



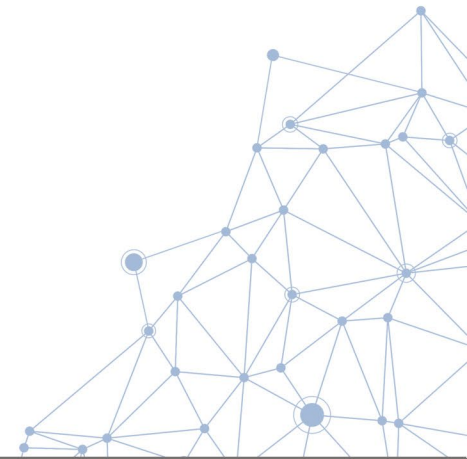
Putnam Hazard Mitigation Plan Update 2020

Planning Partnership Meeting – Mitigation Workshop Presentation

August 26, 2020

Agenda

1. Introductions
2. Project Status
3. Developing Mitigation Strategies – NYS DHSES, FEMA
4. Development of Actions and Action Worksheets using Problem Statement Worksheets
5. Review draft action worksheets and begin new action worksheets
6. Discuss opportunities for integrating mitigation into daily operations
7. Next Steps



Hazard Mitigation – What is it?

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

-or-

Any action taken to reduce future disaster losses






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

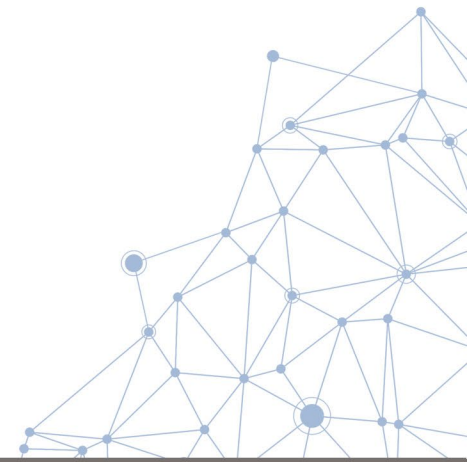


Why are we spending valuable time on this?

Mitigation Works!

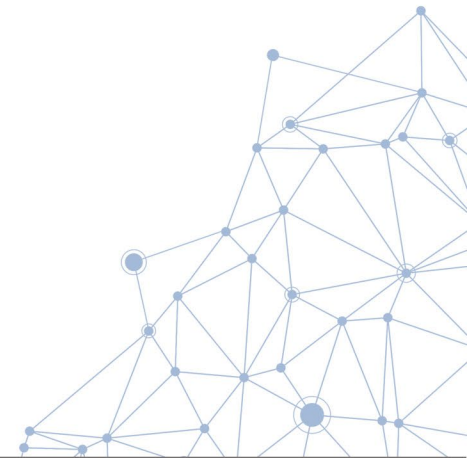
- The nation saves \$6 for every \$1 spent through mitigation grants funded via select federal agencies (e.g. FEMA)

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



Our Schedule

Task	Date
Data Collection	Complete
Update Hazard Profiles	Complete
Risk Assessment	Complete
Risk Results Presentation	Complete
Mitigation Strategy Workshop	August 26, 2020 – TODAY!
Review Draft Plan	October 21, 2020
Submit to NYSDHSES	November 18, 2020
Submit to FEMA	TBD

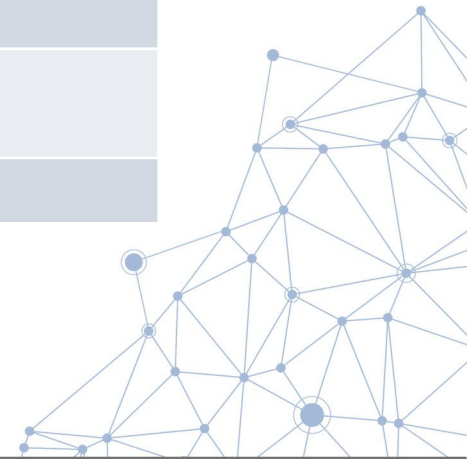


Our Progress Update – Annex Progress

Municipality	LOIP Received	Status
Putnam County		Annex meeting held; follow-ups in progress
Brewster (V)	X	Annex approaching completion
Carmel (T)	X	Annex approaching completion
Cold Spring (V)		No response
Kent (T)	X	Annex meeting held; Tt following up
Nelsonville (V)		Annex approaching completion
Patterson (T)	X	Annex approaching completion
Philipstown (T)	X	Annex meeting held; Tt following up
Putnam Valley (T)	X	Annex approaching completion
Southeast (T)	X	Annex approaching completion

Progress Update - Data Needs

Municipality	Critical Facilities	Permit Data	Risk Ranking Worksheet	Mitigation Brainstorming
Brewster (V)	X			X
Carmel (T)	X		X	
Cold Spring (V)				
Kent (T)		X		
Nelsonville (V)	X			
Patterson (T)	X	X		
Philipstown (T)				
Putnam Valley (T)	X	X	X	
Southeast (T)	X	X	X	X



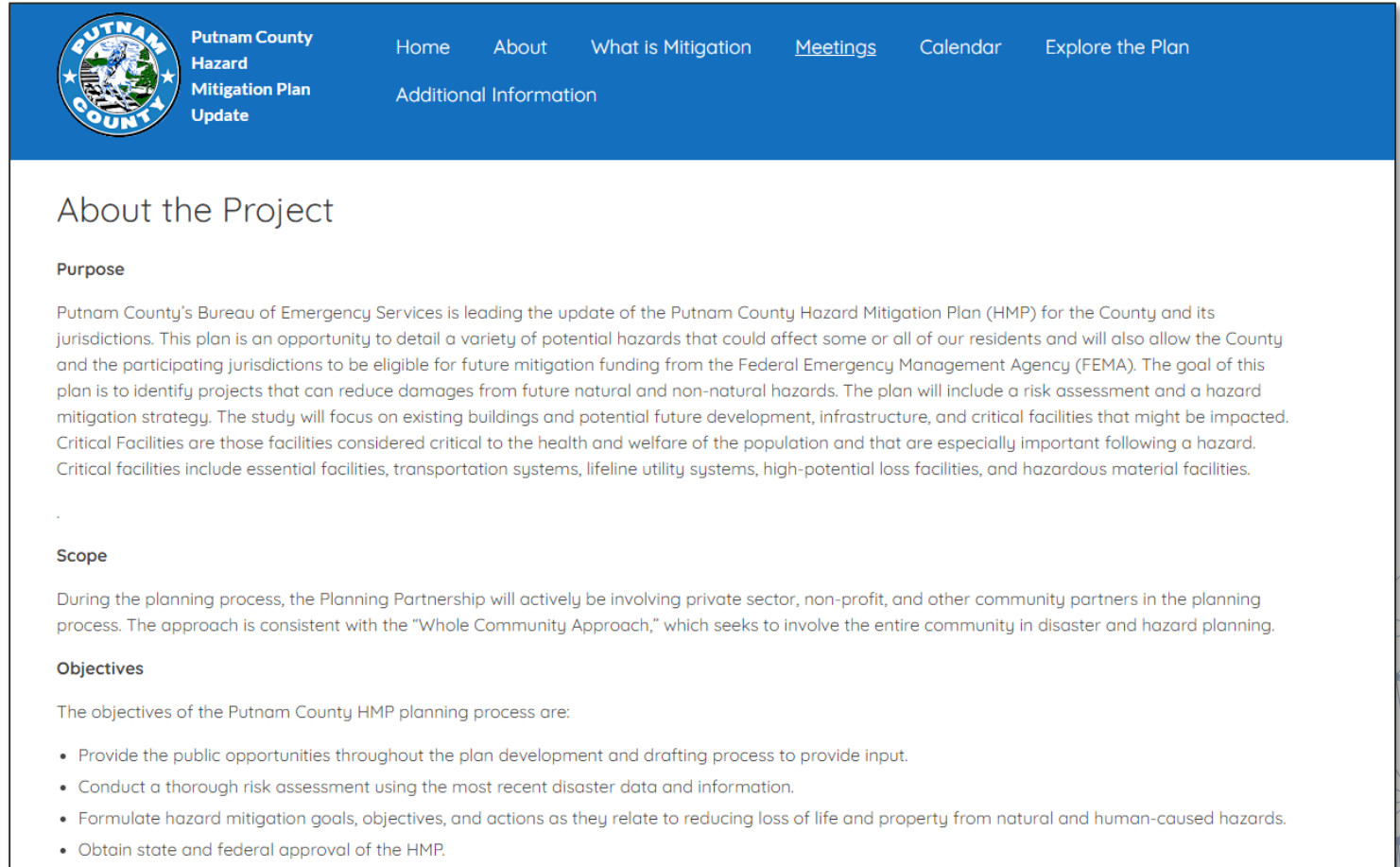


ACTION! Take and Distribute the Citizen Survey!

- Ready to go – here is the link – post on your municipal websites

<https://www.surveymonkey.com/r/PutnamHMP2020>

- Survey will close on 10/23/20
- Feedback on concerns and projects will be incorporated as applicable in your community annex
- HMP Website available here: <https://www.putnamcountynyhmp.com>



The screenshot shows the website for the Putnam County Hazard Mitigation Plan Update. The header is blue with the Putnam County logo on the left and navigation links (Home, About, What is Mitigation, Meetings, Calendar, Explore the Plan, Additional Information) on the right. The main content area is white and titled "About the Project". It includes sections for Purpose, Scope, and Objectives.

Putnam County Hazard Mitigation Plan Update

Home About What is Mitigation Meetings Calendar Explore the Plan Additional Information

About the Project

Purpose

Putnam County's Bureau of Emergency Services is leading the update of the Putnam County Hazard Mitigation Plan (HMP) for the County and its jurisdictions. This plan is an opportunity to detail a variety of potential hazards that could affect some or all of our residents and will also allow the County and the participating jurisdictions to be eligible for future mitigation funding from the Federal Emergency Management Agency (FEMA). The goal of this plan is to identify projects that can reduce damages from future natural and non-natural hazards. The plan will include a risk assessment and a hazard mitigation strategy. The study will focus on existing buildings and potential future development, infrastructure, and critical facilities that might be impacted. Critical Facilities are those facilities considered critical to the health and welfare of the population and that are especially important following a hazard. Critical facilities include essential facilities, transportation systems, lifeline utility systems, high-potential loss facilities, and hazardous material facilities.

Scope

During the planning process, the Planning Partnership will actively be involving private sector, non-profit, and other community partners in the planning process. The approach is consistent with the "Whole Community Approach," which seeks to involve the entire community in disaster and hazard planning.

Objectives

The objectives of the Putnam County HMP planning process are:

- Provide the public opportunities throughout the plan development and drafting process to provide input.
- Conduct a thorough risk assessment using the most recent disaster data and information.
- Formulate hazard mitigation goals, objectives, and actions as they relate to reducing loss of life and property from natural and human-caused hazards.
- Obtain state and federal approval of the HMP.

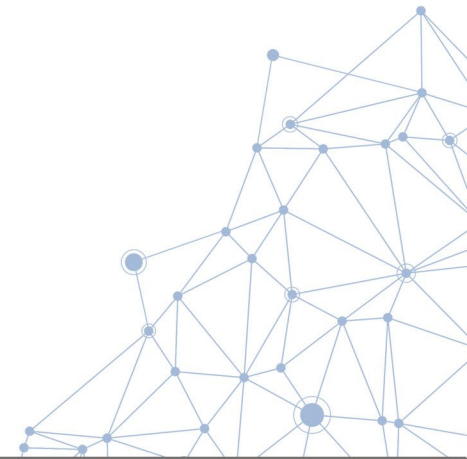
Citizen Survey (74 responses)

➤ Top hazards experienced in last 10 years

- Severe Storm 95%
- Severe Winter Storm 90%
- Extreme Temperature 46%
- Drought 34%

➤ Top Hazards of Concern (>50% very concerned or extremely concerned)

- Extreme Temperature
- Severe Storm (Nor'Easter)
- Severe Winter Storm (Ice Storms)



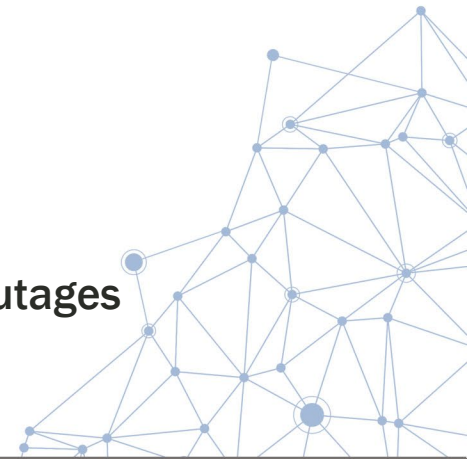
Citizen Survey (continued)

➤ Top projects to implement to reduce the damage due to natural hazards

- Work on improving the damage resistance of utilities (electricity, communications, water/wastewater facilities etc.) **86%**
- Retrofit infrastructure, such as elevating roadways and improving drainage systems **46%**
- Inform property owners of ways they can mitigate damage to their properties **39%**
- Improve access to information about hazard risks and high-hazard areas **39%**

➤ Additional types of projects to reduce damage and disruption in Putnam County

- Unhealthy tree mitigation, tree inspection and maintenance program
- Undergrounding utility wires
- Dredge the great swamp
- Stock utility poles, transformers etc.
- Develop town and County disaster plans
- Stormwater drainage systems
- Expand town sewer system to avoid well customer loss of sanitary system use due to power outages
- Generator incentive program



Stakeholder Outreach

➤ Stakeholder surveys to inform the mitigation strategy

- Business/Commerce,
- Utilities
- Health Care/Medical
- Academia
- Social Services
- Transportation/DPW
- Emergency Services

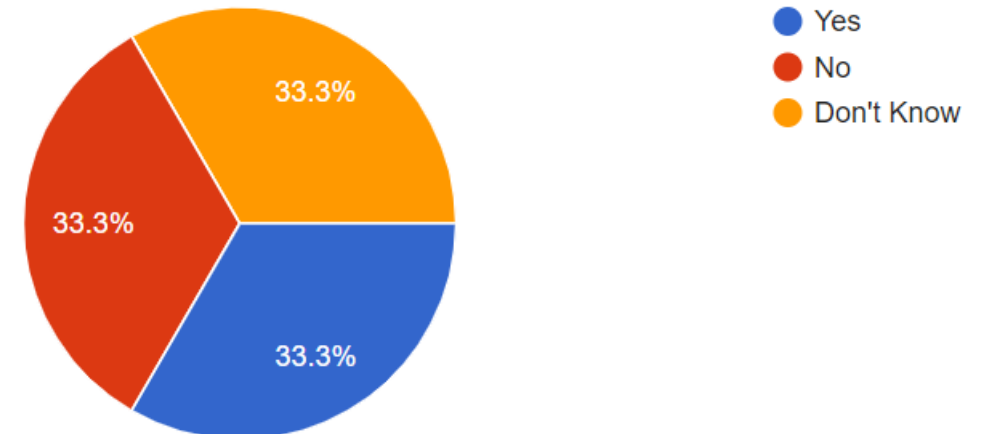
➤ 3 Responses as of 8/24/20

- Putnam Hospital
- Danbury Department of Health and Human Services
- American Red Cross

➤ Main Concerns

- Power supply
- Access to roads

Do you believe that local government understands, supports, and possesses adequate resources for hazard risk reduction efforts in the community?



Stakeholder Feedback

- Projects Identified
 - Cut the trees around the power lines servicing the hospital.
 - Increased community outreach and awareness.
 - Housing of the most vulnerable populations and better coordination between private and governmental agencies will be areas that must be improved.

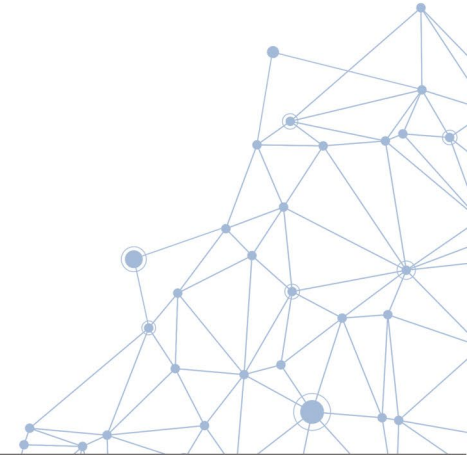


Mitigation Strategy



Hazards of Concern

- Drought 
- Earthquake 
- Extreme Temperature 
- Flood 
- Harmful Algal Bloom 
- Disease Outbreak 
- Severe Storm 
- Severe Winter Storm 
- Terrorism 
- Wildfire 



Risk Reduction

To Reduce Risk:

➤ *Manipulate the Hazard:*

- **Structural flood control**

➤ *Reduce/Eliminate Exposure:*

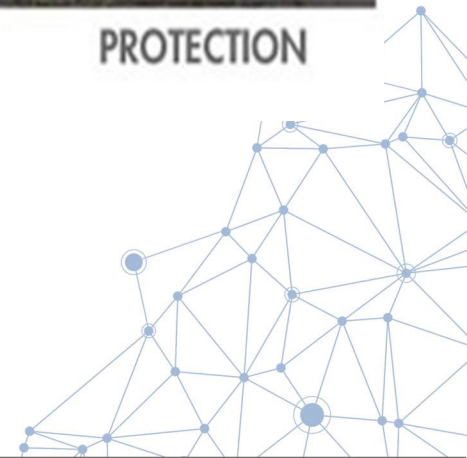
- **Property acquisition**

➤ *Reduce Vulnerability:*

- **Retrofit**

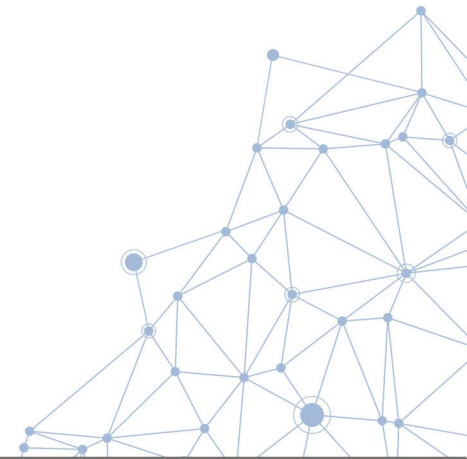
➤ *Increase Capability:*

- **\$, preparation, technical assistance, planning, enforcement**



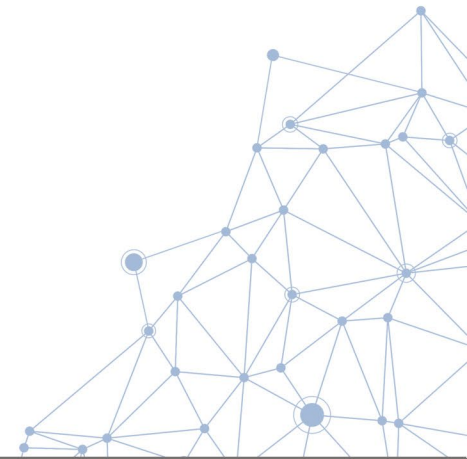
NYS Requirements for Mitigation Strategy Update

- Need to develop at least 2 Action Worksheets
- 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



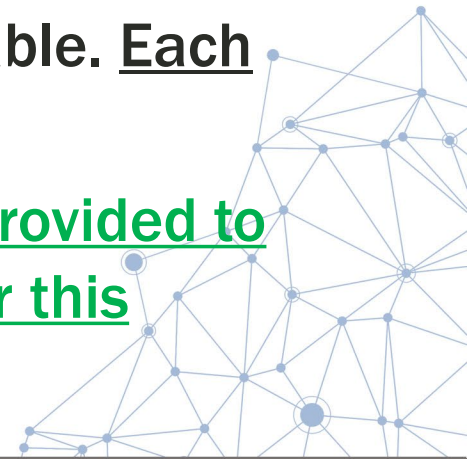
NYS Requirements for Mitigation Strategy Update

- 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



NYS Requirements for Mitigation Strategy Update

- Proposed actions MUST have specific information identified including:
 - Project lead
 - Estimated cost
 - Timeline
 - Whether the action involves a critical facility
 - Etc.
- All of these required items are identified within the proposed action table. Each cell of the table MUST be filled out!
- Initial worksheets pre-populated with BRAINSTORMING ideas will be provided to each community to jump start the process and will be distributed after this meeting.



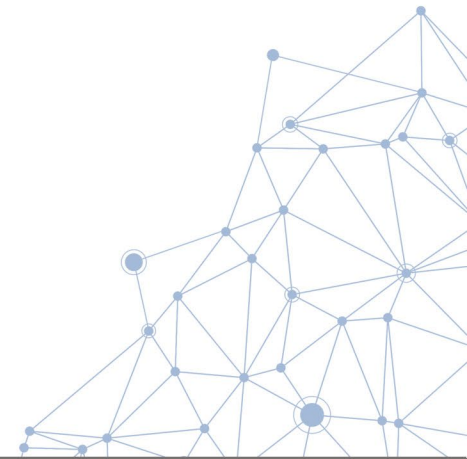
Connection to the Mitigation Strategy

- 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**



Collaborative Solutions for Mitigation

➤ Distribution of Problems in the County

- Based on risk ranking, survey results, and local officials' input

County-Wide Project Distribution	
Type	No.
Critical facility outreach	41
Emergency generator-traffic lights	1
General outreach	1
Generators, utility hardening	1
HAB mitigation	4
RL mitigation	2
Tree maintenance, bury utilities	5
Stormwater flooding	4
Sheltering plan	4
RL mitigation	4
Generator and water pressure	1
Flood mitigation	1
Tree maintenance, bury utilities, public sewer	1
Grand Total	70

Projects by Municipality	No.
Brewster	5
Critical facility outreach	1
Emergency generator-traffic lights	1
General outreach	1
Tree maintenance, bury utilities	1
Stormwater flooding	1
Carmel	15
Critical facility outreach	11
HAB mitigation	1
RL mitigation	1
Tree maintenance, bury utilities	1
Stormwater flooding	1
Cold Spring	4
Critical facility outreach	3
RL mitigation	1
Kent	7
Critical facility outreach	2
Generators, utility hardening	1
Tree maintenance, bury utilities	1
Stormwater flooding	1
Sheltering plan	1
RL mitigation	1

Nelsonville	4
Critical facility outreach	3
Generator and water pressure	1
Patterson	14
Critical facility outreach	11
HAB mitigation	1
Tree maintenance, bury utilities	1
Sheltering plan	1
Philipstown	1
RL mitigation	1
Putnam Valley	7
Critical facility outreach	3
HAB mitigation	1
Tree maintenance, bury utilities	1
Sheltering plan	1
RL mitigation	1
Southeast	13
Critical facility outreach	7
HAB mitigation	1
Stormwater flooding	1
Sheltering plan	1
RL mitigation	1
Flood mitigation	1
Tree maintenance, bury utilities, public sewer	1

Tetra Tech has sent out the pre-populated Problem Statement Brainstorming Worksheets as a starting point

Mitigation Brainstorming

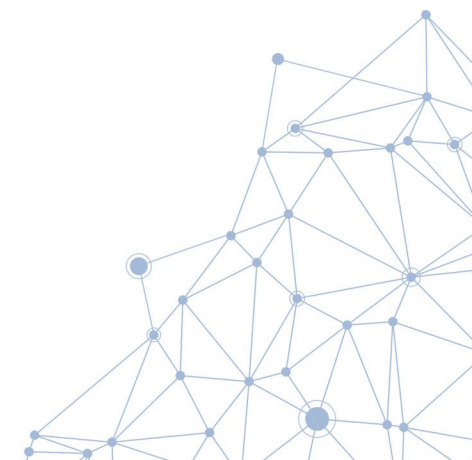
Name: _____ Jurisdiction: Brewster

How to describe the problem – provide a detailed description of the problem area, including its impacts to your jurisdiction, past damages, loss of service, etc. Be sure to include the street address of the property/project location (if applicable), adjacent streets, water bodies, and well-known structures. End the statement with a brief description of existing conditions (topography, terrain, hydrology) of the site.

How to describe the solution – provide a detailed description of the solution. Describe the physical area to be affected, both by direct work and the project's effects; how the solution will address the problem; and proposed construction methods. Also include where you are in the development process (i.e. has a study already been completed, are there drawings of the project, etc.).

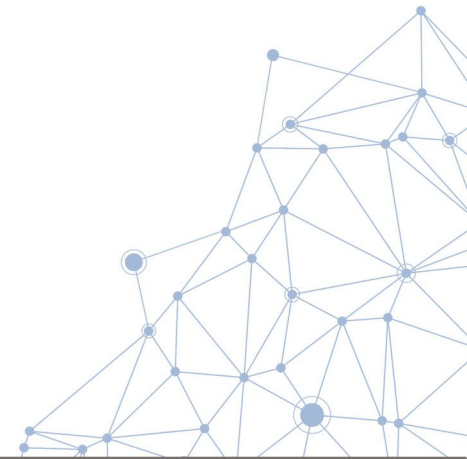
While solutions aren't required for this process, having a general idea of what you would like to see accomplished would be beneficial. If you have any questions, please reach out to your Tetra Tech planner: Brian Kempf (brian.kempf@tetratech.com or 212-615-3720).

Hazard	Problem Areas/ Challenges/Questions/Ideas	Location	Lead Agency	Potential Solutions
All hazards	Residents receive hazard information through a diverse array of sources.			<i>Explore methods to communicate hazards and preparation information.</i>
All hazards	The Village has experienced utility failures owing to severe weather events. This has resulted in a loss of water and electric services.	Village-wide	NYSEG	<i>Explore feasibility of hardening or burying electric infrastructure. Create and implement a tree maintenance program, including a tree inventory to identify vulnerable trees and developing a schedule to trim or remove trees.</i>
All hazards	Visibility is reduced on local roadways during power outages resulting from severe storms, creating hazardous conditions.			<i>Install emergency lighting and backup power for street lights and traffic lights.</i>
Flood; Severe Storm	<i>The Village experiences drainage issues that can result in road flooding.</i>			<i>Identify and address drainage hotspots; re-examine stormwater regulations and determine if enhanced standards can address flooding.</i>
Flood	<i>Brewster Metro North Rail Facility is</i>			<i>Community to reach out to the facility owner to</i>



What are we focusing on for our mitigation strategy?

- Stronger connection between the risk assessment and 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



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.



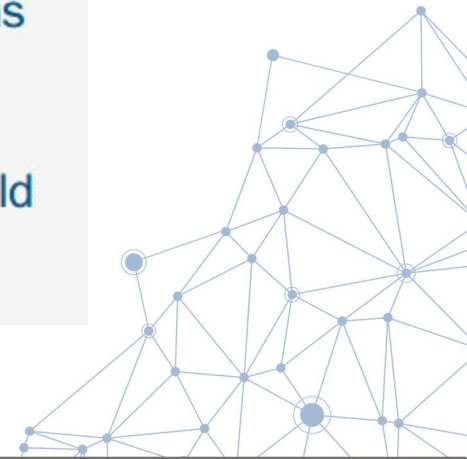
Structure and infrastructure projects involve modifying existing structures and infrastructure or constructing new structures to reduce the impact of hazards.



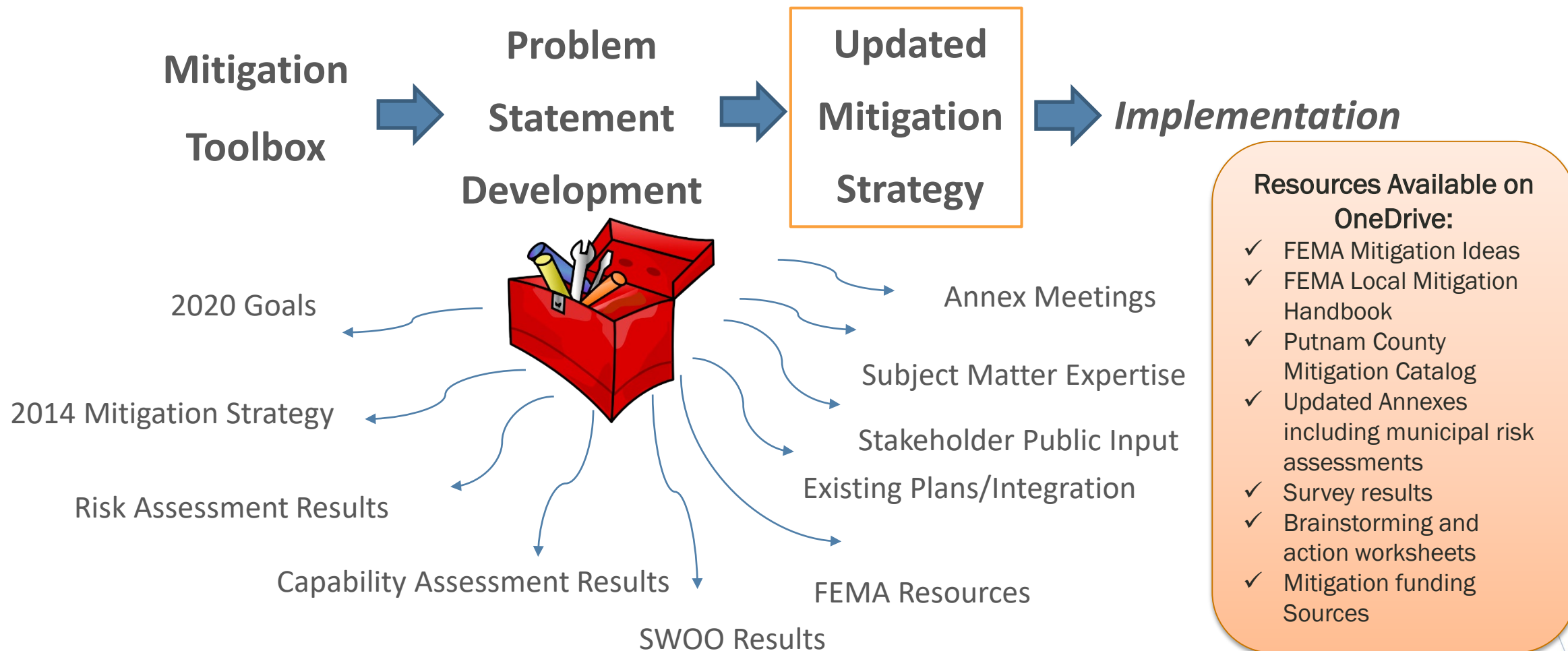
Natural systems protection projects minimize losses while also preserving or restoring the function of natural systems.



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.

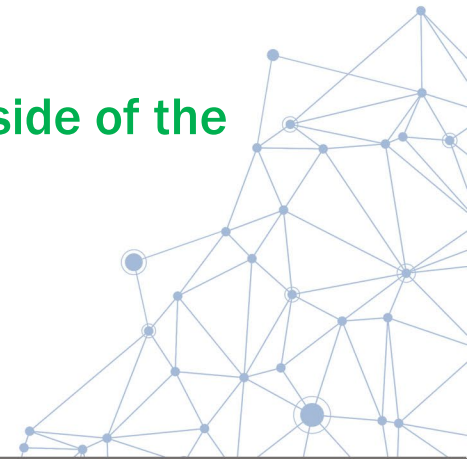


Please Refer to the Mitigation Toolbox on OneDrive to Aid in Developing your Mitigation Strategy!



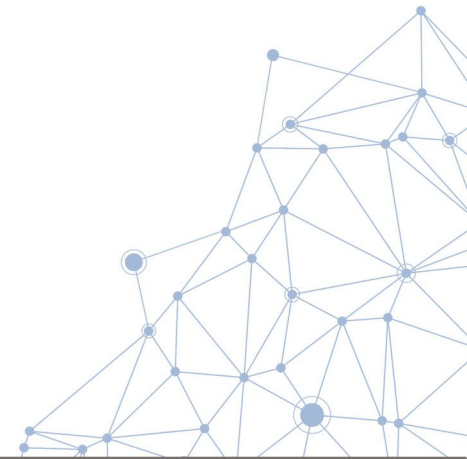
Update the Mitigation Strategy

- Review our Goals and Objectives
- Start with Problems (many identified on your Problem Statement Brainstorming Worksheets)
 - Areas that have been impacted
 - Recurring issues
 - Critical/Lifeline facilities in the floodplain
 - RL/SRL properties need mitigating
 - Lack of identified locations for temporary housing and permanent housing (outside of the floodplain)



Update the Mitigation Strategy

- Identify New Mitigation Actions/Projects
- Modify 'Carry-Over' projects from the 2015 HMP
 - More specific or to address different aspect of original problem

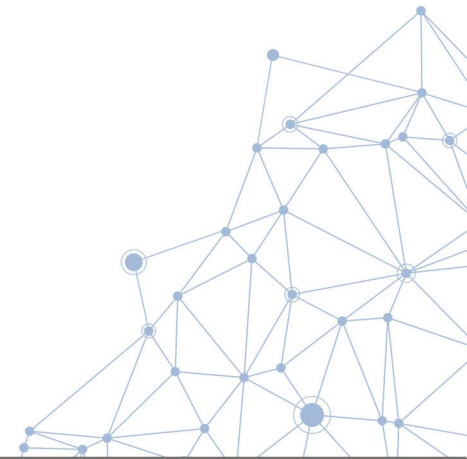


Making Previous Actions More Specific



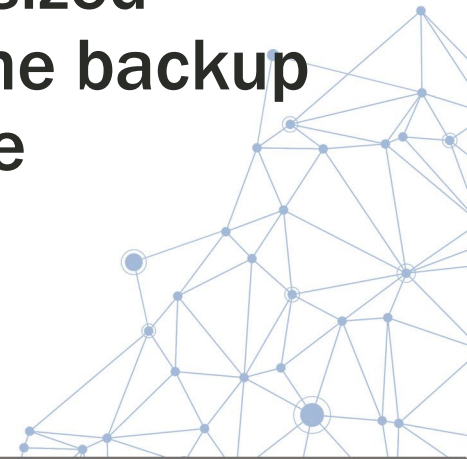
Previous Problem and Action

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



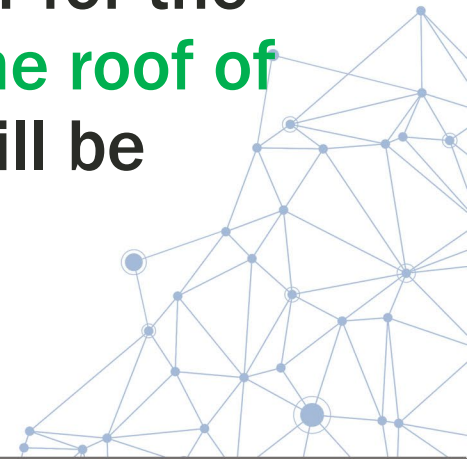
Improved Problem and Action

- **Problem:** Town Hall lacks a backup power source. The Town Hall houses the Emergency Operations Center and also can serve as a backup shelter. 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.



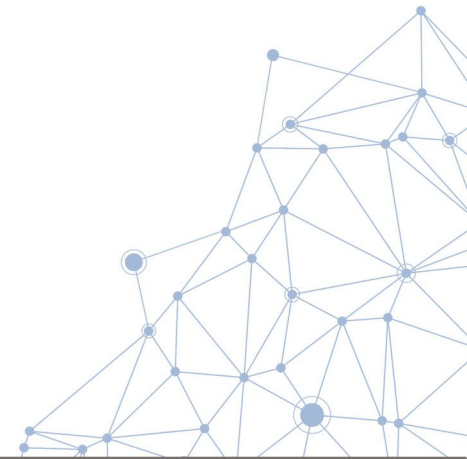
EVEN MORE Improved Problem and Action

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



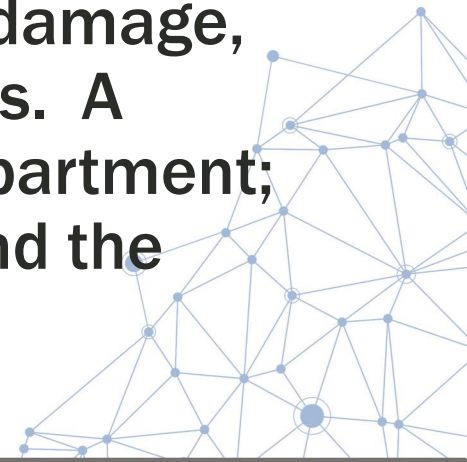
Previous Problem and Action

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



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 ones 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 Department's capability.



Proposed Action Table



➤ Complete this table noting your proposed projects and related information.

➤ *At least 2 of these projects will be detailed on an Action Worksheet*

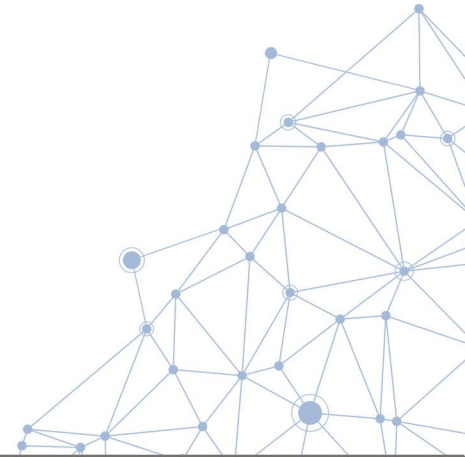
Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				Problem:										
				Solution:										
				Problem:										
				Solution:										
				Problem:										
				Solution:										
				Problem:										
				Solution:										
				Problem:										
				Solution:										

Action Worksheets



Action Worksheets

- Should also develop additional Action Worksheets for projects you plan to apply for FEMA funding support for within the next 5 years
- Not every action requires an Action Worksheet to be developed but the same sort of information about those actions are still needed in the Proposed Actions table of the annex
- Fill out the highlighted areas
- Areas not highlighted will be filled out by Tetra Tech staff
- Develop at least 2 Action Worksheets for your municipality



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?

Action Worksheet			
Project Name:			
Project Number:			
Risk / Vulnerability			
Hazard(s) of Concern:			
Description of the Problem:			
Action or Project Intended for Implementation			
Description of the Solution:			
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
(If yes, this project must intend to protect 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	Current problem continues
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

Action Worksheet

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

Action Worksheet			
Project Name:			
Project Number:			
Risk / Vulnerability			
Hazard(s) of Concern:			
Description of the Problem:			
Action or Project Intended for Implementation			
Description of the Solution:			
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
(If yes, this project must intend to protect 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	Current problem continues
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

Action Worksheet

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

Action Worksheet			
Project Name:			
Project Number:			
Risk / Vulnerability			
Hazard(s) of Concern:			
Description of the Problem:			
Action or Project Intended for Implementation			
Description of the Solution:			
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
(If yes, this project must intend to protect 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	Current problem continues
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

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

Action Worksheet			
Project Name:			
Project Number:			
Risk / Vulnerability			
Hazard(s) of Concern:			
Description of the Problem:			
Action or Project Intended for Implementation			
Description of the Solution:			
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
(If yes, this project must intend to protect 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	Current problem continues
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

Action Worksheet

➤ Estimated Benefits

- Provide a description of the estimated benefits, either quantitative and/or qualitative
- Identify the benefits that implementation of this project will provide. If dollar amounts are known, include them. If dollar amounts are unknown or are unquantifiable, describe the losses that will be avoided.

Action Worksheet			
Project Name:			
Project Number:			
Risk / Vulnerability			
Hazard(s) of Concern:			
Description of the Problem:			
Action or Project Intended for Implementation			
Description of the Solution:			
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
(If yes, this project must intend to protect 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	Current problem continues
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

Action Worksheet

➤ Prioritization

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

Action Worksheet			
Project Name:			
Project Number:			
Risk / Vulnerability			
Hazard(s) of Concern:			
Description of the Problem:			
Action or Project Intended for Implementation			
Description of the Solution:			
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
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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	Current problem continues
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

Action Worksheet

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

Action Worksheet			
Project Name:			
Project Number:			
Risk / Vulnerability			
Hazard(s) of Concern:			
Description of the Problem:			
Action or Project Intended for Implementation			
Description of the Solution:			
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
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(If yes, this project must intend to protect 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
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Progress Report (for plan maintenance)			
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Update Evaluation of the Problem and/or Solution:			

Action Worksheet

- Estimated Time Required for Project Implementation
- Provide the estimated time required to complete the project from start to finish.

Action Worksheet			
Project Name:			
Project Number:			
Risk / Vulnerability			
Hazard(s) of Concern:			
Description of the Problem:			
Action or Project Intended for Implementation			
Description of the Solution:			
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		Yes <input type="checkbox"/>	No <input type="checkbox"/>
(If yes, this project must intend to protect 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	Current problem continues
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

Action Worksheet

➤ Alternatives

- Three alternatives are needed for each action worksheet.
 - 1st alternative can be no action
 - 2nd and 3rd alternatives – include estimate cost and a description of the pros/cons of the alternatives

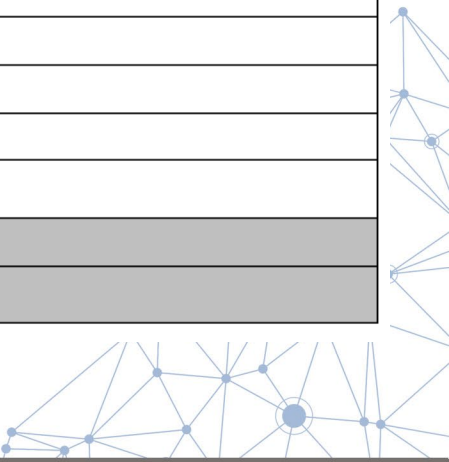
Action Worksheet			
Project Name:			
Project Number:			
Risk / Vulnerability			
Hazard(s) of Concern:			
Description of the Problem:			
Action or Project Intended for Implementation			
Description of the Solution:			
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Plan for Implementation			
Prioritization:		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)			
	Action	Estimated Cost	Evaluation
Alternatives:	No Action	\$0	Current problem continues
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

Evaluation of Actions

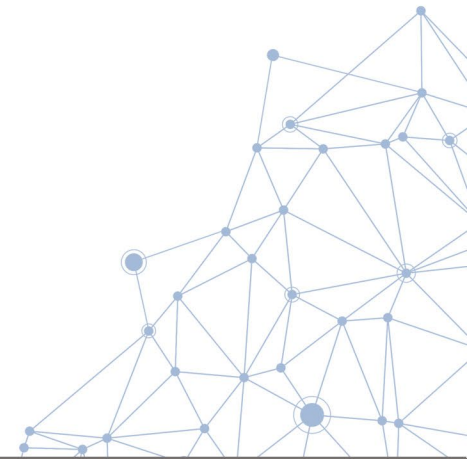
- Consider the benefits and costs
- Consider the implementation timeline
- Consider the areas/problems of greatest need
- Consider the funding sources
- High/Medium/Low priority

1 = highlight effective or feasible
 0 = neutral
 -1 = ineffective or not feasible

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)		



The Plan's Direction



Questions?



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Thank
You!