# CAROLINA BEACH RCCP
# JANUARY 7, 2026 CAT MEETING

**Town of Carolina Beach | Coastal Protection Engineering (CPE)**
**Inspire Placemaking Collective | NC Division of Coastal Management**

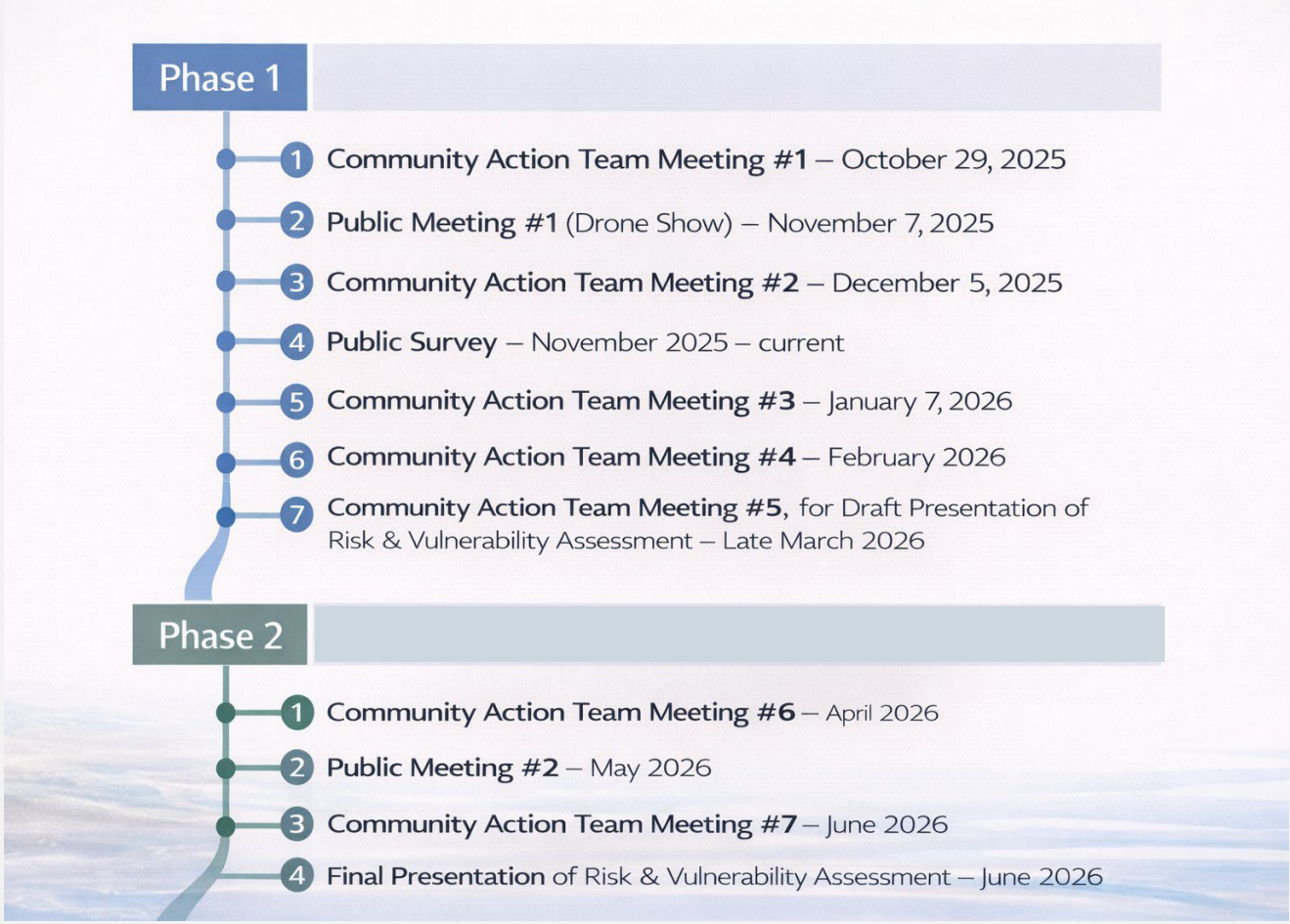
# TODAY'S AGENDA & MEETING OBJECTIVES






Coastal Protection Engineering

# PROPOSED SCHEDULE




COASTAL PROTECTION ENGINEERING

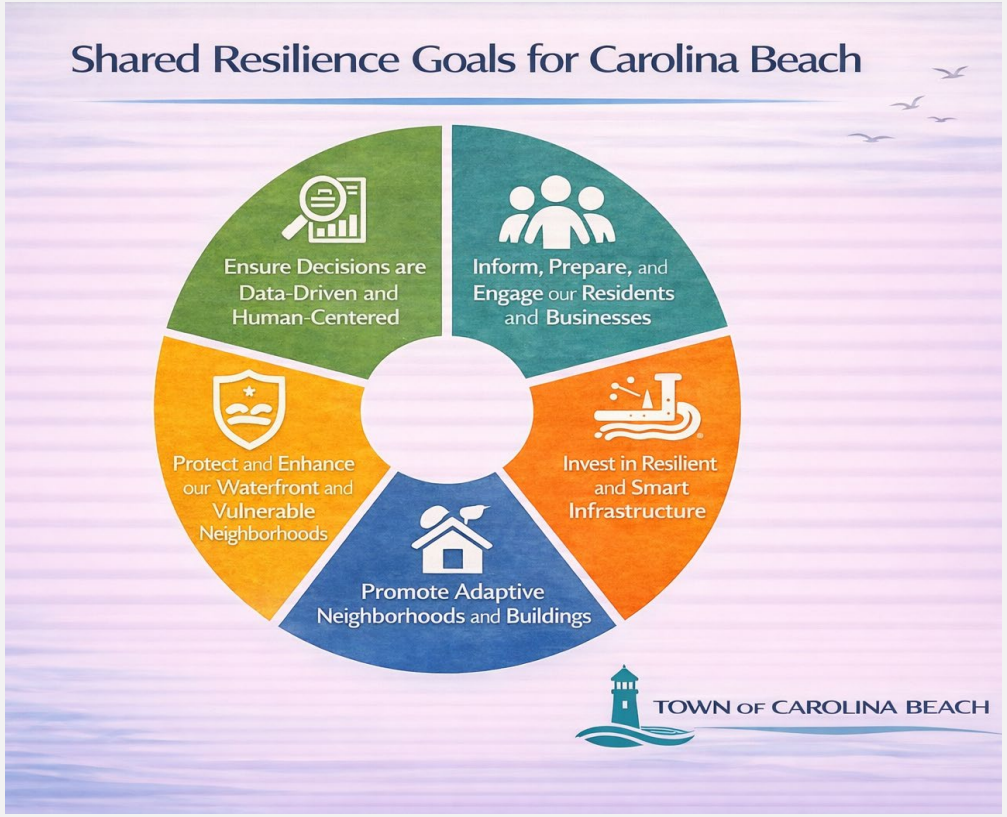
# RESILIENCE CONCEPTS FROM EXISTING DATA






Coastal Protection Engineering

# PROJECT GOALS AND MISSION






COASTAL PROTECTION ENGINEERING

# PROJECT GOALS AND MISSION

*Goal 1 — Ensure Decisions are Data-Driven and Human-Centered*

- Use data, CAT input and existing plans to identify and prioritize resilience hotspots like Canal Drive/Florida Avenue, Northend wetlands, the oceanfront dune system, Harbor/Marina, Carolina Beach Lake, and Lake Park Blvd corridor.

*Goal 2 — Inform, Prepare, and Engage our Residents and Businesses*

- Develop a clear, community-informed understanding of stormwater vulnerabilities, watershed health, flooding, groundwater conditions, sea-level rise, and surge.
- Foster a culture of resilience by engaging residents, businesses, civic organizations, and partner agencies in shaping a shared resilience vision through open communication, transparent decision making, and collaborative planning and leadership demonstrating positive support of the goals.

*Goal 3 — Protect and Enhance our Waterfront and Vulnerable Neighborhoods*

- Protect critical infrastructure by strengthening utilities, harbor structures, public facilities, transportation systems, roads and areas repeatedly affected by flooding or long-term risk.
- Strengthen natural coastal defenses though the protection and enhancement of dunes, beaches, wetlands, marshes, maritime forests, and vegetated shorelines that provide natural flood protection and ecological resilience.

*Goal 4 — Invest in Resilient and Smart Infrastructure*

- Modernize stormwater & flood management systems through advanced drainage improvements, outfall retrofits, backflow prevention, green infrastructure, and storage capacity enhancements to reduce flooding and improve water quality. Develop a consistent maintenance plan with scheduled inspections.
- Ensure evacuation routes, transportation corridors, and key multimodal networks remain safe and functional during storms, high tides and emergencies.

*Goal 5 — Promote Adaptive Neighborhoods and Buildings*

- Develop Fundable, Ready-to-Implement Resilience Projects by translating vulnerabilities and priorities into near-term and long-term projects positioned for RCCP Phase 4, FEMA, BRIC, state grants and other funding opportunities.

# PROJECT GOALS AND MISSION

*To plan for a community ready to actively prepare for increasing coastal hazards while promoting accessibility, economic welfare, and high quality of life for residents.*

## Carolina Beach RCCP Mission Statement

**The mission** of the Carolina Beach Resiliency Coastal Communities Plan (**RCCP**) is to **build a safer**, stronger, and more adaptable coastal community by understanding local **flood risks**, protecting natural and human-built environments, and developing implementable **strategies** that reduce vulnerability to chronic flooding due to infrastructure, sea-level rise, and storms.

Through science-driven analysis and community partnership, the RCCP seeks to ensure that Carolina Beach remains a thriving, resilient barrier island for generations to come.

TOWN OF CAROLINA BEACH



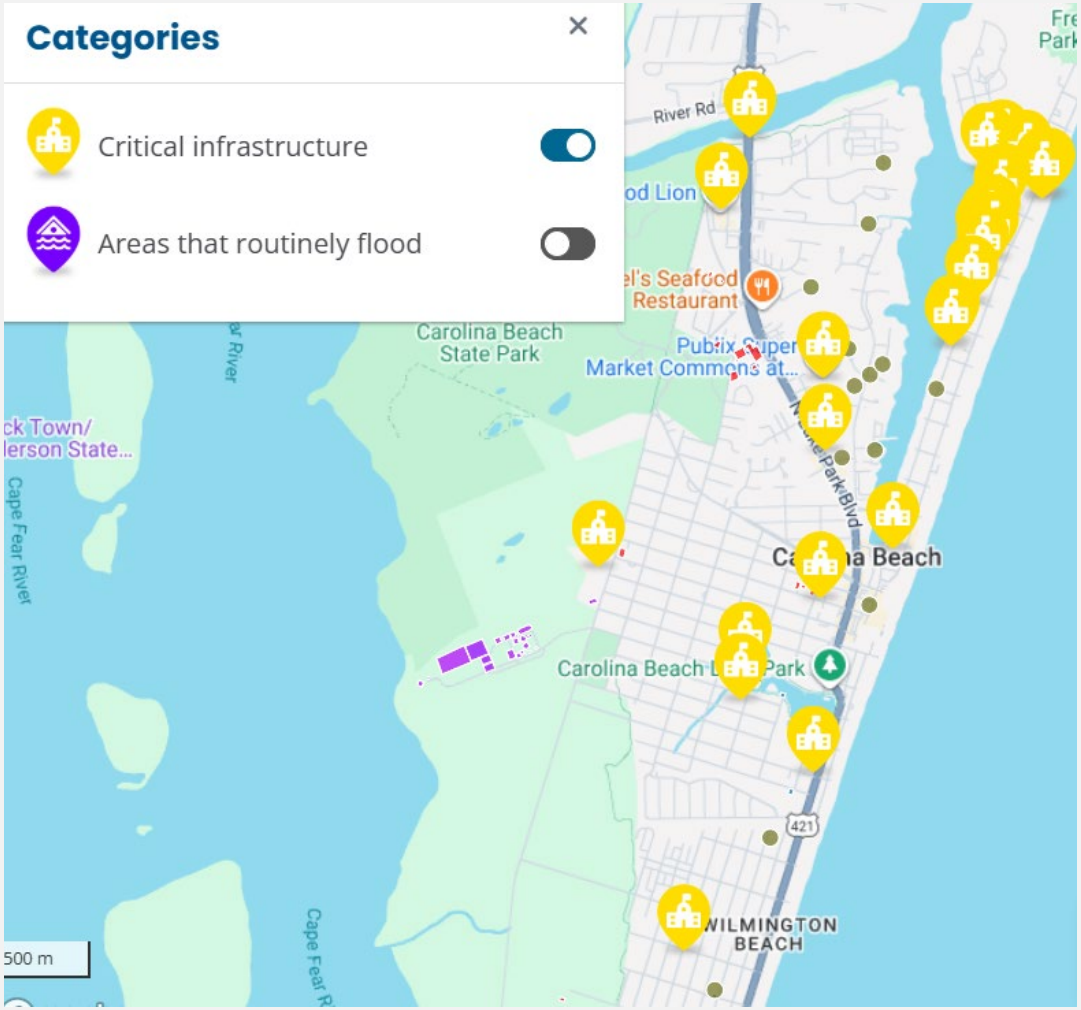
COASTAL PROTECTION ENGINEERING

# FINALIZE CRITICAL ASSETS




- Confirm and refine the inventory of **critical infrastructure** relevant to flood risk and community resilience
- Identify and map **key natural features and natural infrastructure** that provide flood protection, water quality, and ecological benefits
- Incorporate **locally important assets** identified by CAT members, Town staff, and community stakeholders
- Validate asset function, condition, and relevance using **local knowledge and available GIS data**
- Distinguish between **public, private, and shared responsibility assets**
- Identify assets with known or recurring **flooding, access, or maintenance challenges**
- Establish a shared understanding of which assets will be **carried forward into the risk and vulnerability assessment**

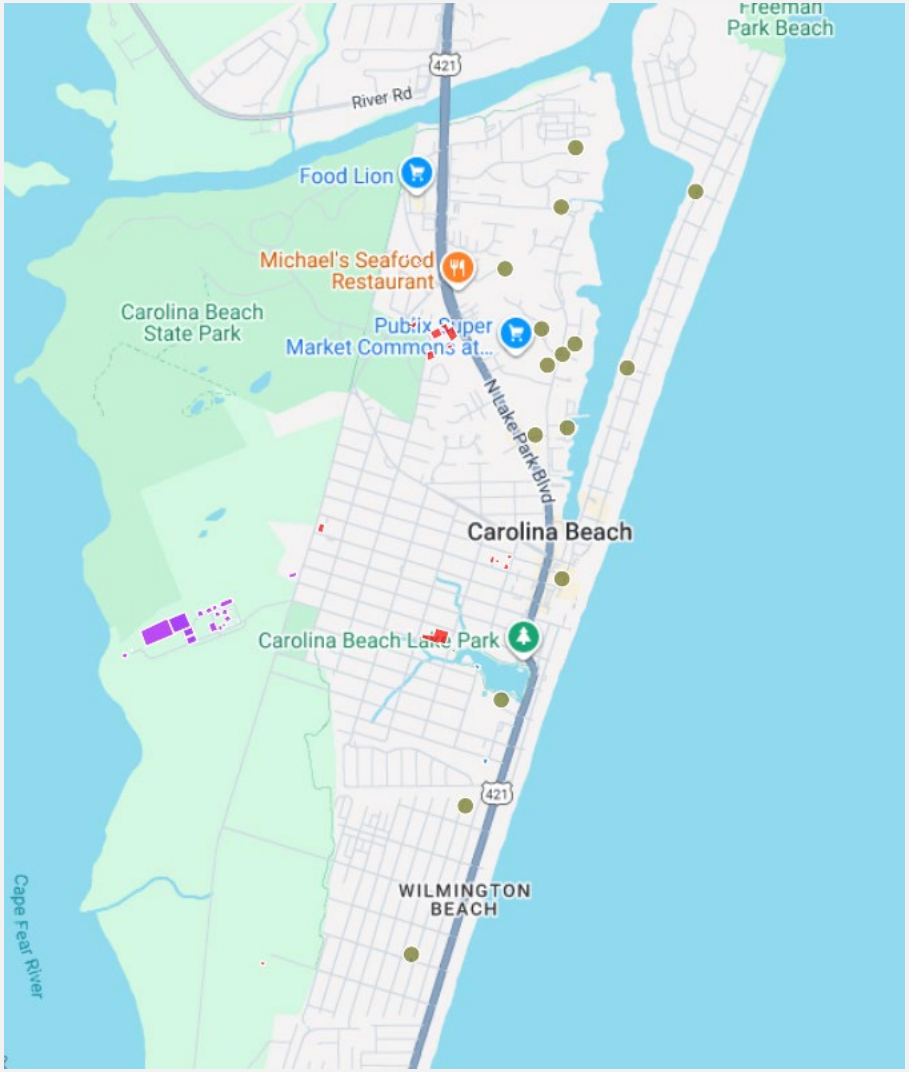
# MAPPED CRITICAL ASSETS




**Layers**

- Town Owned Buildings
- Water Treatment Plant
- Waste Water Treatment Plant
- Sewer Pumpstation
- Stormwater Pump Station

# MAPPED TOWN FACILITIES




**Layers**

- Town Owned Buildings
- Water Treatment Plant
- Waste Water Treatment Plant
- Sewer Pumpstation
- Stormwater Pump Station

# RISK AND VULNERABILITY ASSESSMENT




- Risk Evaluation
- Vulnerability Characterization
- High-Risk Area Identification
- Critical Infrastructure Assessment
- Priority Vulnerabilities Summary



Figure 6 | Required Critical Assets to Map

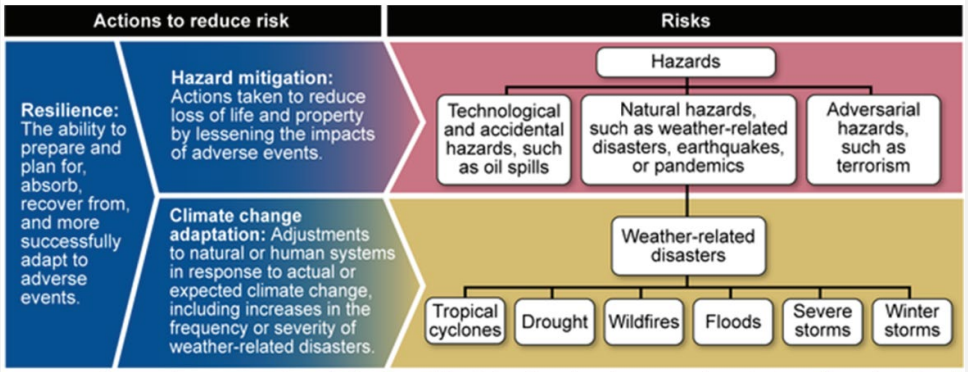


Figure 7 | Source: GAO analysis of Presidential Policy Directive 8, previous GAO work, and National Oceanic and Atmospheric Administration data. | GAO-16-454

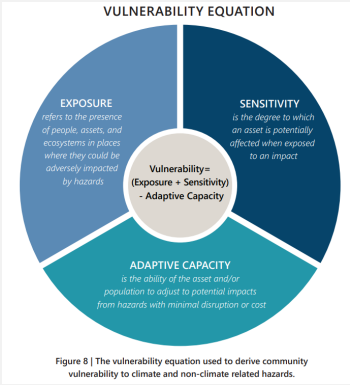
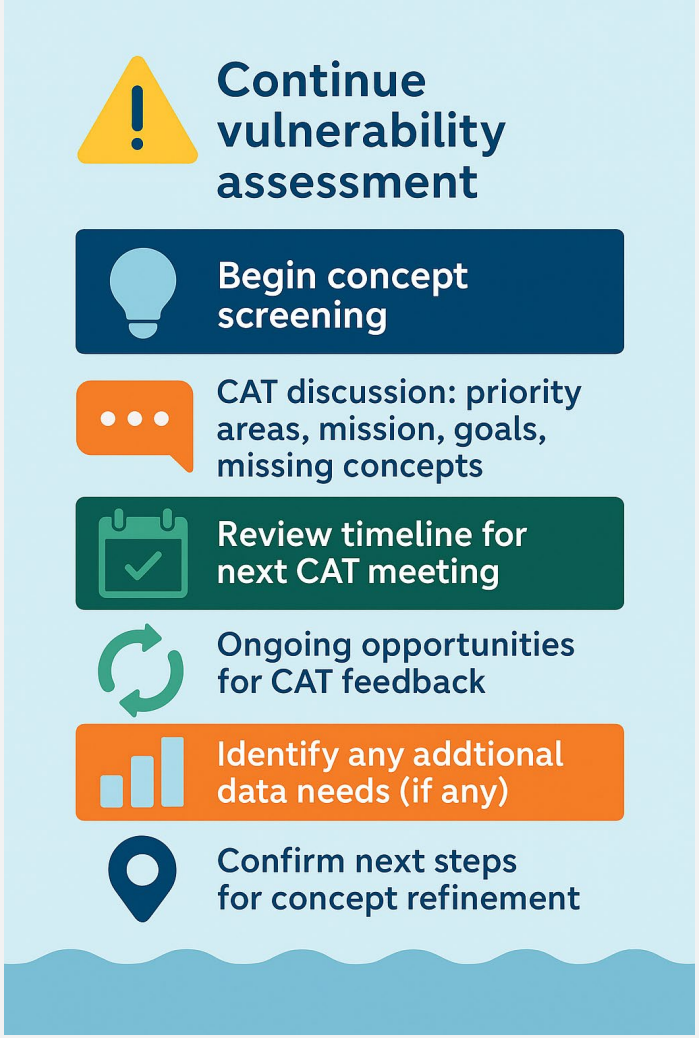


Figure 8 | The vulnerability equation used to derive community vulnerability to climate and non-climate related hazards.



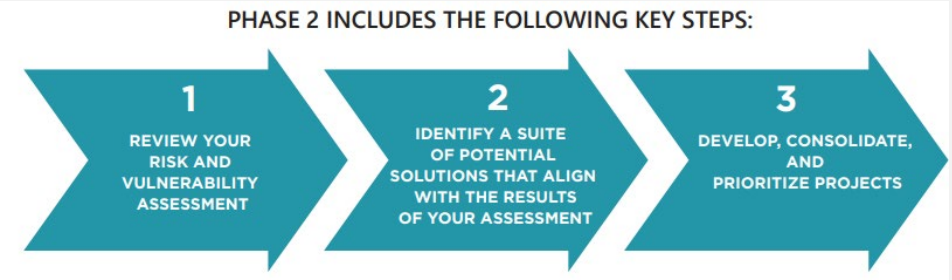
COASTAL PROTECTION ENGINEERING

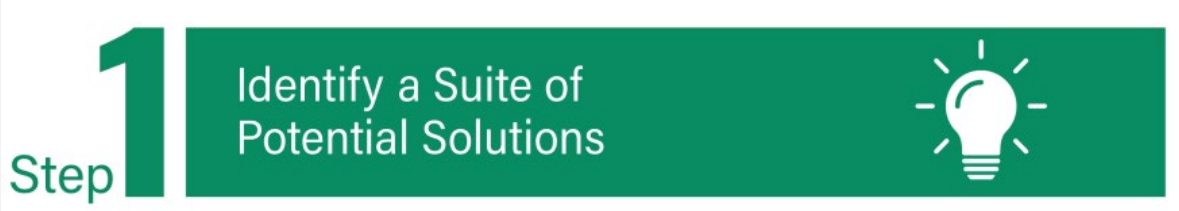
# NEXT STEPS FOR PHASE 1

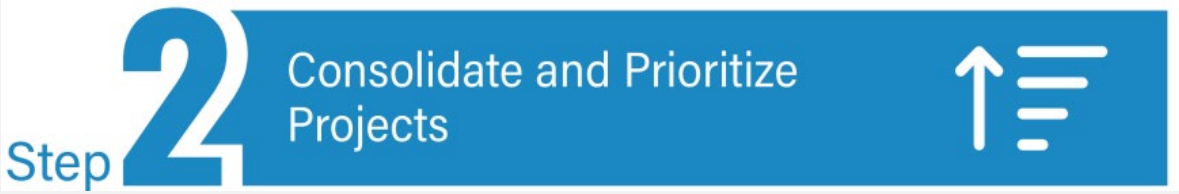



- These steps guide the transition from vulnerability assessment to concept development.
- The CAT's role is central as we refine priorities and shape draft concepts.
- This work also sets the foundation for Phase 2 of the RCCP.

# NEXT STEPS - PHASE 2




- Evaluate strategies and their feasibility
- Consolidate and prioritize strategies



Coastal Protection Engineering

# PROJECT CONTACTS

**Town of Carolina Beach**

- Jeremy Hardison – Community Development Director

jeremy.hardison@carolinabeach.org or 910-458-2991

- Ed Parvin – Deputy Town Manager

ed.parvin@carolinabeach.org

- Sheila P. Nicholson – Administrative Services Officer
- Gigi Baggarley – GIS Administrator

**State of North Carolina – RCCP Program**

- Kasen Wally – Coastal Resiliency Specialist

kasen.wally@deq.nc.gov

- Makenzie Todd – Coastal Resiliency Coordinator

mackenzie.todd@deq.nc.gov

- Jennifer Fickle – Coastal Resiliency Specialist

jennifer.fickler@deq.nc.gov

**Coastal Protection Engineering**

- Tara Marden – RCCP Project Manager and Senior Coastal Geologist

tmarden@coastalprotectioneng.com or 508-397-96989

- Adam Priest – CPE Resident Professional Engineer (CB resident)

apriest@coastalprotectioneng.com

- Stephanie Spranger – UNCW Coastal Engineering Intern

sspranger@coastalprotectioneng.com

**Inspire Placemaking Collective**

- Jay McLeod, AICP – Director of Comprehensive Planning

jmcleod@inspireplacemaking.com

- Robbie Addington, AICP – Planner

raddington@inspireplacemaking.com

- Addie Sherman – Senior Graphic Designer

asherman@inspireplacemaking.com

## RELEVANT LINKS

https://app.climatecentral.org/coastal-risk-finder

https://www.nhcgov.com/222/Southeastern-North-Carolina-Regional-Haz

https://experience.arcgis.com/experience/203f772571cb48b1b8b50fdcc3272e2c/page/Category-1

https://sunnydayflooding.com/view-data/

https://www.climate.gov/maps-data/dataset/sea-level-rise-map-viewer



Coastal Protection Engineering