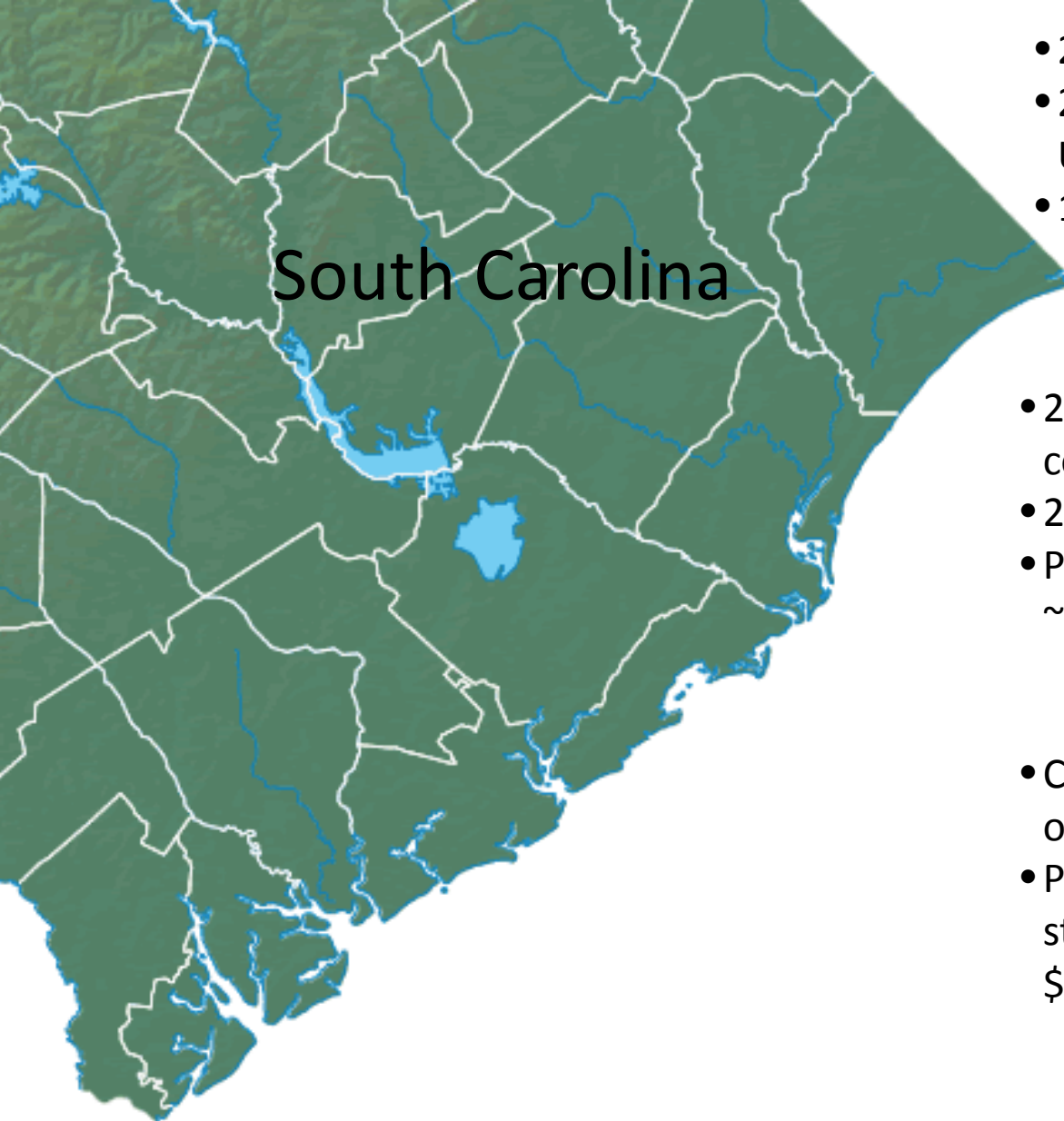


Stemming the Tide: Stakeholder-driven adaptation planning in South Carolina

Liz Fly, Ph.D.

Coastal Climate Extension Specialist





South Carolina

- 2,876 miles of tidal shoreline
- 20% of total salt marsh area on US East Coast
- 165 linear miles of beach

- 21% population increase in coastal counties over last 10 years
- 20 million tourists annual
- Property value of coastal counties = ~\$191.9 billion

- Coastal counties contribute over 50% of state's \$15 billion tourism industry
- Port facilities = 300,000 jobs statewide; yearly economic impact \$45 billion



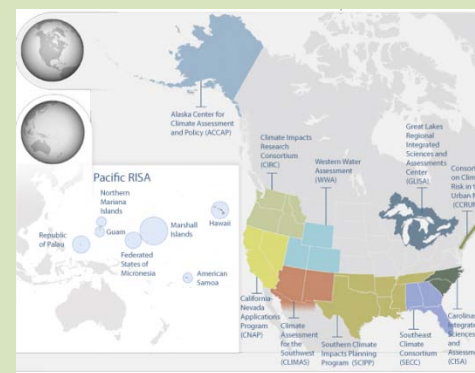
State Agency

Mission: Generate and provide science-based information to enhance the practical use and conservation of coastal and marine resources that fosters a sustainable economy and environment.



NOAA-funded program at
University of South Carolina

Mission: Integrate climate science and resource management in the Carolinas, in the focus areas of water resources, coasts, and public health.



Assist blue crab fishermen in identifying ways to adapt to a changing climate

Develop adaptation plan for small fishing village of McClellanville, SC

Assist citizen-driven sea level rise task force in cities of Beaufort and Port Royal

Develop a Low Impact Development manual for coastal SC

Provide engagement opportunity for Beaufort County to develop SLR adaptation strategies

Address erosion issues and natural resource management on barrier island of Folly Beach

Provide platform for information and resource sharing to address infrastructure vulnerability in Charleston

Integrate scientific and local knowledge to inform risk-based management approaches in Sullivan's Island

A participatory approach to preparing for sea level rise in Beaufort County, SC

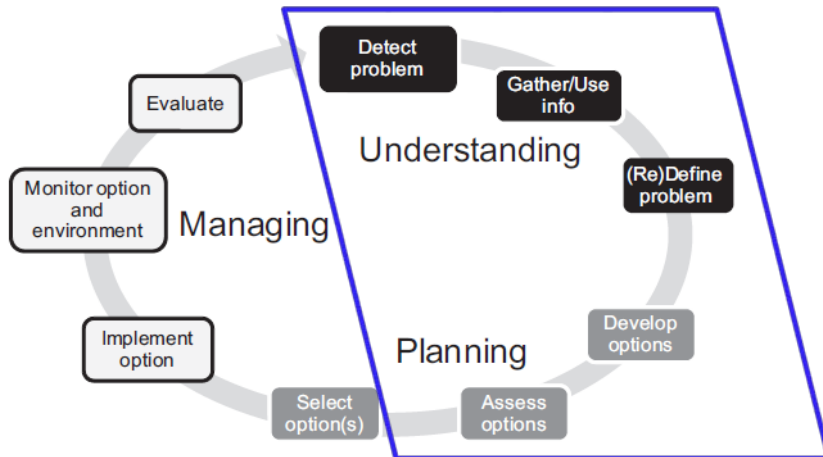


2010 Comprehensive Plan Recommendation 5-20:
Climate Change and Rising Sea-Level

Process



Social and Environmental
Research Institute

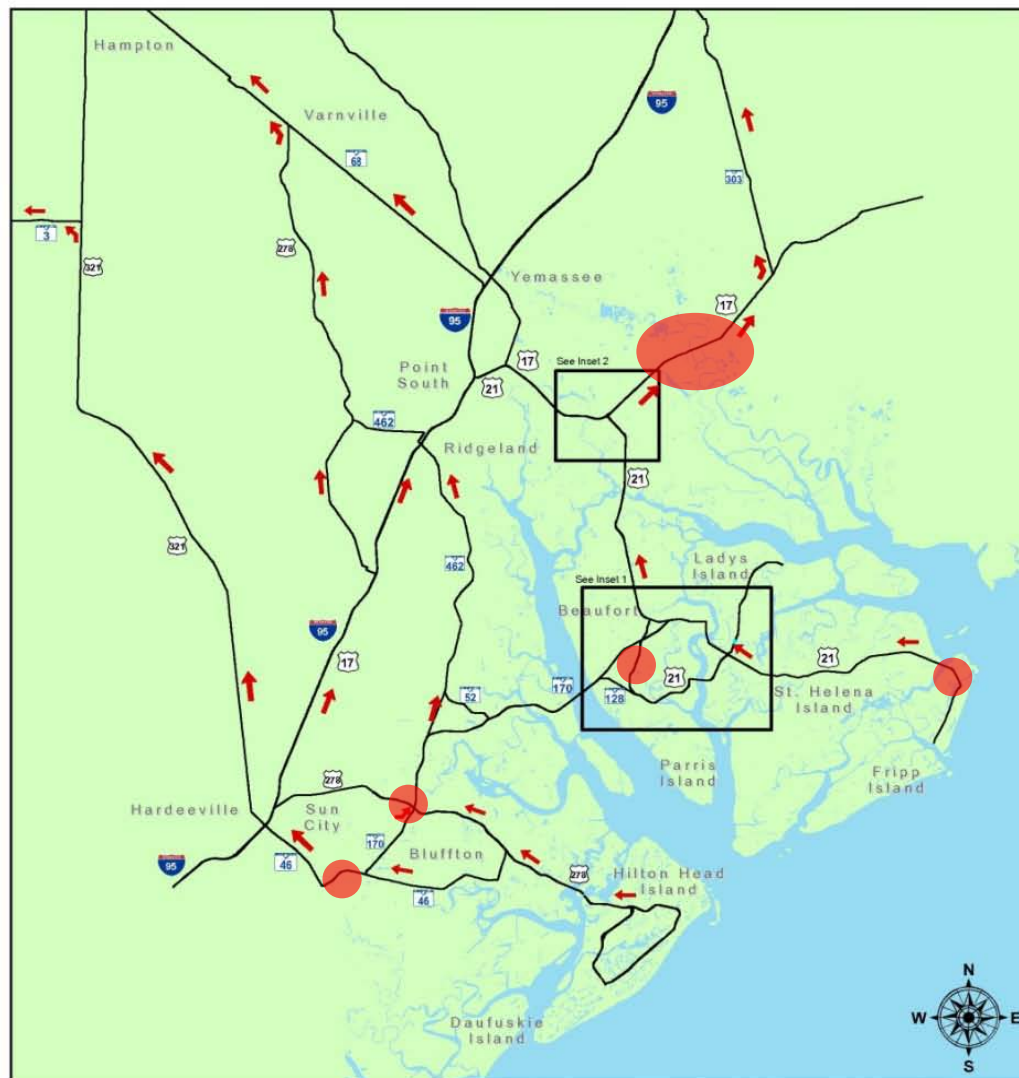


Interviews with key community members
Stakeholder Focus Group
Public workshops

23 potential sea level rise
adaptation strategies

Inform 2015 Comprehensive
Plan update

EVACUATION ROUTES FOR BEAUFORT COUNTY AND SURROUNDING AREA



● The red circles identify major roads & evacuation routes susceptible to flooding at MHHW + 2 ft.

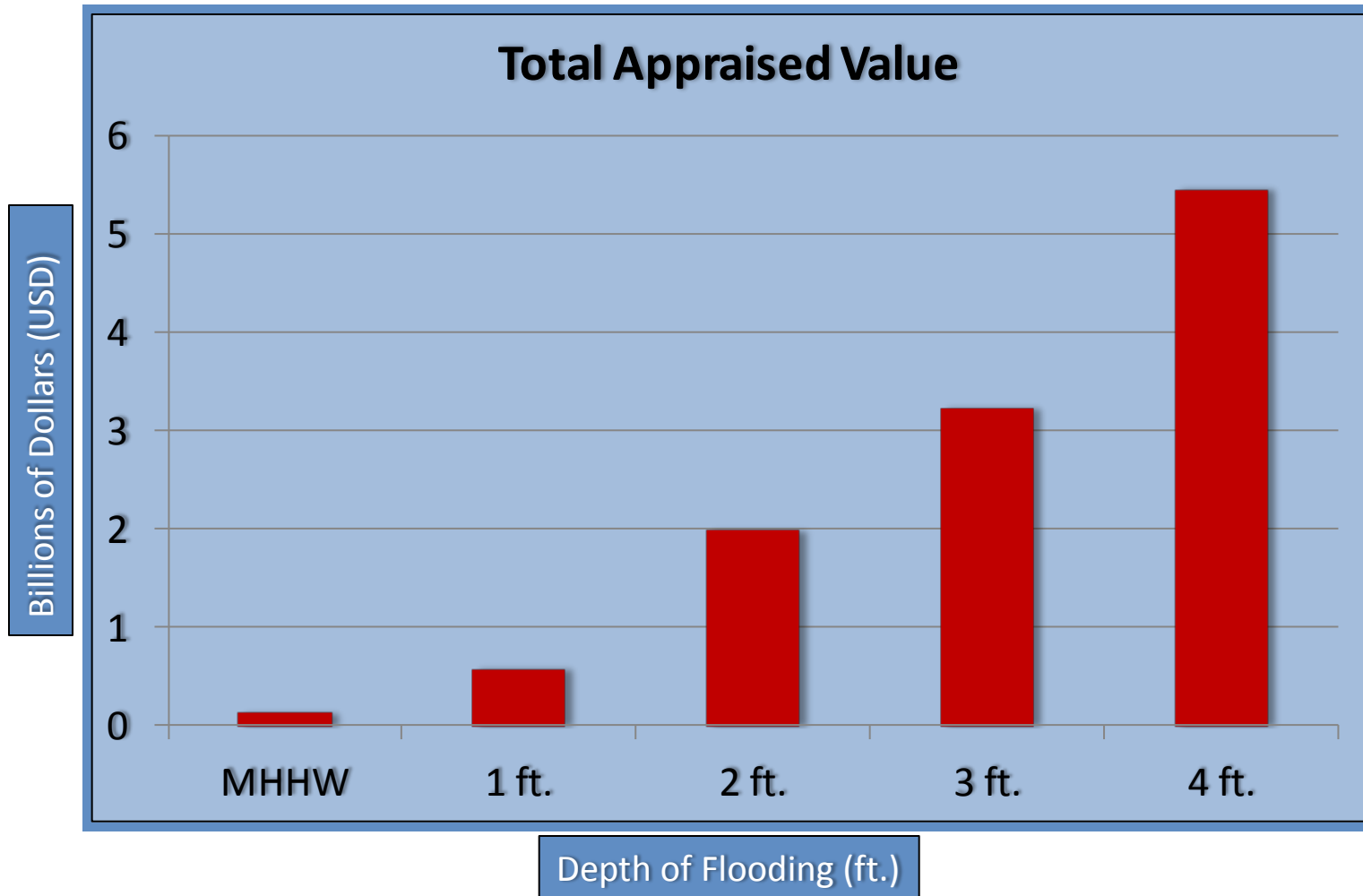


Map prepared by the Beaufort County
Emergency Management Division

March 20, 2012

Beaufort County Hurricane Re-Entry
Telephone Number
1-800-963-5023

Vulnerable Property Value in Beaufort County, SC



Final Report – Adaptation Strategies



Coordination, Cooperation, and Collaboration

balance public and private interests and responsibilities



Emergency Management



Research & Monitoring



Water Management

build water control structures



Miscellaneous

Education & Information

disclosure and disclaimer notice to purchasers of high risk properties



Land Management

limit development in high risk areas

revise building codes to higher standards and incentivize better design.



Transportation Adaptation

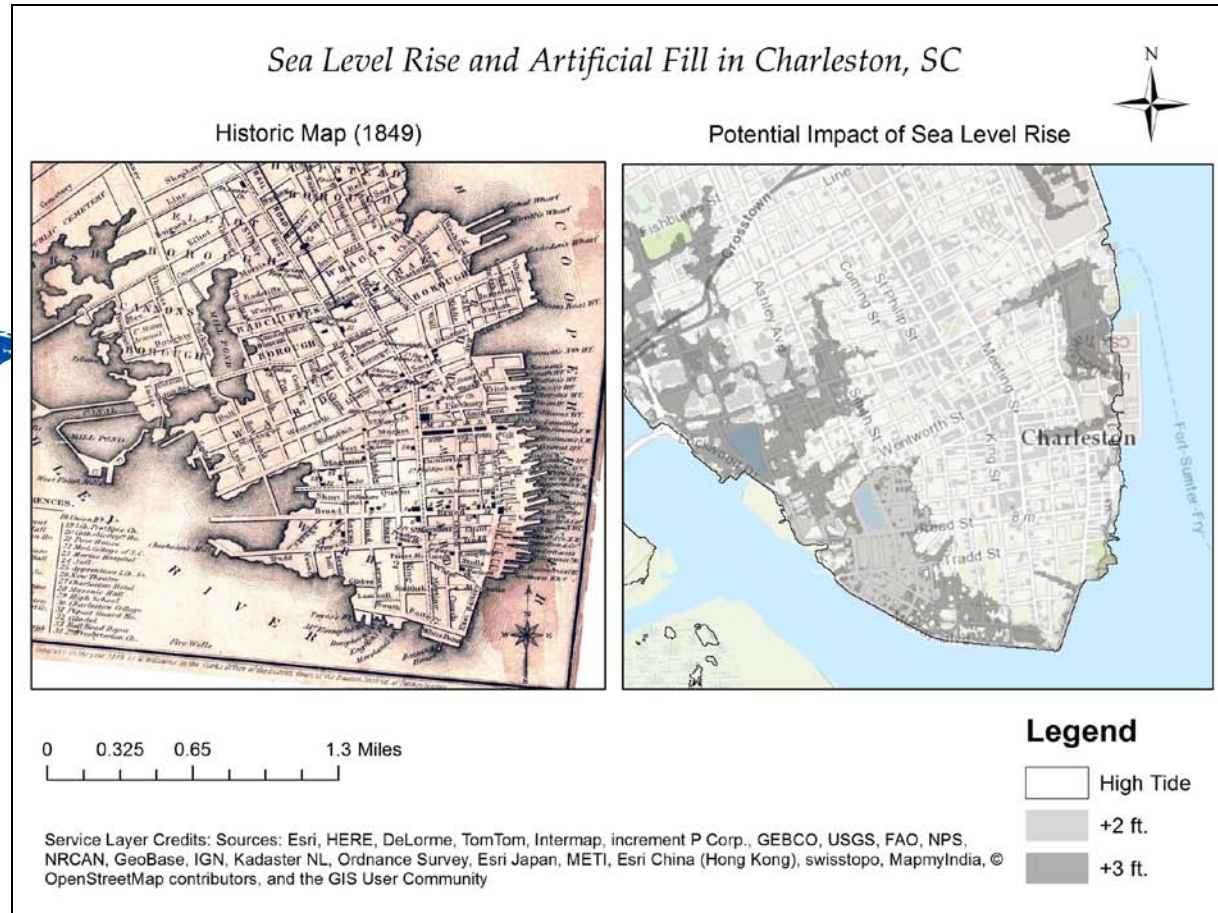
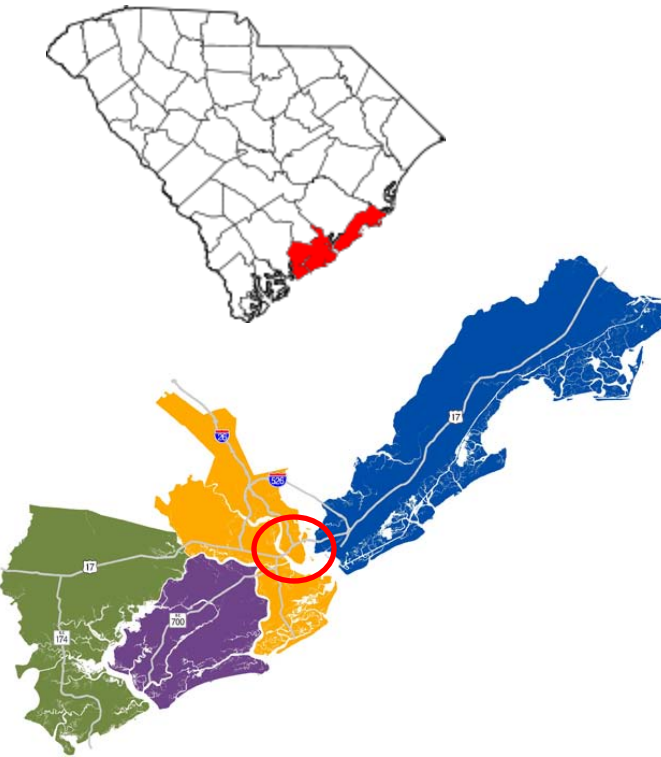
prioritize, elevate, and protect low-lying roads and causeways

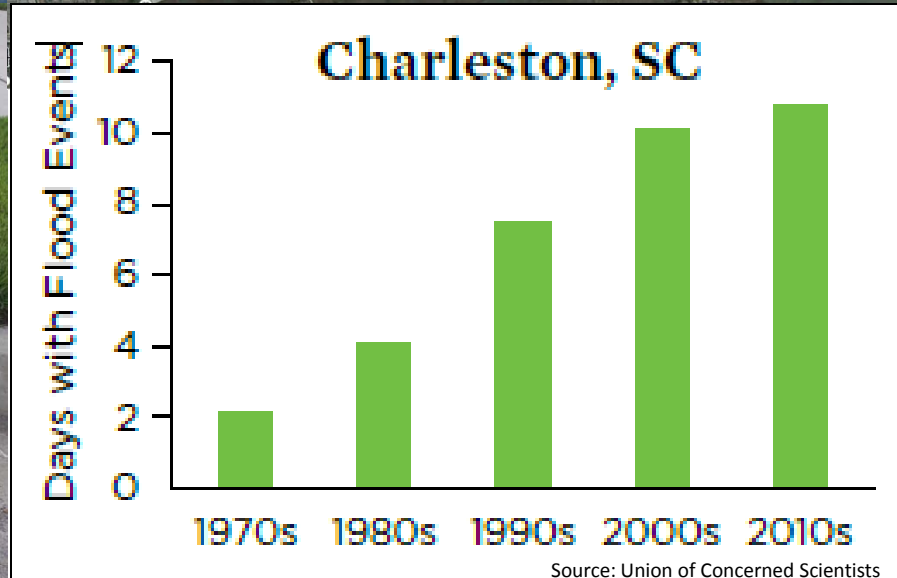
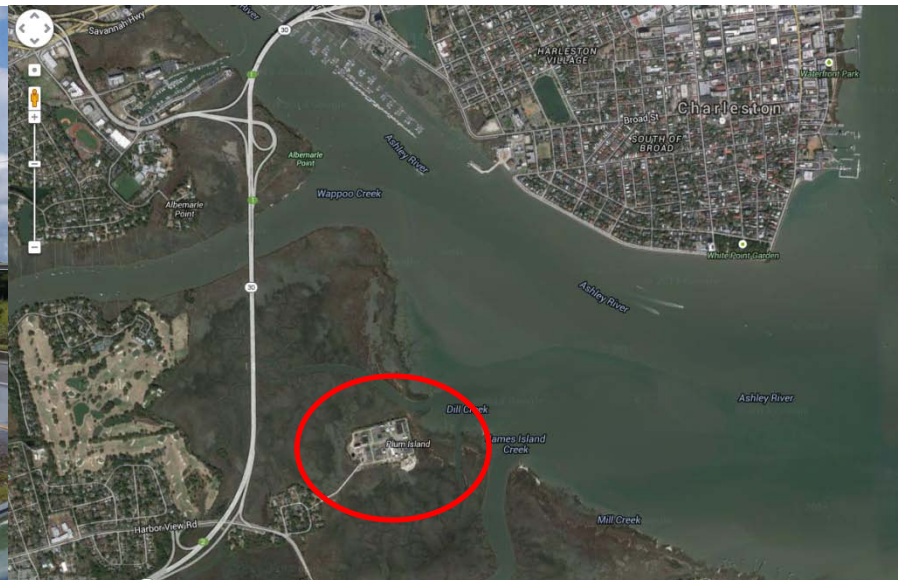


Social Adaptation



Resiliency efforts in the Charleston region





Resilience Planning Effort Moving Forward

Collective interest in the resilience of communities, critical infrastructure and socio-economic continuity to episodic and chronic hazards

Long-term objectives

- Develop a unified strategy
- Provide a platform to share information, educate, and enhance long-term planning decisions
- Implement effective pre-hazard mitigation strategies and post-recovery efforts



Questions?

AT
HIGH TIDE OR
HEAVY RAINS
THIS AREA
FLOODS

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S.C. Sea Grant Consortium: www.scseagrant.org

Carolinas Integrated Sciences and Assessments: www.cisa.sc.edu

In the questions slide, we'll pose a couple of questions regarding lessons-learned and best practices gained along the way. What information and tools do you see may be needed locally to support continued, long-term planning?

Questions

