higher numbers reflect a higher percentage of the property value in the county at risk.)

Econ. = Impact on the economy (Higher numbers reflect higher loss estimates.)

Adapt. Cap. = Adaptive capacity (Higher numbers reflect less capability to address hazard impacts.)

Future Cond. = Impact of future conditions on the hazard (Higher numbers indicate higher future risk from the hazard.)



To update the actions and initiatives for your mitigation strategy, please consider the questions below. Suggested actions will be developed based on Erie County's needs and capabilities, or will be carried over from the previous hazard mitigation plan (HMP) update based on the responses given in Worksheet 4. Some questions may not apply to your municipality.

1. Which properties in your jurisdiction are most vulnerable to flood events and would have the greatest need for retrofitting or other flood hazard mitigation measures? Specific property addresses do not need to be listed (to ensure residential privacy), but names of streets or neighborhoods can be included.

2. What public outreach and education actions would you be most interested in implementing? Circle all that apply.
 - A. Provide general hazard risk preparedness and mitigation and related National Flood Insurance Program (NFIP) information in regular newsletters and mailings.
 - B. Provide hazard risk and risk-reduction information through social media channels and e-mail blast systems.
 - C. Post flyers and other readily available NFIP informational materials at the municipal hall or distribute at regular civic meetings.
 - D. Develop and maintain a hazard risk management webpage on the municipal website where information and mapping can be posted.
 - E. Encourage private business owners and managers of infrastructure that provide critical services in post-disaster situations to develop Continuity of Operations Plans or Business Continuity Plans.
 - F. Enhance public outreach to residents in NFIP floodplain areas, which may include distributing periodic articles and including handouts in the annual newsletter, to inform residents of annual grant opportunities.
 - G. Other:

3. Which critical facilities still need or would benefit from a backup generator or redundant power supply?

4. Which critical facilities have been damaged by flood events and require floodproofing or relocation?



5. Which roads would benefit from mitigation or structural projects to reduce vulnerability to flood or stormwater incidents? Also, please specify the types of projects that would most help a high-risk road (for example, new/expanded culvert, road elevation, repaving, etc.), if this information is available.

6. What areas in the municipality are still in need of stormwater rehabilitation and upgrades?

7. Where do trees or vegetation need to be trimmed away from power or communications wires?

8. Which properties in your jurisdiction are most vulnerable to landslide events and would have the greatest need for retrofitting or other landslide hazard mitigation measures? Specific property addresses do not need to be listed (to ensure residential privacy), but names of streets or neighborhoods can be included.

9. Has internet connectivity in your community been adequate to support people working and learning from home during the COVID-19 pandemic?

10. Which properties in your jurisdiction are most vulnerable to wildfire events and would have the greatest need for hazard mitigation measures? Specific property addresses do not need to be listed (to ensure residential privacy), but names of streets or neighborhoods can be included.

11. What other mitigation projects are you interested in? Also, list current projects your municipality is targeting for completion during the next 5 years. Please provide as much detail as possible.



MEETING NOTES

Meeting	Erie County Hazard Mitigation Plan (HMP) Mitigation Strategy Workshop #1		
Date	June 9, 2021	Time	9:00 – 10:15 a.m.
Location	Webinar		
Attendees	Dan Castle, Deputy Commissioner, Erie County Department of Environment and Planning		
	Greg Butcher, Deputy Commissioner, Erie County Department of Homeland Security and Emergency Services		
	Melissa Calhoun, Public Safety Officer - Special Assistant Erie County, Erie County Department of Homeland Security and Emergency Services		
	Amy Alduino, Recycling Coordinator, Erie County Department of Environment and Planning		
	Joanna Panasiewicz, Watershed Coordinator, Erie County Department of Environment and Planning		
	Jonathan DePlanche, Senior Civil Engineer, Erie County Department of Public Works Division of Highways		
	Matthew W. Barrett, Security Officer, Erie County Water Authority		
	Elizabeth Cassidy, Code Enforcement, Town of Aurora		
	Michael Borth, Code Enforcement Officer, Village of Akron		
	Jayne DeTine, Clerk, Village of Akron		
	Jim Zymanek, Director, Emergency Services, Town of Amherst, Village of Williamsville		
	Mike Mazurowski, Emergency Manager, Town of Cheektowaga		
	Clyde Drake, Supervisor, Town of Concord		
	Cathie Thomas, Village Administrator, Village of East Aurora		
	Nicholas Pikul, Deputy Emergency Manager, Town of Hamburg		
	Geoffrey Hack, Emergency Manager, Town of Holland		
	Ronald Rozler, Disaster Coordinator, Town of Lancaster		
	Dave Cummings, Supervisor, Town of Newstead		
	Dawn Izydorczak, Clerk, Town of Newstead		
	Jordan Kellerman, Assistant Emergency Manager, Town of Orchard Park		
	Todd Catalano, Emergency Manager, Village of Springville		
	Bill Krebs, Mayor, Village of Springville		
	Liz Melock, Village Administrator, Village of Springville		
Mark Banks, Director, OEM, City of Tonawanda			
Chuck Stuart, Fire Chief, City of Tonawanda			
James Chatham, Emergency Services Coordinator, Town of Tonawanda			
Robert Lutz, Emergency Services Coordinator, Town of Tonawanda			
James Unger, Patrol Captain/Public Information Officer, West Seneca Police Department			



MEETING NOTES

Kevin Clapp, Planning Manager, Mitigation Programs, NYS Division of Homeland Security & Emergency Services
--

Brian Kehoe, Planner, Tetra Tech

Tony Subbio, Project Manager, Tetra Tech
--

Chris Huch, Planner, Tetra Tech

Purpose

The purpose of the Mitigation Strategy Workshop was to work with the jurisdictional participants of the Erie County HMP to identify problems and potential mitigation actions to include in their jurisdictional annexes.

Discussion Points

This section summarizes each discussion point addressed during the meeting.

Welcome and Opening Remarks

Mr. Butcher thanked participants for attending the meeting and participating in the planning process. Mr. Subbio and Mr. Huch welcomed attendees. Mr. Huch described the purpose of the meeting, which was to review the hazard mitigation planning process and develop mitigation strategies.

Hazard Mitigation Review

Mr. Huch provided a brief review of the concepts of hazard mitigation.

Developing Mitigation Strategies

Mr. Huch reviewed the hazards of concern and discussed different methods of risk reduction. Mr. Huch then reviewed the NYS requirements for updating the mitigation strategy. Each jurisdiction will need to meet the following requirements:

- Each jurisdiction must develop at least two Mitigation Action Development worksheets.
- Repetitive and Severe Repetitive Loss Properties need an action with specific details (street or neighborhood names).
- Critical facilities need to be protected to the 500-year flood event (0.2% annual chance) or worst-case scenario.
- Evacuation routes and shelters must be made viable.
- Temporary and permanent housing locations must be identified.
- Proposed actions must have specific information when discussing the problem and solution and identify information such as:
 - Project lead
 - Estimated cost
 - Timeline
 - Whether the action involves a critical facility



MEETING NOTES

Mr. Huch explained that mitigation actions must have a clear connection to the risk and capability assessments. Mr. Huch reviewed the types of mitigation actions that should be considered:

- Structure and Infrastructure Projects
- Local Plans and Regulations
- Natural Systems Protection Projects
- Education and Awareness Programs

Mr. Huch explained to participants that carryover actions must be updated to be made more specific. Mr. Huch provided examples on how to update carryover actions to meet the current standards of the HMP planning process.

Fill Out and Return the Mitigation Action Development Worksheet

Mr. Huch explained how participants should fill out the Mitigation Action Development Worksheet. The worksheet is designed to gather as much information as possible from municipal participants so Tetra Tech planners can develop mitigation actions for municipal review and input. The worksheet is to be filled out and returned to the county and Tetra Tech after the municipality completes it.

Mr. Huch reviewed the proposed action table and action worksheet and detailed the information necessary to complete each. Mr. Huch reviewed how municipal representatives should make use of problem statements emailed to them by their Tetra Tech planners, identify additional problem areas, and brainstorm potential mitigation actions.

Mr. Clapp described the value of developing viable, fundable mitigation actions/strategies and generating a “wish list” of projects to protect the community. Each community should watch for funding announcements on the NYS DHSES website. Applications for FEMA’s Hazard Mitigation Grant Program are available through NYS DHSES until June 11. It is also expected that funding will be announced in August 2021 for the Building Resilient Infrastructure and Communities grant.

Mr. Lutz asked if the proposed action table would be sent out to attendees. Mr. Huch replied that it could, but that all relevant information is captured in the Action Worksheet.

Next Steps

The following next steps were discussed at the meetings:

- Participants were asked to return their Mitigation Action Development Worksheets to Mr. Subbio by June 16, 2021.
- Municipalities will work with their assigned Tetra Tech planners to complete development of their annexes and mitigation actions.
- All actions and annexes are required to be completed by June 23, 2021.

The meeting adjourned at 10:15 a.m.



MEETING NOTES

Meeting	Erie County Hazard Mitigation Plan (HMP) Mitigation Strategy Workshop #2		
Date	June 9, 2021	Time	6:00 – 7:15 p.m.
Location	Webinar		
Attendees	Greg Butcher, Deputy Commissioner, Erie County Department of Homeland Security and Emergency Services		
	Melissa Calhoun, Public Safety Officer - Special Assistant Erie County, Erie County Department of Homeland Security and Emergency Services		
	Kenneth Martin, Supervisor, Town of Collins		
	Clyde Drake, Supervisor, Town of Concord		
	Mike Willibey, Emergency Manager, Town of Concord		
	Brian Burgstahler, Emergency Manager Town of Eden		
	Danil Kowalik, Emergency Manager, Town of Newstead		
	Kevin Clapp, Planning Manager, Mitigation Programs, NYS Division of Homeland Security & Emergency Services		
	Brian Kehoe, Planner, Tetra Tech		
	Tony Subbio, Project Manager, Tetra Tech		
Chris Huch, Planner, Tetra Tech			

Purpose

The purpose of the Mitigation Strategy Workshop was to work with the jurisdictional participants of the Erie County HMP to identify problems and potential mitigation actions to include in their jurisdictional annexes.

Discussion Points

This section summarizes each discussion point addressed during the meeting.

Welcome and Opening Remarks

Mr. Butcher thanked participants for attending the meeting and participating in the planning process. Mr. Subbio and Mr. Huch welcomed attendees. Mr. Huch described the purpose of the meeting, which was to review the hazard mitigation planning process and develop mitigation strategies.

Hazard Mitigation Review

Mr. Huch provided a brief review of the concepts of hazard mitigation.



MEETING NOTES

Developing Mitigation Strategies

Mr. Huch reviewed the hazards of concern and discussed different methods of risk reduction. Mr. Huch then reviewed the NYS requirements for updating the mitigation strategy. Each jurisdiction will need to meet the following requirements:

- Each jurisdiction must develop at least two Mitigation Action Development worksheets.
- Repetitive and Severe Repetitive Loss Properties need an action with specific details (street or neighborhood names).
- Critical facilities need to be protected to the 500-year flood event (0.2% annual chance) or worst-case scenario.
- Evacuation routes and shelters must be made viable.
- Temporary and permanent housing locations must be identified.
- Proposed actions must have specific information when discussing the problem and solution and identify information such as:
 - Project lead
 - Estimated cost
 - Timeline
 - Whether the action involves a critical facility

Mr. Huch explained that mitigation actions must have a clear connection to the risk and capability assessments. Mr. Huch reviewed the types of mitigation actions that should be considered:

- Structure and Infrastructure Projects
- Local Plans and Regulations
- Natural Systems Protection Projects
- Education and Awareness Programs

Mr. Huch explained to participants that carryover actions must be updated to be made more specific. Mr. Huch provided examples on how to update carryover actions to meet the current standards of the HMP planning process.

Fill Out and Return the Mitigation Action Development Worksheet

Mr. Huch explained how participants should fill out the Mitigation Action Development Worksheet. The worksheet is designed to gather as much information as possible from municipal participants so Tetra Tech planners can develop mitigation actions for municipal review and input. The worksheet is to be filled out and returned to the county and Tetra Tech after the municipality completes it.

Mr. Huch reviewed the proposed action table and action worksheet and detailed the information necessary to complete each. Mr. Huch reviewed how municipal representatives should make use of problem statements emailed to them by their Tetra Tech planners, identify additional problem areas, and brainstorm potential mitigation actions.



MEETING NOTES

Mr. Clapp described the value of developing viable, fundable mitigation actions/strategies and generating a “wish list” of projects to protect the community. Each community should watch for funding announcements on the NYS DHSES website. Applications for Hazard Mitigation Grant Program funding are available through NYS DHSES until June 11. It is also expected that funding will be announced in August 2021 for the Building Resilient Infrastructure and Communities grant.

Next Steps

The following next steps were discussed at the meetings:

- Participants were asked to return their Mitigation Action Development Worksheets to Mr. Subbio by June 16, 2021.
- Municipalities will work with their assigned Tetra Tech planners to complete development of their annexes and mitigation actions.
- All actions and annexes are required to be completed by June 23, 2021.

The meeting adjourned at 7:15 p.m.



TETRA TECH
complex world | CLEAR SOLUTIONS™

Erie County

**Hazard Mitigation Plan Update
Mitigation Strategy Workshop**
June 9, 2021 9:00 – 11:00 a.m. & 6:00 – 8:00 p.m.

1

Welcome

- If you are attending the webinar on your computer, please add your name, title, and organization(s) to the chat window.
 - Bring your mouse to the lower part of the screen until a set of buttons appears.
 - Click **Show conversation**.

2

Today's Topics

- Introductions
- Hazard Mitigation Explained
- Develop Mitigation Strategies
- Develop Actions and Action Worksheets
- Integrate Mitigation Activities
- Next Steps

3

What Is Hazard Mitigation?

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

"...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).

4

Mitigation Works!

The nation saves **\$6** for every **\$1** spent through mitigation grants funded via select federal agencies.

National Benefit-Cost Ratio (BCR) Per Peril <small>*BCR numbers in this study have been rounded</small>	Beyond Code Requirements	Federally Funded
Overall Hazard Benefit-Cost Ratio	\$4:1	\$6:1
Riverine Flood	\$5:1	\$7:1
Hurricane Surge	\$7:1	Too few grants
Wind	\$5:1	\$5:1
Earthquake	\$4:1	\$3:1
Wildland-Urban Interface Fire	\$4:1	\$3:1

5

Hazard Mitigation Components

3 KEY COMPONENTS THAT CONTRIBUTE TO NATURAL HAZARD MITIGATION PLANNING

- BECOME ELIGIBLE FOR MITIGATION FUNDING & ASSISTANCE
- COLLABORATE & GATHER SUPPORT FROM FEDERAL AND STATE PARTNERS
- DEVELOPING A TOOL BOX OF LOCAL TIPS & TRICKS FOR HAZARD MITIGATION ACTION

BENEFITS OF NATURAL HAZARD MITIGATION PLANNING

6



Tetra Tech

Mitigation Strategy

7

2021 HMP Hazards of Concern

- Coastal Erosion
- Cyber Security
- Earthquake
- Expansive Soils
- Extreme Temperature
- Flood
- Hazardous Materials
- Landslide
- Pandemic
- Severe Storm
- Severe Winter Storm
- Utility Failure
- Wildfire

8

Risk Reduction

To reduce risk:

- **Manipulate the hazard:**
 - Structural flood control
- **Reduce/eliminate exposure:**
 - Property acquisition
- **Reduce vulnerability:**
 - Retrofit
- **Increase capability:**
 - funding, preparation, technical assistance, planning, enforcement

9

NYS & FEMA Requirements for Mitigation Strategy Update

- Develop *at least two Action Worksheets*.
- **Address Repetitive and Severe Repetitive Loss Properties** - need an action with specific details (street or neighborhood names).
- Identify critical facilities, assess vulnerabilities and ensure protection to the 500-year flood event or worst-case scenario.
 - If already protected, we must note how.
 - *If not protected, a mitigation action must be developed.*
- Plan for climate change and propose actions to address.

10

NYS Requirements: Mitigation Strategy

- **MUST** identify evacuation routes and shelters in the plan.
 - Identify actions to make evacuation routes and shelters viable, if not already.
- **MUST** identify temporary housing and permanent housing locations in the plan.
 - Identify actions to develop these locations, even if outside of jurisdictional boundaries.

11

NYS Requirements: Mitigation Strategy

- Proposed actions **MUST** have specific information identified, including:
 - Project lead
 - Estimated cost
 - Timeline
 - Whether the action involves a critical facility
 - Etc.
- All of these required items are identified within the proposed action table. **Each cell of the table MUST be filled out!**

12



Connection to the Mitigation Strategy

- Need a clear connection between vulnerability and proposed mitigation actions.
- Capability assessment provides insight into challenges/opportunities for the mitigation strategy as well.
- Provides the factual basis for activities proposed in the mitigation strategy.



13

13

Connection to the Mitigation Strategy

- More specific actions:
 - Specific projects, in specific locations, in a specific timeframe
- Diverse actions:
 - Focus on highest ranked hazards but also look to address other hazards
 - Include a variety in the types of actions



14

14

FEMA 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.



15

15

Update the Mitigation Strategy

- Review your Goals and Objectives.
- Start with Problems (many identified in your Problem Statements/worksheets):
 - Areas that have been impacted
 - Recurring issues
 - Critical/lifeline facilities in the floodplain
 - RL/SRL properties need mitigating
 - Lack of identified locations for temporary housing and permanent housing (outside of the floodplain)



16

16

Update the Mitigation Strategy

- Identify new mitigation actions/projects.
- Modify carry-over projects from the 2015 HMP.
 - Be more specific or address different aspect of original problem.



17

17



Make Previous Actions More Specific

18



Previous Problem/Action (2015 HMP)

- **Problem:** Critical facilities require backup power.
- **Solution:** Acquire backup power for critical facilities.



19

19

Improved Problem and Action

- **Problem:** Town Hall lacks a backup power source. The Town Hall houses the Emergency Operations Center and can also serve as a backup shelter. Lack of power results in a breakdown of continuity of operations and prevents the Town Hall from providing critical services during a hazard event.
- **Solution:** The Town Engineer will work with the Office of Emergency Management to research and purchase the appropriately sized backup generator for the Town Hall. The DPW will install the backup generator and necessary electrical components and will be responsible for testing and upkeep of the generator after installation.



20

20

EVEN MORE Improved Problem and Action

- **Problem:** Town Hall lacks a backup power source. The Town Hall houses the Emergency Operations Center and also can serve as a backup shelter for approximately 100 people. Lack of power results in a breakdown of continuity of operations and prevents the Town Hall from providing critical services during a hazard event.
- **Solution:** The Town Engineer will work with the Office of Emergency Management to research and purchase a 75 kW generator for the Town Hall. The DPW will install the backup generator on the roof of the Town Hall, install necessary electrical components, and be responsible for testing and upkeep of the generator after installation.



21

21

Previous Problem and Action

- **Problem:** Falling trees result in power outages.
- **Solution:** Complete tree trimming.



22

22

Improved Problem and Action

- **Problem:** High-hazard trees pose a risk for falling on private property and utilities during storm events. The town does not have a program in place to monitor and inspect trees and identify trees that need to be trimmed or removed.
- **Solution:** The town will develop a vegetation management program. This program will include routine inspections of trees in the municipal rights-of-way, identify trees that are in need of trimming or removal, and conduct the trimming and removal. This will help reduce tree damage, road closures, and power outages during severe weather events. A majority of the tree work will be conducted by the Highway Department; however, outside contractors might be used if removal is beyond the Highway Department's capability.



23

23



Mitigation Development Worksheet

24



Tetra Tech emailed **Problem Statements** to help fill out your **Mitigation Development Worksheet & Action Worksheets**

25

26

Proposed Action Table

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Priority	Estimated Timeframe	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Program	ES&S Category
2020-Misc-001				Problem: Solution:									
2020-Misc-002				Problem: Solution:									
2020-Misc-003				Problem: Solution:									
2020-Misc-004				Problem: Solution:									
2020-Misc-005				Problem: Solution:									

27

28

Action Worksheets

- Each jurisdiction must develop at least two **Action Worksheets**.
- Jurisdictions should also develop additional Action Worksheets for projects you plan to apply for FEMA funding support for within the next five years.
- Not every action requires an Action Worksheet to be developed, but the same sort of information about those actions is still needed in the Proposed Actions table of the annex.

29

Action Worksheet

Project Name:			
Project Number:			
Risk / Vulnerability			
Hazard(s) of Concern:			
Description of the Problem:			
Action or Project Intended for Implementation			
Description of the Solution:			
Is this project related to a Critical Facility? Yes <input type="checkbox"/> No <input type="checkbox"/>			
Is this project related to a Critical Facility located within the 100-year floodplains? Yes <input type="checkbox"/> No <input type="checkbox"/>			
(If yes, this project must intend to protect to the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
Level of Protection:		Estimated Benefits (lives avoided):	
Useful Life:		Goals Met:	
Estimated Cost:		Mitigation Action Type:	
Plan for Implementation			
Prioritization:		Desired Timeframe for Implementation:	
Estimated Time Required for Project Implementation:		Potential Funding Sources:	
Responsible Organization:		Local Planning Mechanisms to be Used in Implementation if any:	
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			

30



Action Worksheet

- Complete the highlighted areas.
- Areas not highlighted will be completed by Tetra Tech staff.



31

Action Worksheet			
Project Name:			
Project Number:			
Risk / Vulnerability			
Hazard(s) of Concern:			
Description of the Problem:			
Action or Project Intended for Implementation			
Description of the Solution:			
Is this project related to a Critical Facility?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Is this project related to a Critical Facility located within the 100-year floodplain?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
<small>(If yes, this project must intend to protect to the 500-year flood event or the actual worse case damage scenario, whichever is greater)</small>			
Level of Protection:		Estimated Benefits (losses avoided):	
Useful Life:		Goals Met:	
Estimated Cost:		Mitigation Action Type:	
Plan for Implementation			
Prioritization:	Desired Timeframe for Implementation:		
Estimated Time Required for Project Implementation:	Potential Funding Sources:		
Responsible Organization:	Local Planning Mechanisms to be Used in Implementation if any:		
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			

32

Action Worksheet

- Description of the Problem
 - What is the problem?
 - What is the risk?
 - Where is the problem occurring?
 - Who is the problem impacting?
 - Have there been past damages?
 - How frequently does the problem occur?



33

Action Worksheet			
Project Name:			
Project Number:			
Risk / Vulnerability			
Hazard(s) of Concern:			
Description of the Problem:			
Action or Project Intended for Implementation			
Description of the Solution:			
Is this project related to a Critical Facility?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Is this project related to a Critical Facility located within the 100-year floodplain?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
<small>(If yes, this project must intend to protect to the 500-year flood event or the actual worse case damage scenario, whichever is greater)</small>			
Level of Protection:		Estimated Benefits (losses avoided):	
Useful Life:		Goals Met:	
Estimated Cost:		Mitigation Action Type:	
Plan for Implementation			
Prioritization:	Desired Timeframe for Implementation:		
Estimated Time Required for Project Implementation:	Potential Funding Sources:		
Responsible Organization:	Local Planning Mechanisms to be Used in Implementation if any:		
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			

34

Action Worksheet

- Description of the Solution
 - How do you propose to solve or mitigate the problem?
 - What are the design specifications?
 - Height and length of a floodwall
 - kW for backup generators
 - Number of structures to be bought out or elevated
 - Etc.
 - Who is responsible for what aspects of the project?



35

Action Worksheet			
Project Name:			
Project Number:			
Risk / Vulnerability			
Hazard(s) of Concern:			
Description of the Problem:			
Action or Project Intended for Implementation			
Description of the Solution:			
Is this project related to a Critical Facility?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Is this project related to a Critical Facility located within the 100-year floodplain?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
<small>(If yes, this project must intend to protect to the 500-year flood event or the actual worse case damage scenario, whichever is greater)</small>			
Level of Protection:		Estimated Benefits (losses avoided):	
Useful Life:		Goals Met:	
Estimated Cost:		Mitigation Action Type:	
Plan for Implementation			
Prioritization:	Desired Timeframe for Implementation:		
Estimated Time Required for Project Implementation:	Potential Funding Sources:		
Responsible Organization:	Local Planning Mechanisms to be Used in Implementation if any:		
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			

36



Action Worksheet

- Level of Protection
 - What level event is the project being designed to protect to?
 - For flood protection: 1% flood (100-year flood), 0.2% flood (500-year flood)
 - For stormwater improvements: 5-year rain events, 10-year rain events
 - If not a specific level, include brief description of what protections are.
 - For generators: Prevents power loss



37

37

Action Worksheet			
Project Name:			
Project Number:			
Risk / Vulnerability			
Hazard(s) of Concern:			
Description of the Problem:			
Action or Project Intended for Implementation			
Description of the Solution:			
Is this project related to a Critical Facility?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Is this project related to a Critical Facility located within the 100-year floodplain?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
<small>(If yes, this project must intend to protect to the 500-year flood event or the actual worse case damage scenario, whichever is greater)</small>			
Level of Protection:		Estimated Benefits (losses avoided):	
Useful Life:		Goals Met:	
Estimated Cost:		Mitigation Action Type:	
Plan for Implementation			
Prioritization:		Desired Timeframe for Implementation:	
Estimated Time Required for Project Implementation:		Potential Funding Sources:	
Responsible Organization:		Local Planning Mechanisms to be Used in Implementation if any:	
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			

38

38

Action Worksheet

- Estimated cost
 - What will the project cost?
 - If project includes phases or components, what will each phase or component cost?
 - New generator: \$25K, elevation platform for generator: \$1K



39

39

Action Worksheet			
Project Name:			
Project Number:			
Risk / Vulnerability			
Hazard(s) of Concern:			
Description of the Problem:			
Action or Project Intended for Implementation			
Description of the Solution:			
Is this project related to a Critical Facility?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Is this project related to a Critical Facility located within the 100-year floodplain?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
<small>(If yes, this project must intend to protect to the 500-year flood event or the actual worse case damage scenario, whichever is greater)</small>			
Level of Protection:		Estimated Benefits (losses avoided):	
Useful Life:		Goals Met:	
Estimated Cost:		Mitigation Action Type:	
Plan for Implementation			
Prioritization:		Desired Timeframe for Implementation:	
Estimated Time Required for Project Implementation:		Potential Funding Sources:	
Responsible Organization:		Local Planning Mechanisms to be Used in Implementation if any:	
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			

40

40

Action Worksheet

- Prioritization
 - High, Medium, or Low
 - Use the second page of the Action Worksheet to evaluate each action and assist in the determination of priority (to be discussed shortly).



41

41

Action Worksheet			
Project Name:			
Project Number:			
Risk / Vulnerability			
Hazard(s) of Concern:			
Description of the Problem:			
Action or Project Intended for Implementation			
Description of the Solution:			
Is this project related to a Critical Facility?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Is this project related to a Critical Facility located within the 100-year floodplain?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
<small>(If yes, this project must intend to protect to the 500-year flood event or the actual worse case damage scenario, whichever is greater)</small>			
Level of Protection:		Estimated Benefits (losses avoided):	
Useful Life:		Goals Met:	
Estimated Cost:		Mitigation Action Type:	
Plan for Implementation			
Prioritization:		Desired Timeframe for Implementation:	
Estimated Time Required for Project Implementation:		Potential Funding Sources:	
Responsible Organization:		Local Planning Mechanisms to be Used in Implementation if any:	
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			

42

42



Action Worksheet

- Responsible Organization
 - Identify the lead organization/department/individual for the project.
 - Identify any supporting organizations/departments/individuals for the project.



43

Evaluation of Actions

Evaluation and Prioritization		
Project Name:		
Project Number:		
Criteria	Numeric Rank (1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety		
Property Protection		
Cost-Effectiveness		
Technical		
Political		
Legal		
Fiscal		
Environmental		
Social		
Administrative		
Multi-Hazard		
Timeline		
Agency Champion		
Other Community Objectives		
Total		
Priority (High/Med/Low)		



44

Prioritization of Actions

- Consider the benefits and costs.
- Consider the implementation timeline.
- Consider the areas/problems of greatest need.
- Consider the funding sources.
- High/Medium/Low priority.



45

Schedule Review and Next Steps

- Return your Mitigation Development Worksheet by **June 16**.
- Work with your assigned Tetra Tech planner to complete your annex and the development of your actions.
- All annexes and actions must be complete by **June 23**.
- Targeting posting of the draft plan July 9.



46

For More Information...

- Erie County HMP Website
 - Home - Erie County Hazard Mitigation Plan (HMP) Public Website (eriecountynyhmp.com)
- Erie County Department of Homeland Security and Emergency Services
 - Erie County Department of Homeland Security & Emergency Services - Home | Facebook
 - Department of Homeland Security and Emergency Services (erie.gov)
 - Erie Cty Emerg Svces (@ErieCountyESU) / Twitter
- Erie County Department of Environment & Planning
 - Erie County DEP (@ErieCoDEP) / Twitter
 - Environment & Planning (erie.gov)



47

47

Contacts



Gregory Butcher, Deputy Comm.
gregory.butcher@erie.gov
 (585) 716-858-6578



Tony Subbio, Project Manager
tony.subbio@tetratech.com
 (717) 545-3580



Brian Kehoe
brian.kehoe@tetratech.com
 (585) 354-4216



48



AGENDA

ERIE COUNTY HAZARD MITIGATION PLAN UPDATE Mitigation Strategy Workshop

Wednesday, June 9, 2021 | 9:00 – 11:00 a.m. & 6:00 – 8:00 p.m.

-
1. **Welcome and Opening Remarks**

 2. **Hazard Mitigation Review**

 3. **Developing Mitigation Strategies**
 - a. NYS Requirements
 - b. Areas of Focus
 - c. Types of Mitigation Actions

 4. **Making Previous Actions More Specific**

 5. **Fill Out and Return Your Mitigation Development Worksheet**

 6. **Proposed Action Tables**

 7. **Action Worksheets**

 8. **Questions**

 9. **Next Steps**





ERIE COUNTY HAZARD MITIGATION PLAN UPDATE
Mitigation Action Development



Please work with your municipal planning team and complete this worksheet. Please send electronic Word version by June 18, 2021 to:
Tony Subbio, Tetra Tech
Phone: (717)-839-5654 E-mail: tony.subbio@tetrattech.com

Municipality: _____
Name and Title of Individual
Completing Worksheet*: _____

Check in with your municipal planning team: Municipal officials or residents with historical knowledge, including OEM Coordinator, Police, Fire, DPW, building inspector, municipal engineer, etc.

What is your biggest hazard concern? (flooding, stormwater flooding, falling trees, fuel shortage, hazmat spill, power loss, etc.)

Problem	Solution

Critical Facilities - Backup Power

Please list critical facilities that require backup power. If you have specifics (size of the generator, potential cost, etc.), please provide that information as well.

Problem	Solution

Critical Facilities - Flood Protection

If your emailed problem statement list included critical facilities that were located in the special flood hazard area (100-year floodplain), list them here and identify if they are protected from the 0.2% (500-year) flood or what could be done to protect them (relocate, elevate, floodproof, etc.). If you are unsure of their protections, assume they need additional protections.

Problem	Solution





ERIE COUNTY HAZARD MITIGATION PLAN UPDATE
Mitigation Action Development



Culverts - Undersized/In Need of Upgrade

Please indicate the location (Street? Stream/river?) of any culverts in your community that are undersized or are damaged from past flood events.

Problem	Solution

Flood Protection – Elevation or Buyout

Please identify homes or neighborhoods that would benefit from elevation or buyout to prevent future flood damages.

Problem	Solution

Infrastructure Protection

Please identify roads and other infrastructure that needs protection from flooding, storms, etc. Indicate what the protection measures are (elevate roadway, harden infrastructure, etc.)

Problem	Solution

Other Projects

Please identify other projects that you have in mind after reviewing your problem statements, past actions, risk assessment results, and mitigation catalog.

Problem	Solution



Action Worksheet			
Project Name:			
Project Number:			
Risk / Vulnerability			
Hazard(s) of Concern:			
Description of the Problem:			
Action or Project Intended for Implementation			
Description of the Solution:			
Is this project related to a Critical Facility?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Is this project related to a Critical Facility located within the Special Flood Hazard Area?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
(If yes, this project must intend to protect to the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
Level of Protection:		Estimated Benefits (losses avoided):	
Useful Life:		Goals Met:	
Estimated Cost:		Mitigation Action Type:	
Plan for Implementation			
Prioritization:		Desired Timeframe for Implementation:	
Estimated Time Required for Project Implementation:		Potential Funding Sources:	
Responsible Organization:		Local Planning Mechanisms to be Used in Implementation if any:	
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

Evaluation and Prioritization		
Project Name:		
Project Number:		
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety		
Property Protection		
Cost-Effectiveness		
Technical		
Political		
Legal		
Fiscal		
Environmental		
Social		
Administrative		
Multi-Hazard		
Timeline		
Agency Champion		
Other Community Objectives		
Total		
Priority (High/Med/Low)		

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; one of which cannot be a generator.

- If you have NFIP repetitive or severe repetitive flood loss properties, you must include a specific project to mitigate including the general location (neighborhood name, area of town – do not include specific addresses), type of mitigation (acquisition, elevation), details regarding outreach to homeowners and schedule for implementation.
- If you have critical facilities or lifelines in the floodplain, please identify a mitigation project to reduce flood impacts. If you already mitigated, please indicate the action completed. If it is not within your jurisdiction, consider working with the facility owner to conduct a feasibility study to identify the most effective path forward – need an outcome of the study to determine next steps.

Action Worksheet

Project Name: Please identify a unique project name for the mitigation action.

Project Number: 2020-Jurisdiction-001.

Assessing the Risk and Vulnerability

Hazard(s) of Concern: Please identify the hazard(s) being addressed with this action.

Description of the Problem: Provide a detailed narrative of the problem. Describe the 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 or lifeline in your community.

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: Identify all estimate costs associated with implementation.

Estimated Benefits: Identify the benefits that implementation of this project will provide (e.g., risk reduction). 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:

Goal 1: Protect life, property, and critical infrastructure from the impacts of natural, technological, and human-caused hazards.

Goal 2: Reduce the risk of hazards on life, property, and the environment.

Goal 3: Educate the public, officials, and other stakeholders about the hazards they face and what can be done to mitigate hazard impacts.

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.

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): Identify multiple sources of potential funding. For example, FEMA HMGP and PDM Grants, CDBG-DR funding, etc.

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. Please include the name of the action considered, estimated cost to complete the project, and a description of the pros and cons of the project.

Reporting on Progress (for plan maintenance)

Date of Status Report: This section should be completed during 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.

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.

COASTAL EROSION

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"> ○ None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Retrofit/elevate structures ○ Purchase flood insurance • Increase capability: <ul style="list-style-type: none"> ○ Improve awareness of hazard and insurance options 	<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 ○ Retrofit structures, elevate mechanicals • Increase capability: <ul style="list-style-type: none"> ○ Improve awareness of hazard and insurance options 	<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"> ○ Support sustainable and resilient land use and community development ○ Recognize sea level rise and erosion areas as a hazard overlay for planning ○ Limit new development and critical infrastructure inside the coastal erosion hazard area ○ Develop design standards for development inside areas prone to coastal erosion ○ Incentivize improved flood risk management • Increase capability: <ul style="list-style-type: none"> ○ Develop guidance and checklist for developers to assist with integration and incorporation of green and sustainable approaches ○ Encourage property owners to purchase flood insurance

EARTHQUAKES

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"> ○ Locate outside of hazard area (off soft soils) • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Retrofit structure (anchor house structure to foundation) ○ Secure household items that can cause injury or damage, such as water heaters, bookcases, and other appliances ○ Build to higher design standards • Increase capability: <ul style="list-style-type: none"> ○ Practice “drop, cover, and hold” ○ Develop household mitigation plan, such as creating a retrofit savings account, communication capability with outside, 72 hr self-sufficiency during an event ○ Increase capability by having cash reserves for reconstruction ○ Become informed on the hazard and risk reduction alternatives available ○ Develop a post-disaster action plan for your household 	<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"> ○ Locate/relocate mission critical functions outside hazard area where possible • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Build redundancy for critical functions/facilities ○ Retrofit critical buildings/areas housing mission critical functions • Increase capability: <ul style="list-style-type: none"> ○ Adopt higher standard for new construction; consider “performance-based design” when building new structures ○ Increase capability by having cash reserves for reconstruction ○ Inform your employees on the possible impacts of earthquake and how to deal with them at your work facility ○ Develop a Continuity of Operations (COOP) Plan 	<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"> ○ Locate critical facilities or functions outside of hazard area where possible • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Harden infrastructure ○ Provide redundancy for critical functions ○ Adopt higher regulatory standards for structures ○ Conduct “rapid screening” programs for critical facilities to identify facilities that may be particularly prone to EQ damage, then develop investigation/action plans to address such structures • Increase capability: <ul style="list-style-type: none"> ○ Provide better hazard maps ○ Provide technical information and guidance ○ Enact tools to help manage development in hazard areas: tax incentives, information ○ Include retrofitting/replacement of critical system elements in CIP ○ Develop strategy to take advantage of post-disaster opportunities ○ Warehouse critical infrastructure components such as pipe, power line, and road repair material

EARTHQUAKES

Personal Scale

Corporate Scale

Government Scale

- Develop and adopt a Continuity of Operations/Continuity of Government Plan (COOP/COG)
- Initiate triggers guiding improvements such as: (< 50% substantial damage/improvements)
- Further enhance seismic risk assessment to target high hazard buildings for mitigation opportunities
- Develop a post-disaster action plan that includes a grant funding and debris removal components
- Utilize warning systems such as NY Alert
- Educate builders and developers on seismic construction standards

EXPANSIVE SOILS

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"> ○ 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"> ○ None • 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 • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Consider hazard areas in land use planning and development siting ○ Build structures in land subsidence areas on piers anchored to bedrock ○ Work with stakeholders such as USGS and SWCD to develop appropriate risk reduction strategies • Increase capability: <ul style="list-style-type: none"> ○ Increase understanding of hazard areas (e.g., Landslide Susceptibility Maps) geotechnical surveys, LIDAR, and mapping ○ Work with stakeholders such as USGS, NYS - Geological Survey and SWCD to develop appropriate risk reduction strategies ○ Support and implement hazard disclosure for the sale/re-sale of property in identified risk zones

		<ul style="list-style-type: none">○ Develop county-level programs to document slide events (landslide inventory), and maintain its currency
--	--	---

EXTREME TEMPERATURES

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"> ○ Insulate structure ○ Provide redundant power ○ Plant appropriate trees near home (“Right tree, right place” National Arbor Day Foundation Program) • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Air condition non-conditioned buildings ○ Install backup heat (e.g., wood burning stoves) ○ Incorporate “green building” methods (e.g., green roofs) • Increase capability: <ul style="list-style-type: none"> ○ Be aware of impending heatwaves ○ Inform yourself on the do’s and don’ts during heatwaves ○ Have fans available for use during peak demands in lieu of air conditioning ○ Install backup generators ○ Know the location of cooling and warming shelters 	<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 redundancy to power supply to deal with power grid vulnerability during high demands • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Air condition non-conditioned buildings ○ Incorporate “green building” methods (e.g., green roofs) • Increase capability: <ul style="list-style-type: none"> ○ Inform employees of the seriousness of heatwaves ○ Monitor weather forecasts ○ Establish a COOP 	<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 redundancy to power supply to deal with power grid vulnerability during high demands • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Air condition public buildings ○ Incorporate “green building” methods (e.g., green roofs) • Increase capability: <ul style="list-style-type: none"> ○ Inform the public on the seriousness of heatwaves ○ Identify populations vulnerable to extreme heat (elderly, poor) for early warning during potential heatwaves ○ Enhance weather forecasting capability ○ Distribute fans to vulnerable populations ○ Promote selective approaches to cooling your residences and businesses during peak demands

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 relocate 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 flood-proofing) ○ Store hazardous materials above BFE or outside of flood-prone 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 flood-proofing) ○ Store hazardous materials above BFE or outside of flood-prone areas ● Increase capability: <ul style="list-style-type: none"> ○ Increase capability by having cash reserves for reconstruction ○ Develop and adopt a COOP Plan ○ 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 EAPs are kept in compliance with NYSDEC 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: levees, 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/relocate 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: PUDs, easements, setbacks, greenways, sensitive area tracks ○ Adopt land development criteria such as PUDs, 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

FLOOD

Personal Scale	Corporate Scale	Government Scale
		<p>provisions for enforcing best practice standards by requiring a minimum freeboard of 2' to align with NY State Standards</p> <ul style="list-style-type: none"> ○ 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 flood-proofing) ○ 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) and support county leads of such efforts

FLOOD

Personal Scale	Corporate Scale	Government Scale
		<ul style="list-style-type: none"> ○ 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 the SWCD and other 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 CRS program or improve level of participation in CRS ○ Develop and implement a public information strategy for flood hazard

FLOOD

Personal Scale	Corporate Scale	Government Scale
		<p>awareness, flood insurance (NFIP) and mitigation</p> <ul style="list-style-type: none"> ○ 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) ○ 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 “StormReady” Program

FLOOD

Personal Scale	Corporate Scale	Government Scale
		<ul style="list-style-type: none"> ○ 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 such as NYAlert ○ 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

FLOOD

Personal Scale

Corporate Scale

Government Scale

- Provide trainings for FPAs on the NFIP/Floodplain Best Practices and also pursue CFM accreditation for municipal FPAs
- 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

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 and SWCD to develop appropriate risk reduction strategies

LANDSLIDE

Personal Scale

Corporate Scale

Government Scale

- Install catch-fall nets for rocks at steep slopes near roadways
- **Increase capability:**
 - 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, NYS - Geological Survey and SWCD 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

PANDEMIC

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

SEVERE STORMS

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"> ○ 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., joining NYAlert, 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"> ○ 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 • 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., joining NYAlert, obtain a NOAA weather radio) ○ Develop a COOP Plan ○ Monitor impending 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

SEVERE STORMS

Personal Scale	Corporate Scale	Government Scale
		<ul style="list-style-type: none">○ overhead power, cable, and phone lines○ Promote awareness and participation in alert systems such as NYAlert○ 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 StormReady program○ Provide early warning of impending severe storm events to identified critical or essential facilities, including facilities such as large employment 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

SEVERE STORMS

Personal Scale	Corporate Scale	Government Scale
		<ul style="list-style-type: none">○ Establish partnerships with utility providers through proactive planning

SEVERE WINTER STORMS

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 COOP Plan to address operations before, during, and after coastal storm events ○ Utilize weather radios at the workplace 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 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, and enforce building codes in hazard areas

SEVERE WINTER STORMS

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 area with the highest degree of capability○ Encourage local ordinances for planting trees near lines and join Tree City USA

SEVERE WINTER STORMS

Personal Scale	Corporate Scale	Government Scale
		<ul style="list-style-type: none">○ Increase tree management programs○ Join the Community Rating System (CRS)○ Join StormReady○ 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 backup communication systems to inform public of hazards and to communicate during the hazard event

UTILITY INTERRUPTION

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 	<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 	<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 ○ 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. ○ 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

UTILITY INTERRUPTION

Personal Scale

Corporate Scale

Government Scale

- Encourage local ordinances for planting trees near lines and join Tree City USA
- Increase tree management programs
- Join StormReady
- Retrofit above-ground utilities to underground facilities if appropriate
- Provide better communication systems and backup communication systems to inform public of hazards and to communicate during the hazard event



Potential Mitigation Funding Sources

While it is important to recognize the mitigation strategies for each jurisdiction to help achieve the mitigation goals and objectives of the Hazard Mitigation Plan (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 1. Mitigation Funding Sources

Program	Description	Lead Agency	Website
Federal			
Hazard Mitigation Assistance (HMA)	Grants to provide funding for eligible mitigation activities that reduce disaster losses and protect life and property from future disaster damages – includes FMA, HMGP, PDM.	FEMA	https://www.fema.gov/hazard-mitigation-assistance
Flood Mitigation Assistance (FMA)	Program grants to states and communities for pre-disaster mitigation planning and projects to help reduce or eliminate the long-term risk of flood damage to structures insurable under the National Flood Insurance Program.	FEMA	https://www.fema.gov/flood-mitigation-assistance-grant-program
Hazard Mitigation Grant Program (HMGP)	Grants to states and communities for planning and projects providing long-term hazard mitigation measures following a major disaster declaration.	FEMA	https://www.fema.gov/hazard-mitigation-grant-program
Building Resilient Infrastructure and Communities (BRIC)	Grants to states, local communities, tribes, and territories as they undertake hazard mitigation projects, reducing the risks they face from disasters and natural hazards. BRIC is a new FEMA pre-disaster hazard mitigation program that replaces the existing Pre-Disaster Mitigation (PDM) program.	FEMA	https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities
Public Assistance: Hazard Mitigation Funding Under Section 406	Hazard mitigation discretionary funding available under Section 406 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act following a Presidentially declared disaster.	FEMA	https://www.fema.gov/news-release/2017/05/03/4309/fema-hazard-mitigation-grants-404-and-406
Assistance to Firefighters Grant Program	The primary goal of the Assistance to Firefighters Grants (AFG) is to enhance the safety of the public and firefighters with respect to fire-related hazards by providing direct financial assistance to eligible fire departments, nonaffiliated Emergency Medical Services organizations, and State Fire Training Academies. This funding is for critically needed resources to equip and train emergency personnel to recognized standards, enhance operations efficiencies, foster interoperability, and support community resilience.	FEMA	https://www.fema.gov/welcome-assistance-firefighters-grant-program
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?oppId=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. State pays 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/
FHWA Emergency Relief Program	Fund for the repair or reconstruction of Federal-aid highways that have suffered serious damage as a result of (1) natural disasters or (2) catastrophic failures from an external cause.	U.S. Department of Transportation (DOT)	https://www.fhwa.dot.gov/programadmin/erelief.cfm
Transportation Investment Generating Economic Recovery (TIGER)	Investing in critical road, rail, transit, and port projects across the nation.	U.S. DOT	https://www.transportation.gov/tags/tiger-grants
Community Facilities Direct Loan & Grant Program	This program provides affordable funding to develop essential community facilities in rural areas. An essential community facility is defined as a facility that provides an essential service to the local community for the orderly development of the community in a primarily rural area and does not include private, commercial, or business undertakings.	USDA	https://www.rd.usda.gov/programs-services/community-facilities-direct-loan-grant-program
Emergency Loan Program	USDA's Farm Service Agency (FSA) provides emergency loans to help producers recover from production and physical losses due to drought, flooding, other natural disasters, or quarantine.	USDA	https://www.fsa.usda.gov/programs-and-services/farm-loan-programs/emergency-farm-loans/index
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/



Program	Description	Lead Agency	Website
Emergency Management Performance Grants (EMPG) Program	Assist local, tribal, territorial, and state governments in enhancing and sustaining all-hazards emergency management capabilities.	U.S. DHS	https://www.fema.gov/emergency-management-performance-grant-program
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
USSBA	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
State			
Local Government Records Management Improvement Fund (LGRMIF) Disaster Recovery Grants	Grants for disaster recovery projects related to damage caused by a sudden, unexpected event involving fire, water, man-made or natural phenomena where a timely response is necessary to prevent the irretrievable loss of vital or archival records, or to ensure reasonable, timely access to vital records.	New York State Archives / New York State Education Department	http://www.archives.nysed.gov/grants/grants_lgrmif.shtml
The New York State Emergency Services Revolving Loan	Repair of firefighting apparatus, ambulances, or rescue vehicles; renovation, rehabilitation, or repair of facilities that house firefighting equipment, ambulances, rescue vehicles, and related equipment.	NYS DHSES	http://www.dhSES.ny.gov/ofpc/services/loan/
Environmental Protection Fund (EPF)	Matching grants for the acquisition, planning, development, and improvement of parks, historic properties.	New York State Parks, Recreation & Historic Preservation (NYSOPRHP)	https://www.dec.ny.gov/about/92815.html
Recreational Trails (RTP)	Program matching grants for the acquisition, development, rehabilitation, and maintenance of trails and trail-related projects.	NYSOPRHP	https://parks.ny.gov/grants/recreational-trails/default.aspx



Program	Description	Lead Agency	Website
Environmental Protection & Improvement Grants	Competitive grants for environmental protection and improvement; available for municipalities, community organizations, not-for-profit organizations, and others.	New York State Department of Environmental Conservation	https://www.dec.ny.gov/about/92815.html
Volunteer Fire Assistance Grants	The grant is a 50/50 matching funds program. Its purpose is to make funds available to rural fire companies for the purchase of wildland firefighting equipment such as portable backpack pumps, Nomex protective clothing, hand tools, hard hats, hose, portable radios, and dry hydrants.	NYSDEC	https://www.dec.ny.gov/regulations/2364.html
Clean Water Act Section 604(b) Water Quality Planning Grants	Provide funding to implement regional comprehensive water quality management planning activities as described in Section 604(b) of the federal Clean Water Act. 604(b) funds are to be used for water quality management planning activities, including tasks to determine the nature, extent, and causes of point and nonpoint source water pollution problems and to develop plans to resolve these problems.	NYSDEC	https://www.dec.ny.gov/lands/53122.html
Water Quality Improvement Project (WQIP) Program	The Water Quality Improvement Project (WQIP) program is a competitive reimbursement grant program that funds projects that directly address documented water quality impairments. Applications are typically available each spring through the Consolidated Funding Application.	NYSDEC	https://www.dec.ny.gov/pubs/4774.html
New York State DEC/EFC Wastewater Infrastructure Engineering Planning Grant (EPG)	The New York State Department of Environmental Conservation (DEC), in conjunction with the New York State Environmental Facilities Corporation (EFC), will offer grants to municipalities to help pay for the initial planning of eligible Clean Water State Revolving Fund (CWSRF) water quality projects. The ultimate goal of the EPG program is to advance water quality projects to construction, so successful applicants can use the engineering report funded by the grant to seek financing through the CWSRF program, Water Quality Improvement Project program, or other funding entities to further pursue the identified solution.	NYSDEC	https://www.dec.ny.gov/pubs/81196.html
Climate Smart Communities Grant Program	The CSC Grant program was established in 2016 to provide 50/50 matching grants to cities, towns, villages, and counties (or boroughs of New York City) of the State of New York for eligible climate adaptation and mitigation projects.	NYSDEC	https://www.dec.ny.gov/energy/109181.html
BRIDGE NY	New York State is making funding available for local governments to rehabilitate and replace bridges and culverts statewide.	NYS DOT	https://www.dot.ny.gov/BRIDGENY



MEETING NOTES

Meeting	Erie County Hazard Mitigation Plan (HMP) Update Plan Draft Review Meeting		
Date	September 8, 2021	Time	6:00 – 7:00 p.m.
Location	Webinar		
Attendees	Greg Butcher, Deputy Director, Erie County Department of Homeland Security and Emergency Services		
	Melissa Calhoun, Public Safety Officer, Erie County Department of Homeland Security and Emergency Services		
	Joanna Panasiewicz, Watershed Coordinator, Erie County Department of Environment and Planning		
	Darien Pratchett, Emergency Services Coordinator, Erie County Department of Homeland Security and Emergency Services		
	Elizabeth Cassidy, Clerk, Town of Aurora, /Village of East Aurora		
	Jason Keding, Supervisor, Town of Boston		
	Mike Mazurowski, Emergency Manager, Town of Cheektowaga		
	David Bissonette, Emergency Manager, Town of Clarence		
	Ken Martin, Supervisor, Town of Collins		
	Mike Willibey, Emergency Manager, Town of Concord		
	Robert Westfall, Water Department, Town of Grand Island		
	Geoffrey Hack, Emergency Manager, Town of Holland		
	Rich Stanton, City of Lackawanna		
	Danil Kowalik, Emergency Manager, Town of Newstead		
	Rick Meyers, Emergency Manager, Town of North Collins		
	Richard Mrugalski, Emergency Manger, Town/Village Orchard Park		
	Jerry Whittington, Supervisor, Town of Sardinia		
	Mark Banks, Director, Emergency Management, City of Tonawanda		
	Jim Chatham, Emergency Services Assistant, Town of Tonawanda		
	Robert Lutz, Emergency Manager, Town of Tonawanda		
	James Unger, Police Department, Town of West Seneca		
	Eric Conley, Emergency Manager, Town of West Seneca		
	Jason Tolsma, Emergency Response Manager, National Fuel Gas		
Kevin Clapp, Program Manager, NYS Division of Homeland Security and Emergency Services			
Brian Kehoe, Planner, Tetra Tech			
Kate Long, Planner, Tetra Tech			

Discussion Points

This section summarizes each discussion point addressed during the meeting.



MEETING NOTES

Introductions

Mr. Butcher and Mr. Kehoe welcomed attendees and thanked them for participating as the County wraps up the HMP update process.

Mr. Kehoe facilitated the remainder of the meeting and discussed the organization of the HMP, the breakdown of its nine sections, and appendices.

- Section 1: Introduction
 - Mitigation Planning
 - Participating Jurisdictions
 - Overview
- Section 2: Plan Adoption
 - Adoption Process
- Section 3: Planning Process
 - Participants
 - Activities
 - Ongoing Process
- Section 4: County Profile
 - History
 - Physical Setting
 - Population and Demographics
 - General Building Stock
 - Land Use and Population Trends
 - Critical Facilities
- Section 5: Risk Assessment
 - Hazards of Concern
 - Hazard Ranking
 - Hazard Profiles
- Section 6: Mitigation Strategies
 - Past Accomplishments
 - Goals and Objectives
 - Capability Assessment
 - Plans, Programs, and Resources Available
 - Administrative and Technical Capabilities
 - Fiscal Capabilities
 - Mitigation Strategy Development and Update
 - Action Identification
 - Evaluation and Prioritization



MEETING NOTES

- Benefit/Cost Review
- Section 7: Plan Maintenance
 - HMP Coordinator
 - Ongoing Planning Partnership
 - Monitoring
 - Continuous Evaluation and Progress Reports
 - Updating
 - Integration of Hazard Mitigation with Existing and Future Programs
 - Continued Public Involvement
- Section 8: Planning Partnership
 - Participating Jurisdictions
 - Introduce Jurisdictional Annexes
- Section 9: Jurisdictional Annexes
 - Municipal Planning Team
 - Municipal Profile
 - Hazard Event History
 - Vulnerabilities
 - Capabilities
 - Mitigation Strategy
 - Status of Past Mitigation Actions
 - Current Mitigation Actions
- Appendices
 - Appendix A: Adoption Resolutions
 - Appendix B: Participation Matrix
 - Appendix C: Meeting Documentation
 - Appendix D: Public and Stakeholder Outreach
 - Appendix E: Critical Facilities
 - Appendix F: Plan Review Tools
 - Appendix G: Plan Review Matrix
 - Appendix H: Linkage Procedure

Mr. Kehoe showed participants where the plan sections are posted on the project website (<https://www.eriecountynyhmp.com/draft-plans/>). He emphasized that municipalities have this last opportunity to review their respective jurisdictional annexes and ensure that it faithfully reflects the municipality's intentions, including correctly detailing proposed mitigation actions. Changes requested by the municipality should be provided to the respective Tetra Tech planner by September 12, 2021. Changes will be incorporated into the final version of the annexes.

Mr. Kehoe explained that a municipality's participation in the hazard mitigation planning process, including adoption of the finalized HMP document, is necessary to access certain types of federal funding. Mr. Clapp then provided a comprehensive review of currently available mitigation funding



MEETING NOTES

programs administered through the NYS DHSES and the NYS Department of Environmental Conservation, including the following:

- Building Resilient Infrastructure and Communities – <https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities>
- Flood Mitigation Assistance – <https://www.fema.gov/grants/mitigation/floods>
- High Hazard Dams - <https://www.dec.ny.gov/press/122708.html#:~:text=New%20York%20State%20Department%20of%20Environmental%20Conservation%20%28DEC%29,%28FEMA%29%20High%20Hazard%20Potential%20Dam%20%28HHPD%29%20grant%20program.>
- NYS DHSES – <http://www.dhSES.ny.gov/recovery>
- Hazard Mitigation Grant Program (per Disaster Declaration 4480) <https://www.fema.gov/disaster/coronavirus/disaster-declarations>

Next Steps

Mr. Kehoe concluded the meeting by reminding participants to submit desired changes to their respective jurisdictional annex by September 12, 2021. Submission of the finalized document to NYS DHSES will occur in the near future, beginning a review process that will end with the granting of Approval Pending Adoption status from FEMA.

Meeting materials will be uploaded to the project website by end of day September 9, 2021. Mr. Kehoe provided his contact information: (585)-354-4216 and brian.kehoe@tetrattech.com. He thanked everyone for their participation and made himself available after the meeting in order to address municipality-specific questions.

The meeting adjourned at 7:00 p.m.



TETRA TECH
complex world | CLEAR SOLUTIONS™

**Erie County
Hazard Mitigation Plan
2021 Update**



Plan Draft Review Meeting

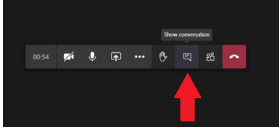
**September 8, 2021
6:00 to 8:00 PM**



1

Welcome!

- If you are attending the webinar on your computer, please add your name, title, and organization(s) to the Chat.
 - Bring your mouse to the lower part of the screen until a set of buttons appears.
 - Click "Show Conversation."




complex world | CLEAR SOLUTIONS™

2

Agenda

- Draft Plan Review
- Next Steps
- Questions




complex world | CLEAR SOLUTIONS™

3

Draft Plan Review

- **Section 1: Introduction**
 - Mitigation Planning
 - Participating Jurisdictions
 - Overview
- **Section 2: Plan Adoption**
 - Adoption Process
- **Section 3: Planning Process**
 - Participants
 - Activities
 - Ongoing Process

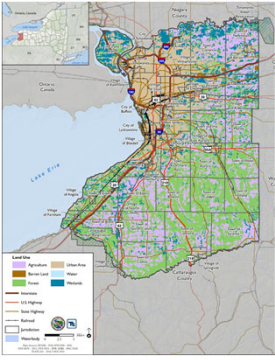


complex world | CLEAR SOLUTIONS™

4

Draft Plan Review

- **Section 4: County Profile**
 - History
 - Physical Setting
 - Population and Demographics
 - General Building Stock
 - Land Use and Population Trends
 - Critical Facilities
- **Section 5: Risk Assessment**
 - Hazards of Concern
 - Hazard Ranking
 - Hazard Profiles



complex world | CLEAR SOLUTIONS™

5

Draft Plan Review

- **Section 6: Mitigation Strategies**
 - Past Accomplishments
 - Goals and Objectives
 - Capability Assessment
 - Plans, Programs, and Resources Available
 - Administrative and Technical Capabilities
 - Fiscal Capabilities
 - Mitigation Strategy Development and Update
 - Action Identification
 - Evaluation and Prioritization
 - Benefit/Cost Review

complex world | CLEAR SOLUTIONS™

6



AGENDA

ERIE COUNTY HAZARD MITIGATION PLAN UPDATE Plan Draft Review Meeting

September 8, 2021 | 6:00 to 8:00 p.m.

1. Welcome

2. Draft Plan Review

- a. Section 1: Introduction
 - b. Section 2: Plan Adoption
 - c. Section 3: Planning Process
 - d. Section 4: County Profile
 - e. Section 5: Risk Assessment
 - f. Section 6: Mitigation Strategies
 - g. Section 7: Plan Maintenance
 - h. Section 8: Planning Partnership
 - i. Section 9: Jurisdictional Annexes
 - j. Appendices
-

3. Next Steps

4. Questions

