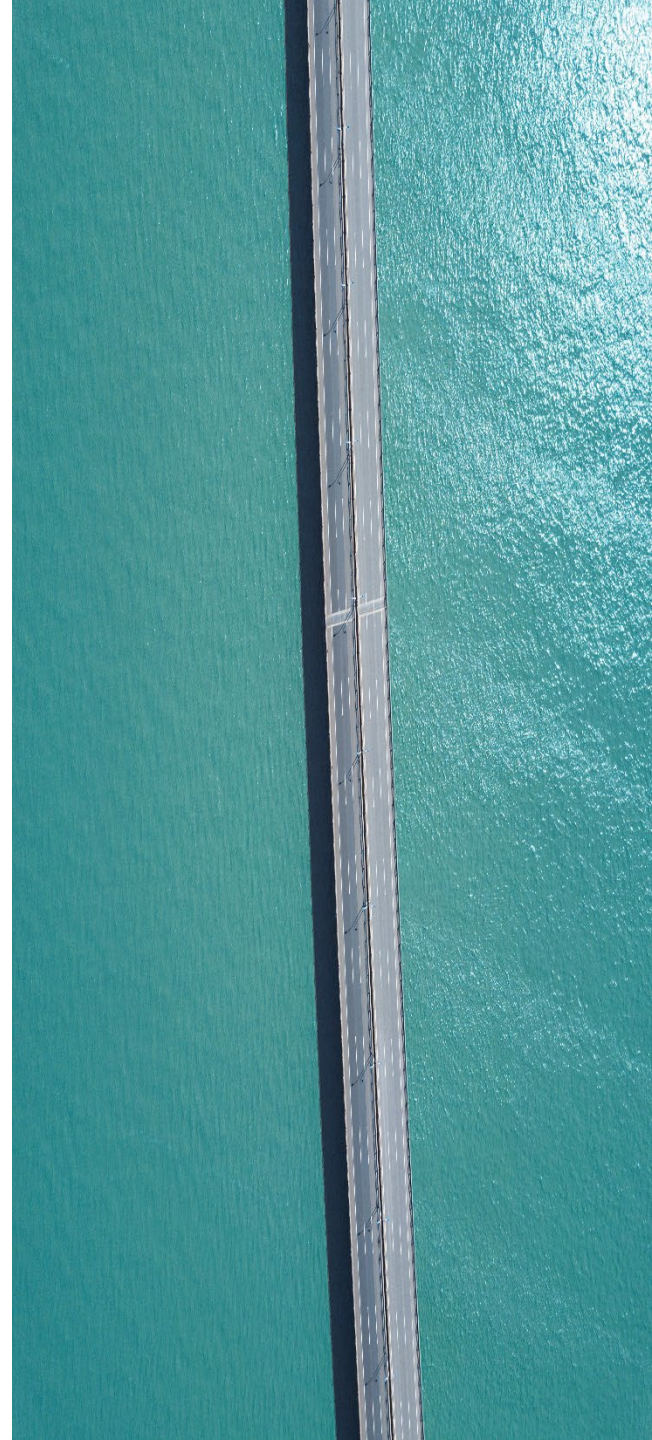




Outer Banks Regional Hazard Mitigation Plan Update

Hazard Mitigation Planning Committee
Meeting 1 – April 22 & 23, 2024

Agenda & Introductions



Agenda & Introductions

Agenda

- Introductions
- Why Plan?
- Project Overview
- Planning Process
- Project Schedule
- Next Steps
- Q & A



Introductions

- Welcome!
- Reminder to sign in
- Introductions: Project Team and Planning Committee

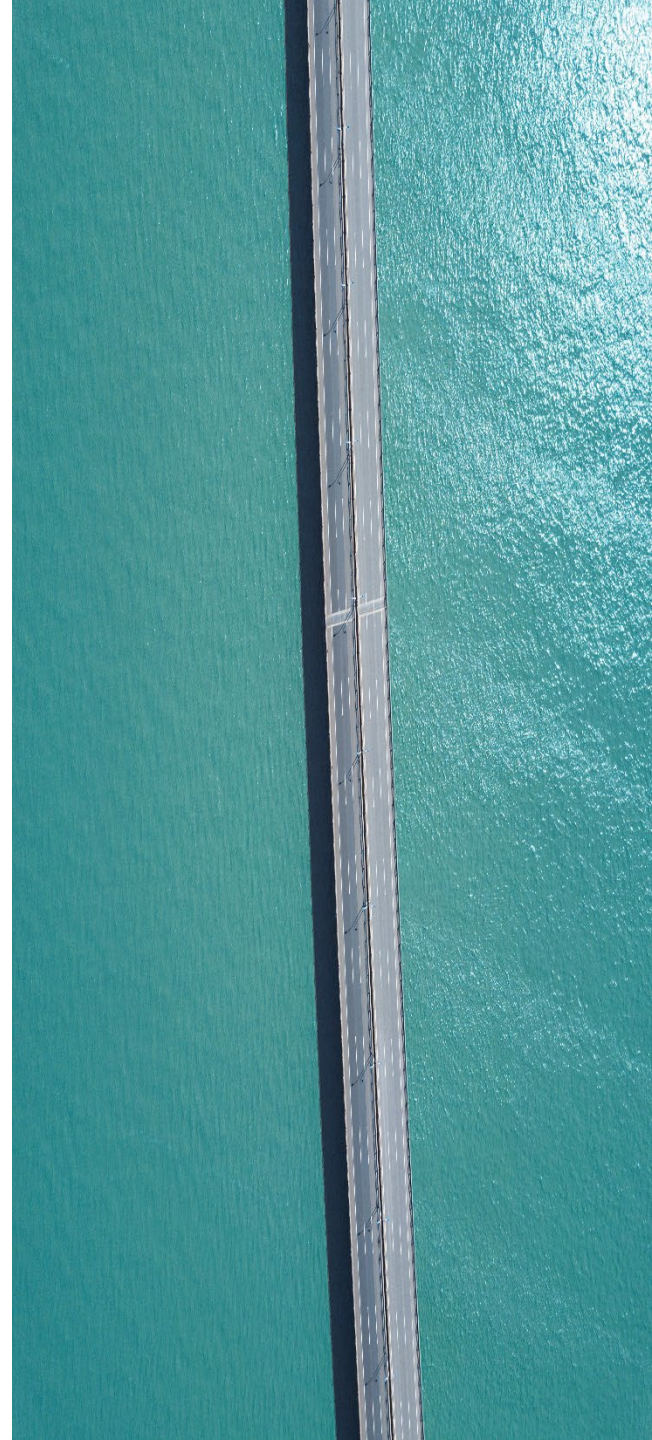
WSP Planning Consultants & Contact Info

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Why Plan?



Why Plan?

Hazard Mitigation Plan Update Requirement

Disaster Mitigation Act of 2000: 44CFR 201.6

- Communities are required to update their hazard mitigation plans every 5 years to remain eligible for federal pre- and post-disaster funding
 - HMP provides eligibility for Hazard Mitigation Grant Program (HMGP), Building Resilient Infrastructure & Communities (BRIC), and Flood Mitigation Assistance (FMA) grants
- Any federally declared disaster in the State of North Carolina means that Dare and Currituck Counties are eligible to apply for HMGP funding
 - The disaster does not have to impact Dare or Currituck Counties for communities in the Outer Banks region to apply for funding
- BRIC and FMA are funded annually; in FY 2023, over \$1.8 billion in BRIC and FMA funding was made available by FEMA
- Having an updated plan ensures all communities will be ready with mitigation project ideas whenever funding becomes available

Why Plan?

Trends in Disasters

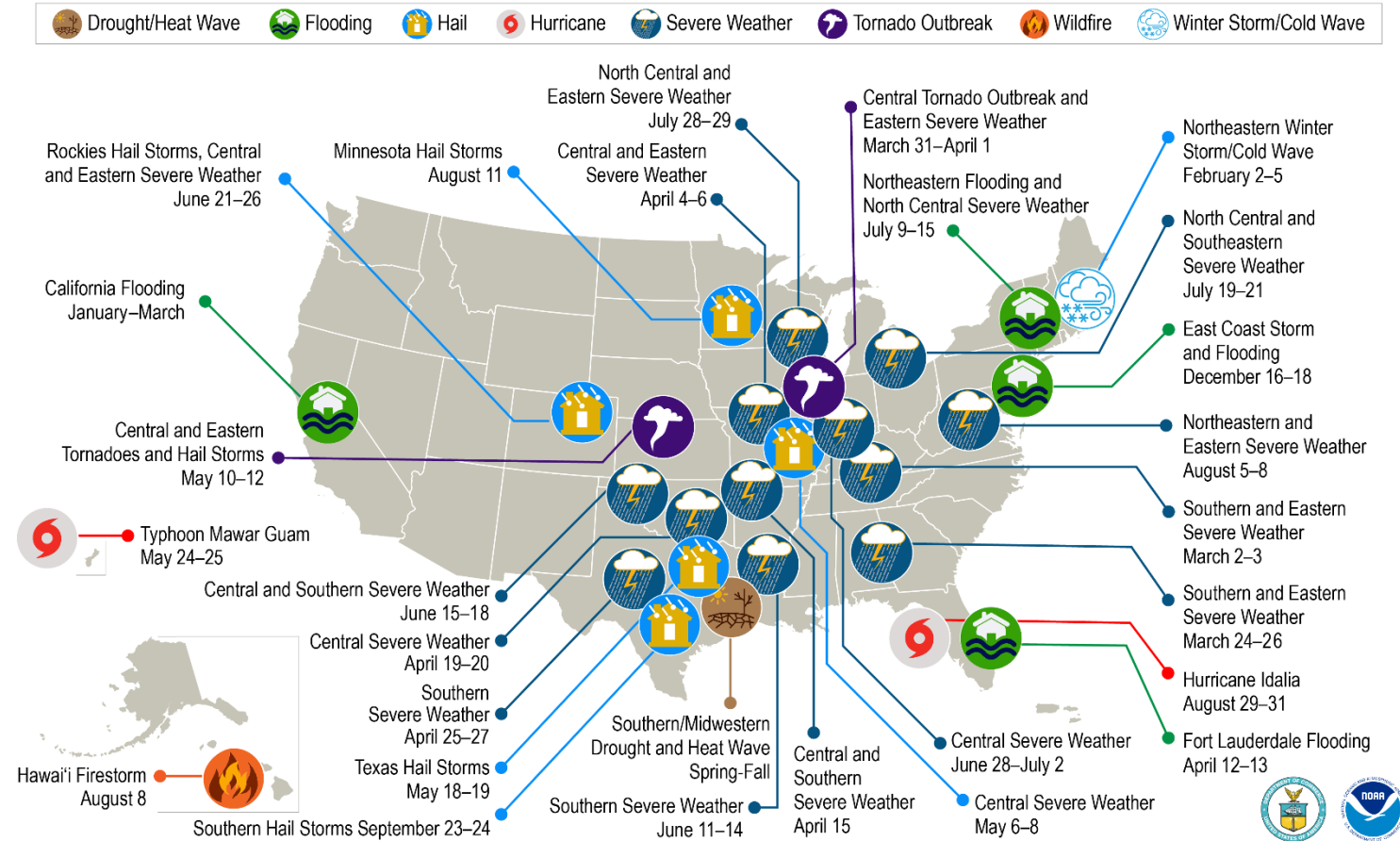
In 2023, there were more billion-dollar disasters than in any previous year – 28 total

The 1980-2023 average of billion-dollar disasters is 8.5 events per year; the 2021-2023 average is 22 events per year (CPI adjusted)

There are **more people, buildings, and infrastructure exposed to risk**

Hazard events are occurring with **more frequency and intensity**

U.S. 2023 Billion-Dollar Weather and Climate Disasters



This map denotes the approximate location for each of the 28 separate billion-dollar weather and climate disasters that impacted the United States in 2023.

Why Plan?

Trends in Disasters

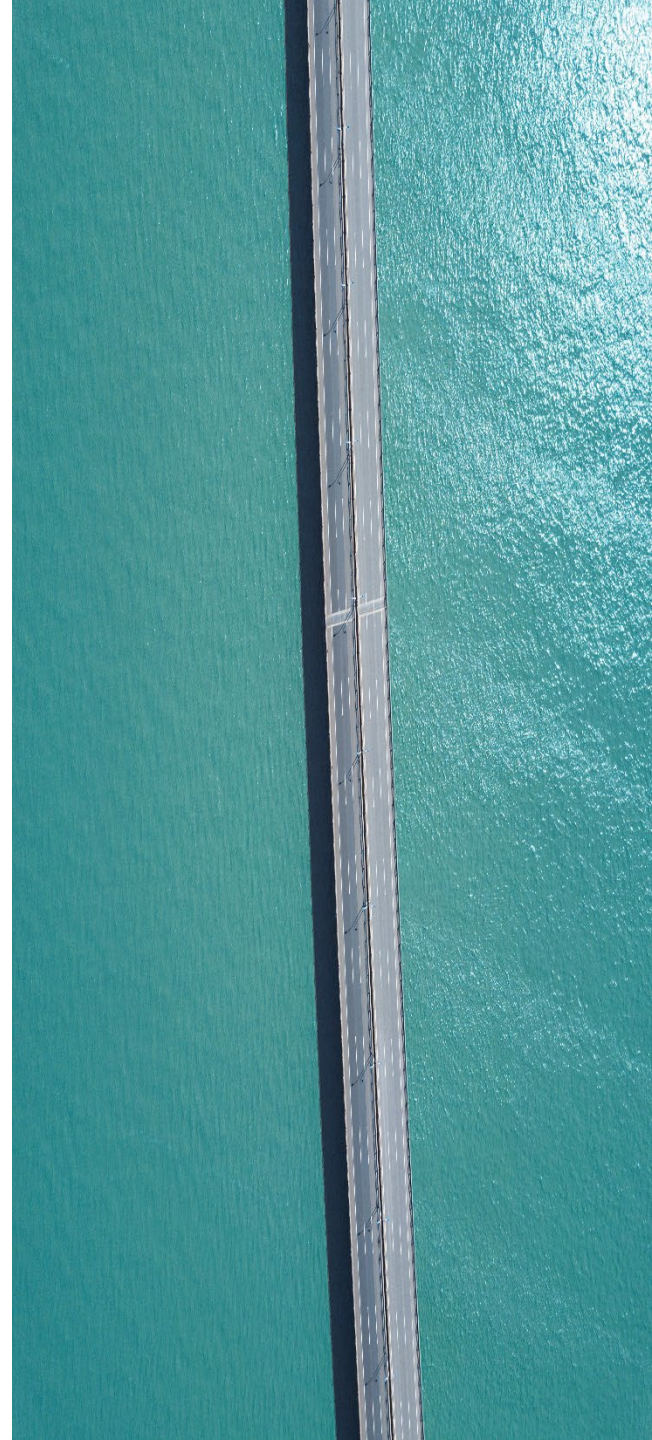
Costliest Disasters to Impact NC since 1980

Event	Year	CPI Adjusted Estimated Cost (Across US)	Deaths (Across US)
Hurricane Harvey	2017	\$157.5b	89
Hurricane Ian	2022	\$117.4b	152
Hurricane Sandy	2012	\$87.2b	159
Hurricane Ida	2021	\$83.1b	96
Hurricane Irma	2017	\$63.0b	97
Drought/Heat Wave	1980	\$40.0b	1,260
Hurricane Ivan	2004	\$33.4b	57
Hurricane Michael	2018	\$30.7b	49
Hurricane Florence	2018	\$29.5b	53
Winter Storm/Cold Wave	2021	\$26.8b	262

Why Hazard Mitigation is a Priority:

- 1 The **spiraling costs of response and recovery**; the cost of doing nothing is too much
- 2 Many **events are predictable and repetitive**; we know what to expect
- 3 Loss reduction activities can be **effective, cost-beneficial, and environmentally sound**
- 4 There are **legal and moral responsibilities** to prevent future disasters
- 5 There are **funds available** to help; federally-funded projects average a **6:1 benefit-cost ratio**

Project Overview



44

Revised as of October 1, 2018

Emergency Management
and
Assistance

Project Overview

Disaster Mitigation Act (DMA) Planning Requirements

What is DMA? Why is it Important?

- Outlines the planning requirements that local governments must follow
- Provides continued eligibility for mitigation funds, pre- and post-disaster funding
- Guides mitigation activities in a coordinated & economical manner
- Integrates into other existing planning mechanisms
- Directs future development and informs wise planning and building
- Reduces losses and makes communities more disaster resistant

**Phase 1**

Organize Resources

**Phase 2**

Assess Risks

**Phase 3**

Develop a Mitigation Strategy

**Phase 4**

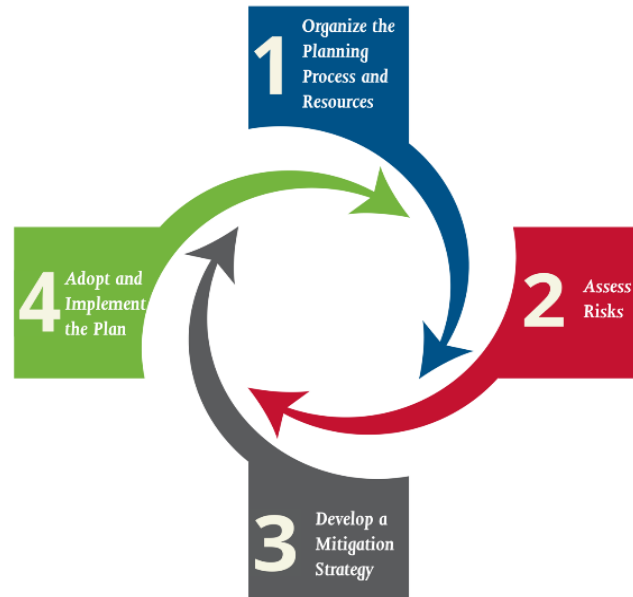
Adopt and Implement

Community Rating System (CRS) Planning Requirements

CRS Activity 510 Floodplain Management Planning

10-Step planning process aligns with the four phases of DMA

This plan will follow a blended planning process; completed HMP will meet the requirements of both programs



DMA Process	CRS Process
Phase I - Organize Resources	
§201.6(c)(1)	Step 1. Organize to Prepare the Plan
§201.6(b)(1)	Step 2. Involve the Public
§201.6(b)(2) & (3)	Step 3. Coordinate
Phase II - Risk Assessment	
§201.6(c)(2)(i)	Step 4. Assess the Hazard
§201.6(c)(2)(ii) & (iii)	Step 5. Assess the Problem
Phase III - Mitigation Strategy	
§201.6(c)(3)(i)	Step 6. Set Goals
§201.6(c)(3)(ii)	Step 7. Review Possible Activities
§201.6(c)(3)(iii)	Step 8. Draft an Action Plan
Phase IV - Plan Maintenance	
§201.6(c)(5)	Step 9. Adopt the Plan
§201.6(c)(4)	Step 10. Implement, Evaluate, and Revise the Plan

CRS Program Overview

- Based on ISO Fire Insurance Rating Program
- Encourages higher standards than the NFIP minimum
- 10 Classes
- Point-based system
- 5% premium discount for every 500 points

Goals of the Program

1. Reduce flood damage to insurable property
2. Strengthen and support the insurance aspects of the NFIP
3. Encourage a comprehensive approach to floodplain management

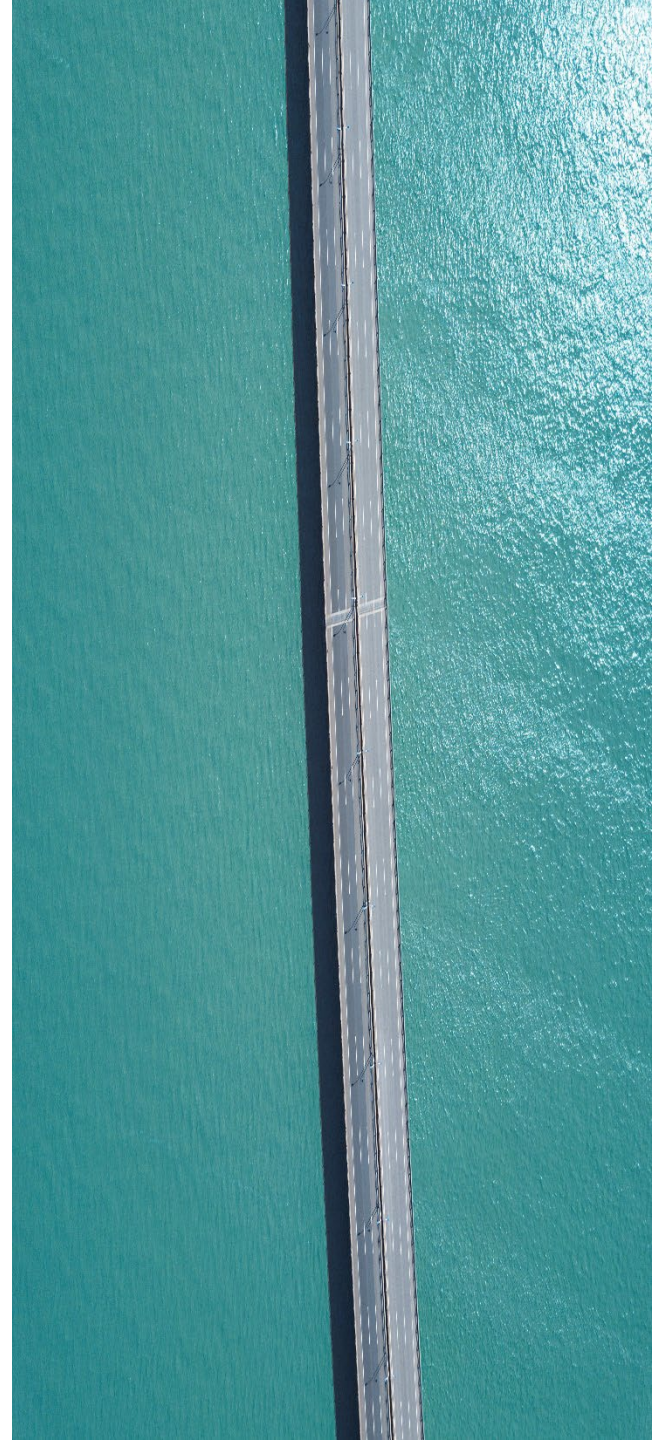
Table 110-1. CRS classes, credit points, and premium discounts.			
CRS Class	Credit Points (cT)	Premium Reduction	
		In SFHA	Outside SFHA
1	4,500+	45%	10%
2	4,000–4,499	40%	10%
3	3,500–3,999	35%	10%
4	3,000–3,499	30%	10%
5	2,500–2,999	25%	10%
6	2,000–2,499	20%	10%
7	1,500–1,999	15%	5%
8	1,000–1,499	10%	5%
9	500–999	5%	5%
10	0–499	0	0
<p><i>SFHA: Zones A, AE, A1–A30, V, V1–V30, AO, and AH</i></p> <p><i>Outside the SFHA: Zones X, B, C, A99, AR, and D</i></p> <p><i>Preferred Risk Policies are not eligible for CRS premium discounts because they already have premiums lower than other policies. Preferred Risk Policies are available only in B, C, and X Zones for properties that are shown to have a minimal risk of flood damage.</i></p> <p><i>Some minus-rated policies may not be eligible for CRS premium discounts.</i></p> <p><i>Premium discounts are subject to change.</i></p>			

Scope of Work

The updated plan will meet the following criteria:

- Will include all required elements (as defined by FEMA)
- Will meet or exceed the final rule for local mitigation planning found in 44 CFR, Section 201.6, in order to be approved by FEMA
- Natural hazards will coordinate with current FEMA-approved State Mitigation Plan
- Will include natural and human-caused hazards and mitigation measures
- Will incorporate any local climate adaptation data and findings
- Will address equitable outcomes (underserved communities and social vulnerability)

Planning Process



Four-Phase Planning Process



Planning Process

Phase 1: Organize Resources

- Form the HMPC
- Plan for Public Involvement
- Coordinate with other stakeholders
 - FEMA Region 4
 - NOAA, NWS, other federal agencies
 - NCEM, NCORR, NCDPS, other state agencies
 - Neighboring communities
 - Non-profits
 - Businesses
 - Colleges & universities
 - Others...
- Stakeholders will be invited to contribute data and input, review drafts, and attend public meetings

Responsibilities of the HMPC:

- Attend the four committee meetings
- Provide updated capability information
- Provide mitigation action progress updates
- Identify new mitigation actions
- Review and provide feedback on draft documents



Phase 2: Assess Risks

Hazard Identification

- *What can happen here?*
- Hazard list will coordinate with the 2023 State HMP and previous Outer Banks Regional plan
- FEMA only requires and reviews natural hazards

Vulnerability Assessment

- *What will be affected or impacted?*
- Property, critical facilities, people, economy, natural resources, cultural and historic resources
- GIS datasets will enable spatial analysis of vulnerability

Capability Assessment

- How can we implement mitigation?
- Planning & regulatory resources, administrative & technical resources, financial resources, past mitigation efforts, etc.

Previously identified hazards: Coastal Hazards (Erosion, Rip Current, Sea Level Rise), Drought, Earthquake, Extreme Heat, Flood, Hurricane & Tropical Storm, Severe Weather, Severe Winter Storm, Tornado, Wildfire, Hazardous Materials Incident, Radiological Emergency, Cyber Threat, Terrorism, Transportation Infrastructure Failure

Planning Process

Phase 2: Assess Risks – Vulnerability Assessment

- Quantitative & Qualitative Methodologies
- NCEM Integrated Hazard Risk Management Database (IRISK)
 - Flood, thunderstorm wind, hurricane wind, tornado, earthquake, and wildfire hazards
 - Estimated loss to buildings, infrastructure, critical facilities, and people
- FEMA's Hazus software for flood, earthquake, and hurricane wind loss estimates
- EMAP Consequence Analysis



Critical facilities and critical infrastructure will be categorized into **FEMA lifeline** categories

Phase 3: Develop a Mitigation Strategy

- **Set Planning Goals**
 - Review the goals from the previous plan to determine if they are still relevant and appropriate. Update the existing goals and objectives as needed.
- **Review Mitigation Alternatives**
 - Consider action ideas from each of FEMA's mitigation categories: Prevention, Property Protection, Structural Projects, Emergency Services, Natural Resource Protection, and Public Education
 - Review all existing mitigation actions – were they completed? If not, should they be carried forward or deleted?
- **Draft an Action Plan**
 - Develop and prioritize mitigation actions for all identified and evaluated hazards
 - Decide who will be responsible, when projects will be completed, how projects will be funded, etc.

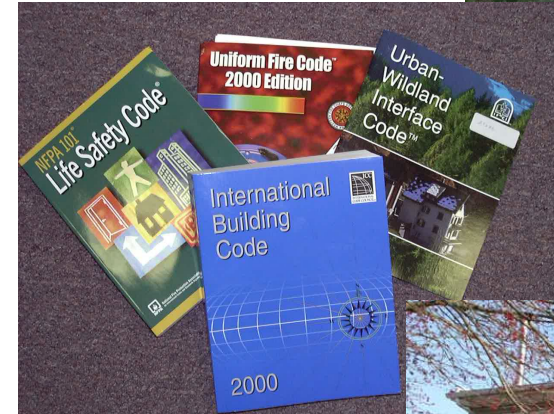


Planning Process

Phase 3: Develop a Mitigation Strategy

Four general mitigation approaches:

1. **Alter the hazard**
 - Change how the hazard occurs
 - Constructed wetlands, prescribed burns, beach renourishment
2. **Avert the hazard**
 - Prevent impacts from the hazard
 - Floodwalls, channels and culverts, fire breaks
3. **Adapt to the hazard**
 - Change building and development practices to minimize impacts
 - Building codes, zoning, design standards, safe rooms, generators
4. **Avoid the hazard**
 - Prevent or reduce exposure to known hazard areas
 - Property acquisition, open space preservation, relocation



Phase 3: Develop a Mitigation Strategy

FEMA requirement: Must have at least one action for each identified hazard

CRS credit requirement: Maximize credit by including actions in each of the six FEMA/CRS mitigation categories:

1. Prevention (land development plans & policies, building codes, ordinances)
2. Property Protection (acquisition, elevation, retrofitting, backup generators)
3. Structural Projects (floodwalls, critical facility retrofit, power line protection, safe rooms)
4. Emergency Services (hazard warning systems, response capacity & capability improvements)
5. Natural Resource Protection (dune or wetland restoration, vegetative management, open space preservation)
6. Public Education (mailings, websites, social media campaigns, interactive map tools, hazard disclosure requirements, targeted outreach and engagement)

Phase 3: Develop a Mitigation Strategy

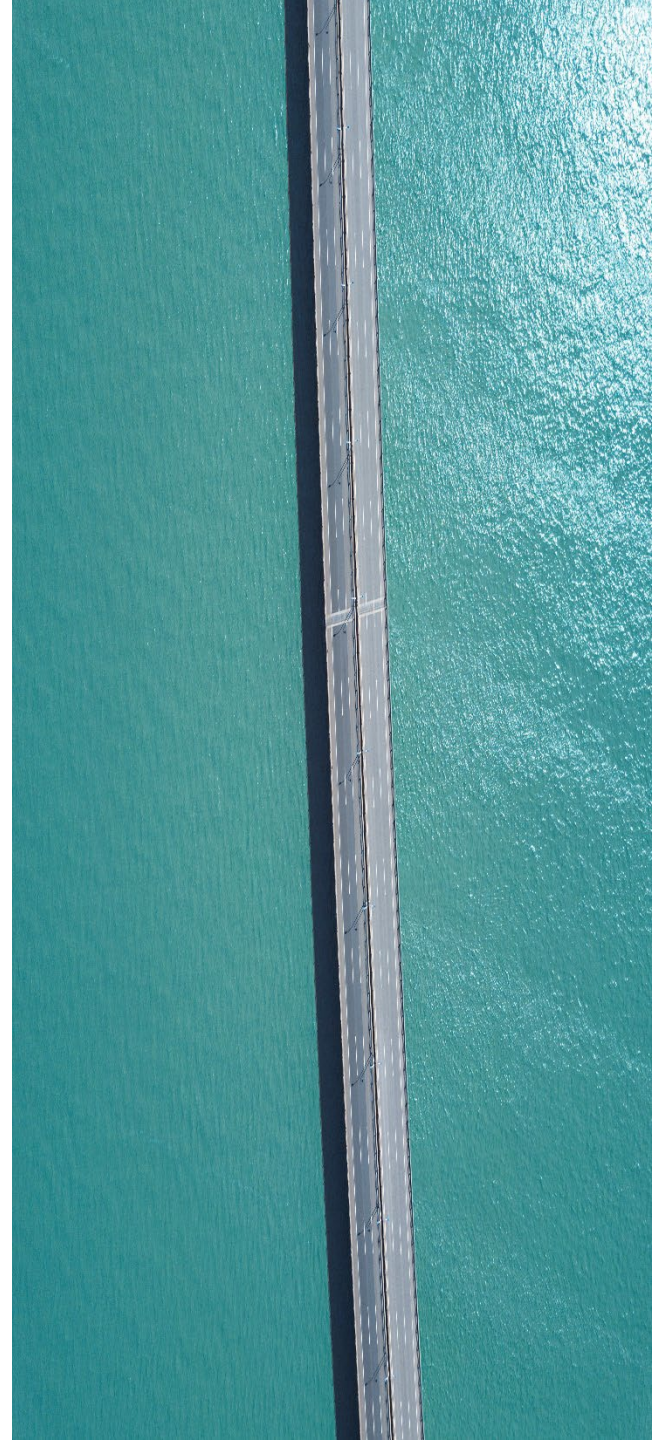
Existing Actions Plan:

	Prevention	Property Protection	Natural Resource Protection	Structural Projects	Emergency Services	Public Education
Currituck County	4	3	6	4	3	15
Dare County	5	6	3	6	4	7
Duck	9	1	4	3	3	8
Kill Devil Hills	9	3	4	1	3	9
Kitty Hawk	2	3	2	1	4	3
Manteo	2	3	3	8	5	2
Nags Head	11	4	3	3	1	3
Southern Shores	12	2	2	2	3	3

Phase 4: Adoption and Implementation

- Each participating jurisdiction must adopt the plan by resolution
- Ongoing plan maintenance includes at least annual meetings of the HMPC to review the plan
 - Quarterly meetings are recommended to encourage progress and maximize CRS credit for the plan
- Plan will continue to undergo a full update every five years

Project Schedule





Project
Schedule

Key Milestones and Meetings

April

HMPC 1 – Kickoff Meetings
Public Kickoff Meetings

May - June

HIRA updates
Capability assessment updates

June/July

HMPC 2 – Risk Assessment Review Meeting
Additional public kickoff meetings

August - September

Mitigation action updates



September/October

HMPC 3 – Mitigation Strategy Meetings

November

HMPC 4 – Draft Plan Review Meetings
Public Meetings – Draft Plan Review

December/January

NCEM plan review
estimated

February/March

FEMA plan review
estimated

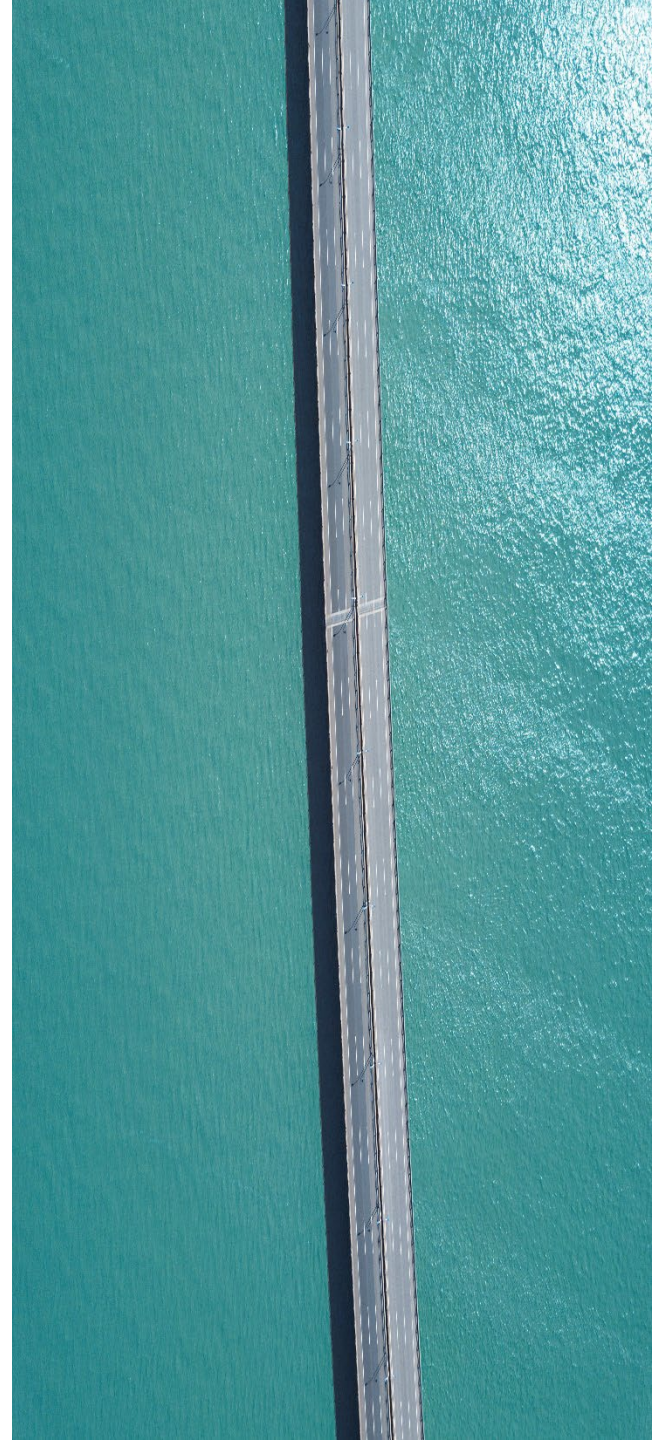
February - March

Local adoptions to be completed

June 2025

Final approved plan deadline

Next Steps



Next Steps

Public Outreach

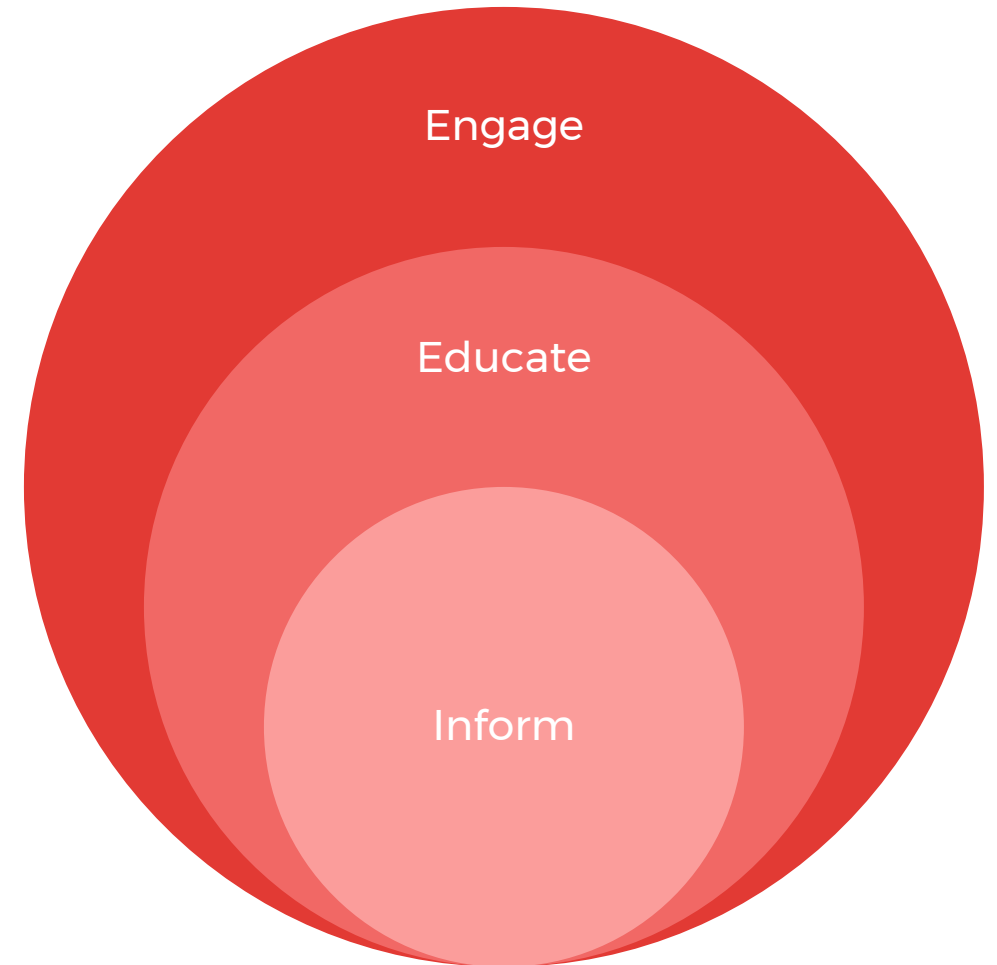
Public Meetings

- Two meetings this week
- 2-3 meetings after the next HMPC meetings
- 2-3 meetings to review the draft plan

Public survey

Other opportunities:

- Informational flyer/handout
- Social media, news media?
- Local websites? Share meeting announcements and draft documents?
- Stakeholders and local partnerships?



Next Steps

What's Next

WSP team action items:

- WSP team is beginning work on the risk and vulnerability assessment

Requests for HMPC input:

- Begin to review existing mitigation actions and be prepared to discuss the status of existing actions
- Support public meeting publicity and public engagement
 - Share the survey link: <https://forms.office.com/e/jSgqtjaHUc>

Outer Banks Regional Hazard
Mitigation Plan Public Survey





Thank you



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