



# RiverCOG Natural Hazards Mitigation Plan 2025-2026 Update Kickoff

May 28, 2025

Via Zoom

**RESILIENT**  
Land & Water



Lower Connecticut River Valley Council of Governments

145 Dennison Road Essex, CT 06426 | +1 860 581 8554 | [www.rivercog.org](http://www.rivercog.org)

**RiverCOG**

Chester | Clinton | Cromwell | Deep River | Durham | East Haddam | East Hampton | Essex | Haddam | Killingworth | Lyme | Middlefield | Middletown | Old Lyme | Old Saybrook | Portland | Westbrook

# Agenda



## Welcome and Introductions



## NHMP Overview and Update Process

Discussion of existing plan



## Updating the Hazard ID and Risk Assessment

Hazard Selection and Ranking



## Discussion of Current Plan Status and Changes

Capabilities Assessment Update  
Mitigation Strategy Update



## Next Steps

Schedule



## Questions & Wrap-up

# Introductions



Name



Department/Role



What is your goal for this project?



What issues are you concerned about?



What information / expertise can you contribute?



# Introductions

## The Decision Makers

- Hazard Mitigation Planning Committee (HMPC)
- Local Planning Teams (LPTs)
- CT Division of Emergency Management and Homeland Security (DEMHS)
- FEMA Region I

## Dewberry Team

- Scott Choquette, Project Manager
- David Murphy, Deputy Project Manager (RLW)
- Julia Bontempo, Sr. Planner
- Jesse Nelson, GIS and Risk Assessment
- Victoria Vetre, Sr. Planner (RLW)
- Scott Bighinatti, Sr. Environmental Scientist (RLW)

# It's Your Plan!

## We are here to:

- Facilitate the process
- Lend technical expertise & consultation
- Do the heavy lifting

## You are here to:

- Participate and contribute hazard information
- Make the final decisions
- Help ensure that we collectively create a plan that the COG and all participating jurisdictions can and will use to reduce future losses



### Participating Jurisdictions:

Chester  
Clinton  
Cromwell  
Deep River  
Durham  
East Haddam  
East Hampton  
Essex  
Haddam  
Killingworth  
Lyme  
Middlefield  
Middletown  
Old Lyme  
Portland

## 2021 Lower Connecticut River Valley Hazard Mitigation Plan Update Volume 1: Planning-Area-Wide Elements



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May 2021

With Contracted Support From:





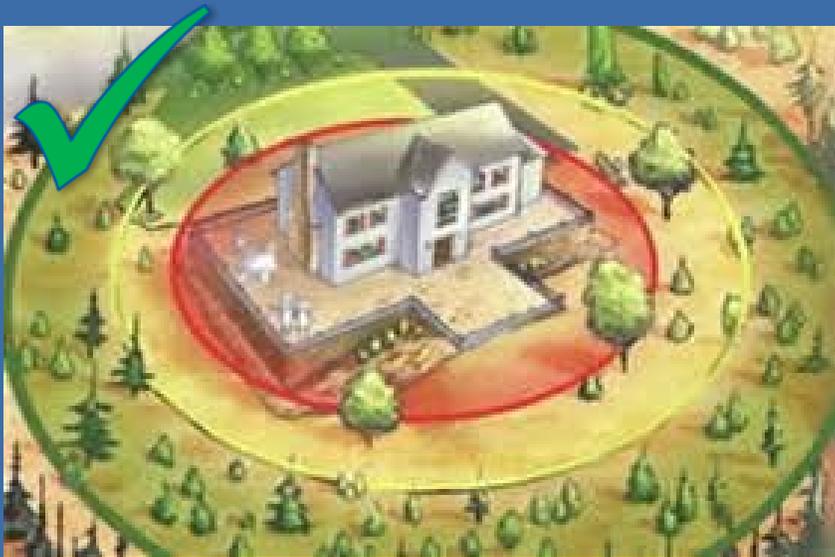
# Plan Overview and Update Process

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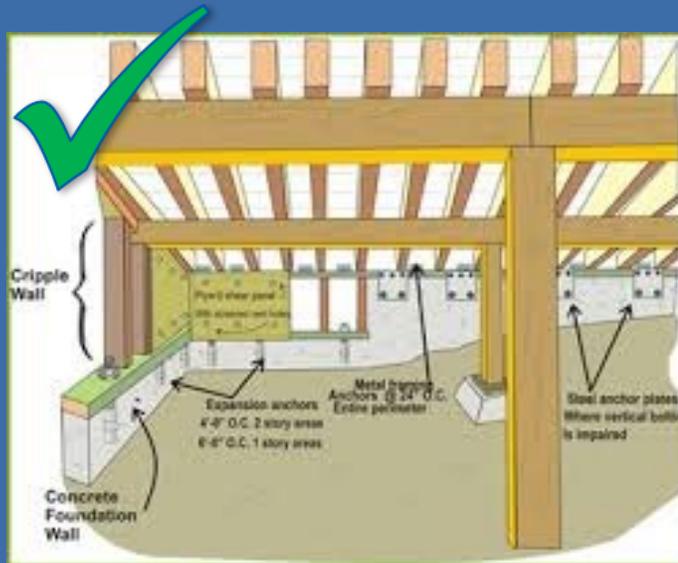
## Overview

# What is **hazard mitigation**?

Any sustainable action that will **reduce or eliminate injury** to citizens, damages to structures and allow continuity of critical society functions



**Mitigation**  
Defensible Space for  
Wildfire Mitigation



**Mitigation**  
Earthquake Retrofit



**Preparedness & Response**  
purchase of a police  
command vehicle

# Why have a hazard mitigation plan?



- Reduces or eliminates the need to respond (Lessens resource burden)
- Creates resiliency and sustainability
- Promotes Data sharing between different levels of government and academia
- Supports decision-making
- Disaster Mitigation Act of 2000
  - Certain FEMA Public Assistance (State Plans)
  - FEMA's Hazard Mitigation Assistance Programs

# Hazard Mitigation Grants

- Local communities must have a FEMA-approved Hazard Mitigation Plan in place to receive Federal grant funds for hazard mitigation projects
  - **HMGP** (Hazard Mitigation Grant Program)
  - **HMGP Post Fire**
  - **FMA** (Flood Mitigation Assistance)
- Other (non-FEMA) funding sources



# Plan Update Requirements

- Comprehensive **planning process** / foster relationships
  - Description of who is involved and how the plan is prepared
  - Established method for monitoring, maintaining and updating the plan
- **Hazard Identification and Risk Assessment** update
  - Hazard profiles, vulnerabilities, potential losses, development trends
- Focus on **mitigation strategy and actions**
  - Goals, progress, evaluation of actions, implementation plan
- Improve **mitigation capabilities**
  - Discussion of current policies, programs, and capabilities to support LHMPs and reduce risk statewide
- **Approval by DEMHS & FEMA** and **adoption every 5 Years**

# What has changed since 2021?

- May 2023 Local Hazard Mitigation Planning Guidance
  - Includes enhanced consideration of climate change and adaptation
  - Requires inclusion of community lifelines
  - Increased emphasis on future development
  - Increased emphasis on High Hazard Potential Dams
  - Increased emphasis on social vulnerability
- From NHMP to Hazard Mitigation and Climate Adaptation Plan (HMCAP)
- Current Status of 2023 Guidance Changes

# Continuous Improvement

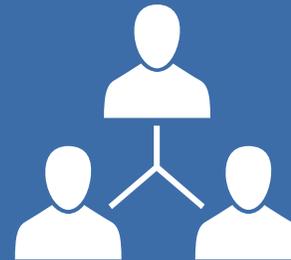
- **Climate change analysis** in relevant hazard sections
- Address **high-hazard potential dams** in the HIRA and Goals, Objectives, and Strategies sections
- Connecting to **public health emergencies** (e.g., COVID-19) and infrastructure mitigation planning
- Incorporating **DEMHS and FEMA Region I review comment** and all updates since the last plan



Are there other concerns?

# Public Outreach

- Part of the planning process requirements
- Includes **the public**
  - Residents
  - Business owners
- Includes **stakeholders**
  - Neighboring communities
  - Chambers, neighborhood associations
  - Large employers
  - Federal, state and NGO partners



***We want to know what your priorities are!***



**Are there other stakeholders?**

# Public Outreach Strategy

## Public Input



Stakeholder & Community Champion Engagement



Project Website / Webpage



Online Survey



Virtual Workshops / Public Meetings



Neighboring Jurisdictions Engagement



Videos



Story Map

## Hazard Mitigation Plan



- Expand reach
- Secure buy-in

- Community-based
- Social media

# Increase Consistency with Plans and Programs

- Incorporating projects like **Resilient East Haddam** and **Resilient Portland**
- Draw from **Regional Plan of Conservation and Development**
- Sea Grant **Resilience Planning**
- Regional **Climate Action Plan**



Are there other efforts we should incorporate?

**The Hazard Mitigation Plan can help inform, and include the results of, other planning efforts**



Are there other efforts we should incorporate?

# Other Update Items

- **Address FEMA Local Plan Requirements**
  - Fully integrate NFIP program and FMA Requirements
    - Repetitive and Severe Repetitive Loss properties
  - Describe current status of projects
  - Address changes to critical facilities
  - Address changes to capacity and capabilities

# Discussion: Existing Plan

- What do you like about current plan?
- Have the necessary people/departments been asked to participate?
- Are there any specific layout requests / adjustments that would improve usability?
- What would you like changed in the revision?
- Emphasis on Project Development deemphasizing updating lesser hazards in great detail



Current Plan Discussion



# Hazard ID & Risk Assessment

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Update

# Selecting Hazards to Address

- Do the current hazards still make sense?
- Have there been any changes in priorities?
- Rearrange following a climate aligned taxonomy: Atmospheric Hazards, Hydrological Hazards, Wildfire Hazards, Geologic Hazards, etc.

Coastal Storms

Drought

Dam/Levee breaks

Earthquake

Fire



Flood

Hurricane

Severe Ice Storms

Severe Snow Storms

Tornados

Tropical Cyclones

Tsunamis

Windstorms

Invasive Species

# Ranking of Hazards

TABLE 4: SAMPLE HAZARD RANKING PARAMETERS

| PRI CATEGORY     | DEGREE OF RISK       |   |             | ASSIGNED WEIGHTING FACTOR |
|------------------|----------------------|---|-------------|---------------------------|
|                  | LEVEL                | CRITERIA  | INDEX VALUE |                           |
| Probability      | Unlikely             | Less than 1% annual probability   | 1           | 25%                       |
|                  | Possible             | Between 1 and 10% annual probability  | 2           |                           |
|                  | Likely               | Between 10 and 100% annual probability  | 3           |                           |
|                  | Highly Likely        | 100% annual probability   | 4           |                           |
| Impact           | Minor                | Very few injuries, if any. Only minor property damage and minimal disruption on quality of life. Temporary shutdown of critical facilities.                             | 1           | 25%                       |
|                  | Limited              | Minor injuries only. More than 10% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for more than one day.                   | 2           |                           |
|                  | Critical             | Multiple deaths/injuries possible. More than 25% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for more than one week.    | 3           |                           |
|                  | Catastrophic         | High number of deaths/injuries possible. More than 50% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for 30 days or more. | 4           |                           |
| Spatial Extent   | Negligible           | Less than 1% of area affected   | 1           | 20%                       |
|                  | Small                | Between 1 and 10% of area affected  | 2           |                           |
|                  | Moderate             | Between 10 and 50% of area affected   | 3           |                           |
|                  | Large                | Between 50 and 100% of area affected  | 4           |                           |
| Warning Time     | > 24 hours           | Self-explanatory  | 1           | 10%                       |
|                  | 12 to 24 hours       | Self-explanatory  | 2           |                           |
|                  | 6 to 12 hours        | Self-explanatory  | 3           |                           |
|                  | < 6 hours            | Self-explanatory  | 4           |                           |
| Public Sentiment | Not Concerned        | Based on Public Survey Results  | 1           | 10%                       |
|                  | Somewhat Concerned   | Based on Public Survey Results  | 2           |                           |
|                  | Moderately Concerned | Based on Public Survey Results  | 3           |                           |
|                  | Very Concerned       | Based on Public Survey Results  | 4           |                           |
| Duration         | < 6 hours            | Self-explanatory  | 1           | 10%                       |
|                  | < 24 hours           | Self-explanatory  | 2           |                           |
|                  | < 1 week             | Self-explanatory  | 3           |                           |
|                  | > 1 week             | Self-explanatory  | 4           |                           |

Atmospheric

Hydrological

Geological

| Hazard Type                | 2021 Ranking | 2026 Consideration Level | Notes |
|----------------------------|--------------|--------------------------|-------|
| Extreme Heat               | Medium       | Medium                   |       |
| Thunderstorm               | Medium       | Medium                   |       |
| Extreme Wind               | Medium-High  | Medium-High              |       |
| Hailstorm                  | Medium-Low   | Medium-Low               |       |
| Lightning                  | Medium       | Medium                   |       |
| Severe Winter Weather      | High         | High                     |       |
| Tornado                    | Medium       | Medium                   |       |
| Tropical Storm / Hurricane | Medium       | Medium                   |       |
| Drought                    | Medium       | Medium                   |       |
| Flash Flood / Flooding     | High         | High                     |       |
| Dam and Levee Failure      | Low          | Low                      |       |
| Wildfire / WUI             | Medium       | Medium                   |       |
| Earthquake                 | Medium-Low   | Medium-Low               |       |
| Landslide                  | Medium-Low   | Medium-Low               |       |
|                            |              |                          |       |



2021 Consideration Level Discussion

# Changes in Ranking (sample)

# HIRA Update – Data Call

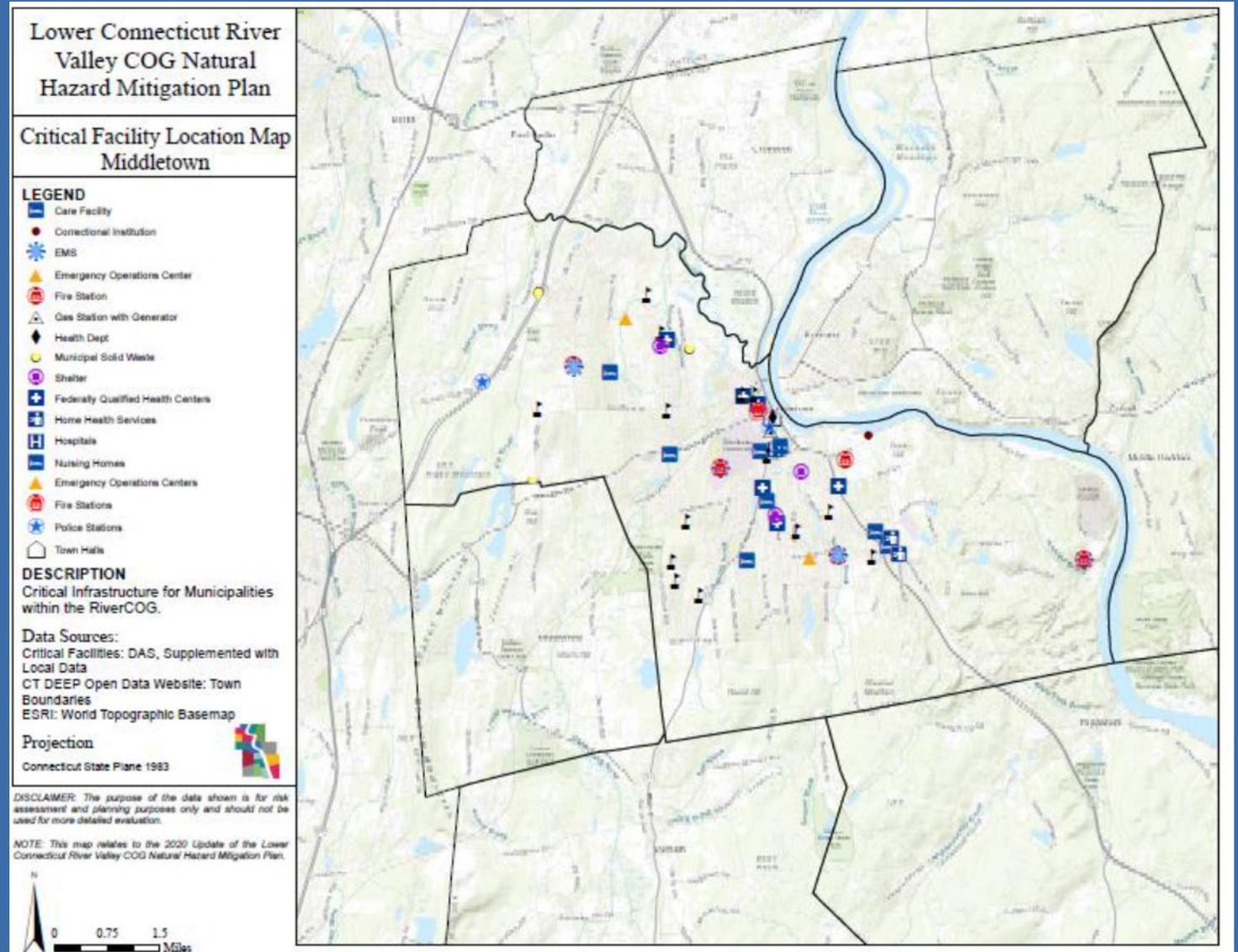
- What **natural hazard events** have occurred since 2021?
- What **specific vulnerabilities** exist in the planning area that may not have been captured in the previous plan?
- Please provide any **updates to areas of concern** noted in HIRA narrative.



HIRA Update Discussion

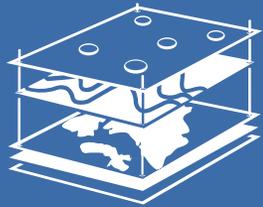
# Critical Facilities

- Existing list from 2021 will be distributed ahead of local meetings
- Deadline will be provided with distribution or at LPT meetings



# Loss Estimation Approaches

## Hazus Analysis



Flood, Hurricane Wind, and Earthquakes

(Improved methodology in most recent version)

## Non-Hazus Analysis



All Other Hazards

- NCEI, NFIP losses, and Public Assistance reimbursements
- Downscale loss estimates from CT HMP
- Typical losses for the most challenging hazards (i.e., wildfire losses)

**Augmented with Exposure Analysis as Needed**

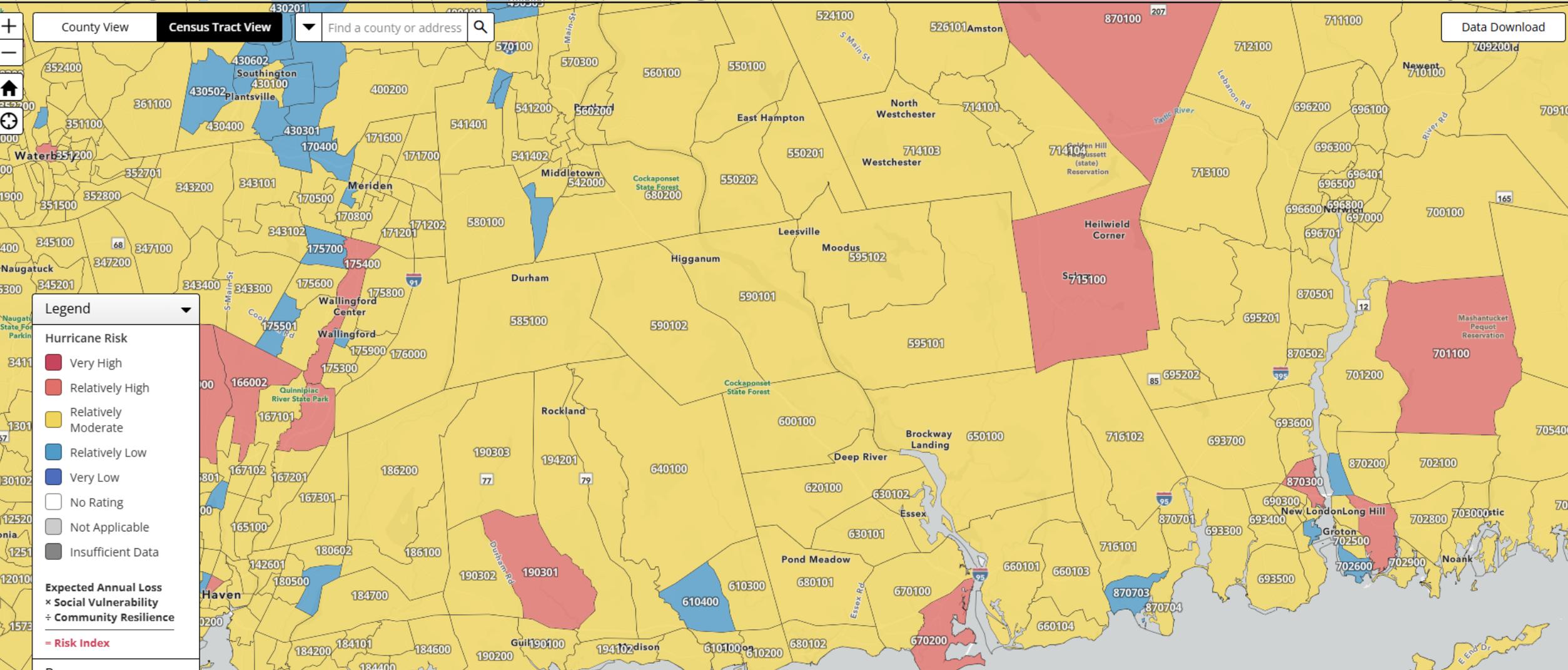
# National Risk Index

Hurricane (RI) Coastal Flooding (EAL) Social Vulnerability Community Resilience

Help

County View Census Tract View Find a county or address

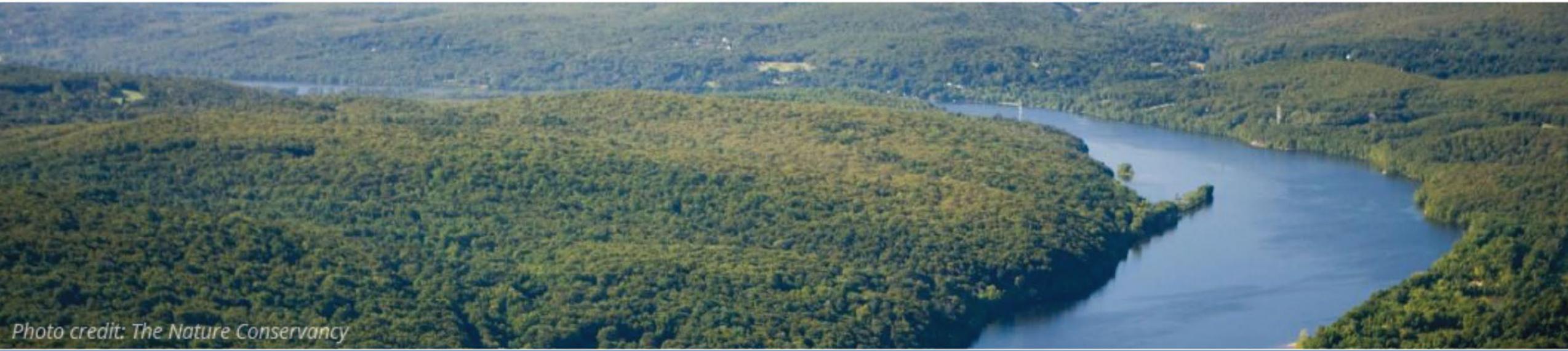
Data Download



**Legend**

- Hurricane Risk
  - Very High
  - Relatively High
  - Relatively Moderate
  - Relatively Low
  - Very Low
  - No Rating
  - Not Applicable
  - Insufficient Data
- Expected Annual Loss × Social Vulnerability ÷ Community Resilience = Risk Index
- Basemaps

Create Report



*Photo credit: The Nature Conservancy*

# Capability Assessment & Mitigation Strategy Update

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# Capability Assessment

- **Update:**
  - Municipal Mitigation Capability and Capacity Analysis
  - Regional Mitigation Capability and Capacity Analysis
  - Federal, State and Other Programs and Resources



Template will be provided



Deadline will be provided  
with distribution and  
discussed at LPT meetings

# Regional Goals and Objectives

**Goal 1: Promote implementation of sound flood management and other natural hazard mitigation principals on a regional and local level.**

**Note:** Covers future development through policy, planning, regulation, emergency services, and environmental strategies

**Objective for Goal 1:** To promote the development, improvement and implementation of programs, policies, regulations and emergency services that result in the reduction of long-term risks to life and property.

**Goal 2: Implementation of effective natural hazard mitigation projects at the regional and local level.**

**Note:** Covers infrastructure and building related projects – the existing built environment.

**Objective for Goal 2:** To enhance the ability of RiverCOG, other regional entities, and local communities to reduce or eliminate risks to life and property from natural hazards through cost- effective hazard mitigation projects, including avoidance.

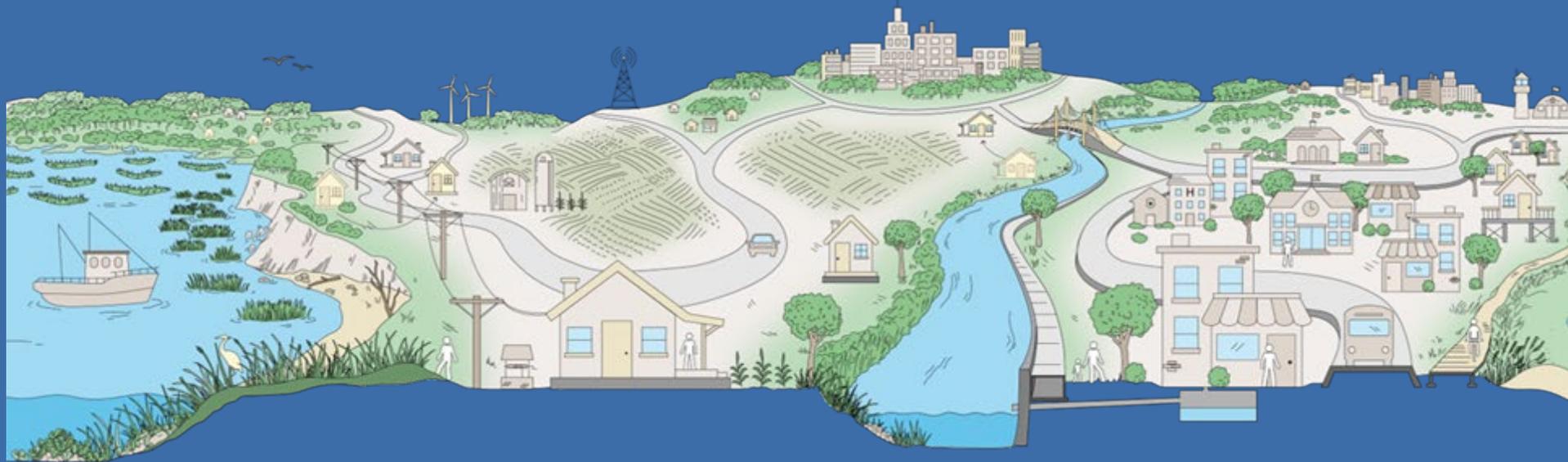
**Goal 3: Increase research, planning and outreach activities for the mitigation of natural hazards on a regional and local level.**

**Note:** Covers the people component of mitigation via outreach and education, and integration with other planning and continuous improvement through increased research.

**Objective for Goal 3:** To increase general awareness of the region’s natural hazards and encourage State agencies, local communities, and the public to be proactive in taking actions to reduce long-term risk to life and property.

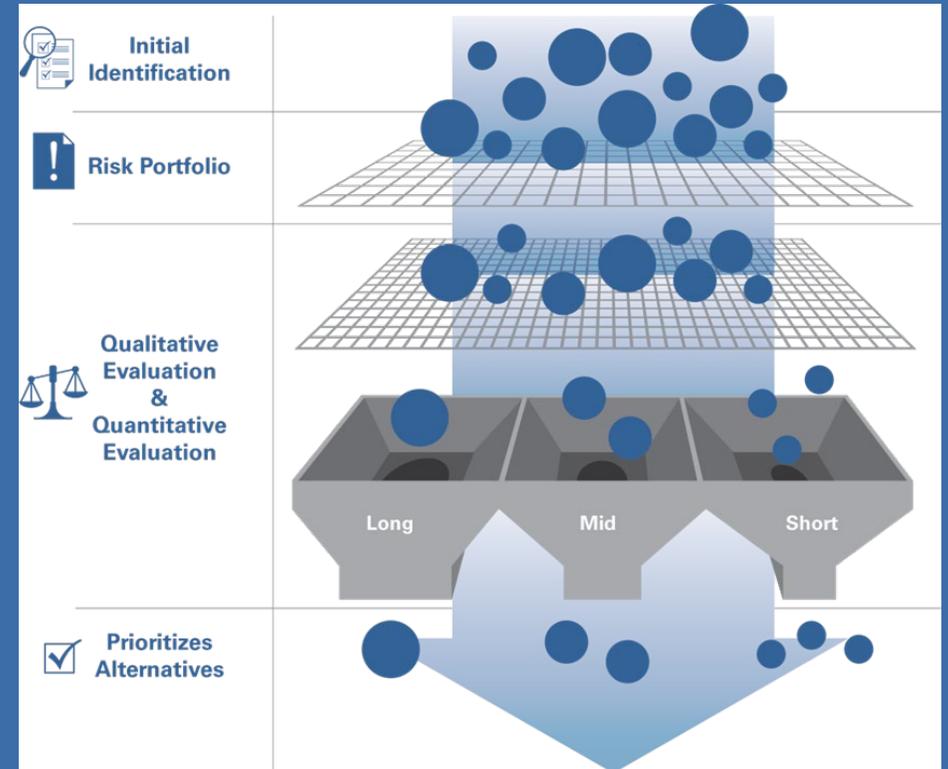
# Mitigation Actions from 2021

- Based on Risks and Vulnerabilities Assessment and Identified Gaps in Capabilities or Capacity
- Must identify the **completed, deleted, or deferred actions or activities** from the previously approved plan as a benchmark for progress
- Existing list will be distributed and completed at local meetings



# Approach for Mitigation Actions

- Retire “ongoing” and “continuous” actions
- Shift from preparedness to true mitigation
- Break individual projects into pieces such that a reasonable phase is identified for the five-year planning horizon
- Avoid “consider”
  - Bad: “Consider enrolling in the CRS Program”
  - Good: “Quantify the costs and benefits of enrolling in the CRS”
- More focus on project development and implementation
- Informed by risk assessment
- Must address integration with other plans and operations





# Next Steps

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# Project Milestones

We are here



- Data collection
- Mission statement
- Stakeholder lists
- Outreach website
- Capability assessment survey

- Public Survey
- Capability assessment
- Hazard ID & risk assessment
- Mitigation goals & objectives
- **1<sup>st</sup> Public Meeting**

- Mitigation strategies
- Plan maintenance procedures

- Draft Plan
- **2<sup>nd</sup> Public Meeting**

- MEMA and FEMA Reviews
- Adoption

# Schedule

|   |  | Mar-25 | Apr-25 | May-25 | Jun-25 | Jul-25 | Aug-25 | Sep-25 | Oct-25 | Nov-25 | Dec-25 | Jan-26 | Feb-26 | Mar-26 | Apr-25 | May-25 | Jun-25 | Jul-25 |
|---|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| <b>1. Pre-Planning, Data Collection, Planning Process</b> |  |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 1.1   | Internal Kick-Off Meeting                    |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 1.2   | Planning Team Workshop 1 /Public Meeting     |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 1.3   | Data Collection and Municipal Meetings       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 1.4   | Stakeholder and Public Participation         |        |        |        |        | survey | survey | survey |        |        |        |        |        |        |        |        |        |        |
| 1.5   | Record Keeping and Reporting                 |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <b>2. Capability Assessment</b>                           |  |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 2a  | Complete Data Collection                     |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 2b  | Update Capability Assessment                 |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <b>3. Update Risk Assessments</b>                         |  |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 3.1   | Hazard ID and Prioritization                 |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 3.2   | Hazard Profiles                              |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 3.3   | Critical Facilities and Asset Inventory      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 3.4   | Vulnerability Assessment and Loss Est.       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 3.5   | Planning Team Workshop 2 /Public Meeting     |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <b>4. Mitigation Goals and Strategies</b>                 |  |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 4.1   | Update 2021 Actions                          |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 4.2   | Jurisdiction Goals, Strategies, and Projects |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 4.3   | Plan Implementation Strategy Refinement      |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 4.4   | Planning Team Workshop 3 / Public Meet       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| <b>5. Final HMP Submission and Review</b>                 |  |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 5.1   | Final Plan Adoption and Approval Proc.       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | DESPP/DEMHS Submittal*                       |        |        |        |        |        |        |        |        |        |        |        |        | Submit |        |        |        |        |
| 5.2   | FEMA Final Plan Approval/Adoption*           |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|   | Final Deliverables                           |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |

# Next Steps

- Formalize MAC and LPTs
- Complete LPT in-person meetings
- Prepare, distribute and complete:
  - Capabilities questionnaire
  - Final draft goals and objectives
  - 2016 Mitigation actions disposition
  - Final hazard ranking review
  - HIRA / GIS data questionnaire
  - Updates to critical facilities list
- Create the HMP website, then develop and distribute public outreach materials:
  - Story Map
  - Online Survey

# Data Call

1. A **list of hazard events** that have affected your jurisdiction since the last plan update.
2. **Disaster damages** from the hazard events described above.
3. **State/Federal disaster funding received** (e.g., PA payments, grants for projects) since the last plan update.
4. **New jurisdictional plans, policies, and regulations** since the last plan update (feel free to provide a link if this is available online).

Please email to Julia Bontempo ([jbontempo@dewberry.com](mailto:jbontempo@dewberry.com))

# Questions?



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