MEETING NOTES

Meeting	Livingston County Hazard Mitigation Plan (HMP) Update Steering Committee Kickoff Meeting		
Date	May 13, 2021	**Time**	1:00–2:15 p.m.
Location	Webinar		
Attendees	Brad Austin, Director/Fire Coordinator, Livingston County Office of Emergency Management		
	Bill Bacon, Director, Livingston County Economic Development Department		
	Kevin Clapp, Planning Manager, New York State Division of Homeland Security and Emergency Services (NYS DHSES)		
	Angela Ellis, Deputy County Administrator, Livingston County		
	Heather Ferrero, Deputy Director, Livingston County Planning Department		
	Dave Fanaro, Supervisor, Town of Leicester		
	Dwight Knapp, Supervisor, Town of Ossian		
	Dennis Mahus, Supervisor, Town of North Dansville		
	Robert Stryker, District Manager, Livingston County Soil and Water Conservation District		
	Jason Wolfanger, Director, Livingston County Highway Department		
	Brian Kehoe, Community Planner, Tetra Tech		
	Tony Subbio, Project Manager, Tetra Tech		

Discussion Points

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

Introductions

Mr. Austin and Mr. Kehoe welcomed the group. Attendees introduced themselves, providing their name, agency represented, experience with hazard mitigation (if any), and areas of focus/concern that might be addressed in the HMP update. Ms. Ellis stated that she wants to make sure the county gets good projects funded and implemented. Mr. Fanaro asked if the plan will address cyber issues.

Overview of Hazard Mitigation

Mr. Kehoe provided a brief overview of hazard mitigation as well as certain federal funding sources potentially available for municipalities to complete mitigation projects. The presentation reviewed federal and state requirements for the HMP update process and deliverables. FEMA has determined that federal mitigation funding provides a significant return on investment.

Project Scope Review

The presentation reviewed the scope of the HMP update project. The phases described below are specifically stipulated in the federal Disaster Mitigation Act of 2000 (DMA 2000).

Phase 1 – Planning Process

Mr. Kehoe explained that the Steering Committee will provide strategic oversight of the planning process and described 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. At a minimum, the following organization types will be invited to participate: all municipalities in the county, emergency responders, chamber of commerce, tourism groups, bordering counties, schools and higher education institutions, soil and conservation agencies, and others. Mr. Kehoe asked the Committee to recommend particular organizations to invite. 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. Ms. Ellis requested an email from Tetra Tech that she can use to introduce Tetra Tech's planners to personnel at the SUNY-Geneseo campus.

Phase 2 – Update the Risk Assessment

The group reviewed the Hazards of Concern from the 2015 Livingston County HMP and considered whether any hazards should be switched for others that are currently of greater concern. Tetra Tech will work with county to finalize this list, incorporating input from this committee. Mr. Clapp reported that FEMA only requires natural hazards be addressed. The committee discussed dropping earthquake as a hazard of concern, and whether to include dam failure, subsidence, cyber issues, and agriterrorism. Mr. Subbio stated that cyber attack and agriterrorism can be incorporated into the terrorism hazard profile. Mr. Kehoe described the risk/vulnerability analysis that will be conducted for each of the Hazards of Concern. After completion of all hazard profiles, Tetra Tech will share the key risk assessment data with the Planning Partnership and the public.

Phase 3 – Public Involvement Strategy

Municipalities may be asked to complete a Letter of Intent to Participate (LOI). This LOI will confirm the community's intention to participate actively in the HMP planning process and confirm their understanding of municipal roles and responsibilities.

Tetra Tech will meet with participating jurisdictions after the Planning Partnership Kickoff Meeting at a pair of information-gathering meetings. These meetings will guide municipalities to provide key data for their annexes and to develop mitigation actions. Engagement with municipalities will typically be conducted remotely, with possible in-person follow-up. Mr. Kehoe described the six information-gathering worksheets that Tetra Tech will use to collect information from municipalities. Mr. Austin stated that he has copies of the jurisdictional annexes from the 2015 HMP marked with edits and updates, which were completed by his predecessor working with municipal officials. Mr. Subbio stated that these notes may negate the need for a municipality to complete one or more of the worksheets. Mr. Austin will provide the annotated annexes to Tetra Tech for review.

Mr. Kehoe then described how the project website will provide information on the planning process. This website will link to the following three different engagement tools:

1. A survey for the public/residents

2. A survey tailored to collect specific risk/impact information from stakeholders in industry, emergency responders, healthcare facilities, schools, and higher education, etc.
3. A GIS tool that facilitates geocoding and collecting a description of hazard events that have occurred throughout the county

The Planning Partnership will hold its first meeting on June 10, 2021. There are two meetings open to the public: the Risk Assessment Meeting and the meeting to review a draft HMP.

Phase 4 – Mitigation Strategy

The Steering Committee will set the goals and objectives for the HMP and will share them with the Planning Partnership. Tetra Tech will use the information reported by the municipalities regarding their 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 will conduct a Mitigation Strategy Workshop to assist in developing new mitigation actions for inclusion in the plan.

County staff will compile information from municipal worksheets, the risk assessment, capability assessment, and proposed mitigation actions into a jurisdictional annex for participating municipalities. Tetra Tech will review and finalize the jurisdictional annexes.

Phase 5 – Plan Maintenance

Tetra Tech and the Steering Committee will develop procedures for maintaining the HMP for the five years after adoption. Maintenance procedures will be documented in the HMP. Plan maintenance will also describe avenues to integrate comprehensive planning, zoning, and/or municipal operations to support hazard mitigation.

Mitigation actions will be loaded into Tetra Tech's BATool[SM], a plan review tool to allow for ongoing plan maintenance.

Phase 6 – Plan Update and Deliverables

Tetra Tech will compile the elements of the HMP document as the planning process progresses. The draft plan will be shared with the Steering Committee for review and comment throughout the planning process.

Phase 7 – Plan Review and Adoption

Tetra Tech will post the draft HMP to the project website for public review. The public review period will be advertised and will last for 30 days. Tetra Tech will lead a public meeting with the Planning Partnership to gather feedback on the draft plan and make changes accordingly.

Tetra Tech will transmit the HMP to NYS DHSES for review. 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 FEMA's Region II office. FEMA will complete a review within 45 days, and Tetra Tech will make any required changes from this review. FEMA will grant the HMP "approvable pending adoption" status to indicate when it meets all requirements.

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. Mr. Clapp stated that Hazard Mitigation Grant Program (HMGP) funds were made available in the state due to DR-4567 (Tropical Storm Isaias). Applications are due to FEMA in October 2021. Jurisdictions do not need an approved HMP in place at the time of application, only at the time of funding award, which will be in 2022. Jurisdictions should begin thinking about projects for which they want to pursue funding.

Project Schedule Review

Mr. Kehoe reviewed the project schedule. The Planning Partnership Kickoff Meeting has been scheduled for June 10, 2021. The Risk Assessment Review Meeting will be held in August 2021. The Mitigation Action Workshop will be held in September 2021, and jurisdictional annexes should also be completed that month. Submission to NYS DHSES is targeted for November 2021, and by March 2022, it is hoped that FEMA will issue an "approvable pending adoption" (APA) notice. The schedule presented is the schedule that would need to be followed to complete the project before the county's grant expires in March 2022. Mr. Subbio stated that the timeline is feasible but is predicated on engagement by municipalities and the timely transfer of GIS information from the county to Tetra Tech.

Next Steps

- Ms. Ferrero and her colleagues will gather GIS data and communicate any questions to Mr. Kehoe.
- Tetra Tech will send information to Mr. Austin to distribute the invitation for the public and stakeholders to complete the surveys.
- The Planning Partnership Kickoff Meeting has been scheduled for June 10, 2021.
- The information-gathering sessions will be scheduled for the week of June 28, 2021.
- Tetra Tech will distribute the set of six worksheets to municipalities at the Planning Partnership Kickoff Meeting.

Mr. Austin thanked the Steering Committee members for their participation in the HMP update.

The meeting adjourned at 2:15 p.m.

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Livingston County Hazard Mitigation Plan

2022 Update

Steering Committee Kickoff Meeting

May 13, 2021
1:00 – 3:00 p.m.

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Agenda

- Introductions
- Overview of Hazard Mitigation
- Project Scope Review
- Project Schedule Review
- Next Steps
- Questions

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Introductions

- Name
- Agency
- Mitigation Experience
- Focus and Concerns

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Overview of Hazard Mitigation

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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).

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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 *BCR numbers in this study have been rounded	Beyond Code Requirements	Federally Funded
Overall Hazard Benefit-Cost Ratio	$4:1	$6:1
Riverine Flood	$5:1	$7:1
Hurricane Surge	$7:1	
Wind	$5:1	$5:1
Earthquake	$4:1	$3:1
Wildland-Urban Interface Fire	$4:1	$3:1

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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

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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

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Project Scope Review

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Project Scope Review

Phase 1 – Planning Process

- Steering Committee Strategic Oversight Meetings
  - Today's kickoff meeting
  - Meet bi-monthly through submission of HMP to NYS
  - August 2021 Risk Assessment Review Meeting, via webinar
  - September 2021 review draft goals and objectives and Mitigation Strategy Workshop, via webinar
- Public Review
  - October 4 – November 2, 2021 draft HMP available for public review

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Project Scope Review

- Phase 1 – 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

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Project Scope Review (Continued)

- Phase 2 – Update the Risk Assessment

Hazards of Concern (2014)

- Drought
- Earthquake
- Flood
- Hazardous Materials
- Infestation
- Landslide
- Severe Storm
- Severe Winter Storm
- Terrorism
- Utility Failure
- Wildfire

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Project Scope Review (Continued)

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

Drought
Earthquake
Flood
Hazardous Materials
Invasive Species/Infestation
Landslide
Severe Storm (*includes extreme wind and tornado)*
Severe winter storm (*includes winter storm/ice storm)*
Terrorism
Utility Failure
Wildfire

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Project Scope Review (Continued)

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

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Project Scope Review (Continued)

- Phase 3 – Public Involvement Strategy
  - Letter of Intent
  - Stakeholder Outreach
    - Project Website
    - Surveys
      - Individuals
      - Stakeholders
      - Problem Areas
    - Planning Partnership Meetings
      - Risk Assessment Review
      - Plan Draft Review

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Project Scope Review (Continued)

- Phase 3 – Public Involvement Strategy
  - 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

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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
  - Jurisdictional Annexes (will be developed by county staff)

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Project Scope Review (Continued)

- Phase 5 – Plan Maintenance
  - Annual Review
  - Integration with Other Planning Mechanisms
  - BATool[SM]
- 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

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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"

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Project Schedule Review

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Next Steps

- Document Request
- GIS Data
- Distribute Surveys
- Planning Partnership Kickoff Meeting
- Information-Gathering Sessions
- Risk Assessment Update

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Questions?

Thank you for your time!

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AGENDA

LIVINGSTON COUNTY HAZARD MITIGATION PLAN UPDATE
Steering Committee Kickoff Meeting

Thursday, May 13, 2021 | 1:00-3:00 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 Schedule Review
5. Next Steps
   a. Document Request
   b. GIS Data
   c. Develop Website and Surveys
   d. Planning Partnership Kickoff Meeting
   e. Information-Gathering Sessions
   f. Risk Assessment Update
6. Questions

*Project Schedule**

***Schedule is estimated based on the goal of meeting the original grant deadline of March 2022; dates are subject to change.**

Task	Timeframe
Phase 1 – Planning Process	► Conduct a Steering Committee Kickoff Meeting on May 13, 2021 ► Conduct a Planning Partnership Kickoff Meeting during the week of May 31 – June 4, 2021 ► Conduct Steering Committee Meetings at least bimonthly through submittal of the HMP to NYS DHSES
Phase 2 - Update the Risk Assessment	► Perform a thorough risk assessment of each hazard by the middle of August 2021 ► Conduct a Risk Assessment Review Meeting at the end of August 2021
Phase 3 - Public Involvement Strategy	► Implement public outreach throughout the planning process ► Conduct two identical information-gathering webinars for local officials, on or about June 23, 2021
Phase 4 - Mitigation Strategy	► Assess local capabilities by the middle of August 2021 ► Identify goals and objectives by early September 2021 ► Conduct a Mitigation Strategy Workshop in the middle of September 2021 ► Complete the jurisdictional annexes by the end of September 2021
Phase 5 - Plan Maintenance	► Develop plan maintenance procedures by early July 2021 ► Populate the BATool[SM] Plan Review Tool upon receiving APA status
Phase 6 - Plan Update and Deliverables	► Begin plan development at the start of the project ► Complete the draft HMP by October 4, 2021 ► Allow public review from October 4 – November 2, 2021 ► Conduct the draft review meeting on or about November 2, 2021 ► Finalize the draft HMP by November 4, 2021
Phase 7 - Plan Review and Adoption	► Submit the draft HMP to NYS DHSES for review by November 5, 2021 ► Revise and finalize the HMP to ensure compliance with state and federal requirements through February 2022 ► Receive APA status in late February 2022 (estimated) ► Facilitate adoption of the updated HMP in March 2022
Phase 8 - Project Management	► Develop monthly status reports and invoices

County Data 'Wish List'

It would be preferable if spatial datasets (GIS) provide coverage for the entire county. Please fill out the file format and file name for all data included in the deliverable.

NOTE: If the county indicates **N** under 'County Has the Data,' please state whether the information is not spatially available/available in another format OR if that facility type does not exist in the county.

GIS File (* Denotes first-priority for critical facility; ** for general building stock inventory)	County Has the Data (Y/N)? And has data been updated?	Data Received (Y/N)	File Format (Shapefile, Excel, Access, Geodatabase, PDF)	File Name (i.e. police.shp; critical_facilities.xlsx)
Critical / Essential Facilities				
EOCs*				
Police*				
Fire*				
Hospitals and Medical Centers*				
Rescue Stations/EMS/Ambulance*				
Schools - Public and Private*				
Colleges / Universities*				
Shelters*				
Nursing Homes/Senior Care / Senior Centers*				
Municipal Halls*				
County Buildings*				
Correctional Institutions*				
Day Care Centers				
Public Health Departments*				
Public Works Buildings/Highway Departments/Vehicle and Equipment Storage*				
Drug and Alcohol Treatment Centers*				
Nuclear Facilities				
Temporary Housing Sites (for use post-disaster) *				
Homeless Shelters*				

GIS File (* Denotes first-priority for critical facility; ** for general building stock inventory)	County Has the Data (Y/N)? And has data been updated?	Data Received (Y/N)	File Format (Shapefile, Excel, Access, Geodatabase, PDF)	File Name (i.e. police.shp; critical_facilities.xlsx)
Additional sites that house socially-vulnerable populations				
Transportation				
Evacuation Routes*				
Major and Minor Highways (US, State, Interstate, County)				
Local Streets				
Train Stations*				
Railroad Line (Heavy and Light Rail)				
Railroad and Light Rail Facilities - transfer facility, rail yard and stations*				
Airports/Heliports*				
Bus Facilities *				
Bridges*				
Subway Station *				
Ferry				
Marina				
Utilities				
Electric Power Facilities*				
Electric Power Transfer Station/Substation*				
Potable Water Supply Treatment Facilities*				
Potable Water Wells (Public/Private) *				
Potable Water Pump Stations*				
Water Towers/Tanks*				
Wastewater Treatment Plants*				
Wastewater Pump Stations*				
Natural Gas*				
Oil Refineries*				
Major Communication Facilities (not cell towers) *				

GIS File (* Denotes first-priority for critical facility; ** for general building stock inventory)	County Has the Data (Y/N)? And has data been updated?	Data Received (Y/N)	File Format (Shapefile, Excel, Access, Geodatabase, PDF)	File Name (i.e. police.shp; critical_facilities.xlsx)
Culverts				
Green Infrastructure				
Outfalls				
Storm drain inlets				
Subsurface infiltration/detention systems				
Septic Sites				
Public Community Water Supply Wells				
Stormwater Points (Pipe ends, catch basins, swale ends, etc.)				
Other: (e.g. manufactured treatment devices)				
Miscellaneous – Other facilities not above that the County considers critical to operations pre-, during and post- event				
Tier II Facilities/Major Hazmat Facilities*				
Military Installations*				
Major Employers*				
Historic sites and cultural resources				
Church/Religious				
Library				
Post Office				
Radio Tower (for emergency response)				
Polling Site				
Chemical Storage				
Boundaries				
Municipal Boundaries/County Boundary				
Municipal Utility Authorities (MUA)				
School Districts				
Emergency Service Districts (Police/Fire/EMS)				
Water Service Areas				
Water Purveyors				

GIS File (* Denotes first-priority for critical facility; ** for general building stock inventory)	County Has the Data (Y/N)? And has data been updated?	Data Received (Y/N)	File Format (Shapefile, Excel, Access, Geodatabase, PDF)	File Name (i.e. police.shp; critical_facilities.xlsx)
Sewer Service Areas				
Sole Source Aquifers				
Sewersheds				
Federal Land Areas				
State Land				
Electric Service Territories				
Land Use and Buildings/Parcels				
Land Use and Land Cover				
Open Space				
Zoning				
Parcels**				
Building Footprints** (*Building specific data listed in next table)*				
Mobile Home Parks**				
Easement				
Zipcode Boundaries				
Hydrology / Hydrography				
Streams and Rivers				
Drainage Basins				
Reservoirs				
Dams*				
Levees*				
Canal				
Riparian Buffer				
Flood Data				
Urban/Stormwater flood-prone areas				
Local detailed flood studies				
Dam Break Inundation Areas				

GIS File (* Denotes first-priority for critical facility; ** for general building stock inventory)	County Has the Data (Y/N)? And has data been updated?	Data Received (Y/N)	File Format (Shapefile, Excel, Access, Geodatabase, PDF)	File Name (i.e. police.shp; critical_facilities.xlsx)
National Flood Hazard Map from PASDA				
Q3 data (if no DFIRM is available from the FEMA Map Service Center)				
New Development				
Major building or infrastructure development over the next 5 years				
Major recent developments since the last HMP (spatial)				
New construction/ redevelopment permits since the last HMP (by occupancy class; by year)				
Priority economic development/redevelopment areas				
Changes in demographics (spatial distribution or countywide statistics)				
Buildable land analysis				
FEMA Mitigation				
FEMA-funded mitigation projects				
CDBG-DR-funded mitigation projects				
Green Infrastructure Project Locations (points/boundaries)				
Acquisitions				
Elevations				
Stormwater				
Other mitigation projects				
Hazard Areas / Studies				
FEMA/USACE Tiered Evacuation Study results				
Rainfall/Waterway Gages				
Historic Wildfire Locations				
Hazardous Materials Radii				
Urban flood locations				
Landslide locations				

GIS File (* Denotes first-priority for critical facility; ** for general building stock inventory)	County Has the Data (Y/N)? And has data been updated?	Data Received (Y/N)	File Format (Shapefile, Excel, Access, Geodatabase, PDF)	File Name (i.e. police.shp; critical_facilities.xlsx)
Sinkhole locations				
Elevation Data				
Contour lines (2-ft, 5-ft, 10-ft)				
County wide DEM or Lidar				
Steep Slopes (20pct)				
Other				
Socially-vulnerable populations (spatial distribution or countywide statistics)				
Wellhead Protection Areas				
Hydrants				
Cultural Sites				
Historic Sites				

*** Denotes first-priority for critical facility inventory** **** For general building stock inventory**

General Building Stock Attributes Needed for 2021 HMP Update

We are requesting the Assessor/Real Property data table(s) or spatial layers, including a unique field to join to the parcel/building footprint GIS data set, to use as part of the risk assessment. We would like to obtain the following attributes (if available) for each building. Where data is not available, assumptions will be made.

Building Attribute	County Has Data (Y/N)	Source	File Name	Attribute Name (i.e. exterior wall, stories, etc.)	Received (Y/N)
Parcel Layer					
Building Footprint Layer with Unique Parcel ID					
Total square footage (From parcel attribute or calculated from building footprints)					
Construction type (wood, masonry, concrete, steel, etc.)					
Year Built					
Number of stories					
Foundation (crawlspace, basement, slab on grade, fill, pile, pier, solid wall)					
First finished floor elevation					
Occupancy Type/Property Class (residential, commercial, industrial etc.)					
Basement (Y/N) (If yes, is basement finished?)					
Replacement Cost Value (structure) – will be estimated using RS Means valuations if unavailable					
Replacement Cost Value (contents) – will be estimated using RS Means valuations if unavailable					
Municipality					
Address					
Name • Unique ID to join with parcel (if these attributes are in the parcel file)					
Latitude					
Longitude					

MEETING NOTES

Meeting	Livingston County Hazard Mitigation Plan (HMP) Update Planning Partnership Kickoff Meeting		
Date	June 24, 2021	**Time**	2:00 to 3:15 p.m.
Location	Webinar		
Attendees	Brad Austin, Director/Fire Coordinator, Livingston County Office of Emergency Management		
	Julie Barry, Livingston County Office of Grants and Public Information		
	Amy Davies, Treasurer, Livingston County		
	Treasurer Diane Deane, Commissioner, Livingston County Department of Social Services		
	Heather Ferrero, Deputy Director, Livingston County Planning Department		
	Bill Mann, Deputy County Administrator		
	Jason Parker, Livingston County Department of Information Technology		
	Lindsay Quintilone, Livingston County Public Defender		
	Michele Rees, Clerk of the Livingston County Board of Supervisors		
	Dan Rittenhouse, Livingston County Sheriff's Office		
	Amanda Schultz, Director of Communications, Livingston County Sheriff's Office		
	Jason Wolfanger, Superintendent, Livingston County Highway Department		
	Stephen Woodruff, Livingston County Center for Nursing and Rehabilitation		
	Brian Glise, Code Enforcement/Fire Marshal, Town of Avon		
	Chris Buckley, Supervisor Water and Streets Department, Village of Caledonia		
	Eric Osganian, Police Department, Village of Geneseo		
	Margaret Duff, Mayor, Village of Geneseo		
	Kim Burgess, Town Clerk, Town of Groveland		
	Amy Neumann, Town Clerk, Town of Leicester		
	Dustin Geiger, Fire and Emergency Medical Services (EMS) Manager, Town of York		
	Christine Harris, Clerk, Town of York		
	Carl Peter, CEO, Town of York		
	Paul Gister - National Grid		
	Uthman Aziz, New York State Electric and Gas (NYSEG)		
	Bob Molisani, Caledonia-Mumford Central School District		
	Bill Platt, Disaster Program Specialist, American Red Cross		
	Veronica Dasher, Government and Community Relations Manager for NYSEG and RG&E		
	Scott Ewanow, Assistant Chief of Police and Emergency Manager - State University of New York College at Geneseo		

	Kevin Clapp, Planning Manager, New York State Division of Homeland Security and Emergency Services (NYS DHSES)
	Phil Stitzinger, Buffalo District Emergency Manager, U.S. Army Corps of Engineers
	Brian Kehoe, Planner, Consultant - Tetra Tech
	Tony Subbio, Project Manager, Consultant - Tetra Tech

Discussion Points

This section summarizes each discussion point addressed during the Planning Partnership Kickoff Meeting.

Introductions

Mr. Kehoe opened the meeting. As attendees entered the virtual meeting, they were prompted to provide their name and affiliation via the webinar chat function. Mr. Austin then welcomed all attendees and emphasized the value of active participation. Mr. Kehoe noted that the meeting will be recorded and then prompted attendees to share hazard issues that attendees would like to address during the planning process.

Overview of Hazard Mitigation

Mr. Kehoe provided a basic overview of the hazard mitigation planning, including federal and New York State requirements for HMP updates. The updated HMP will be reviewed and approved by the NYS DHSES and subsequently by the Federal Emergency Management Agency (FEMA). Each municipality's participation in the HMP planning process will be documented in the plan. Communities that do not participate in the HMP update process will not be eligible for certain types of federal funding.

Project Scope Review

Mr. Kehoe reviewed the planning process and the ways in which each phase meets state and/or FEMA requirements.

Phase 1 – Planning Process

Mr. Kehoe discussed how the Steering Committee and the Planning Partnership each have important roles in completing the HMP. Engagement by Planning Partnership members is valuable and appreciated. Stakeholders at today's meeting are asked to provide information about community-specific hazards and to recommend actions that can be taken to mitigate risk.

Phase 2 – Update the Risk Assessment

The following hazards of concern are proposed to be profiled in Livingston County's updated HMP. This list reflects input from the Steering Committee:

- Cyber Security
- Drought
- Earthquake

- Flood
- Hazardous Materials
- Landslide
- Severe Storm
- Severe Winter Storm
- Pandemic
- Utility Failure
- Wildfire

Each hazard of concern will be profiled in depth. Projected impacts of the 500-year earthquake, the 1 percent and 0.2 percent annual chance floods, and the 500-year wind event will be produced using FEMA's Hazards-US (HAZUS) software. Disaster impacts will be assessed in terms of injuries, deaths, property damage, and debris generated. Quantitative analysis will be conducted for geographic hazards, and other hazards will be qualitatively assessed. Upon completion of the hazard profiles, Tetra Tech will present the risk assessment with the Planning Partnership and the public.

Mr. Kehoe asked participants to share hazard concerns within their community. The following comments were provided:

- Mr. Wolfanger noted that there are roadways where flooding occurs with some frequency. There is a need to upsize culverts in several locations.
- Mr. Austin described FEMA's keen interest in addressing the COVID-19 pandemic and related hazard impacts. This HMP update is an effective place for each community to frame how it will continue to effectively respond to pandemic risk.
- Mr. Subbio noted that municipalities can use the HMP process to frame mitigation responses eligible for funding from non-FEMA funding sources. Pandemic response is a prioritized federal funding goal.

Phase 3 – Public Involvement Strategy

Municipalities are asked 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.

Tetra Tech will conduct two information gathering meetings with participating jurisdictions (dates to be determined). Information provided by municipalities is an indispensable part of a successful HMP update. Information will be gathered from participating municipalities via a set of jurisdictional worksheets:

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

Mr. Kehoe described how stakeholder outreach is an important part of the HMP planning process. Tetra Tech created a project website where project information is regularly uploaded. Mr. Kehoe demonstrated the functionality of the website, including Tetra Tech's online mapping tool with which

hazard locations are georeferenced. Tetra Tech will prepare online surveys for stakeholder groups (residents, neighboring counties, and stakeholders [academia, emergency response organizations, business owners, etc.]). The public will be invited to participate in upcoming Risk Assessment and Plan Draft Review Meetings.

Phase 4 – Mitigation Strategy

Tetra Tech and county staff will guide municipalities in determining strategic actions that address hazards. The Steering Committee will establish goals and objectives for the HMP. County staff will work with municipalities to develop mitigation actions to be included in the updated HMP. Municipal capability is an important element of hazard mitigation planning. Municipalities will catalog municipal capabilities for implementing hazard mitigation. A Mitigation Strategy Workshop near the end of the planning process will refine strategic mitigation actions to include in the updated HMP.

County staff will compile a jurisdictional annex for each municipality and the county. These annexes become a detailed compendium of the community's hazard risk exposure and proposed mitigation strategy.

Phase 5 – Plan Maintenance

The Plan Maintenance section of the HMP will describe how the plan will be maintained until the next required update in 2025. This section will also describe how the HMP can be integrated with comprehensive plans, zoning, and other regulations. Mitigation actions will be loaded into Tetra Tech's BATool, which streamlines the ongoing plan maintenance process.

Phase 6 – Plan Update and Deliverables

Throughout the planning process, Tetra Tech will compile the HMP document. The first volume of the HMP will profile Livingston County, explain the planning process, describe the risk assessment and mitigation strategies, and discuss maintenance of the plan. Jurisdictional annexes and additional information are compiled in Volume II of the HMP. Draft versions of the plan will be shared with the Steering Committee and Planning Partnership throughout the planning process.

Phase 7 – Plan Review and Adoption

Tetra Tech will also provide the draft HMP online and encourage public review and comment. The public review period will be advertised and lasts for 30 days. After the HMP draft is reviewed and updated, Tetra Tech will oversee submission of the formal draft to NYS DHSES for agency review. If NYS DHSES identifies needed changes, Tetra Tech will make these changes and 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. The HMP will then be granted "Approvable Pending Adoption" status to indicate it has met all requirements.

The county and participating jurisdictions must formally adopt the HMP by resolution of the local governing board. After such adoption, each jurisdiction will receive a letter from FEMA declaring formal approval.

Project Schedule Review

Mr. Kehoe reviewed the project schedule. It is essential for municipalities to provide requested information by the deadline of July 16, 2021. It will be important to complete the draft HMP for public review by March 2022.

Next Steps

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

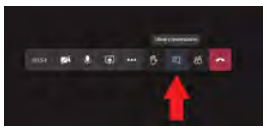
- Municipal officials and staff are encouraged to work as a team to provide information for the HMP update.
- Provide your community's reports and plans related to planning and disaster management.
- Schedule Public Informational Meetings.
- Schedule Municipal Information Gathering Meetings.
- A Risk Assessment Meeting will be held near the end of the planning process.

Mr. Kehoe and Mr. Austin ended the meeting by thanking participants for their attendance and in anticipation of continued engagement.

The meeting adjourned at 3:15 p.m.

Welcome

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



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Livingston County Hazard Mitigation Plan

2022 Update

Planning Partnership Kickoff Meeting
June 24, 2021
2:00-4:00 p.m.

2

Agenda

- Introductions
- Overview of Hazard Mitigation
- Project Scope Review
- Project Schedule Review
- Next Steps
- Questions

3

Introductions

- Name
- Agency
- Focus and Concerns

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Overview of Hazard Mitigation

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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).

6

6

Mitigation Works!

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

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

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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

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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

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Project Scope Review

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Project Scope Review

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

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Project Scope Review (Continued)

- **Phase 2 – Update the Risk Assessment**
  - Hazards of Concern (proposed)
    - Cyber Security
    - Drought
    - Earthquake
    - Flood
    - Haz Mat
    - Landslide
    - Severe Storm
    - Severe Winter Storm
    - Pandemic
    - Utility Failure
    - Wildfire

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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: 500-year MRP event
  - Quantitative Analysis for Geographic Hazards
  - Review Risk Assessment with Planning Partnership (open to the public)

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Project Scope Review (Continued)

- Phase 3 – Public Involvement Strategy
  - Letter of Intent to Participate
  - Two 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

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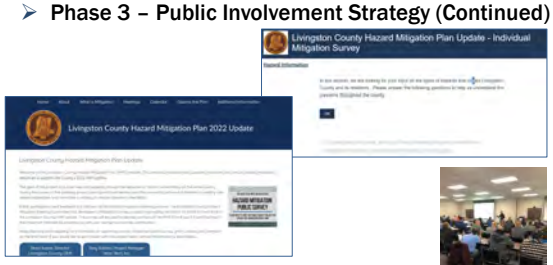
Project Scope Review (Continued)

- Phase 3 – Public Involvement Strategy (Continued)



Home - (livingstoncountynyhmp.com)

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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
  - Jurisdictional Annexes (will be developed by county staff)

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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

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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
  - Revise As Necessary
  - "Approvable Pending Adoption"

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Project Schedule Review

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Project Schedule Review

Task	Timeframe
Phase 1 – Planning Process	► Conduct a Steering Committee Kickoff Meeting on May 13, 2021 ► Conduct a Planning Partnership Kickoff Meeting on June 24, 2021 ► Conduct Steering Committee Meetings at least bimonthly through submittal of the HMP to NYS DHSES
Phase 2 - Update the Risk Assessment	► Perform a thorough risk assessment of each hazard by the middle of August 2021 ► Conduct a Risk Assessment Review Meeting at the end of August 2021
Phase 3 - Public Involvement Strategy	► Implement public outreach throughout the planning process ► Conduct two identical information-gathering webinars for local officials, on or about June 23, 2021
Phase 4 - Mitigation Strategy	► Assess local capabilities by the middle of August 2021 ► Identify goals and objectives by early September 2021 ► Conduct a Mitigation Strategy Workshop in the middle of September 2021 ► Complete the jurisdictional annexes by the end of September 2021
Phase 5 - Plan Maintenance	► Develop plan maintenance procedures by early July 2021 ► Populate the BATool[SM] Plan Review Tool upon receiving APA status
Phase 6 - Plan Update and Deliverables	► Begin plan development at the start of the project ► Complete the draft HMP by October 4, 2021 ► Allow public review from October 4 – November 2, 2021 ► Conduct the draft review meeting on or about November 2, 2021 ► Finalize the draft HMP by November 4, 2021
Phase 7 - Plan Review and Adoption	► Submit the draft HMP to NYS DHSES for review by November 5, 2021 ► Revise and finalize the HMP to ensure compliance with state and federal requirements through February 2022 ► Receive APA status in late February 2022 (estimated) ► Facilitate adoption of the updated HMP in March 2022
Phase 8 - Project Management	► Develop monthly status reports and invoices

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Next Steps

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Next Steps

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

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Contacts

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AGENDA

LIVINGSTON COUNTY HAZARD MITIGATION PLAN UPDATE
Planning Partnership Kickoff Meeting

Thursday, June 24, 2021 | 2:00 – 4:00 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 Schedule Review**
5. **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
6. **Questions**

*Project Schedule**

***Schedule is estimated based on the goal of meeting the original grant deadline of March 2022; dates are subject to change.**

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Phase 8 - Project Management	► Develop monthly status reports and invoices

MEETING NOTES

Meeting	Livingston County Hazard Mitigation Plan (HMP) Update Steering Committee Meeting #2		
Date	August 23, 2021	**Time**	10:00 to 10:45 a.m.
Location	Webinar		
Attendees	Bill Bacon, Director, Livingston County Economic Development Department		
	Angela Ellis, Deputy County Administrator, Livingston County		
	Heather Ferrero, Deputy Director, Livingston County Planning Department		
	Mark Grove, Director, Livingston County Department of Health		
	Jason Wolfanger, Director, Livingston County Highway Department		
	Dennis Mahus, Supervisor, Town of North Dansville		
	Dean Pendergast, Floodplain Administrator, Town of Geneseo		
	Brian Kehoe, Community Planner, Tetra Tech		
	Tony Subbio, Project Manager, Tetra Tech		

Discussion Points

This section summarizes each discussion point addressed during the Steering Committee's second meeting. Mr. Subbio opened the meeting and provided the meeting agenda.

Project Status

Ms. Ferrero indicated that a large number of municipalities have returned worksheets and that she is following up with others. Mr. Kehoe previously provided a feedback email to Ms. Ferrero with guidance on filling data gaps in worksheets that have been returned.

On August 31, 2021, the project Risk Assessment Review Meeting will be held. Tetra Tech staff will review the project schedule and status; the project team continues to work towards meeting grant timelines. The Risk Assessment Review meeting will feature highlights of the quantitative and qualitative analysis conducted on particular hazards of concern (drought, earthquake, flood, hazardous materials, invasive species, landslide, salt mine subsidence, pandemic, severe storm, severe winter storm, terrorism, utility failure, and wildfire). At the meeting, we will review the data and algorithms that underlie the risk assessment. Meeting attendees will be prompted to share their knowledge of local hazard impacts. The risk assessment results will inform the development of mitigation strategies. This work is ongoing, including completion of municipal worksheets. A Mitigation Strategy workshop will be held on September 8, 2021.

Mr. Kehoe will provide draft RA meeting materials to Ms. Ferrero by August 27, with the aim to provide materials to attendees before the meeting.

Risk Assessment Review Overview

Tetra Tech's team completed a risk assessment for the 13 hazards of concern. The risk assessment results are available in a comprehensive Excel spreadsheet and related maps.

MEETING NOTES

Some significant risk assessment results will be reported in the presentation to our August 31 meeting participants.

The risk assessment reports on projected hazard impacts by municipality as follows:

- By building inventory and content "Replacement Cost Value"
- Both residential/commercial buildings
- FEMA-designated Lifelines and Critical Facilities, which include adult care, bridges, communications, Fire/EMS/Police, water/wastewater facilities, etc. (837 critical facilities county-wide)
- By debris generated and people displaced (for floods)
- By potential deaths/injuries

The risk assessment incorporates analysis of the following:

- 1% annual chance and 0.2% annual chance floodplains
- Wildfire hazard areas
- Earthquake
- AKZO Salt Mine subsidence area
- Steep slopes >25%
- Hazmat buffers (roadways, railways, Tier 2 facilities)

Selected results of the risk assessment include:

- ~3,000 people live in the 1% annual chance floodplain (4.5% of the county's buildings are sited there). Approximately 4,200 people live in the 0.2% annual chance flood plain. Relatively few critical facilities or lifelines are in the floodplains.
- Approximately 500 buildings are located in the salt mine subsidence area (almost all in Geneseo), with a replacement cost value of $400 million.
- 1,900 buildings worth $700 million in replacement cost value are located on steep slopes.
- A fairly small population is exposed to hazmat incidents on roadways and railways. Most of the county population is within half-mile of a hazmat facility.
- 30% of buildings are located in the wildfire hazard area.

Next Steps

Ms. Ellis queried which Livingston County municipalities have been awarded or applied for FEMA funding in the past 10 years.

Mr. Kehoe and Ms. Ferrero will meet on August 27 to review the Risk Assessment Review Meeting materials and address any outstanding questions about worksheet completion and jurisdictional annex development.

The meeting adjourned at 10:45 a.m.

MEETING NOTES

Meeting	Livingston County Hazard Mitigation Plan (HMP) Update Risk Assessment Review Meeting		
Date	August 31, 2021	**Time**	2:00 – 3:15 p.m.
Location	Webinar		
Attendees	Andrea Bailey, County Clerk		
	Julie Barry, Livingston County, Grants and Public Information Coordinator		
	Will Gall, Deputy, Livingston County Fire Coordinator		
	Heather Ferrero, Livingston County Planning Department, Project Manager		
	Mark Grove, Environmental Health Director with the Livingston County Department of Health		
	Amy Mann, Treasurer, Livingston County		
	Lynne Mignemi, Director, Livingston County Probation Department		
	Jason Parker, Livingston County Department of Information Technology		
	Jason Wolfanger, Superintendent, Livingston County Highway Department		
	Andy Anderson, Fire Marshall, Village of Avon		
	Heather Randall, Clerk, Village of Avon		
	Thomas Perkins, Code Enforcement Officer, Town of Caledonia		
	Peter Vogt, Mayor, Village of Dansville		
	Sarah Wright, Clerk, Town of Geneseo		
	Aprile Mack, Clerk, Village of Geneseo		
	Eric Osganian, Police Chief, Geneseo Police Department		
	Amy Neumann, Town Clerk, Town of Leicester		
	Dave DiSalvo, Board member, Town of Mount Morris		
	Chris Young, Superintendent Department of Public Works, Village of Mount Morris		
	Dennis Mahus, Supervisor, Town of North Dansville		
	Dwight Knapp, Supervisor, Town of Ossian		
	Daniel Porter, Program Manager - Government & Community Relations, NYSEG/RG&E		
	Scott Ewanow, Assistant Chief of Police and Emergency Manager - State University of New York at Geneseo		
	Steve Winslow, Manager of the Mount Morris Dam for the U.S. Army Corps of Engineers		
	Brian Kehoe, Planner, Consultant - Tetra Tech		
	Kate Long, Planner, Consultant - Tetra Tech		

Discussion Points

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

MEETING NOTES

Introductions

Mr. Kehoe opened the meeting at 2 p.m. As attendees entered the virtual meeting, they were prompted to provide their name and affiliation via the webinar chat function. It was announced that the meeting would be recorded for viewing by stakeholders who did not attend this session.

Risk Assessment Review

Mr. Kehoe shared the project schedule and status and noted that the planning process is pursuing an aggressive schedule with a completion target date of March 2022. Issuance of an "Approvable Pending Adoption" notice from the Federal Emergency Management Agency will mark completion of the update project. Mr. Kehoe displayed the project's website, noting that it is the repository for all information about the county's Hazard Mitigation Plan and its planning process. All meetings and available plan documents are and will continue to be posted to the project website: livingstoncountynyhmp.com

Mr. Kehoe summarized the methodology and purpose of a hazard risk assessment. Importantly, the risk assessment informs the development of a municipality's mitigation strategy, which includes a prioritized list of proposed mitigation actions. The project team is also developing an associated risk ranking for each of the 13 Hazards of Concern. Mr. Kehoe reviewed the results of the risk assessment for each Hazard of Concern, summarizing history of past events, hazard exposure, and impacts. The risk assessment includes projections of potential impact to life, property, and economy at defined hazard event intensities.

The risk assessment encompasses the 13 hazards of concern incorporated in this HMP update.

- Drought
- Earthquake
- Flood
- Hazardous Materials
- Invasive Species
- Landslide
- Mine Subsidence
- Pandemic
- Severe Storm
- Severe Winter Storm
- Terrorism
- Utility Failure
- Wildfire

Comments

Throughout the meeting, Mr. Kehoe prompted participants to share their experience and knowledge of hazard risks in the county or in their particular municipality. Participants indicated the following:

- Ms. Neumann stated that Lower River Road in Leicester is prone to flooding.
- Ms. Mack stated that Lower Oak Street/Second Street, Jaycox Creek, and Indian Meadows within the Village of Geneseo are prone to flooding.
- Mr. Winslow stated that Flats Road in Geneseo is prone to flooding.
- Mr. Grove stated that the Ginna nuclear power plant has a 50-mile radius hazard zone that encompasses much of Livingston County.

- Mr. Ewanow asked with whom he should coordinate for the plan regarding the vulnerabilities and the potential sheltering options at SUNY Geneseo. Ms. Ferrero replied that he should coordinate with the Village of Geneseo Police Chief.

Next Steps

The following next steps were discussed at the meeting:

1. Participating municipalities complete worksheets
2. Mitigation Strategy Workshop – September 8, 2021, 9:30–11:00 a.m.
3. Complete Jurisdictional Annexes
4. Complete the Hazard Mitigation Plan

The meeting concluded with summary comments from Heather Ferrero, who noted that numerous municipalities had submitted worksheets and that she would soon reach out to remaining municipalities.

Mr. Kehoe made a final request for input and comments, thanked participants for their time, and stated that he would remain on the line to field any remaining questions/comments. Questions about the planning process can be directed to the contacts provided on the final presentation slide: Brian Kehoe and Tony Subbio from Tetra Tech and Heather Ferrero from the Livingston County Planning Department.

The meeting adjourned at 3:15 p.m.

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Livingston County Hazard Mitigation Plan

2022 Update

Risk Assessment Review Meeting

August 31, 2021
2:00 – 4:00 p.m.

1

Welcome

If you are attending the webinar on your computer, please add your name, title, and organization(s) to the Chat.

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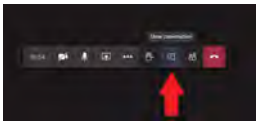

- Write in your name and affiliation
- How are you involved/interested in hazard mitigation?

2

Agenda

- Welcome
- Project Schedule/Status
- Risk Assessment of Hazards of Concern
- Next Steps

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Project Schedule

✓	May-2021	Steering Committee Initial Meeting
✓	June-2021	Planning Partnership Kickoff Meeting
✓	July-September 2021	Data collection, draft jurisdictional annexes
✓	July- August 2021	Draft 13 hazard profiles & run risk assessment
❑	31-August-2021	Risk Assessment Review Meeting
❑	8-September-2021	Mitigation Strategy Workshop
❑	September-October - 2021	Develop problem statements with municipalities
❑	October/November - 2021	Draft HMP and make available for review
❑	November- 2021	Finalize HMP and submit to NYS DHSES
❑	~January - 2022	NYS DHSES forwards HMP to FEMA Region 2
❑	March-2022	FEMA issues Approvable Pending Adoption

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Risk Assessment

Hazards of Concern:

Drought	**Pandemic**
Earthquake	Severe Storms
Flood	Severe Winter Storms
Hazardous Materials	Terrorism
Invasive Species	Utility Failure
Landslide	Wildfire
Mine Subsidence	

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Risk Assessment

Risk is a function of:

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

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Risk Assessment
Drought

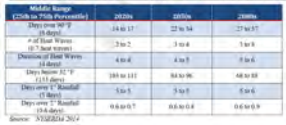
4 USDA drought declarations in Livingston County since 2012-2021

Annual probability of occurrence = 7%)based on 1950-2017 events)

Table 5.4.1-6. Projected Seasonal Precipitation Change in Region 1, 2050s (% change)

Winter	Spring	Summer	Fall
5 to +15	0 to +15	+10 to +10	-5 to +10

Source: NYSERDA 2011



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Risk Assessment
Cyber Security/Terrorism

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

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Risk Assessment
Earthquake

- 1 earthquake epi-centered in the county since 2015. (May 2021, Magnitude 2.4)
- Probability is rare
- Exposure to NEHRP Soils
  - 14,000 buildings
  - Hundreds of critical facilities
  - 100% in Villages of Avon, Leicester, and Nunda

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Risk Assessment
Flood

- $25 million in reported property damage since 1954
- Exposure 1-Percent Annual Chance Floodplain
  - $223 million building stock replacement value (1% total)
  - 93 critical facilities (most are bridges)
  - 15,000 tons of debris
  - 1,500 buildings
- Mount Morris dam improved flood control

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Flood

FEMA Flood Hazard Areas

>10% buildings located in1% annual chance flood

1. Geneseo Town
2. Mt Morris Village
3. Mt. Morris Town
4. N. Dansville Town
5. West Sparta Town

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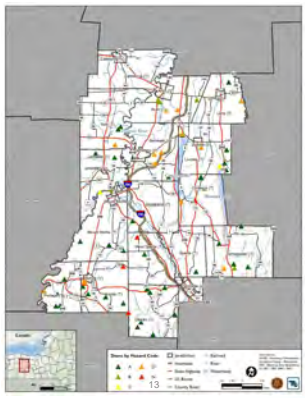
Flood – dam risk



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Risk Assessment Flood

Residents exposed to 1-percent annual chance flood area: 2,922

4.5% total population

Flood History

11 flood events (2015-2021)
2 FEMA flood-related declarations (1954-2021)

NFIP countywide

TBD Policies

TBD Claims

$TBD Payments

NATIONAL FLOOD INSURANCE PROGRAM

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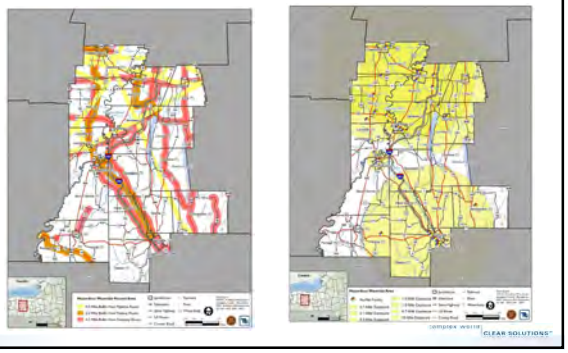
Risk Assessment Hazardous Materials



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Risk Assessment Hazardous Materials

of Tier 2 facilities in the county
43

Hazardous spill events reported to US DOT 2015-2020
3

Probability of annual occurrence
100%

16

16

Risk Assessment Landslide

- 3,150 people exposed (5% county total)
- 1,894 buildings (6% of county total)
- $728 million building replacement value
- 17 critical facilities
- Towns of Conesus, Geneseo and Ossian >10% of population in the landslide-susceptible hazard area

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Risk Assessment Salt Mine Subsidence

- ~800 people exposed
- ~500 buildings
- $384 million building replacement cost value
- 44 critical facilities

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Risk Assessment
Pandemic

- Past outbreaks in USA
  - Influenza (annual)
  - Asian Flu (1957-1958)
  - West Nile Virus (2000)
  - Swine Flu (2009-2010)
  - Ebola (2014)
  - COVID
- Exposure
  - Entire County is vulnerable
  - Dense population centers can be more vulnerable

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Risk Assessment
Severe Storm

- Include thunderstorm, lightning, hailstorm, windstorm, tornado, hurricanes/tropical storms
- Climate change likely to cause more severe and more frequent severe storms.

8 — Severe Storm events where damage >$25,000 (2015-2019)

Federally declared Severe Storm Events (1954-2019) — 12

$16 million

Crop damages reported (2014-2020)

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Risk Assessment
Severe Winter Storms

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

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Risk Assessment
Severe Winter Storms

5 — FEMA Declarations (1972 – 2019)

$11 billion — Estimated Potential Loss

10 — # Winter Storms where damage > $25,000 (2015-2020)

100% — Probability of annual occurrence

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Risk Assessment
Utility Failure

- Usually caused by severe storms/other hazards
  - 3 notable 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
  - High cost to government and community services

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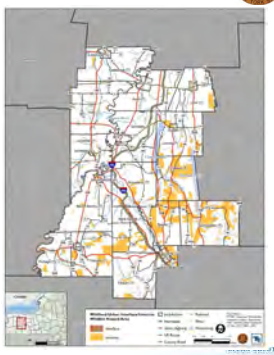
Risk Assessment
Wildfire

$4.6 Billion — Building Replacement Cost Value

- 187 critical facilities in the WUI
- Villages of Mt. Morris and Nunda have the most critical facilities in the WUI



29% population
Wildland Urban Interface

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Next Steps

1. Participating municipalities will complete worksheets
2. Mitigation Strategy Workshop – September 8, 2021
3. Complete Jurisdictional Annexes
4. Complete the Hazard Mitigation Plan

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Contacts

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AGENDA

LIVINGSTON COUNTY HAZARD MITIGATION PLAN UPDATE
Risk Assessment Review Meeting

Tuesday, August 31, 2021 | 2:00 – 4:00 p.m.

1. **Welcome**
2. **Project Schedule/Status Update**
3. **Risk Assessment**
    1. Drought
    2. Earthquake
    3. Flood
    4. Hazardous Materials
    5. Invasive Species
    6. Landslide
    7. Mine Subsidence
    8. Pandemic
    9. Severe Storms
    10. Severe Winter Storms
    11. Terrorism
    12. Utility Failure
    13. Wildfire
4. **Next Steps**
    a. Complete Worksheets (as needed)
    b. Mitigation Strategy Workshop – September 8, 2021
    c. Develop Mitigation Actions
    d. Complete Jurisdictional Annexes

To update the actions and initiatives for your mitigation strategy, please consider the questions below. Suggested actions will be developed based on Livingston 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. Has internet connectivity in your community been adequate to support people working and learning from home during the COVID-19 pandemic?

9. Can you identify private or public wells that might run dry during a drought?

10. Are there buildings in your community that are vulnerable to earthquake damage?

11. Does your municipality store hazardous materials, such as at a fire station or highway garage?

12. Which invasive species are impacting your community?

13. Are there critical facilities that are vulnerable to landsliding?

14. Has your community been impacted by the land subsidence from the AKZO salt mine collapse?

15. Does your municipality have enough equipment to clear roadways during severe winter weather?

16. Do your municipality protect its digital assets against cyber security?

17. Can the town identify which structures within its boundary are located in areas vulnerable to wildfire risk?

LIVINGSTON 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 September 17, 2021 2021 to:
Brian Kehoe, Tetra Tech
Phone: (585) 354-4216 E-mail: brian.kehoe@tetratech.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

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

Mitigation Catalog

DROUGHT		
Personal Scale	**Corporate Scale**	**Government Scale**

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

Mitigation Catalog

DROUGHT		
Personal Scale	**Corporate Scale**	**Government Scale**
○ Install rain-capturing devices for irrigation. ○ Install graywater systems in homes to encourage water reuse. ○ Rotate crops by growing a series of different types of crops on the same fields every season to reduce soil erosion. ○ Planting “cover crops,” such as oats, wheat, and buckwheat, to prevent soil erosion. • ***Increase Capability*** ○ Practice active water conservation techniques. ○ Seek ways to operate wells in such a way to enhance their functional longevity and supply capability.		agreements with alternative suppliers. ○ Develop a drought contingency plan ○ Develop criteria-"triggers" for drought related actions ○ Improve accuracy of water supply forecasts ○ Provide incentives to influence active water conservation techniques such as water user rate reductions. ○ Establish protocol for saltwater de-salinization to be implemented during conditions of severe drought. ○ Consider providing incentives to property owners that utilize drought resistant landscapes in the design of their homes. ○ Use of water buffalo tankers ○ Promote well usage techniques that strive to enhance functional longevity and supply capability of private water supply wells. ○ Develop an ordinance to restrict the use of public water resources for non-essential usage, such as landscaping, washing cars, filling swimming pools, etc.

Mitigation Catalog

EARTHQUAKES		
Personal Scale	**Corporate Scale**	**Government Scale**

• ***Manipulate the hazard:***
  ○ None
• ***Reduce exposure to the hazard***:
  ○ Locate outside of hazard area (off soft soils)
• ***Reduce vulnerability to the hazard:***
  ○ 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:***
  ○ 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
	• ***Manipulate the hazard:***
	  ○ None
	• ***Reduce exposure to the hazard:***
	  ○ Locate/relocate mission critical functions outside hazard area where possible
	• ***Reduce vulnerability to the hazard:***
	  ○ Build redundancy for critical functions/facilities
	  ○ Retrofit critical buildings/areas housing mission critical functions
	• ***Increase capability:***
	  ○ 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
		• ***Manipulate the hazard:***
		  ○ None
		• ***Reduce exposure to the hazard:***
		  ○ Locate critical facilities or functions outside of hazard area where possible
		• ***Reduce vulnerability to the hazard:***
		  ○ 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:***
		  ○ 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

Mitigation Catalog

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

Mitigation Catalog

FLOOD		
Personal Scale	**Corporate Scale**	**Government Scale**

• ***Manipulate the hazard:***
  ○ Clear stormwater drains and culverts
• ***Reduce exposure to the hazard:***
  ○ Locate or relocate outside of hazard area
  ○ Institute low impact development techniques on property
• ***Reduce vulnerability to the hazard:***
  ○ 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:***
  ○ Develop household mitigation plan, such as retrofit savings, communication capability with outside, 72-hr self-sufficiency during and after an event
  ○ Buy flood insurance
	• ***Manipulate the hazard:***
	  ○ Clear stormwater drains and culverts
	• ***Reduce exposure to the hazard:***
	  ○ Locate business critical facilities or functions outside hazard area
	  ○ Institute low impact development techniques on property
	• ***Reduce vulnerability to the hazard:***
	  ○ 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:***
	  ○ 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
		• ***Manipulate the hazard:***
		  ○ 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:***
		  ○ 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

Mitigation Catalog

FLOOD		
Personal Scale	**Corporate Scale**	**Government Scale**
		provisions for enforcing best practice standards by requiring a minimum freeboard of 2' to align with NY State Standards ○ Continue development application reviews by the county Planning Board to reduce risky development practices • ***Reduce vulnerability to the hazard:*** ○ 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

Mitigation Catalog

FLOOD		
Personal Scale	**Corporate Scale**	**Government Scale**
		○ 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:*** ○ 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

Mitigation Catalog

FLOOD		
Personal Scale	**Corporate Scale**	**Government Scale**
		awareness, flood insurance (NFIP) and mitigation ○ Maintain existing data as well as gather new data needed to define risks and vulnerability ○ Create a building and elevation inventory of structures in the floodplain ○ Identify flood-prone areas that may be in need of new flood studies ○ Establish a program to identify and educate owners of flood-prone properties of potential mitigation options (e.g., elevations, relocations) ○ Charge a hazard mitigation fee on all new permits to create a hazard mitigation funding source for initiatives or grant cost-share requirements ○ Integrate floodplain management policies into other planning mechanisms within the planning area ○ Establish a Stormwater Utility to deal with urban drainage/flooding issues ○ Establish incentives to promote flood hazard mitigation of private property (e.g., permit fee waivers) ○ 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

Mitigation Catalog

FLOOD		
Personal Scale	**Corporate Scale**	**Government Scale**
		○ 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

Mitigation Catalog

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

Mitigation Catalog

HAZARDOUS MATERIALS		
Personal Scale	**Corporate Scale**	**Government Scale**

• ***Manipulate the hazard:***
  ○ Identify and eliminate sources of potential hazardous material spills
• ***Reduce exposure to the hazard***:
  ○ Increase distance between hazardous material sites and development
• ***Reduce vulnerability to the hazard:***
  ○ None
• ***Increase capability:***
  ○ Personal planning for potential event
	• ***Manipulate the hazard:***
	  ○ Identify and eliminate sources of potential hazardous material spills
	• ***Reduce exposure to the hazard:***
	  ○ None
	• ***Reduce vulnerability to the hazard:***
	  ○ None
	• ***Increase capability:***
	  ○ Increase inspection of hazardous material facilities and transport vehicles
	  ○ Conduct training for response
		• ***Manipulate the hazard:***
		  ○ Identify and eliminate sources of potential hazardous material spills
		• ***Reduce exposure to the hazard:***
		  ○ Increase inspection of hazardous material facilities and transport vehicles
		• ***Reduce vulnerability to the hazard:***
		  ○ None
		• ***Increase capability:***
		  ○ Increase inspection of hazardous material facilities and transport vehicles
		  ○ Conduct training for response
		  ○ Public outreach

INVASIVE SPECIES		
Personal Scale	**Corporate Scale**	**Government Scale**

• ***Manipulate the Hazard***:
  ○ Participate in quarantine, control, or eradication programs.
• ***Reduce exposure to the hazard***:
  ○ None
• ***Reduce vulnerability to the hazard:***
  ○ Form citizen action groups to promote awareness and best practices on local levels.
• ***Increase Capability***
	• ***Manipulate the Hazard:***
	  ○ None
	• ***Reduce exposure to the hazard:***
	  ○ None
	• ***Reduce vulnerability to the hazard:***
	  ○ None
	• ***Increase Capability:***
	Build and maintain partnerships with other stakeholders to coordinate information sharing,
		• ***Manipulate the Hazard:***
		  ○ Work with Federal/State agencies on quarantine, control, or eradication programs for invasive species.
		• ***Reduce exposure to the hazard:***
		  ○ Create/disseminate planting guides which explain which types of plants and vegetation

INVASIVE SPECIES		
Personal Scale	**Corporate Scale**	**Government Scale**
○ Regularly check the NYSISRI Portal for updated information. ○ Comply with Invasive Species rules and regulations to minimize the chance for invasive species to spread. ○ " Broaden collaborations focused ○ on ecosystem restoration and ecosystem-based management. "	and response for Invasive Species throughout the county/region.	are safe to plant within the county. • ***Reduce vulnerability to the hazard:*** ○ Pass municipal ordinances to enforce best practices for invasive species at the local level. • ***Increase Capability:*** ○ Build and maintain partnerships with other stakeholders to coordinate information sharing, and response for Invasive Species throughout the county/region. ○ Work with federal/state agencies to disseminate information to local municipalities regarding Invasive Species from the NYS Invasive Species Research Institute portal. ○ Disseminate information to the general public to educate them on Invasive Species ○ Work with stakeholders to identify and expand resources for prevention and early detection of invasive species. ○ Support New York State's initiative for an invasive species early warning system. ○ Broaden collaborations focused on ecosystem restoration and

Mitigation Catalog

INVASIVE SPECIES		
Personal Scale	**Corporate Scale**	**Government Scale**
		ecosystem-based management." Build ecological restoration planning into IS management projects. Support New York State's marketing, branding, and educational initiatives.

Mitigation Catalog

LANDSLIDE		
Personal Scale	**Corporate Scale**	**Government Scale**

• ***Manipulate the hazard:***
  ○ Apply soil stabilization measures, such as planting soil stabilizing vegetation on steep slopes
• ***Reduce exposure to the hazard***:
  ○ None
• ***Reduce vulnerability to the hazard:***
  ○ None
• ***Increase capability:***
  ○ None
	• ***Manipulate the hazard:***
	  ○ None
	• ***Reduce exposure to the hazard:***
	  ○ None
	• ***Reduce vulnerability to the hazard:***
	  ○ None
	• ***Increase capability:***
	  ○ None
		• ***Manipulate the hazard:***
		  ○ 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:***
		  ○ 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:***
		  ○ 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

Mitigation Catalog

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

Mitigation Catalog

PANDEMIC		
Personal Scale	**Corporate Scale**	**Government Scale**

• ***Manipulate the hazard:***
  ○ None
• ***Reduce exposure to the hazard***:
  ○ Proper hygiene
  ○ PPE
  ○ Social distancing
• ***Reduce vulnerability to the hazard:***
  ○ Focus on personal health
• ***Increase capability:***
  ○ Storage of PPE
  ○ Storage of supplies and food to reduce need to enter public spaces
	• ***Manipulate the hazard:***
	  ○ None
	• ***Reduce exposure to the hazard:***
	  ○ PPE
	  ○ Social distancing
	• ***Reduce vulnerability to the hazard:***
	  ○ Distanced work environment
	  ○ Regular cleaning of work environment
	• ***Increase capability:***
	  ○ Storage of PPE
	  ○ Equipment for monitoring
	  ○ Trainings for staff
		• ***Manipulate the hazard:***
		  ○ None
		• ***Reduce exposure to the hazard:***
		  ○ PPE
		  ○ Social distancing
		• ***Reduce vulnerability to the hazard:***
		  ○ Distanced work environment
		  ○ Regular cleaning of work environment
		• ***Increase capability:***
		  ○ Storage of PPE
		  ○ Equipment for monitoring/treatment
		  ○ Trainings for staff
		  ○ Public outreach

Mitigation Catalog

SEVERE STORMS		
Personal Scale	**Corporate Scale**	**Government Scale**

• ***Manipulate the hazard:***
  ○ None
• ***Reduce exposure to the hazard***:
  ○ None
• ***Reduce vulnerability to the hazard:***
  ○ 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:***
  ○ 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
	• ***Manipulate the hazard:***
	  ○ None
	• ***Reduce exposure to the hazard:***
	  ○ None
	• ***Reduce vulnerability to the hazard:***
	  ○ Relocate critical infrastructure, such as power lines, underground
	  ○ Reinforce or relocate critical infrastructure such as powerlines so that it meets performance expectations
	• ***Increase capability:***
	  ○ 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
		• ***Manipulate the hazard:***
		  ○ None
		• ***Reduce exposure to the hazard:***
		  ○ None
		• ***Reduce vulnerability to the hazard:***
		  ○ 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:***
		  ○ 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**
		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 employments centers, schools, hospitals ○ Promote emergency power supplies to private property ○ Improve, expand, or harden communications facilities and services ○ Recruit additional emergency personnel or use mutual aid agreements ○ Increase sheltering capabilities ○ Increase capability to respond to power outages and downed power lines

Mitigation Catalog

SEVERE STORMS		
Personal Scale	**Corporate Scale**	**Government Scale**
		○ Establish partnerships with utility providers through proactive planning

Mitigation Catalog

SEVERE WINTER STORMS		
Personal Scale	**Corporate Scale**	**Government Scale**

• ***Manipulate the hazard:***
  ○ None
• ***Reduce exposure to the hazard***:
  ○ Plant appropriate trees near home and power lines ("Right tree, right place" National Arbor Day Foundation)
• ***Reduce vulnerability to the hazard:***
  ○ 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:***
  ○ 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
	• ***Manipulate the hazard:***
	  ○ None
	• ***Reduce exposure to the hazard:***
	  ○ None
	• ***Reduce vulnerability to the hazard:***
	  ○ 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:***
	  ○ 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
		• ***Manipulate the hazard:***
		  ○ None
		• ***Reduce exposure to the hazard:***
		  ○ None
		• ***Reduce vulnerability to the hazard:***
		  ○ 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:***
		  ○ 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

Mitigation Catalog

SEVERE WINTER STORMS		
Personal Scale	**Corporate Scale**	**Government Scale**
		○ Increase communication alternatives ○ Modify land use and environmental regulations to support vegetation management activities that improve reliability in utility corridors ○ Modify landscape and other ordinances to encourage appropriate planting near overhead power, cable, and phone lines ○ Provide weather radios to vulnerable populations ○ Enhance public awareness campaigns to address those issues of alert and warning and actions to take during severe weather events ○ Utilize the best available technology to enhance the warning systems for all severe weather events (i.e., tornado warning systems) ○ Coordinate severe weather warning capabilities and the dissemination of warning amongst those agencies within the planning are with the highest degree of capability ○ Encourage local ordinances for planting trees near lines and join Tree City USA

Mitigation Catalog

SEVERE WINTER STORMS		
Personal Scale	**Corporate Scale**	**Government Scale**
		○ 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

Mitigation Catalog

UTILITY FAILURE		
Personal Scale	**Corporate Scale**	**Government Scale**

• ***Manipulate the hazard:***
  ○ None
• ***Reduce exposure to the hazard***:
  ○ Plant appropriate trees near home and power lines ("Right tree, right place" National Arbor Day Foundation)
• ***Reduce vulnerability to the hazard:***
  ○ 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:***
  ○ Trim or remove trees that could affect power lines
  ○ Prepare emergency food and supplies to be self-sufficient for at least 72 hours
	• ***Manipulate the hazard:***
	  ○ None
	• ***Reduce exposure to the hazard:***
	  ○ None
	• ***Reduce vulnerability to the hazard:***
	  ○ 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:***
	  ○ Trim or remove trees that could affect power lines
	  ○ Create redundancy in utilities and communications
		• ***Manipulate the hazard:***
		  ○ None
		• ***Reduce exposure to the hazard:***
		  ○ None
		• ***Reduce vulnerability to the hazard:***
		  ○ 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:***
		  ○ 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

Mitigation Catalog

UTILITY FAILURE		
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

WILDFIRE		
Personal Scale	**Corporate Scale**	**Government Scale**
• ***Manipulate the Hazard***: ○ Clear potential fuels on property; dry, overgrown underbrush; diseased trees • ***Reduce exposure to the hazard***: ○ Clean and maintain defensible space around structures ○ Locate outside hazard area ○ Mow regularly	• ***Manipulate the Hazard:*** ○ None • ***Reduce exposure to the hazard:*** ○ None • ***Reduce vulnerability to the hazard:*** ○ Create and maintain defensible space around structure and infrastructure and provide water onsite	• ***Manipulate the Hazard:*** ○ None • ***Reduce exposure to the hazard:*** ○ Clear fuels (dry underbrush, diseased trees) on land that can trigger and maintain wildfires ○ Implement Best Management Practices on public lands • ***Reduce vulnerability to the hazard:***

Mitigation Catalog

WILDFIRE		

• ***Reduce vulnerability to the hazard:***
  ○ Create and maintain defensible space around structures, provide water on site.
  ○ Use fire-retardant building materials
  ○ Create defensible spaces around your home.
• ***Increase Capability***
  ○ Employ Firewise techniques to safeguard your home
  ○ Identify alternative water supply points proximate to your home such as swimming pools, lakes, streams
  ○ Support your local fire department
  ○ Be aware of weather conditions that support/enhance the probability of wildfires
	○ Use fire-retardant building materials
	○ Provide stored water to be utilized for firefighting with appropriate fire department connections at facilities not equipped with fire hydrants or inadequate fire hydrant spacing
	• ***Increase Capability:***
	  ○ Support Firewise community initiatives
		○ Create and maintain defensible space around structure and infrastructure
		○ Higher regulatory standards
		○ Establish water main supply and hydrants in unhydranted areas
		○ Decrease hydrant spacing
		• ***Increase Capability:***
		  ○ More public outreach and education efforts including an active “Firewise” program
		  ○ Identify fire response and alternative evacuation routes
		  ○ Seek alternative water supplies in urban wildland interface areas.
		  ○ Become a "Firewise" community
		  ○ Increase capability to fight wildfires utilizing equipment that can support wildfire fighting such as: tankers, engines with "pump-and-run" capabilities, dump tanks for tanker shuttle operations.
		  ○ Develop/implement wildfire management plans.
		  ○ Establish Mutual Aid Agreements
		  ○ Develop a Water Supply Plan

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	Livingston County Hazard Mitigation Plan (HMP) Update Mitigation Strategy Workshop Meeting		
Date	September 8, 2021	**Time**	9:30 - 10:45 a.m.
Location	Webinar		
Attendees	Heather Ferrero, Deputy Director, Livingston County Planning Department		
	Thomas Perkins, Code Enforcement Officer, Town of Caledonia		
	Peter Vogt, Mayor, Village of Dansville		
	Sarah Wright, Clerk, Town of Geneseo		
	Aprile Mack, Clerk, Village of Geneseo		
	Cal Lathan, Mayor, Village of Livonia		
	Dennis Mahus, Supervisor, Town of North Dansville		
	Dwight Knapp, Supervisor, Town of Ossian		
	Deb Babbit Henry, Town of Springwater		
	Chris Harris, Town of York		
	Brian Kehoe, Planner, Consultant - Tetra Tech		
	Kate Long, Planner, Consultant - Tetra Tech		

Purpose

The purpose of the Mitigation Strategy Workshop was to work with the jurisdictional participants of the Livingston 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

Ms. Ferrero thanked participants for attending the meeting and participating in the planning process. Mr. Kehoe described the purpose of the meeting, which was to review the hazard mitigation planning process and develop mitigation strategies.

Hazard Mitigation Review

Mr. Kehoe provided a brief review of the concepts and benefits of hazard mitigation.

Developing Mitigation Strategies

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

- 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.
- Address the actual and projected impacts of climate change.
- 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. Kehoe explained that mitigation actions must have a clear connection to the risk and capability assessments; municipalities should aim to address the riskiest hazards in their mitigation actions. Mr. Kehoe 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. Kehoe explained to participants that proposed mitigation actions must be created/updated with more specific details. Mr. Kehoe provided examples of how to generate proposed actions that meet current standards of the HMP planning process.

Fill Out and Return the Mitigation Action Development Worksheet

Mr. Kehoe 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 that appropriately detailed mitigation actions can be developed. The worksheet is to be filled out and returned to the county by September 17, 2021.

Mr. Kehoe reviewed the proposed action table and action worksheet line by line and detailed the level of detail required for each. Mr. Kehoe explained that identifying known problem areas is a good starting point and that the municipalities may have already identified potential mitigation solutions. All of this information should be recorded on the action worksheets. Each municipality must develop at least two Action Worksheets, and these should aim to meet FEMA funding eligibility criteria. County Staff are available to assist with this effort.

Comments

The following comments/questions were received during the meeting:

- Ms. Mack, Village of Geneseo, asked about carrying over projects from the 2015 countywide HMP to which Mr. Kehoe responded in the affirmative. Worksheet #4 was circulated to all municipalities and contains a listing of 2015 proposed projects. Where appropriate and desired, these can be carried over to the new plan with refinements, as necessary. Ms. Mack asked about how to include other village officials in the process of devising proposed actions, and Mr. Kehoe shared ideas for encouraging involvement by these officials.
- Ms. Ferrero stated that about six municipalities have not returned previously circulated worksheets and that she will continue to reach out to them accordingly. Only those municipalities participating in the HMP update process will be eligible to apply for specified FEMA funding solicitations in the future.

Next Steps

The meeting closed with a reminder to municipal officials were reminded that Action Worksheets should be returned by September 17, 2021.

- Contact information for Mr. Kehoe and Ms. Ferrero was provided.

Mr. Kehoe made a final request for input and comments, thanked participants for their time, and stated that he would remain on the line to field questions/comments.

The meeting adjourned at 10:45 a.m.

TETRA TECH

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Livingston County Hazard Mitigation Plan

2022 Update

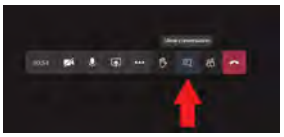
Mitigation Strategy Review Meeting

September 8, 2021
9:30–11:00 a.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

- Hazard Mitigation Review
- Developing Mitigation Strategies
- Making Previous Actions More Specific
- Fill Out and Return the Mitigation Action Development Worksheet
- Proposed Action Table
- Action Worksheets
- Questions
- Next Steps

3

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

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 *BCR numbers in this study have been rounded	Beyond Code Requirements	Federally Funded
Overall Hazard Benefit-Cost Ratio	$4:1	$6:1
Riverine Flood	$5:1	$7:1
Hurricane Surge	$7:1	
Wind	$5:1	$5:1
Earthquake	$4:1	$3:1
Wildland-Urban Interface Fire	$4:1	$3:1

5

5

Hazard Mitigation Components

6

2021/22 HMP Hazards of Concern

Drought
Earthquake
Flood
Hazardous Materials
Invasive Species
Landslide
Mine Subsidence
Pandemic
Severe Storms
Severe Winter Storms
Terrorism
Utility Failure
Wildfire

7

7

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

8

8

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.

9

9

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.

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NYS Requirements: Mitigation Strategy

- Proposed actions MUST have specified 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.

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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.

Risk and Capability Assessments → Mitigation Strategy

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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

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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.

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Update the Mitigation Strategy

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

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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.

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TETRA TECH

Make Previous Actions More Specific

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Previous Problem/Action (2015 HMP)

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

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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.

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EVEN MORE 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 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.

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Previous Problem and Action

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

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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.

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Mitigation Action Development Worksheet

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Proposed Action Table

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	LRP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Purpose	CAS Category
2020-Mini-001				Problem: Solution:										
2020-Mini-002				Problem: Solution:										
2020-Mini-003				Problem: Solution:										
2020-Mini-004				Problem: Solution:										
2020-Mini-005				Problem: Solution:										

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Action Worksheets

- Each jurisdiction must develop at least two Action Worksheets.
- Jurisdictions should also develop Action Worksheets for projects for which they plan to apply for FEMA funding support 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.

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Action Worksheet

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

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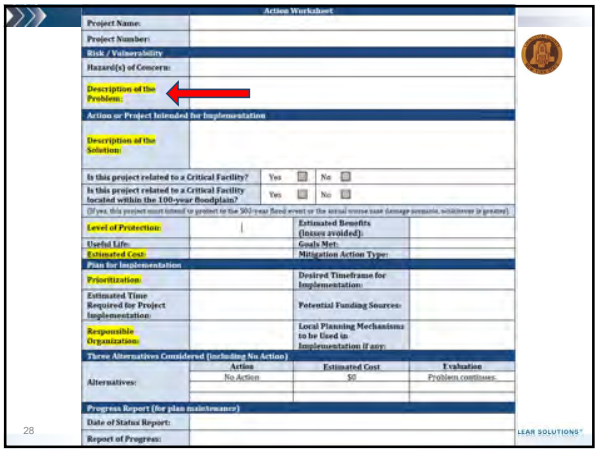

28

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?

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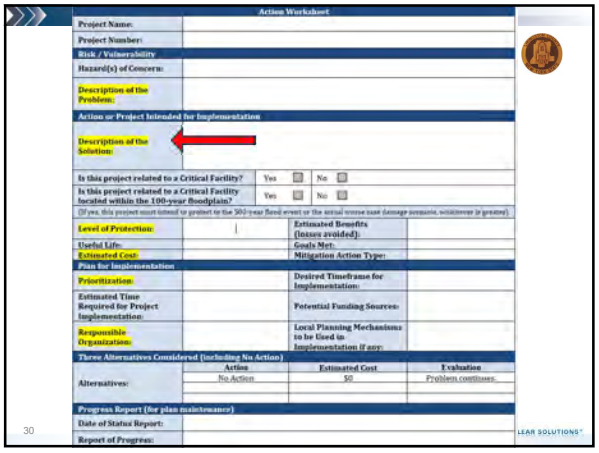

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Action Worksheet

- 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
  - Who is responsible for what aspects of the project?

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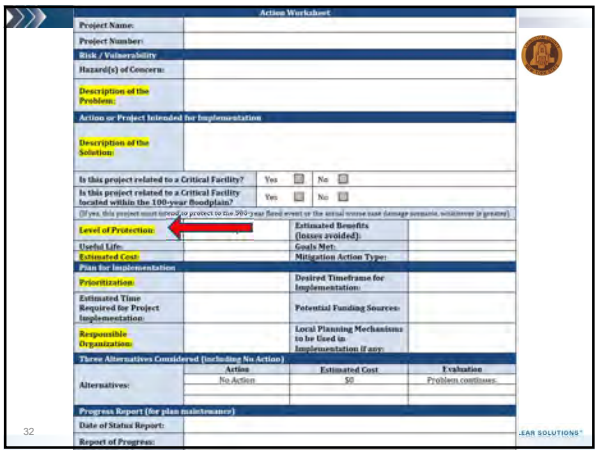

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Action Worksheet

- 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 in place.
    - For generators: Prevents power loss

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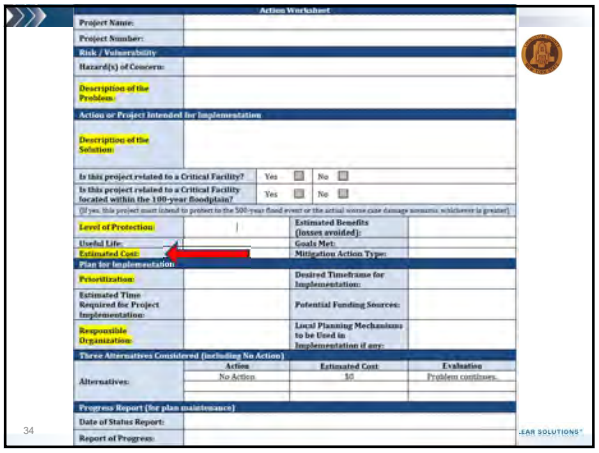

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Action Worksheet

- 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

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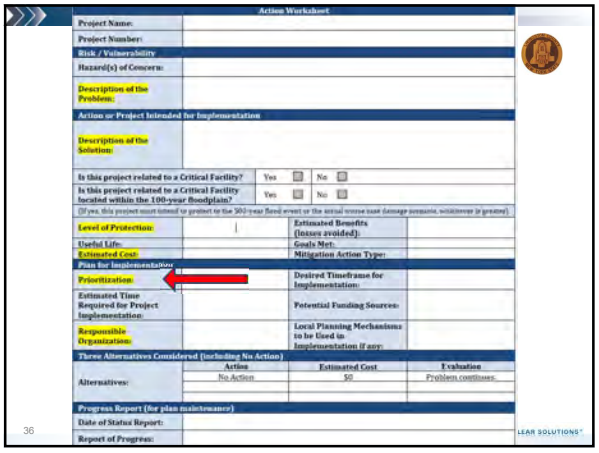

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Action Worksheet

- 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).

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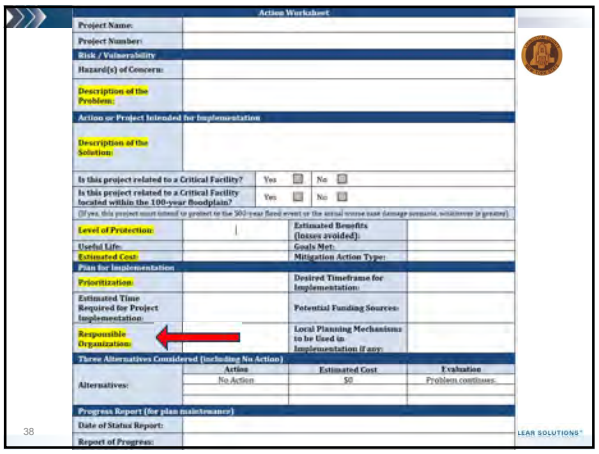

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Action Worksheet

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

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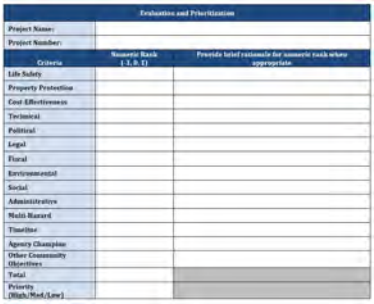
Evaluation of Actions



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Prioritization of Actions

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

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Schedule Review and Next Steps

- Return your Mitigation Development Worksheet by **September 17, 2021.**
- Work with county staff to complete your annex and the development of your actions.
- All annexes and actions must be complete by **the end of October 2021.**
- Targeting posting of the draft plan in November 2021.

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For More Information…

- Livingston County HMP Website (livingstoncountynyhmp.com)
- Livingston County Department of Planning (https://livingstoncounty.us/210/Planning-Department)
- Livingston County Office of Emergency Management (https://livingstoncounty.us/203/Emergency-Management-Office-of)

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Contacts

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

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AGENDA

LIVINGSTON COUNTY HAZARD MITIGATION PLAN UPDATE
Mitigation Strategy Workshop

Wednesday, September 8, 2021 | 9:30 – 11:00 a.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 the Mitigation Action Development Worksheet**
6. **Proposed Action Tables**
7. **Action Worksheets**
8. **Questions**
9. **Next Steps**

LIVINGSTON 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 September 17, 2021 2021 to:
Brian Kehoe, Tetra Tech
Phone: (585) 354-4216 E-mail: brian.kehoe@tetratech.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

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 ☐	No ☐	
Is this project related to a Critical Facility located within the Special Flood Hazard Area?	Yes ☐	No ☐	
(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 hazard impacts.

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.

Mitigation Catalog

DROUGHT		
Personal Scale	**Corporate Scale**	**Government Scale**

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

Mitigation Catalog

DROUGHT		
Personal Scale	**Corporate Scale**	**Government Scale**
○ Install rain-capturing devices for irrigation. ○ Install graywater systems in homes to encourage water reuse. ○ Rotate crops by growing a series of different types of crops on the same fields every season to reduce soil erosion. ○ Planting “cover crops,” such as oats, wheat, and buckwheat, to prevent soil erosion. • ***Increase Capability*** ○ Practice active water conservation techniques. ○ Seek ways to operate wells in such a way to enhance their functional longevity and supply capability.		agreements with alternative suppliers. ○ Develop a drought contingency plan ○ Develop criteria-"triggers" for drought related actions ○ Improve accuracy of water supply forecasts ○ Provide incentives to influence active water conservation techniques such as water user rate reductions. ○ Establish protocol for saltwater de-salinization to be implemented during conditions of severe drought. ○ Consider providing incentives to property owners that utilize drought resistant landscapes in the design of their homes. ○ Use of water buffalo tankers ○ Promote well usage techniques that strive to enhance functional longevity and supply capability of private water supply wells. ○ Develop an ordinance to restrict the use of public water resources for non-essential usage, such as landscaping, washing cars, filling swimming pools, etc.

Mitigation Catalog

EARTHQUAKES		
Personal Scale	**Corporate Scale**	**Government Scale**

• ***Manipulate the hazard:***
  ○ None
• ***Reduce exposure to the hazard***:
  ○ Locate outside of hazard area (off soft soils)
• ***Reduce vulnerability to the hazard:***
  ○ 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:***
  ○ 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
	• ***Manipulate the hazard:***
	  ○ None
	• ***Reduce exposure to the hazard:***
	  ○ Locate/relocate mission critical functions outside hazard area where possible
	• ***Reduce vulnerability to the hazard:***
	  ○ Build redundancy for critical functions/facilities
	  ○ Retrofit critical buildings/areas housing mission critical functions
	• ***Increase capability:***
	  ○ 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
		• ***Manipulate the hazard:***
		  ○ None
		• ***Reduce exposure to the hazard:***
		  ○ Locate critical facilities or functions outside of hazard area where possible
		• ***Reduce vulnerability to the hazard:***
		  ○ 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:***
		  ○ 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

Mitigation Catalog

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

Mitigation Catalog

FLOOD		
Personal Scale	**Corporate Scale**	**Government Scale**

• ***Manipulate the hazard:***
  ○ Clear stormwater drains and culverts
• ***Reduce exposure to the hazard:***
  ○ Locate or relocate outside of hazard area
  ○ Institute low impact development techniques on property
• ***Reduce vulnerability to the hazard:***
  ○ 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:***
  ○ Develop household mitigation plan, such as retrofit savings, communication capability with outside, 72-hr self-sufficiency during and after an event
  ○ Buy flood insurance
	• ***Manipulate the hazard:***
	  ○ Clear stormwater drains and culverts
	• ***Reduce exposure to the hazard:***
	  ○ Locate business critical facilities or functions outside hazard area
	  ○ Institute low impact development techniques on property
	• ***Reduce vulnerability to the hazard:***
	  ○ 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:***
	  ○ 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
		• ***Manipulate the hazard:***
		  ○ 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:***
		  ○ 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

Mitigation Catalog

FLOOD		
Personal Scale	**Corporate Scale**	**Government Scale**
		provisions for enforcing best practice standards by requiring a minimum freeboard of 2' to align with NY State Standards ○ Continue development application reviews by the county Planning Board to reduce risky development practices • ***Reduce vulnerability to the hazard:*** ○ 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

Mitigation Catalog

FLOOD		
Personal Scale	**Corporate Scale**	**Government Scale**
		○ 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:*** ○ 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

Mitigation Catalog

FLOOD		
Personal Scale	**Corporate Scale**	**Government Scale**
		awareness, flood insurance (NFIP) and mitigation ○ Maintain existing data as well as gather new data needed to define risks and vulnerability ○ Create a building and elevation inventory of structures in the floodplain ○ Identify flood-prone areas that may be in need of new flood studies ○ Establish a program to identify and educate owners of flood-prone properties of potential mitigation options (e.g., elevations, relocations) ○ Charge a hazard mitigation fee on all new permits to create a hazard mitigation funding source for initiatives or grant cost-share requirements ○ Integrate floodplain management policies into other planning mechanisms within the planning area ○ Establish a Stormwater Utility to deal with urban drainage/flooding issues ○ Establish incentives to promote flood hazard mitigation of private property (e.g., permit fee waivers) ○ 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

Mitigation Catalog

FLOOD		
Personal Scale	**Corporate Scale**	**Government Scale**
		○ 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

Mitigation Catalog

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

Mitigation Catalog

HAZARDOUS MATERIALS		
Personal Scale	**Corporate Scale**	**Government Scale**

• ***Manipulate the hazard:***
  ○ Identify and eliminate sources of potential hazardous material spills
• ***Reduce exposure to the hazard***:
  ○ Increase distance between hazardous material sites and development
• ***Reduce vulnerability to the hazard:***
  ○ None
• ***Increase capability:***
  ○ Personal planning for potential event
	• ***Manipulate the hazard:***
	  ○ Identify and eliminate sources of potential hazardous material spills
	• ***Reduce exposure to the hazard:***
	  ○ None
	• ***Reduce vulnerability to the hazard:***
	  ○ None
	• ***Increase capability:***
	  ○ Increase inspection of hazardous material facilities and transport vehicles
	  ○ Conduct training for response
		• ***Manipulate the hazard:***
		  ○ Identify and eliminate sources of potential hazardous material spills
		• ***Reduce exposure to the hazard:***
		  ○ Increase inspection of hazardous material facilities and transport vehicles
		• ***Reduce vulnerability to the hazard:***
		  ○ None
		• ***Increase capability:***
		  ○ Increase inspection of hazardous material facilities and transport vehicles
		  ○ Conduct training for response
		  ○ Public outreach

INVASIVE SPECIES		
Personal Scale	**Corporate Scale**	**Government Scale**

• ***Manipulate the Hazard***:
  ○ Participate in quarantine, control, or eradication programs.
• ***Reduce exposure to the hazard***:
  ○ None
• ***Reduce vulnerability to the hazard:***
  ○ Form citizen action groups to promote awareness and best practices on local levels.
• ***Increase Capability***
	• ***Manipulate the Hazard:***
	  ○ None
	• ***Reduce exposure to the hazard:***
	  ○ None
	• ***Reduce vulnerability to the hazard:***
	  ○ None
	• ***Increase Capability:***
	Build and maintain partnerships with other stakeholders to coordinate information sharing,
		• ***Manipulate the Hazard:***
		  ○ Work with Federal/State agencies on quarantine, control, or eradication programs for invasive species.
		• ***Reduce exposure to the hazard:***
		  ○ Create/disseminate planting guides which explain which types of plants and vegetation

INVASIVE SPECIES		
Personal Scale	**Corporate Scale**	**Government Scale**
○ Regularly check the NYSISRI Portal for updated information. ○ Comply with Invasive Species rules and regulations to minimize the chance for invasive species to spread. ○ " Broaden collaborations focused ○ on ecosystem restoration and ecosystem-based management. "	and response for Invasive Species throughout the county/region.	are safe to plant within the county. • ***Reduce vulnerability to the hazard:*** ○ Pass municipal ordinances to enforce best practices for invasive species at the local level. • ***Increase Capability:*** ○ Build and maintain partnerships with other stakeholders to coordinate information sharing, and response for Invasive Species throughout the county/region. ○ Work with federal/state agencies to disseminate information to local municipalities regarding Invasive Species from the NYS Invasive Species Research Institute portal. ○ Disseminate information to the general public to educate them on Invasive Species ○ Work with stakeholders to identify and expand resources for prevention and early detection of invasive species. ○ Support New York State's initiative for an invasive species early warning system. ○ Broaden collaborations focused on ecosystem restoration and

Mitigation Catalog

INVASIVE SPECIES		
Personal Scale	**Corporate Scale**	**Government Scale**
		ecosystem-based management." Build ecological restoration planning into IS management projects. Support New York State's marketing, branding, and educational initiatives.

Mitigation Catalog

LANDSLIDE		
Personal Scale	**Corporate Scale**	**Government Scale**

• ***Manipulate the hazard:***
  ○ Apply soil stabilization measures, such as planting soil stabilizing vegetation on steep slopes
• ***Reduce exposure to the hazard***:
  ○ None
• ***Reduce vulnerability to the hazard:***
  ○ None
• ***Increase capability:***
  ○ None
	• ***Manipulate the hazard:***
	  ○ None
	• ***Reduce exposure to the hazard:***
	  ○ None
	• ***Reduce vulnerability to the hazard:***
	  ○ None
	• ***Increase capability:***
	  ○ None
		• ***Manipulate the hazard:***
		  ○ 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:***
		  ○ 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:***
		  ○ 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

Mitigation Catalog

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

Mitigation Catalog

PANDEMIC		
Personal Scale	**Corporate Scale**	**Government Scale**

• ***Manipulate the hazard:***
  ○ None
• ***Reduce exposure to the hazard***:
  ○ Proper hygiene
  ○ PPE
  ○ Social distancing
• ***Reduce vulnerability to the hazard:***
  ○ Focus on personal health
• ***Increase capability:***
  ○ Storage of PPE
  ○ Storage of supplies and food to reduce need to enter public spaces
	• ***Manipulate the hazard:***
	  ○ None
	• ***Reduce exposure to the hazard:***
	  ○ PPE
	  ○ Social distancing
	• ***Reduce vulnerability to the hazard:***
	  ○ Distanced work environment
	  ○ Regular cleaning of work environment
	• ***Increase capability:***
	  ○ Storage of PPE
	  ○ Equipment for monitoring
	  ○ Trainings for staff
		• ***Manipulate the hazard:***
		  ○ None
		• ***Reduce exposure to the hazard:***
		  ○ PPE
		  ○ Social distancing
		• ***Reduce vulnerability to the hazard:***
		  ○ Distanced work environment
		  ○ Regular cleaning of work environment
		• ***Increase capability:***
		  ○ Storage of PPE
		  ○ Equipment for monitoring/treatment
		  ○ Trainings for staff
		  ○ Public outreach

Mitigation Catalog

SEVERE STORMS		
Personal Scale	**Corporate Scale**	**Government Scale**

• ***Manipulate the hazard:***
  ○ None
• ***Reduce exposure to the hazard***:
  ○ None
• ***Reduce vulnerability to the hazard:***
  ○ 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:***
  ○ 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
	• ***Manipulate the hazard:***
	  ○ None
	• ***Reduce exposure to the hazard:***
	  ○ None
	• ***Reduce vulnerability to the hazard:***
	  ○ Relocate critical infrastructure, such as power lines, underground
	  ○ Reinforce or relocate critical infrastructure such as powerlines so that it meets performance expectations
	• ***Increase capability:***
	  ○ 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
		• ***Manipulate the hazard:***
		  ○ None
		• ***Reduce exposure to the hazard:***
		  ○ None
		• ***Reduce vulnerability to the hazard:***
		  ○ 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:***
		  ○ 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**
		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 employments centers, schools, hospitals ○ Promote emergency power supplies to private property ○ Improve, expand, or harden communications facilities and services ○ Recruit additional emergency personnel or use mutual aid agreements ○ Increase sheltering capabilities ○ Increase capability to respond to power outages and downed power lines

Mitigation Catalog

SEVERE STORMS		
Personal Scale	**Corporate Scale**	**Government Scale**
		○ Establish partnerships with utility providers through proactive planning

Mitigation Catalog

SEVERE WINTER STORMS		
Personal Scale	**Corporate Scale**	**Government Scale**

• ***Manipulate the hazard:***
  ○ None
• ***Reduce exposure to the hazard***:
  ○ Plant appropriate trees near home and power lines ("Right tree, right place" National Arbor Day Foundation)
• ***Reduce vulnerability to the hazard:***
  ○ 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:***
  ○ 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
	• ***Manipulate the hazard:***
	  ○ None
	• ***Reduce exposure to the hazard:***
	  ○ None
	• ***Reduce vulnerability to the hazard:***
	  ○ 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:***
	  ○ 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
		• ***Manipulate the hazard:***
		  ○ None
		• ***Reduce exposure to the hazard:***
		  ○ None
		• ***Reduce vulnerability to the hazard:***
		  ○ 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:***
		  ○ 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

Mitigation Catalog

SEVERE WINTER STORMS		
Personal Scale	**Corporate Scale**	**Government Scale**
		○ Increase communication alternatives ○ Modify land use and environmental regulations to support vegetation management activities that improve reliability in utility corridors ○ Modify landscape and other ordinances to encourage appropriate planting near overhead power, cable, and phone lines ○ Provide weather radios to vulnerable populations ○ Enhance public awareness campaigns to address those issues of alert and warning and actions to take during severe weather events ○ Utilize the best available technology to enhance the warning systems for all severe weather events (i.e., tornado warning systems) ○ Coordinate severe weather warning capabilities and the dissemination of warning amongst those agencies within the planning are with the highest degree of capability ○ Encourage local ordinances for planting trees near lines and join Tree City USA

Mitigation Catalog

SEVERE WINTER STORMS		
Personal Scale	**Corporate Scale**	**Government Scale**
		○ 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

Mitigation Catalog

UTILITY FAILURE		
Personal Scale	**Corporate Scale**	**Government Scale**

• ***Manipulate the hazard:***
  ○ None
• ***Reduce exposure to the hazard***:
  ○ Plant appropriate trees near home and power lines ("Right tree, right place" National Arbor Day Foundation)
• ***Reduce vulnerability to the hazard:***
  ○ 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:***
  ○ Trim or remove trees that could affect power lines
  ○ Prepare emergency food and supplies to be self-sufficient for at least 72 hours
	• ***Manipulate the hazard:***
	  ○ None
	• ***Reduce exposure to the hazard:***
	  ○ None
	• ***Reduce vulnerability to the hazard:***
	  ○ 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:***
	  ○ Trim or remove trees that could affect power lines
	  ○ Create redundancy in utilities and communications
		• ***Manipulate the hazard:***
		  ○ None
		• ***Reduce exposure to the hazard:***
		  ○ None
		• ***Reduce vulnerability to the hazard:***
		  ○ 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:***
		  ○ 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

Mitigation Catalog

UTILITY FAILURE		
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

WILDFIRE		
Personal Scale	**Corporate Scale**	**Government Scale**
• ***Manipulate the Hazard***: ○ Clear potential fuels on property; dry, overgrown underbrush; diseased trees • ***Reduce exposure to the hazard***: ○ Clean and maintain defensible space around structures ○ Locate outside hazard area ○ Mow regularly	• ***Manipulate the Hazard:*** ○ None • ***Reduce exposure to the hazard:*** ○ None • ***Reduce vulnerability to the hazard:*** ○ Create and maintain defensible space around structure and infrastructure and provide water onsite	• ***Manipulate the Hazard:*** ○ None • ***Reduce exposure to the hazard:*** ○ Clear fuels (dry underbrush, diseased trees) on land that can trigger and maintain wildfires ○ Implement Best Management Practices on public lands • ***Reduce vulnerability to the hazard:***

Mitigation Catalog

WILDFIRE		

• ***Reduce vulnerability to the hazard:***
  ○ Create and maintain defensible space around structures, provide water on site.
  ○ Use fire-retardant building materials
  ○ Create defensible spaces around your home.
• ***Increase Capability***
  ○ Employ Firewise techniques to safeguard your home
  ○ Identify alternative water supply points proximate to your home such as swimming pools, lakes, streams
  ○ Support your local fire department
  ○ Be aware of weather conditions that support/enhance the probability of wildfires
	○ Use fire-retardant building materials
	○ Provide stored water to be utilized for firefighting with appropriate fire department connections at facilities not equipped with fire hydrants or inadequate fire hydrant spacing
	• ***Increase Capability:***
	  ○ Support Firewise community initiatives
		○ Create and maintain defensible space around structure and infrastructure
		○ Higher regulatory standards
		○ Establish water main supply and hydrants in unhydranted areas
		○ Decrease hydrant spacing
		• ***Increase Capability:***
		  ○ More public outreach and education efforts including an active “Firewise” program
		  ○ Identify fire response and alternative evacuation routes
		  ○ Seek alternative water supplies in urban wildland interface areas.
		  ○ Become a "Firewise" community
		  ○ Increase capability to fight wildfires utilizing equipment that can support wildfire fighting such as: tankers, engines with "pump-and-run" capabilities, dump tanks for tanker shuttle operations.
		  ○ Develop/implement wildfire management plans.
		  ○ Establish Mutual Aid Agreements
		  ○ Develop a Water Supply Plan

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	Livingston County Hazard Mitigation Plan (HMP) Update Draft Review Meeting		
Date	December 13, 2021	**Time**	6:00 – 6:25 p.m.
Location	Webinar		
Attendees	Heather Ferrero, Deputy Director, Livingston County Planning Department		
	Andrew Brodell, Director, Livingston County Office of Emergency Management (OEM)		
	Kevin Clapp, Planning Manager, New York State Division of Homeland Security and Emergency Services (NYS DHSES)		
	Heather Apgar, Planner, Consultant - Tetra Tech		

Purpose

The purpose of this meeting was to collect comments on the complete draft of the updated HMP.

Discussion Points

This section summarizes each discussion point addressed during the meeting.

Draft Plan Review

Ms. Apgar led a discussion regarding each of the sections of the HMP. These sections are available on the HMP project website. Information addressed in each section is summarized below:

- **Section 1: Introduction** describes mitigation planning, identifies the participating jurisdictions, and provides an overview of the HMP. Attendees had no comments on, or corrections to, this section.
- **Section 2: Plan Adoption** describes the plan adoption process. Attendees had no comments on, or corrections to, this section.
- **Section 3: Planning Process** identifies the participants of the planning process, describes the planning activities undertaken during the HMP update process, and describes how the planning process will continue after the draft is approved. Ms. Apgar listed the meetings that were conducted as part of the planning process. She also pointed out that four municipalities (the Village of Lima, the Town of Livonia, the Village of Livonia, and the Village of Mount Morris) did not participate in the plan update. Attendees had no comments on, or corrections to, this section.
- **Section 4: County Profile** describes the history of the county, its physical features, the population and demographics, building stock, land use and trends, and critical facilities. Attendees had no comments on, or corrections to, this section.
- **Section 5: Risk Assessment** identifies the hazards of concern, describes how each hazard is prioritized based on the level of risk it poses to the county and its jurisdictions, and includes full profiles of each hazard of concern. The hazards of concern are drought, earthquake, flood, hazardous materials, invasive species, landslide, mine subsidence, pandemic, severe

storm, winter storm, terrorism, utility failure, and wildfire. Attendees had no comments on, or corrections to, this section.

- **Section 6: Mitigation Strategies** describes past accomplishments in implementing hazard mitigation initiatives throughout the county; lists the hazard mitigation goals and objectives; describes the federal, state, county, and local capabilities that can be leveraged to reduce vulnerability to hazards; and describes how mitigation actions were identified, evaluated, and prioritized by each jurisdiction. Mr. Clapp pointed out that NYS DHSES is updating its website, and links listed in this section may not work in the near future.
- **Section 7: Plan Maintenance** identifies the HMP Coordinator and describes the responsibilities associated with this role. Mr. Brodell will be the Livingston County HMP Coordinator. Section 7 also identifies members of the Planning Partnership that will maintain the plan over the next 5 years and describes how the plan will be monitored, evaluated, and updated. This section also describes the ways in which the HMP is integrated into other planning mechanisms and vice versa. Attendees had no comments on, or corrections to, this section.
- **Section 8: Planning Partnership** lists the participating jurisdictions and introduces the content of the jurisdictional annexes. Attendees had no comments on, or corrections to, this section.
- **Section 9: Jurisdictional Annexes** contains an annex for each participating jurisdiction. Each annex includes the following information: municipal planning team, municipal profile, municipal-specific capabilities (planning, development/permitting, administrative, fiscal, education and outreach, community classifications, and adaptive capacity), NFIP compliance, information on evacuation/sheltering/temp/permanent housing; growth and development trends; municipal-specific risk assessment (history of hazard events in the last 5 years, hazard ranking, critical facilities); identified issues/vulnerable areas; status of actions from the last plan; new actions for the 2021 HMP; prioritizing the actions; and action worksheets.
- Ms. Apgar described the set of appendices that are included in the plan. Attendees had no comments on, or corrections to, the appendices.

Next Steps

The following next steps were identified during the meeting:

- Ms. Ferrero will provide additional comments to Mr. Tony Subbio of Tetra Tech.
- Tetra Tech will finalize the HMP draft and provide updates to Mr. Clapp.
- Mr. Clapp will then forward the HMP to the Federal Emergency Management Agency (FEMA) for review.
- Once FEMA determines that the HMP meets FEMA's requirements, the plan will be granted "approvable pending adoption" (APA) status.
- The county and municipalities will formally adopt the HMP after it receives APA status.

The meeting adjourned at 6:25 p.m.

TETRA TECH

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Livingston County Hazard Mitigation Plan

2022 Update

Plan Draft Review Meeting

December 13, 2021
6:00 – 8:00 p.m.

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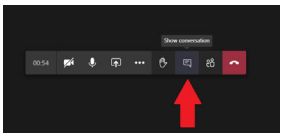
Welcome

- 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.



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Agenda

- Draft Plan Review
- Next Steps
- Questions

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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

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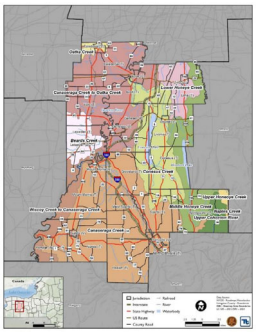
Draft Plan Review

- 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



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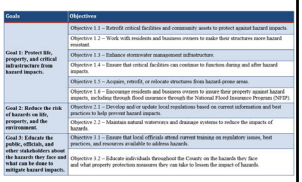
Draft Plan Review

- 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



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Draft Plan 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

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Draft Plan Review

- 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

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Draft Plan Review

- Appendices
  - Appendix A: Adoption Resolutions
  - Appendix B: Participation Matrix
  - Appendix C: Meeting Documentation
  - Appendix D: Public and Stakeholder Outreach
  - Appendix E: Risk Assessment Supplementary Data
  - Appendix F: Critical Facilities
  - Appendix G: Plan Review Tools
  - Appendix H: Linkage Procedures

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Next Steps

- Finalize the draft based on this meeting
- Submit final version to NYS DHSES
- NYS DHSES completes review
- Update and submit to FEMA for review
- FEMA review for up to 45 days
- Approvable Pending Adoption (APA) status
- Municipal adoption

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AGENDA

LIVINGSTON COUNTY HAZARD MITIGATION PLAN UPDATE
Plan Draft Review Meeting

Monday, December 13, 2021 | 6:00 – 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**