

Town of Hilton Head Island

Resilience Plan Update

*Town Council Workshop
October 30, 2024*

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Assistant Town Manager



Overview of Presentation

- **Background**
- **Town Council Approved Scope of Work**
- **Resilience Planning Project Overview**
 - **Project Approach and Timeline**
 - **Public Engagement**
 - **Next Steps**
- **Resilience Plan Contents**

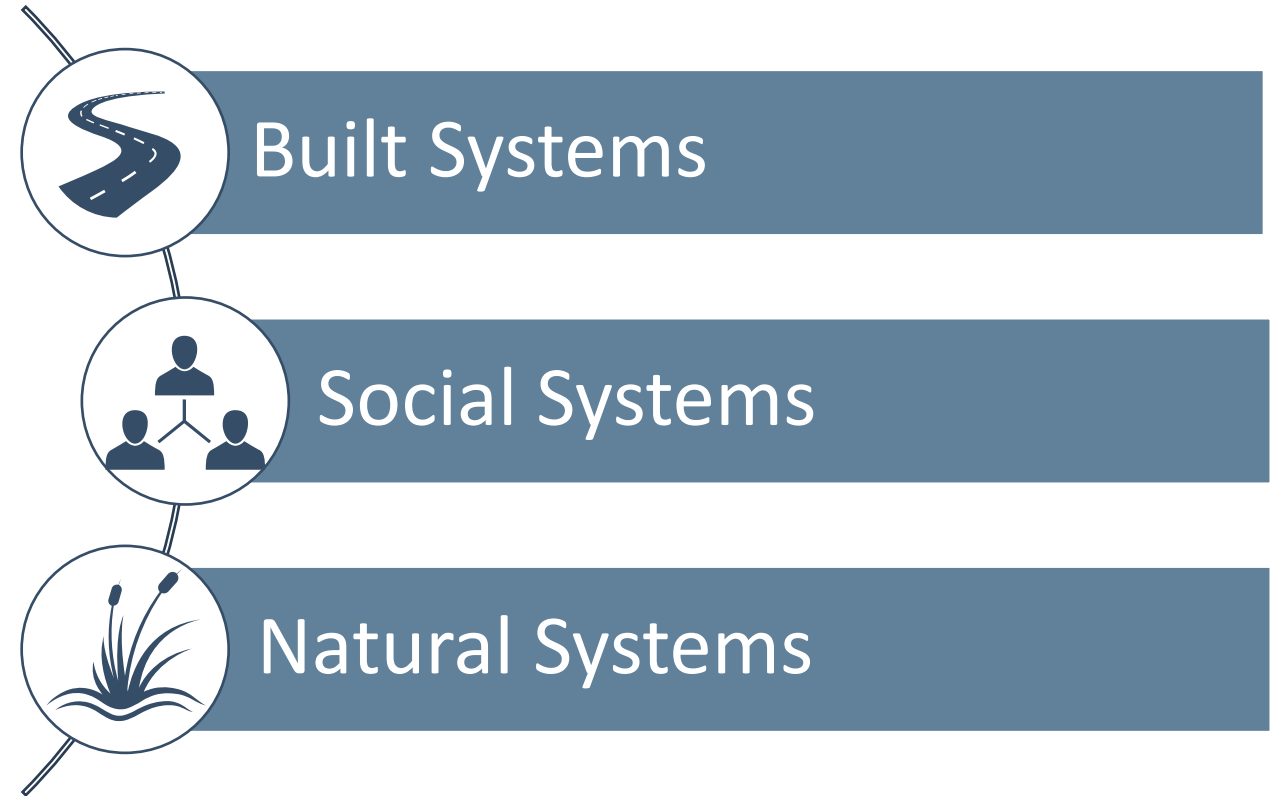
Background

- **Priority initiative in the Town of Hilton Head Island 2023-25 Strategic Action Plan to identify Strengths, Weaknesses, Opportunities & Threats (SWOT) of Hilton Head Island Resiliency and Establish an Island Resiliency Plan**
- **Town Council approved a Resolution June 6, 2023, supporting the proposed approach and scope of services outline to complete the SWOT assessment**
- **Staff procured Dewberry, an expert consultant firm in the field of resiliency planning, to conduct this assessment**

Background

“ Resilience – *The ability of communities, economies, and ecosystems within South Carolina to anticipate, absorb, recover, and thrive when presented with environmental change and natural hazards.*”

South Carolina Office of Resilience
Strategic Statewide Resilience Risk and Reduction Plan



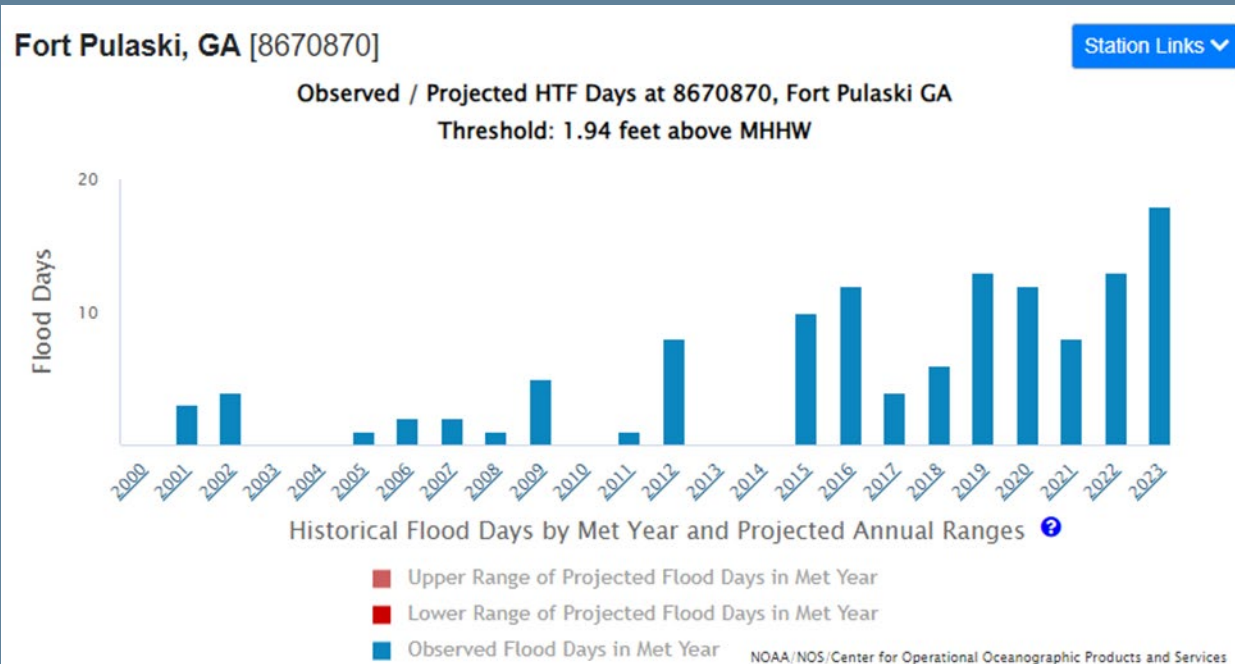
Background

Historic Data



*Ft. Pulaski, GA (Savannah)
water level station*

Historical Flood events:



Historical Rates of Sea Level:

Last 10 Years:
0.38 ft/decade

Last 20 Years:
0.36 ft/decade

Last 30 Years:
0.21 ft/decade

Last 40 Years:
0.18 ft/decade

USACE Sea Level Analysis Tool

Scope of Work Approved By Town Council

Collect and compile information and conduct an analysis of the strengths, weaknesses, opportunities, and threats (SWOT) that the Town possesses and faces with respect to changing conditions

- Compilation and assessment of existing relative data and programs
- Sea Level Rise forecast analysis and selection of design forecast
- Public outreach and solicitation of stakeholder input
- Public policy and regulation assessment and identify those for change
- Recommendations related to floodplain management and future development
- Storm Drainage System assessment (tidal backflow prevention at tidal culverts and outfalls, pump stations, hydraulic capacity, design standards)
- Beach Renourishment program (including sustainability analysis)
- Flood Inundation Mapping
- SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis

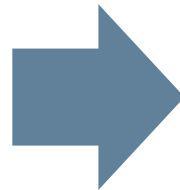
Resilience Planning Project Overview

Project Approach and Timeline

Assessing Risks

Conduct a **SWOT** analysis of the island's assets

- **Step 1:** Understand the threats and hazards posed to assets
- **Step 2:**
 - Identify vulnerable assets and public policy and evaluate potential impacts
 - Climate Change Projections
 - Sea-Level Rise and Flooding Risk
 - Storm Surge and Hurricanes
 - Environmental Degradation and Erosion
 - Infrastructure Vulnerabilities (Transportation, Utilities)
 - Social and Economic Vulnerabilities (Public Health, Housing, Businesses)
 - Public policy assessment



Next Steps

- **Step 3:** SWOT findings , including GIS mapping and geodatabase to drive decision-making on future actions for planning, policy, and engineering programs presented to Town Council
- **Step 4:** Additional Community Engagement to present SWOT findings and receive input
- **Step 5:** Town Council Prioritizes actions for Resilience Planning



Resilience Plan

- **Step 6:** Identify and evaluate mitigation, adaptation, and recovery actions for built, social and natural systems
- **Step 7:** Draft Plan for Town Council consideration for built, social and natural systems

Mar 2024 – Jan 31, 2025



Q1 2025



Q4 2025

Resilience Planning Project Overview

Public Engagement



First Public Open House

Two meetings were held on June 11th and included three stations to gather feedback:

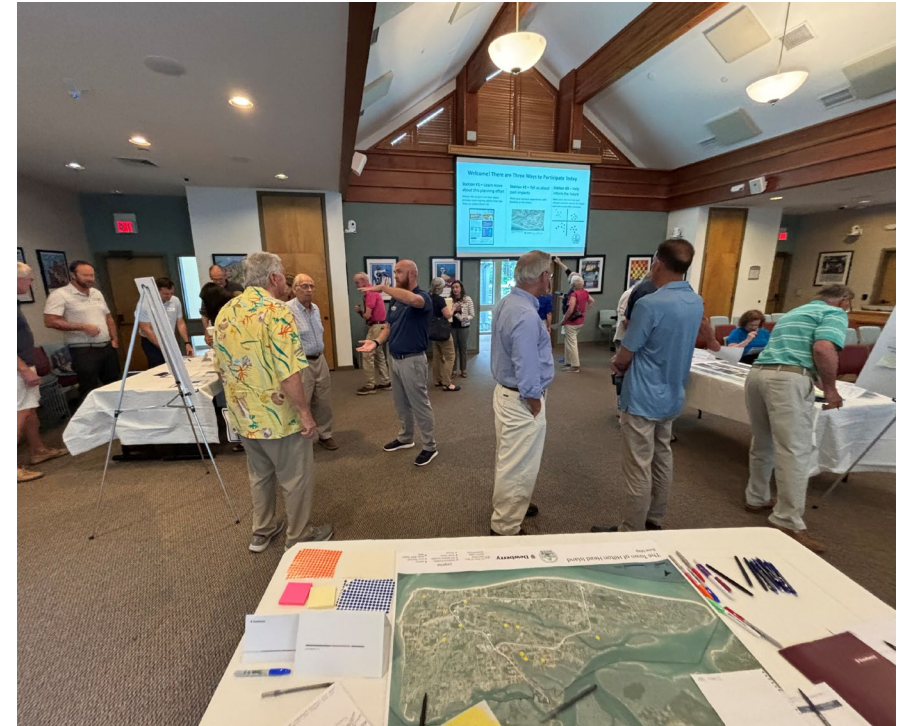
Station 1 – Shared information about the project and related Town efforts

Station 2 – Interacted with the public to gain information on observed flood impacts

Station 3 – Collected preferences of potential strategy types

Results:

- Recorded ~50 locations of previous flood impacts or areas of concern across the island
- Nature Based and Infrastructure Solutions supported the most from the public



Resilience Planning Project Overview

Public Engagement



Community Survey:

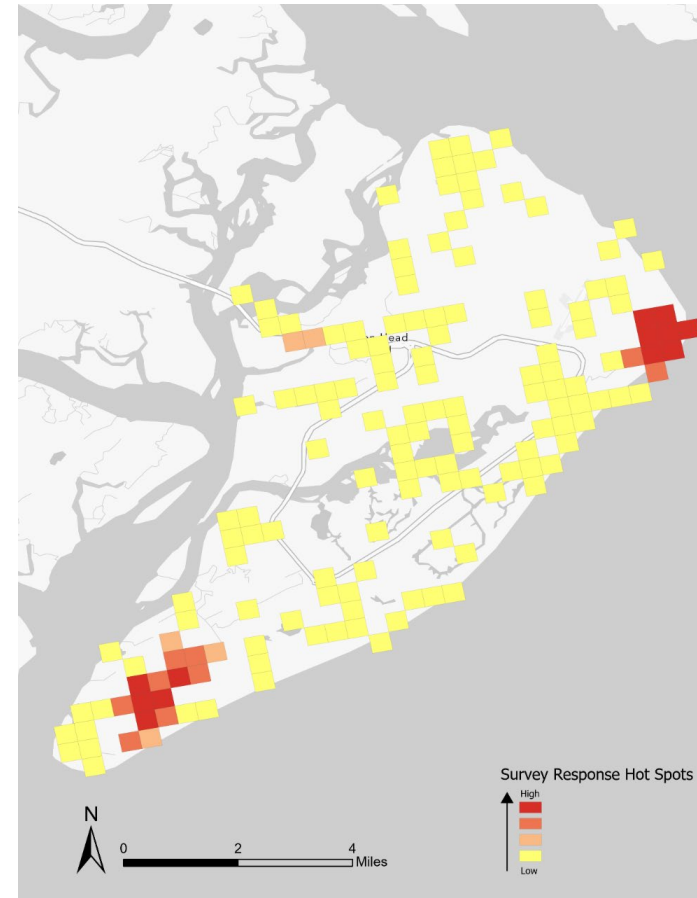
- **459 survey responses** received across the Island

Stakeholder Interviews:

- **12 virtual interviews** completed on flooding challenges and strategies for improvement

Project Story Map:

- Upcoming, will provide information to public on project and findings



Distribution of survey responses to “What area of the Island are you most concerned about flooding?”

Resilience Planning Project Overview

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Resilience Plan

- **Step 6:** Step 6: Identify and evaluate mitigation, adaptation, and recovery actions for built, social and natural systems
- **Step 7:** Draft Plan for Town Council Consideration

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Resilience Plan Contents



1. Executive Summary
 - a. Overview of the Resilience Plan
 - b. Key Goals and Objectives
 - c. Summary of Challenges and Opportunities
 - d. Action Plan Highlights

2. Introduction
 - a. Purpose of the Plan
 - b. Background on Hilton Head Island's Resilience Efforts
 - c. Stakeholder Involvement
 - d. Guiding Principles and Vision

3. Risk and Vulnerability Assessment
 - a. Climate Change Projections
 - b. Sea-Level Rise and Flooding Risk
 - c. Storm Surge and Hurricanes
 - d. Environmental Degradation and Erosion
 - e. Infrastructure Vulnerabilities (Transportation, Utilities)
 - f. Social and Economic Vulnerabilities (Public Health, Housing, Businesses)

4. Resilience Goals and Priorities
 - a. Environmental Protection and Sustainability
 - b. Infrastructure Strengthening and Adaptation
 - c. Public Safety and Emergency Preparedness
 - d. Community Well-being and Social Resilience
 - e. Economic Resilience

Focus on near-term issues and actions, awareness and plan for long-term challenges

Resilience Plan Contents



5. Climate and Environmental Strategies
 - a. Flood Mitigation Measures
 - b. Shoreline Protection and Beach Renourishment
 - c. Wetland Restoration and Conservation
 - d. Water Resource Management
 - e. Tree Canopy and Greenspace Protection
 - f. Integrated Pest Management (IPM) Policy
6. Infrastructure and Community Planning
 - a. Transportation Resilience (Roadways, Public Transport)
 - b. Utility Resilience (Stormwater, Water/Sewer, Energy, Solid Waste and Recycling)
 - c. Growth Management and Zoning
 - d. Public Facilities and Critical Infrastructure Adaptation
 - e. Future-Proofing New Development
7. Public Safety and Emergency Preparedness
 - a. Hurricane Preparedness and Response
 - b. Evacuation Routes and Sheltering Plans
 - c. Community Warning Systems and Communications Strategy
 - d. Lifeguard and Public Safety Programs on Beaches
 - e. Medical and Health Services for Disaster Scenarios
8. Community and Economic Resilience
 - a. Housing Resilience
 - b. Small Business and Tourism Support Strategies
 - c. Workforce Retention Programs
 - d. Social Services Support

Focus on near-term issues and actions, awareness and plan for long-term challenges

Resilience Plan Contents



9. Governance and Partnerships
 - a. Coordination with County, State, and Federal Agencies
 - b. Public-Private Partnerships
 - c. Community Engagement and Public Education Programs
 - d. Intergovernmental Collaboration and Policy Alignment

10. Infrastructure and Community Planning
 - a. Transportation Resilience (Roadways, Public Transport)
 - b. Utility Resilience (Stormwater, Water/Sewer, Energy, Solid Waste and Recycling)
 - c. Growth Management and Zoning
 - d. Public Facilities and Critical Infrastructure Adaptation
 - e. Future-Proofing New Development

11. Public Safety and Emergency Preparedness
 - a. Hurricane Preparedness and Response
 - b. Evacuation Routes and Sheltering Plans
 - c. Community Warning Systems and Communications Strategy
 - d. Lifeguard and Public Safety Programs on Beaches
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12. Community and Economic Resilience
 - a. Housing Resilience
 - b. Small Business and Tourism Support Strategies
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Questions?

