

Chittenden County Multi-Jurisdictional All-Hazards Mitigation Plan

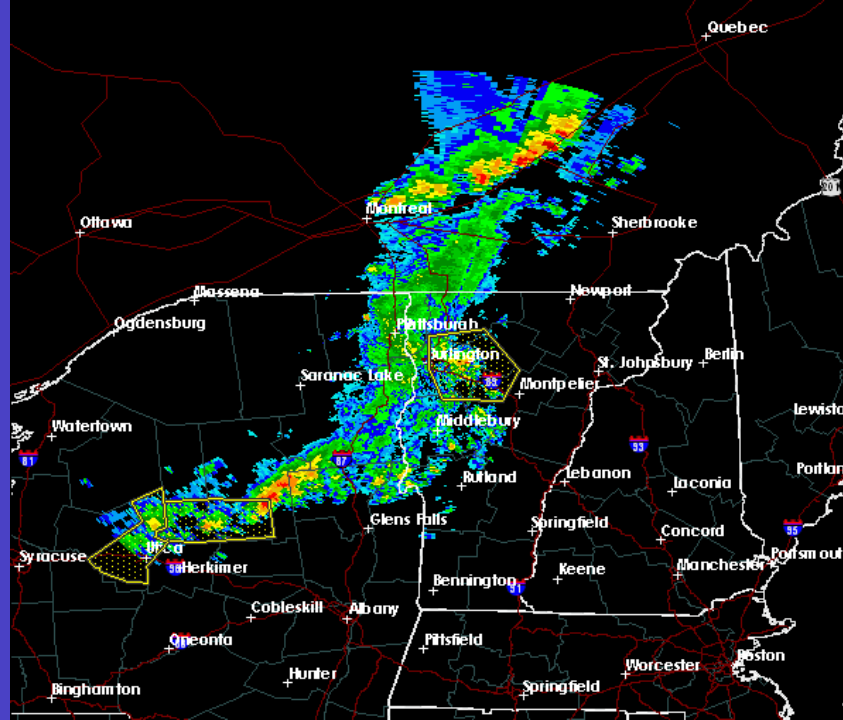
2022 Update

Hazard Mitigation Planning Committee
Mitigation Strategy Meeting

December 15-16, 2021



Agenda



- Welcome and Introductions
- Approval of Minutes from the last meeting
- Final List of 2022 Hazards
- Hazard Problem Statements
- Mitigation Strategy
 - Goals and Objectives-Working Exercise
 - Jurisdictional Capabilities-Working Exercise
 - Mitigation Actions-Working Exercise
- Next Steps
- Questions/Comments

Today's Objectives

In today's meeting we'll:

1. **Present the Goals and Objectives proposed for the 2022 CC MJ-HMP update**
 - Review 2017 goals and objectives
 - Discuss justification for revision
 - **Approve the 2022 Goals and Objectives**
2. **Present Jurisdictional Capabilities for review**
 - Review and discuss current capabilities
 - Identify additional capabilities

Proposed Realignment of the 2022 Plan

(2017 Chittenden County MJ-AHMP)	(Realigned MJ-AHMP 2022)
Executive Summary	Executive Summary
Acknowledgements	
Section 1: Introduction and Purpose	Chapter 1: Introduction
Section 2: Hazard Identification	Chapter 2: Chittenden County Profile (including overview of planning area)
Section 3: Risk Assessment	Chapter 3: Planning Process (includes how plan was developed, who was involved, overview of revisions, etc.)
Section 4: Vulnerability Assessment	Chapter 4: Regional Hazard Identification, Vulnerability and Risk Assessment (HIRA) (all-hazards)
Section 5: Mitigation Strategy	Chapter 5: Mitigation Strategy (including Capability Assessment, Goals and Objectives, and Mitigation Actions)
Section 6: Plan Maintenance	Chapter 6: Plan Maintenance (includes plan monitoring, evaluating and update method and schedule)
Appendices: Planning Documentation; HIRA; Mitigation Strategy; Plan Adoption-approval; Mitigation Grants; sources and Reference	Appendices: Planning Documentation, HIRA: Mitigation Strategy; Plan Adoption-approval; Mitigation Grants; sources and Reference
Jurisdictional Annexes	Jurisdictional Annexes

2022 Hazards – Revisions

Natural

Dam Failure
Extreme Temperatures
Flooding
Fluvial Erosion
Human Infectious Disease
Invasive Species
Severe Winds
Severe Winter Storm
Wildfire

Technological

Hazardous Materials Incident
Multi-Structure Fire
Natural Gas Service Loss
Power Loss
Sewer Service Loss
Telecommunications Failure
Water Pollution
Water Supply Loss
Other Fuel Service Loss

Societal

Civil Disturbance
Crime
Economic Recession
Key Employer Loss
Terrorism

Hazards Profiled – 2022 Plan

- Dam Failure
- Extreme Temperatures
- Flooding
- Fluvial Erosion
- Human Infectious Disease
- Invasive Species
- Severe Winds
- Severe Winter Storm
- Wildfire



Pre-Disaster Capabilities

Sample Capabilities

- Compliance/Enforcement Programs
- Education/Public Awareness
- Zoning/Land Use Programs
- Monitor Potential Disasters
- Plans/Planning

Potential Mitigation Actions

- Prevention/Mitigation Projects
- Resource Management
- Technical Assistance
- Training and Exercises
- Risk/Vulnerability Assessment

Post-Disaster Capabilities

- Long-term recovery/
re-development programs
- Administration of grants
and other recovery and/or
funding programs
- Local/multi-jurisdictional
coordination
- Risk and Vulnerability
Assessments



Local Capabilities Evaluation

- **Evaluation of:**
 - Federal, State and local laws, regulations, policies
 - Programs related to hazard mitigation
 - Development in hazard-prone areas
 - Administration of NFIP, CRS and RiskMAP programs
- **Discussion of:**
 - Local funding capabilities for hazard mitigation projects
 - How the local communities has used its own funds for HM projects
 - How the local has used FEMA mitigation programs and funding sources, including but not limited to:
 - HMGP, PDM and FAM
 - PA , Categories C-G
- **Summary of:**
 - Obstacles and challenges
 - Changes since the previous plan approval

Problem Statement

Community Concerns

- *What critical facilities are your jurisdiction's top concerns?*
- *What causes the most disruption to Chittenden Counties and its communities?*
- *What have been the most severe impacts to the economy?*
- *Is there a specific or vulnerable population impacted by the hazard?*

Hazard-specific Area of Focus

- Hazard impacts
- Assets at risk
- Location and extent
- Previous Occurrences
- Probability of future occurrences



Actions to best mitigate hazards countywide and in each jurisdiction



A glowing yellow tent is pitched on a rocky mountain peak at night. The tent is illuminated from within, casting a warm yellow light. The surrounding landscape is dark and rugged, with snow patches visible on the mountain slopes. In the background, a large, dark mountain peak rises against a deep blue night sky. A bright star or moon is visible in the upper right corner of the sky. The overall scene conveys a sense of isolation and resilience in a harsh environment.

**Prepare and prevent, don't
repair and repent.**

Author Unknown

CCRPC Regional Strategies and Actions that support Hazard Mitigation

- Land Use Regulations
- Natural Resource
- Economic
- Energy
- Public Safety

Mitigation Strategy - Definitions

- **GOAL**

- General guidelines explain what the jurisdiction wants to achieve with the plan
- Broad policy and vision statements explain what is to be achieved by implementing the mitigation strategy

EXAMPLE: Minimize new development in hazard-prone areas.

- **OBJECTIVE**

- Not required, but helps to define or organize mitigation actions
- Measurable (unlike goals)
- Connect goals with Mitigation Actions

EXAMPLE: Reduce the number of vulnerable structures in flood hazard areas.

- **MITIGATION ACTION**

- Specific projects and activities help to achieve the goals

EXAMPLE: Amend zoning ordinance to permit only open space land uses within floodplains.

Mitigation Strategy



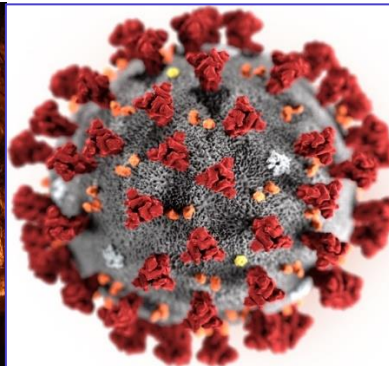
Goals – What long-term outcomes do you want to achieve?

Objectives – What measurable, specific actions will reduce hazard risk?

Actions – What specific projects or initiatives will be taken to address identified hazard risks and vulnerabilities?

Justification for Further Development of Goals and Objectives for 2022

- Provide a more precise framework to link state and local hazard mitigation goals, objectives and actions
- Build goals consistent with FEMA's four primary types of mitigation actions to help align projects and initiatives with federal hazard mitigation funding categories
- Provide specific objectives that address flood mitigation, resiliency of critical infrastructure, and natural systems.



CCRPC-Regional Mitigation Strategies

- A. Assist municipalities with development of plans, policies and zoning
- B. Promote municipal participation in development and implementation of Tactical Basin plans
- C. Assist municipalities to develop and improve infrastructure
- D. Assist municipalities in protecting people, buildings and facilities where development already exists
- E. Assist municipalities in promoting growth in appropriate locations and with transportation infrastructure planning
- F. Assist municipalities in meeting standards to minimize required municipal share towards FEMA Public Assistance project cost.

WORKSHEET: 2022 Goals and Objectives

[PROPOSED]

GOAL 1: Protect life and property from natural and manmade hazards

[Objective] 1.1	Maximize the utilization of the latest technology to provide adequate warning, communication, and mitigation of hazard events
1.2	Reduce the danger to, and enhance protection of, high risk areas during hazard events
1.3	Protect and maintain critical facilities and services

WORKSHEET: 2022 Goals and Objectives

[PROPOSED]

GOAL 2: Protect new and existing properties

2.1	Reduce repetitive losses to the National Flood Insurance Program (NFIP)
2.2	Maximize insurance coverage, including NFIP, to provide financial protection against hazard events
2.3	Enact and enforce regulatory measures to ensure that development will not put people in harm's way or increase threats to existing properties

WORKSHEET: 2022 Goals and Objectives

[PROPOSED]

GOAL 3: Promote a Whole Community approach to understanding hazard risks and implementing mitigation initiatives

3.1	Heighten public awareness of the full range of natural and human-caused hazards faced locally and regionally
3.2	Educate the public on actions they can take to prevent or reduce the loss of life or property from all hazards
3.3	Maximize participation of property owners in protecting their properties
3.4	Train and empower public officials and other community leaders on ways to build on current mitigation effort
3.5	Build and expand the cadre of committed volunteers to safeguard the community before, during and after a disaster

WORKSHEET: 2022 Goals and Objectives

[PROPOSED]

GOAL 4: Foster countywide collaborative mitigation efforts to decrease hazard vulnerability

4.1

Build and support local partnerships to lessen vulnerability to hazards

4.2

Build hazard mitigation concerns into county and town planning and budgeting processes

WORKSHEET: 2022 Goals and Objectives

[PROPOSED]

GOAL 5: Invest appropriately in areas planned for managed growth

- | | |
|-----|---|
| 5.1 | Identify potential sites for reuse, rehabilitation, redevelopment, infill, and brownfield remediation that avoid hazard-prone areas |
| 5.2 | Support mitigation initiatives and policies that protect the cultural, economic, and natural resources |
| 5.3 | Preserve natural systems within areas targeted for development |
| 5.4 | Support hazard mitigation research and development that helps identify additional mitigation opportunities and incorporates climate change considerations |
| 5.5 | Improve and strengthen regional economic systems to promote and increase business opportunities for employers and employees |

PLANNING TEAM RESPONSE REQUESTED

WORKSHEET – Page 5:

RESPONSE REQUESTED: GOALS AND OBJECTIVES

1. **Do you agree** with the recommendation to accept the revised Goals and Objectives as proposed for the 2021 Plan Update? YES_____ NO_____
1. **If you disagree** with the revised Goals and Objectives, as presented, please provide recommended revised text for the related goal/objective in the table below.

<i>GOAL/OBJECTIVE NUMBER</i>	<i>SUGGESTED REVISION</i>

WORKSHEET: CC-HMC Action Required

“Confirm the 2022 Goals and Objectives”



Mitigation Themes

Action Category	What the Actions Entail	Examples
Prevention	Government administrative or regulatory actions or processes that influence the way land and buildings are developed and built	Planning and zoning, building codes, capital improvement programs, and storm water management regulations.
Property Protection	Modification of existing buildings or structures to protect them from a hazard, or removal from the hazard area	Acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
Public Education and Awareness	Inform and educate citizens, elected officials, and property owners about hazards and potential measures to mitigate them	Conduct Town Hall-type meetings during the mitigation planning process to discuss hazards and secure stakeholder input
Natural Resource Protection	Actions that preserve or restore the functions of natural systems.	Sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
Structural Projects	construction of structures that become part of the built environment	Structures may include such as dams, levees, floodwalls, seawalls, retaining walls, and safe rooms. to reduce the impact of a hazard.

Types of Mitigation Actions

Types of Mitigation Measures and Sample Mitigation Actions		
Local Plans and Regulations		
Mitigation Measure	Examples	
<ul style="list-style-type: none"> Government authorities, policies, or codes that influence the way land and buildings are developed and built 	<ul style="list-style-type: none"> Comprehensive plans Land use ordinances Subdivision regulations Development Review Building codes and enforcement NFIP Community Rating System 	<ul style="list-style-type: none"> Capital improvement programs Open space preservation Stormwater management regulations and master plans Community wildfire protection plans, fuels Management & fire breaks
Structure and Infrastructure Projects		
Mitigation Measure	Examples	
<ul style="list-style-type: none"> Modifying existing public and certain private structures and infrastructure to protect or remove them from hazard areas. Create a built environment to reduce the impact of hazards. Many actions FEMA HMA eligible. 	<ul style="list-style-type: none"> Acquisitions and elevations of structures in flood prone areas Utility undergrounding Structural retrofits (e.g., shelters) Floodwalls and retaining walls 	<ul style="list-style-type: none"> Detention and retention structures Culverts Safe rooms
Natural Systems Protection		
Mitigation Measure	Examples	
<ul style="list-style-type: none"> Minimize damage and losses and preserve or restore the functions of natural systems. 	<ul style="list-style-type: none"> Sediment and erosion control Stream corridor restoration Forest management 	<ul style="list-style-type: none"> Conservation easements Wetland restoration and preservation
Education and Awareness Programs		
Mitigation Measure	Examples	
<ul style="list-style-type: none"> Educate citizens, elected officials, and property owners about hazards how to mitigation them. Participate in national programs: StormReady, Firewise, etc. 	<ul style="list-style-type: none"> Radio or television spots Websites with maps and information Social media Real Estate disclosure 	<ul style="list-style-type: none"> Presentations to school groups or neighborhood organizations Mailings to residents in hazard-prone areas

Information needed to Develop a Complete Mitigation Action Worksheet

- Action Title
- Action Description
- Responsible Agency or Position (Specific)
- Hazards Address
- Estimated Cost
- Implementation Timetable
- Priority – Low, Medium, High

Sample Recommended New Actions for the 2022 HMP

Proposed New Action for the 2022 Chittenden County Hazard Mitigation Plan Update

Action #	Proposed Action	Risk Reduction Benefit	Hazard(s) Addressed	Cost Estimate	Agency and/or Department Managing	Project Timeframe Short-/Long-Term	Priority	Potential Funding Source(s)
N-9	Identify challenges to living near wildlife	Communities face animal-related hazards resulting from its location near parks and forests, including invasive species and overgrowth in the deer population	Drought, Extreme Heat, Flood, Hail, High Winds, Infectious Disease, Lightning, Winter Weather, Severe Thunderstorm, Tornado, Wildfire, Vegetation Issues	\$50,000	USDA, Jurisdictional Parks and Recreation and Planning Departments	10 years Long-Term	Medium	General Fund, Volunteer Assistance, Wildlife Conservation grants, US Department of Agriculture, VT Department of Forestry, FEMA funding

Ranking Criteria for New Hazards

Criteria	Description
Life Safety	How effective will the action be at protecting lives and preventing injuries?
Property Protection	How significant will the action be at eliminating or reducing damage to structures and infrastructure?
Technical	Is the mitigation action technically feasible? Is it a long-term solution? Eliminate actions that, from a technical standpoint, will not meet the goals.
Political	Is there overall public support for the mitigation action? Is there the political will to support it?
Legal	Does the community have the authority to implement the action?
Environmental	What are the potential environmental impacts of the action? Will it comply with environmental regulations?
Social	Will the proposed action adversely affect one segment of the population? Will the action disrupt established neighborhoods, break up voting districts, or cause the relocation of lower income people?
Administrative	Does the community have the personnel and administrative capabilities to implement the action and maintain it or will outside help be necessary?
Local Champion	Is there a strong advocate for the action or project among local departments and agencies that will support the action's implementation?
Other Community Objectives	Does the action advance other community objectives, such as capital improvements, economic development, environmental quality, or open space preservation? Does it support the policies of the comprehensive plan?
Rank each criterion on a scale of 1 to 5	

Prioritization Worksheet

Prioritization Worksheet

JURISDICTION: _____ **Date Submitted:** _____

Person(s) Completing Form: _____

Project Description			Project Benefits								
A	B	C	1	2	3	4	5	7	8	9	
Project #	Mitigation Action	Hazard/ Project Type*	Protect Life, Safety, & Property	Funding is Available	Matching Funds Available	Strong BCA	Environmental Benefits	Technically feasible	Short-term or Long-term	TOTAL SCORE	Ranking
Sample: 1	Elevate 4 homes on Elm Street	Flood/SIP	1	1	2	4	3	4	ST	15	M

Mitigation Planning Resources

Funding, Data, Training and other Resources Listed in the SHMP

Source	Description	Type	Category
FEMA – Pre-Disaster Mitigation (PDM) Grants (Now BRIC)	Annual funding providing baseline support for mitigating natural hazards and planning. Relies on annual allocations from Congress and requires a 25% local match.	Federal	Funding
FEMA - Flood Mitigation Assistance (FMA) Grants	Annual funding providing baseline support for mitigating flood hazards through the National Flood Insurance Program (NFIP) and only available to towns participating in NFIP. Requires a 25% local match.	Federal	Funding
FEMA - Hazard Mitigation Grant Program (HMGP)	Available following a disaster at 15% of the total Public Assistance funding allocated in a disaster. Requires a 25% match. Up to 7% of funding is available for planning.	Federal	Funding
HUD - Community Development Block Grant Disaster Relief (CDBG-DR)	Flexible grants available following a disaster to help cities, counties, and States recover from declared disasters. Funding can be used as local match for FEMA grants.	Federal	Funding
USACE Environmental Laboratory	Guidance for implementing environmental programs such as ecosystem restoration and reuse of dredged materials. http://el.erdc.usace.army.mil/index.cfm	Federal	Funding
DEC - Vermont Ecosystem Restoration Grant Program	Fund priority projects that restore and protect rivers, streams, lakes, ponds, and wetlands from nonpoint source runoff and associated nutrient and sediment pollution.	State	Funding Technical Assistance
BGS - State-Owned Facility Inventory (Appendix to Section 3)	Thorough assessment of flood-vulnerable (inundation flooding & fluvial erosion) state- owned and leased buildings, which also identifies mitigation options for the priority buildings identified by a committee. Data under development.as of last SHMP	State	Tool
The Nature Conservancy VT Water Quality Blueprint	Tool to help watershed managers and conservation practitioners prioritize areas that provide the most benefit to water quality and conservation goals.	Nonprofit	Tool
UVM Extension - Center for Sustainable Agriculture	Technical assistance to farmers on water quality improvements.	Nonprofit	Technical Assistance
DEC - Stormwater Permit	Regulatory oversight and technical assistance to ensure proper design and construction of stormwater treatment and control practices to minimize the adverse impacts of stormwater runoff to surface waters.	State	Regulation

Mitigation Action Worksheet

Worksheet requirements mentioned earlier:

- Action Title
- Action Description
- Responsible Agency or Position (Specific)
- Hazards Address
- Estimated Cost
- Implementation Timetable
- Priority – Low, Medium, High



Follow-up

- Complete Mitigation Strategy Webinar Worksheet and submit to:

Leroy.Thompson@iem.com

- If you have suggestions for additional objectives, please contact Leroy Thompson at the email above, or by phone at:

850-570-9867



Leroy.Thompson@iem.com

Nancy.Freeman@iem.com

Elizabeth.Burnett@iem.com

Barbara.Spaulding@iem.com

Thank you



One Last
Thought



RISK ASSESSMENT

It's Not Worth It