

Bladen, Columbus, Robeson Regional HMP Update: Mitigation Strategy Meeting

2025 Hazard Mitigation Plan Update

May 29, 2025

Virtual Meeting



Agenda

- Welcome & Introductions
- Meeting Objectives
- Planning Process & Status Updates
- Capability Assessment
- Mitigation Strategy
- Next Steps & Questions



Introductions

Welcome!

Reminder
to Sign-In

Introductions



Capability Assessment

Overview of Capability Assessment (Existing)

Discuss changes needed In the capability assessment

Current Capability Assessment in progress!

Info on Substantial Damage Estimation Procedures needed.

Mitigation Strategy Development

Overview of Mitigation

Consider Mitigation Techniques Available

Review Previous Mitigation Goals

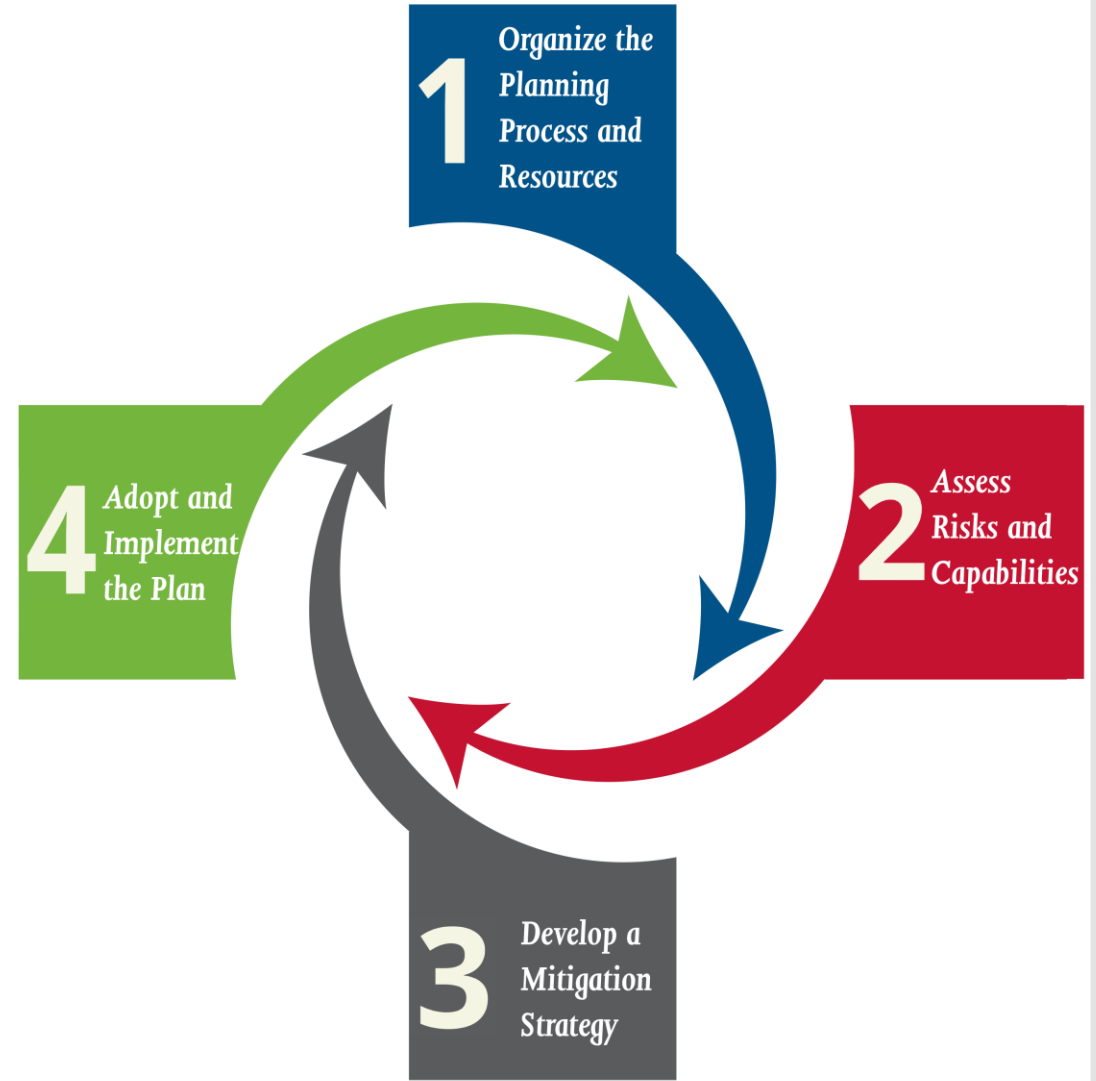
Discuss Existing Actions and Update Status

Identify New Actions and Opportunities

Meeting Objectives



Organize Resources



Plan Update Process

Step 1: Organize Resources



Planning

Planning for Public Involvement

Status: Ongoing



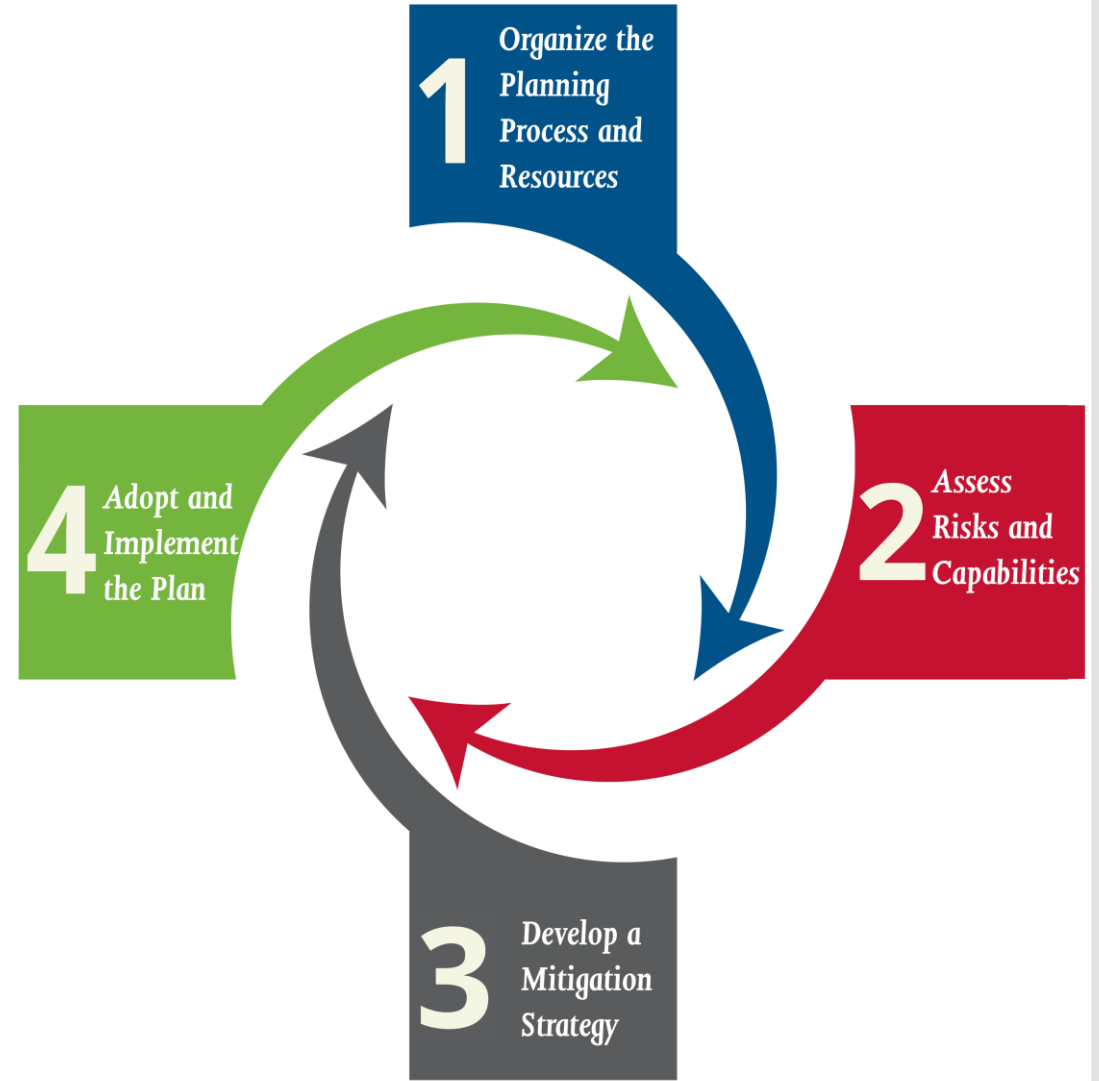
Coordinating

Coordinating with Departments and Agencies

Status: Ongoing



Risk & Capability Assessment





Hazard Identification

What Can Happen Here?

- Previously Identified Hazards
- Identify New Hazards
- Status: Completed



Vulnerability Assessment

What Will be Affected/Impacted?

- Will Use County Parcel Data, FEMA HAZUS Analysis, and NCEM Data
- Status: Ongoing



Capability Assessment

What is our capacity to mitigate?

- Communities previously Self-Assessed Capability
- What Mitigation Actions are Feasible
- Where Gaps Exist
- Status: Current

Plan Update Process

Step 2: Risk & Capability Assessment

What is Capability?



Measures community capability to implement hazard mitigation activities



Identifies and target gaps, conflicts and opportunities with existing local plans, programs, policies, etc.



Identifies mitigation measures already in place or underway



Coupled with the Risk Assessment, the Capability Assessment helps to form the foundation for identifying Mitigation Actions



Capability Indicators

Indicators help evaluate resources, capability, and readiness of a community to effectively implement and sustain mitigation activities.

Plans and Regulatory – Plans, programs, & ordinances

Administrative and Technical – Relevant staff, personnel, and expertise

Fiscal Resources – Bonds, fees, and taxes

Education and Resources – Education programs, volunteer groups, and certifications

Mitigation Resources – Mitigation grants and activities

Political Will – Decision-making, investments, regulation enforcement



Capability Indicator Examples

Plans and Regulatory

Hazard Mitigation Plan
Comprehensive Land Use Plan
Stormwater Management Plan
Flood Prevention Ordinance
National Flood Insurance Program
Community Rating System

Administrative and Technical

Building Official
Emergency Manager
Floodplain Manager
Grant Writers
Land Surveyors
GIS-Skilled Personnel

Fiscal Resources

Capital Improvement Program
CDBG Funding
Special Purpose Taxes
Gas/Electric Utility Fees
Stormwater Utility Fees
Special Tax Bonds

Education and Outreach

Local Citizen Groups
School Programs
Ongoing Education Programs
Storm Ready Certification
Firewise Community Certification
Public-Private Partnerships



Capability vs. Vulnerability Matrix

	Low Vulnerability	Moderate Vulnerability	High Vulnerability
High Capability	(Best Case Scenario)		
Moderate Capability			
Low Capability			(Worst Case Scenario)

High Capability + Low Vulnerability (Best Case Scenario):

The jurisdiction has robust planning, technical, and financial tools in place and is effectively minimizing hazard exposure. These communities are well-positioned to implement mitigation actions with minimal assistance.

Low Capability + High Vulnerability (Worst Case Scenario):

The community lacks the capacity to implement or enforce mitigation strategies and faces significant risk from natural hazards. These areas should be prioritized for technical support, grant funding, and capacity-building.

Moderate Capability/Vulnerability Intersections

Communities in the mid-range of the matrix may have some foundational tools but need targeted improvements—such as updated ordinances, enhanced staff training, or expanded public outreach—to reduce risk more effectively.

New FEMA Requirement on Substantial Flood Estimates (SDE) for Capability Assessment

Rationale:

1. Focuses on identifying structures at risk of substantial damage from future flood events
2. Helps prioritize mitigation strategies and allocate resources effectively
3. Ensures a proactive approach to reduce vulnerability and enhance community resilience to floods
4. Emphasizes the importance of incorporating SDE findings into hazard mitigation planning for risk reduction

Follow-up Action Required: Must collect this information from each municipality individually (example below)

Immediately after a flood event, employees across multiple departments that consist of Town planners, stormwater and transportation engineers, inspectors, building officials, and certified floodplain managers deploy to the affected areas. The town is broken into three areas, and each area has a dedicated number of teams to conduct windshield surveys and assess damage.

This is tracked digitally and on paper forms and then logged into Town databases. Once homeowners come in for permits for repair work, this data is referenced and if a substantial damage is triggered then the building must come into compliance with all Town ordinances, including the floodplain ordinance.

If a homeowner or applicant comes in to improve the property voluntarily without damage, then substantial improvement protocols are activated. This entails a lengthy review during plan review of the project scope, evaluating the building's depreciated value either by tax assessor value or through an appraisal, and the work is adjusted accordingly depending on the determination. All work is also field verified by inspectors to make sure construction is up to code and in compliance with Town ordinances.



Impact on Mitigation Actions

***Note:** Hazard scores may be adjusted in the draft plan per the previous HIRA meeting.

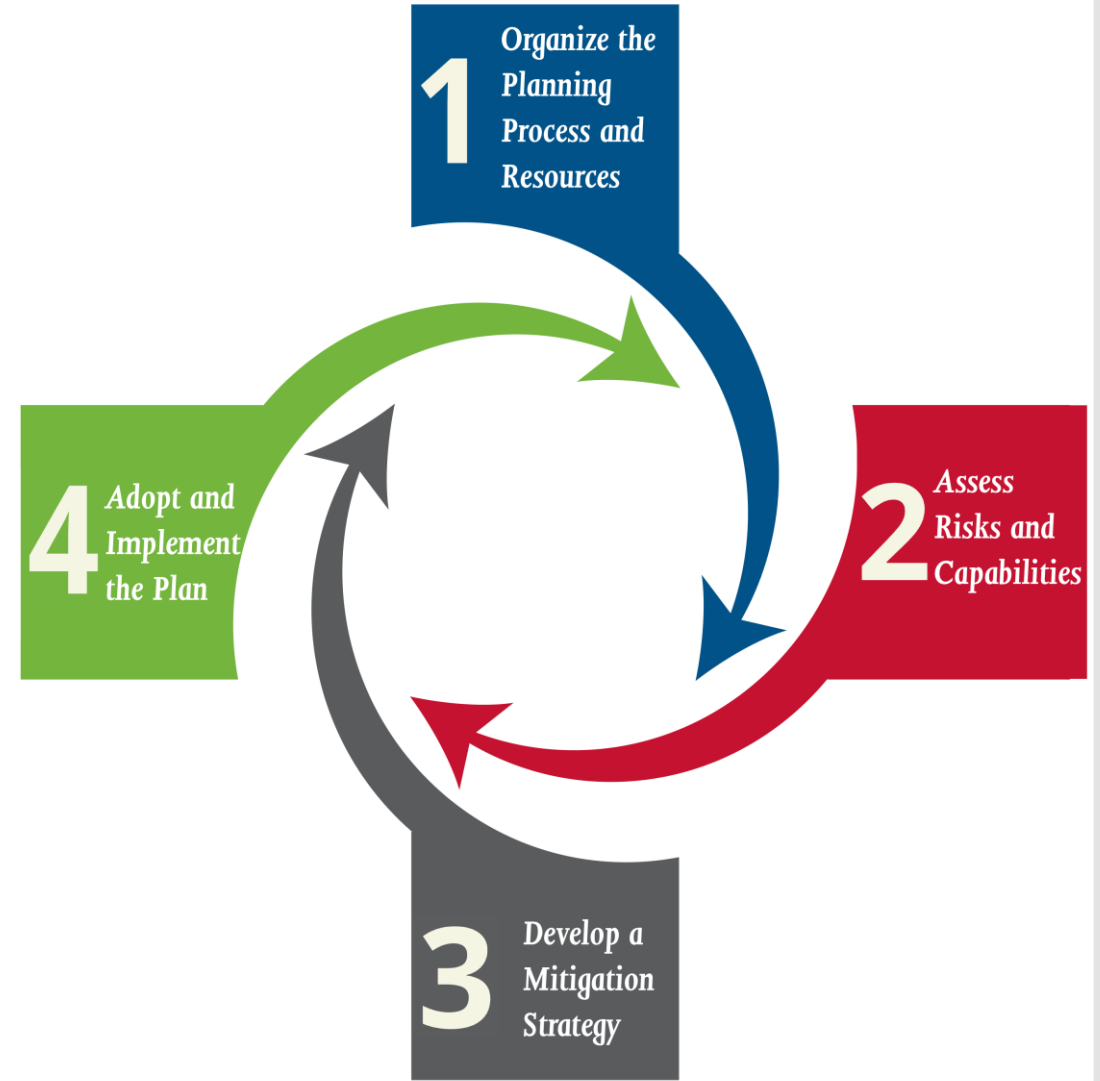
High Risk (≥ 3.0)	Excessive Heat Flooding Hurricane & Tropical Storms Tornado Thunderstorm Wind Severe Winter Weather Wildfire
Moderate Risk (2.0 – 2.9)	Drought Dam Failure Lightning & Hail
Low Risk (< 2.0)	Earthquake

Analysis of risks alongside capabilities is essential for informed decision-making and mitigation strategy development because the combined data:

1. Provides a complete picture of the risks faced by the community and its readiness to manage them
2. Helps identify gaps in preparedness and allocates resources strategically to address vulnerabilities
3. Ensures investments in mitigation measures are targeted at areas and/or populations at highest risk (supports prioritization of actions)



Mitigation Strategy Development



Plan Update Process

Step 3: Mitigation Strategy Development



Setting Mitigation Goals



Reviewing Mitigation Alternatives



Drafting an Action Plan

****Status of 3 Tasks: Current**



What is a Mitigation Strategy?

What is the purpose?

- Reduce vulnerability and mitigate the impact of natural and man-made hazards on communities
- Prioritize actions and allocate resources effectively
- Collaborate with stakeholders, heighten awareness, and build capacity for continued hazard mitigation efforts

What does it entail?

- Development, prioritization, and implementation of feasible measures to prevent, prepare for, respond to, and recover from potential disasters



Basic Types of Mitigation



Mitigating against hazard impacts on **existing development**

Houses
Businesses
Infrastructure
Critical Facilities



Ensuring **future development** is conducted in a way that does not increase vulnerability

Plans
Policies
Procedures



Mitigation Techniques

1. Prevention
2. Property Protection
3. Natural Resource Management
4. Structural Projects
5. Emergency Services
6. Education and Awareness

Mitigation Techniques – Examples

Prevention	Natural Resource Mgmt.	Emergency Services
Planning/Zoning	Floodplain Protection	Warning Systems
Building Codes	Watershed Mgmt.	Response Equipment
Open Space Preservation	Riparian Buffers	Shelter Operations
Floodplain Regulations	Erosion/Sediment Control	Evacuation Planning
Stormwater Mgmt.	Wetland Restoration	Response Training
Drainage Maintenance	Habitat Preservation	Sandbagging
Property Protection	Structural Projects	Education/Awareness
Acquisition/Relocation	Reservoirs	Outreach Projects
Building Elevation	Dams, Levees, Dikes	Speaker Series
Critical Facility Protection	Stormwater Diversions	Hazard Map Info
Retrofitting	Retention Basins	Real Estate Disclosure
Safe Room/Shutters	Channel Modification	Library Materials
Insurance	Storm Sewers	Hazard Expositions



Setting Mitigation Goals



Goal 1 - Promote the public health, safety, and general welfare of residents and minimize public and private losses due to natural hazards.



Goal 2 - Reduce the risk and impact of future natural disasters by regulating development in known high hazard areas.



Goal 3 - Pursue funds to reduce the risk of natural hazards to existing developments where such hazards are clearly identified, and the mitigation efforts are cost-effective.



Goal 4 - Effectively expedite post-disaster reconstruction.



Goal 5 - Provide education to citizens that will empower them to protect themselves and their families from natural hazards.



Goal 6 - Protect the fragile natural and scenic areas of the Region, particularly those areas that protect drinking water supplies.



Review Mitigation Alternatives

1. Review previous plan to determine the status of existing actions
 - FEMA Requirement
 - Completed, deleted, progress update
 - “Ongoing” is too broad
2. Identify new mitigation actions to address evolving needs/vulnerabilities



Action Number	Description	Project Status	Goal Addressed (see p. 8-4)	Hazards Addressed	Priority	Responsible Party/Dept.	Funding Sources	Cost Estimate	Timeframe
Bladen County and all Participating Jurisdictions (Bladenboro, Clarkton, Dublin, East Acardia, Elizabethtown, Tarheel, White Lake)									
B-1	Bladen County and all jurisdictions will review the County's Comprehensive Land Use Plan annually to ensure that the Future Land Use Map adequately delineates portions ^{N P} of the County deemed unsuitable for development due to existing environmental conditions.	To be Continued. Bladen County Planning reviews the land use plan on a yearly basis to ensure that future land use is suitable for development	1, 2, 6	Flood, Wildfire	Medium	<ul style="list-style-type: none"> Bladen County Planning Municipal Administrations Bladen County MAC 	GF	Low	Low
B-2	Bladen County, as well as all municipal jurisdictions participating in the NFIP program (Bladen County (unincorporated), Bladenboro, Clarkton, East Arcadia, Elizabethtown, and White Lake) will review their respective Flood Damage Prevention, Ordinances to assess whether any revision and/or updates have been mandated by FEMA or NCEM. Additionally, jurisdictions will consider whether regulatory options are available to provide for more effective floodplain management.	To be continued, Bladen County is currently acquiring and elevating properties that are in the floodplain and repetitive loss properties due to flooding.	1, 2, 6	Flood	Medium	<ul style="list-style-type: none"> Bladen County Planning Municipal Administrations Governing Boards 	GF, NCDPS	Low	Low
P-3	Bladen County, as well as all participating municipal jurisdictions, will continue to enforce the NC State Building Code. Local Government Inspections Staff will recertify the NC State Building Code as the adopted local regulation applying to all construction activities on an annual basis. Through enforcement of the NC State Building Code, all jurisdictions will work to ensure that all structures, including manufactured homes, are properly anchored to minimize potential impacts stemming from a disaster event.	To be continued, Bladen County adheres to all NC building code regulations and attends con-ed to keep current with all changes.	2	Dam/Levee, Flood, Hurricane, Severe Weather, Wildfire	High	<ul style="list-style-type: none"> Bladen County Building Inspections Municipal Administrations 	GF	Low	Low
B-4	Bladen County, including all municipal jurisdictions participating in the NFIP program, (Bladenboro, Clarkton, Elizabethtown) will maintain and update local Flood Insurance Rate Maps (FIRM) on the County Geographic Information System (GIS). These maps will be reviewed and formally updated as revisions become available through the North Carolina Floodplain Mapping Program.	To be Continued, Bladen County continues to maintain all FIRM maps to remain eligible with NFIP	1, 2	Flood	Medium	<ul style="list-style-type: none"> Bladen County Planning Municipal Administrations Governing Boards 	GF, NCDPS	Medium	Low

Review Previous Plan Mitigation Action Plan (2020)

Table 9.1 (Pages 933-941)

Action	Description			Priority			Lead Agency		Potential Funding Sources		Status	Status Explanation
G3	Request Hazard Mitigation Grant Program (HMGP) funding for the elevation and/or acquisition of structures substantially damaged during a natural hazard event. This funding may also be utilized to address infrastructure needs, if it is determined that facilities within the County or any of the participating jurisdictions are adversely impacted by flood events.	Greene County, Hookerton, Snow Hill, Walstonburg	Flood, Hurricane & Tropical Storm, Dam Failure	High	1.2	PP	<ul style="list-style-type: none">Greene County AdministrationGreene County Emergency ManagementMunicipal Administrations	Staff Time	HMGP, PDM, UHMA	Ongoing – As Needed	As Needed – Carry Forward	Greene County will continue to apply for this funding as the need and/or opportunity arises.
G4	Work to educate and inform local real estate agents, contractors, developers and citizens about issues associated with development in the floodplain by Ensuring that a range of materials related to flood insurance, flood protection, floodplain management, information on floodplains, and listings of qualified contractors familiar with floodproofing and elevation techniques, are available through various avenues including: <ul style="list-style-type: none">Placing materials in the local libraryMaintaining documents at the County Planning and Economic Development OfficeDisseminating information to local contractors	Greene County, Hookerton, Snow Hill, Walstonburg	Flood, Hurricane & Tropical Storm, Dam Failure	High	4.2	PIO	<ul style="list-style-type: none">Greene County Planning and AdministrationMunicipal Administrations	Staff Time	General Fund, NCDPS	1 year	Not Started – Carry Forward	Greene County will initiate these efforts in conjunction with the County's application to the Community Rating System Program.

What hazards does this action address?

How long will it take to implement?

Developing a Mitigation Action Plan

Identify New Mitigation Actions

- Brainstorm and discuss a full range of possible mitigation projects/available mitigation techniques
 - Consistent with mitigation goals and other community objectives
 - Based on hazard risk and local capability
 - ~~Consider BRIC projects for inclusion~~
- Use available resources to aid in strategy development
 - FEMA's Local Mitigation Planning Handbook
 - FEMA's Mitigation Ideas
 - FEMA's Economic Development Strategy and Hazard Mitigation Plan Alignment






Mitigation Strategy - Examples

Potential Actions to Mitigate Excessive Heat (tied for highest PRI as per Risk Assessment findings)

1. Increase Green Space, Parks, and Urban Forests
2. Develop and Implement Heat Emergency Response Plans/Protocols
3. Install Public Cooling Stations, Misting Stations, and Water Fountains in Public Spaces
4. Conduct Outreach Campaigns to Raise Awareness About Heat-Related Risks





Mitigation Strategy - Examples

Potential Actions to Mitigate Hurricane & Tropical Storms (tied for highest PRI as per Risk Assessment findings)

1. Elevating structures to meet requirements of FDPO or relocate structures
2. Provide land use designations susceptible to severe damage from hurricanes and coastal storm events outside of designated SFHA
3. Utilize living shorelines and vegetation, leave natural areas in an undisturbed condition
4. Make structural modifications to increase resilience



Mitigation Strategy - Examples

Potential Actions to Mitigate Flooding (tied for second highest PRI as per Risk Assessment findings)

1. Remove Existing Structures from Flood Hazard Zones
2. Increase Capacity of Storm Drainage System
3. Protect and Preserve Wetlands
4. Develop an Open Space Acquisition, Reuse, and Preservation Plan



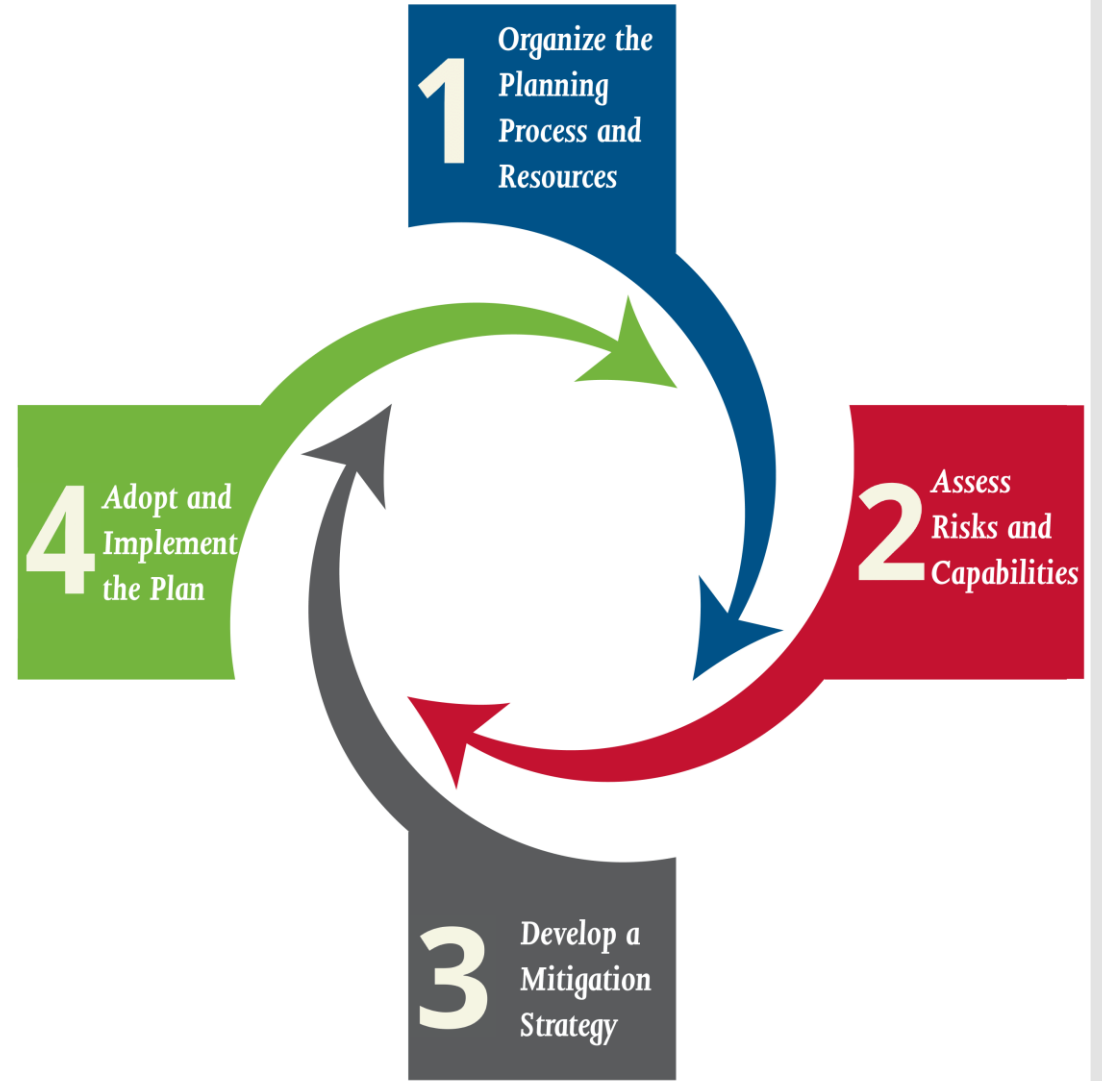
Next Steps

1. Submit Updated Mitigation Actions – As soon as possible, we need these back in a timely manner to provide NCEM with a DRAFT of the plan six months prior to expiration.
2. Submit New Mitigation Actions (if any).
3. Review Draft Capability Assessment – We will provide this assessment within the coming weeks.
4. Submit Substantial Damage Estimate (SDE) Procedures.
5. Draft Plan Submitted in ~~January~~ June.



Following Draft Plan Approval:

Adopt & Implement the Plan



Plan Update Process

Step 4: Adoption and Implementation

Seeking Review and Approval from
Relevant Authorities

Securing Funding and Managing
Resources of Mitigation Projects
and Activities

Executing the Identified Mitigation
Actions

Continuously Monitoring the
Progress of Mitigation Activities



Information Needed for Capability Assessment & Mitigation Strategy!

- **Action Required:** Submit Regional Plan Updates for Capability Assessment.

- **Two-Week Submission Window:** Mitigation Action Plan Updates.

- *Send to Ryan Cox & Danielle Taliaferro by Friday, June 13, 2025*



The background of the slide features a pattern of white question marks and speech bubbles on a light blue background. A dark blue rectangular overlay covers the left side of the slide, containing the text.

Questions

Questions/Comments/Concerns

Adjourn –
Thank you!



Ryan Cox – rcox@consultinsight.com

Danielle Taliaferro – dtaliaferro@consultinsight.com



Nathan Slaughter – nslaughter@esspassociates.com



Kelly Keefe – Kelly.Keefe@aecom.com

