

# Beaufort County, SC Public Workshops On Sea Level Rise Adaptation Strategies



## Summary Report

September 2014

### Research Partners

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[www.sites.google.com/site/beaufortslr](http://www.sites.google.com/site/beaufortslr)



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## Introduction

### Project Overview

The workshops discussed in this report are part of a larger project titled, “Using Participatory Scenario Building to Encourage Climate-Resilient Planning in the Coastal Carolinas.” The work is a collaboration among the Beaufort County Planning Department, the South Carolina Sea Grant Consortium, the Social and Environmental Research Institute (SERI), North Carolina Sea Grant, and the Carolinas Integrated Sciences & Assessments (CISA) program at the University of South Carolina. It is funded by the Community Climate Change Adaptation Initiative (CCCAI) through the National Oceanic and Atmospheric Administration’s National Sea Grant Office.

Work on this project began in 2013. Scoping interviews were conducted with local members of county government, municipal government, nonprofit groups, and military facilities. Using the Vulnerability, Consequences, and Adaptation Planning Scenarios (VCAPS) process, the project team facilitated focus group discussions wherein local residents identified a number of county-wide vulnerabilities to sea level rise, consequences of these vulnerabilities, and potential actions to adapt.

### Workshop Overview

The goal of the public workshops was to seek input on the sea level rise adaptation actions developed by the Beaufort County focus group. A press release was distributed to area media and event flyers were distributed on electronic mailing lists.

Session 1: August 25, 2014

Bluffton Branch Library Large Meeting Room  
120 Palmetto Way, Bluffton, SC 29910

Session 2: August 26, 2014

St. Helena Branch Library Large Meeting Room  
6355 Jonathan Francis Sr. Rd., St. Helena, SC 29920

## Workshop Format

Time	Section Title	Description
1:00	Welcome, Introductions, and Overview of Agenda	Presentation 1: Sea Level Rise in Beaufort, SC
1:20	Vulnerability to Sea Level Rise in Beaufort County	Presentation 2: Sea Level Rise Science Presentation 3: Mapping SLR in Beaufort County
1:45	Review of Working Group Findings and Adaptation Strategies	Presentation 4: Potential Options for Adapting to Sea Level Rise in Beaufort County, SC
2:00	Question and Answer	
2:15	Break	
2:25	Small Group Discussions	Facilitated group discussions about adaptation strategies, including a prioritization vote.
3:25	Report-outs and Full Group Discussion	Facilitators share key points of each small group with all participants.
3:50	Next Steps and Wrap-Up	

### Presentations

Number	Title of Presentation	Presenter
1	Sea Level Rise in Beaufort, SC	Dr. Elizabeth Fly, <i>Coastal Climate Extension Specialist</i> (S.C. Sea Grant Consortium/CISA)
2	Sea Level Rise Science	Dr. Elizabeth Fly, <i>Coastal Climate Extension Specialist</i> (S.C. Sea Grant Consortium/CISA)
3	Mapping SLR in Beaufort County	Sean Bath, <i>Graduate Student Intern</i> (S.C. Sea Grant Consortium / College of Charleston)
4	Potential Options for Adapting to Sea Level Rise in Beaufort County, SC	Dr. Jessica Whitehead, <i>Coastal Communities Hazards Adaptation Specialist</i> (N.C. Sea Grant)

## Small Group Discussions

Participants for each workshop were divided into three or four small groups. Each person was handed a printed sheet of adaptation actions and given five minutes to reflect and write down additional ideas. After five minutes, each person introduced themselves and provided one major reflection or addition they had to the list.

Groups then moved to broader discussion that captured answers to the first three questions below:

Questions:

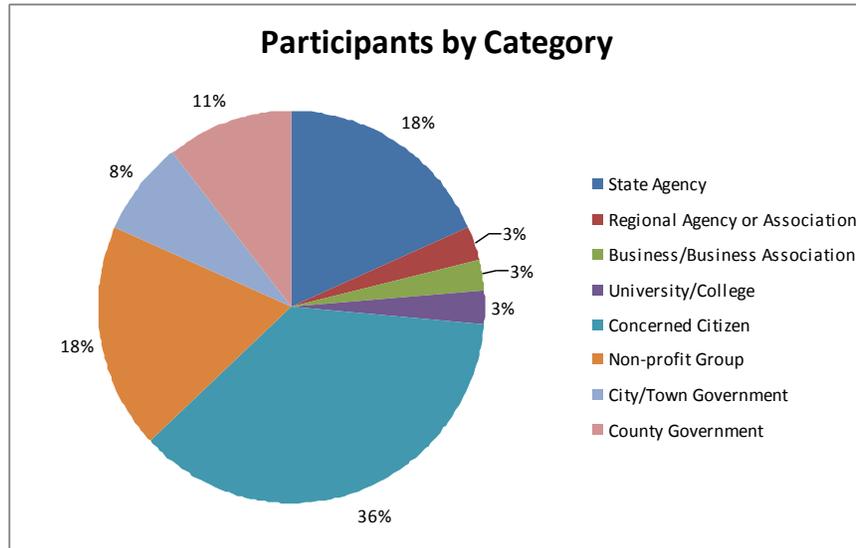
1. Do you have any comments or concerns about the list of suggested adaptation strategies?
2. Would you suggest any alternative strategies?
3. What important trade-offs would you consider with each strategy?

After much discussion on the above questions, participants voted for their top three priority strategies. If priority voting was completed in a timely fashion, group discussion continued emphasizing the following questions:

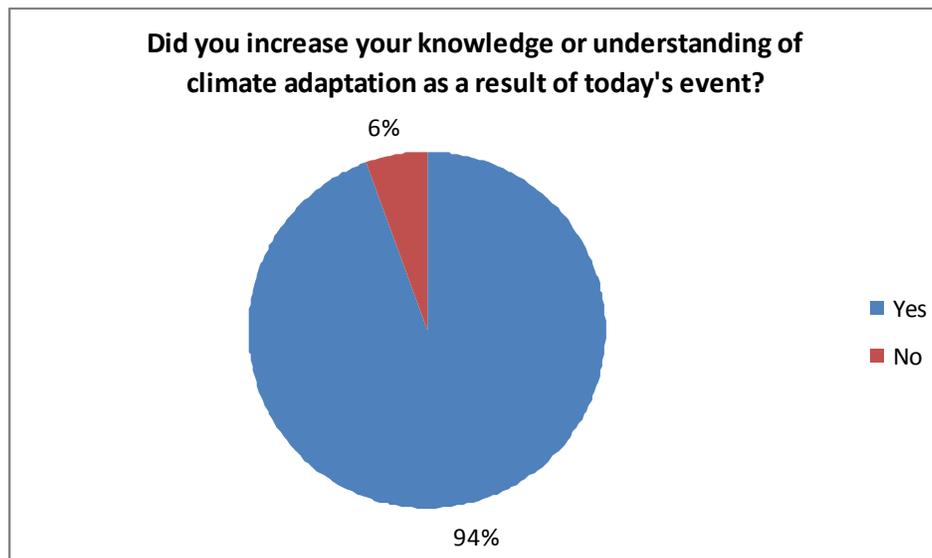
4. What actions do you think can be pursued with currently available resources and political agreement?
5. What additional information would help you make decisions?

At the end of the allotted time, groups decided 3-4 key takeaways from their discussion to share with the larger group.

## Evaluation Survey Highlights

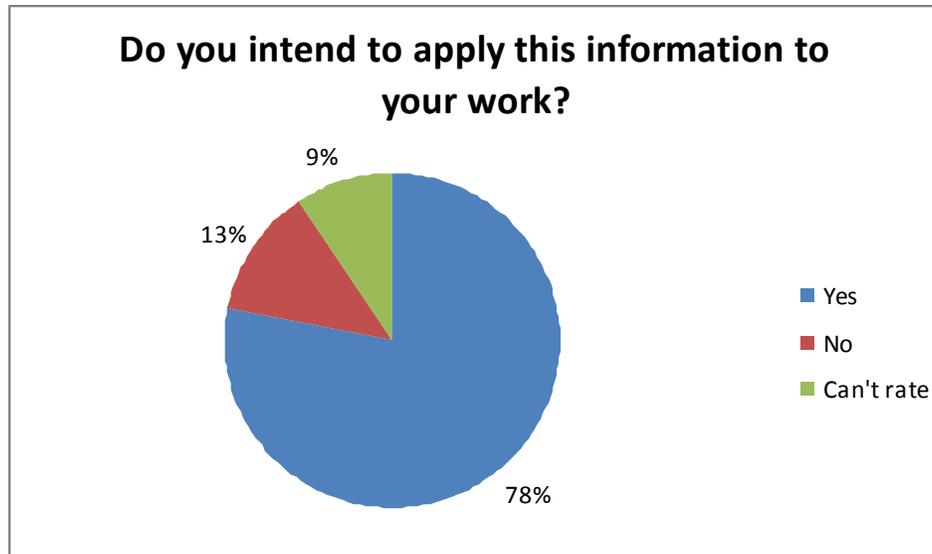


Seventy-seven individuals attended the two sessions (33 on Monday and 44 on Tuesday). Participants were given an evaluation survey to return by the end of the session. The response rate was 49%. According to this survey, 72% of participants were concerned citizens, nonprofit members, or state agency employees (the three largest groups).



According to the evaluation survey, 94% of participants stated that they increased their knowledge due to the workshop.





Up to 78% of survey respondents intend to apply this information to their work.

What type of obstacles do you foresee to applying this information?

1. Political will (10 comments)
2. Financial Cost (9 comments)

Participants identified political will and financial cost as the primary obstacles to applying adaptation information in Beaufort County.

What additional training or assistance would help address these obstacles?

1. Public education/outreach (13 comments)

Participants emphasized public education as the best means to address obstacles. Specific ideas ranged from more workshops to community-level outreach that could target diverse segments of the population.

What component of today's meeting was most useful to you and WHY?

1. Breakout sessions (18 comments)
2. Presentations (13 comments)

Participants were particularly happy with the productivity of breakout group sessions. They enjoyed the opportunity to hear different perspectives and appreciated the way they could prioritize actions. Participants also complimented the quality of presentations introducing the topic.

The top priorities identified among the breakout groups were:

- Collect more information
- Public education\*
- Maintain or strengthen setback policy on growing shorelines
- Elevate existing roads and change future elevation requirements.
- Coordination with key players.

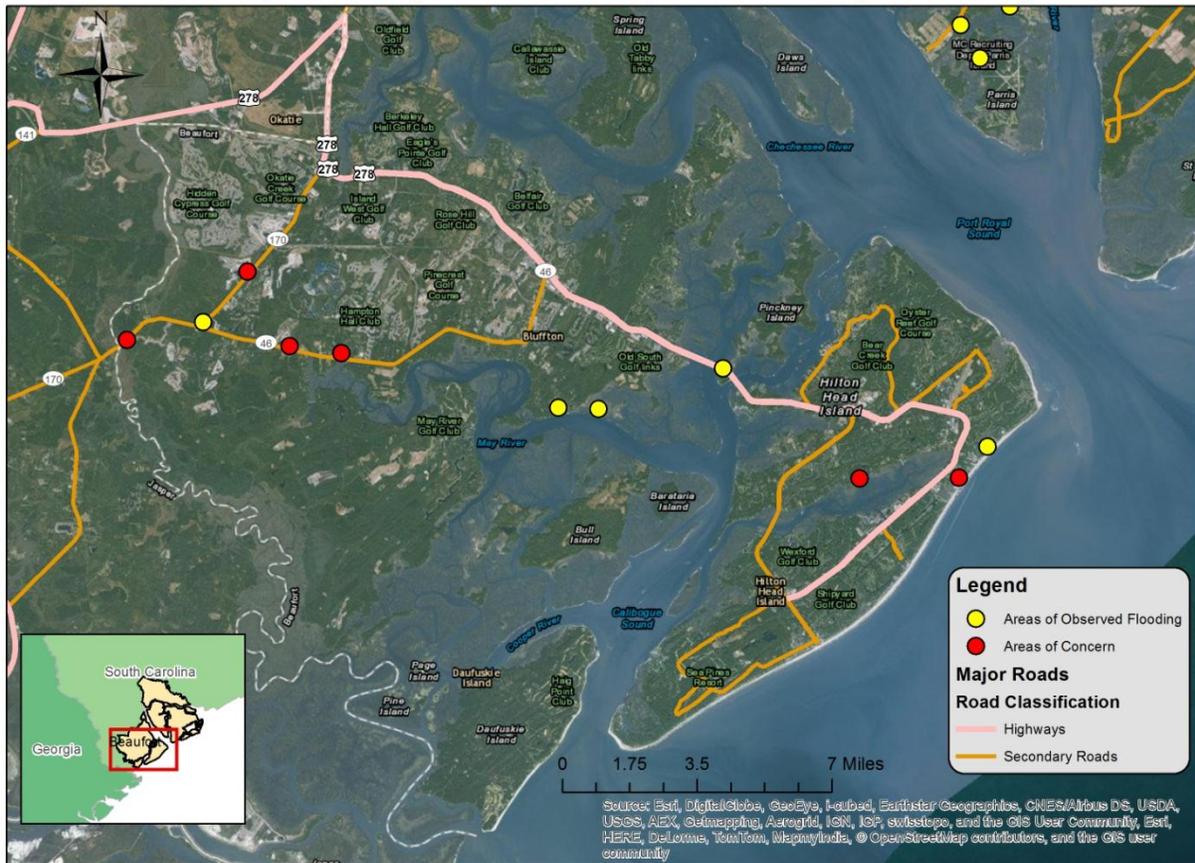
\*This was a new strategy not specifically identified in the focus group.

Breakout groups discussed the adaptation strategies identified by the original focus group. They proposed key edits to action items such as combining similar items (i.e. creating one category of increasing collaboration with key players) and expanding items (i.e. making setback policies more stringent.) Participants also proposed new comprehensive items like living shorelines and low impact development. In many cases, participants used their unique local knowledge to contribute important contextual information. For example, participants noted that homeowners associations (HOAs), planned unit developments (PUDs), and churches were ideal vehicles for community education efforts and important players themselves in determining how the landscape might be affected by sea level rise.

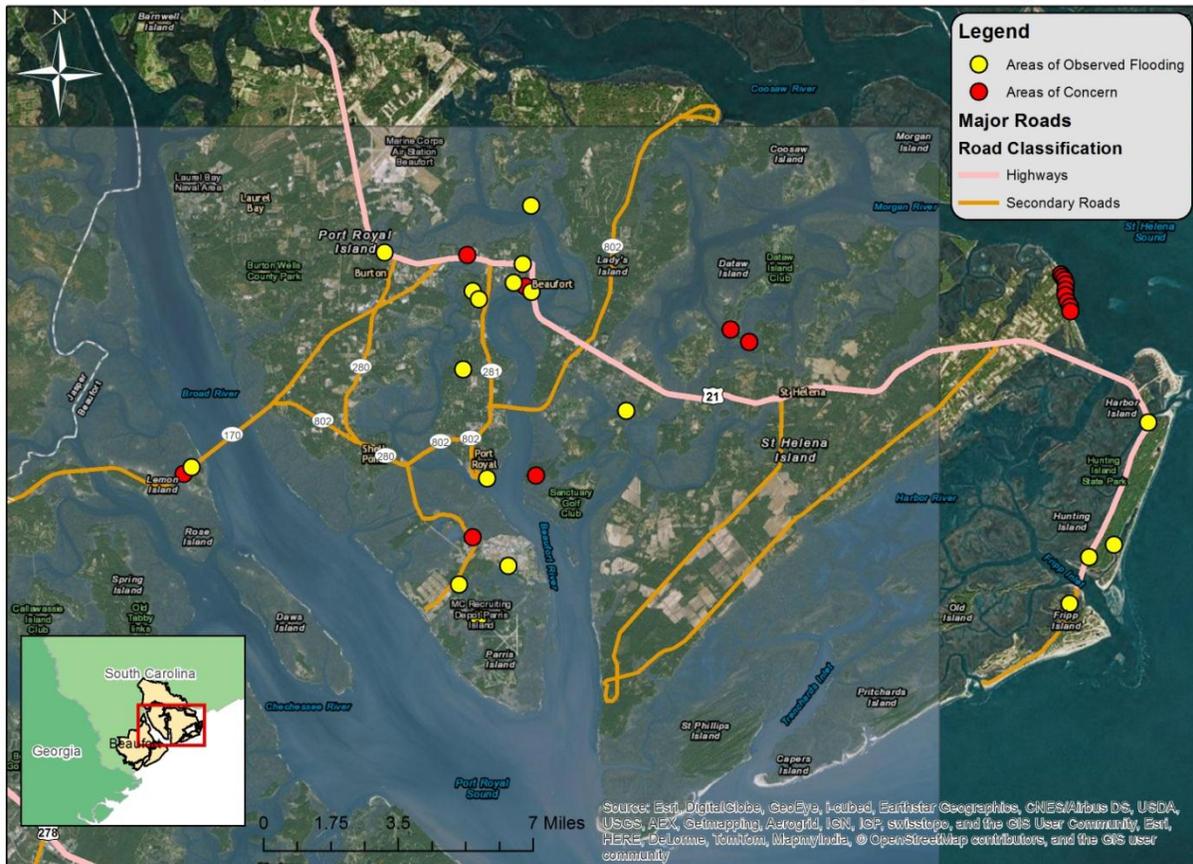
## Participatory Mapping

Maps of Beaufort County were displayed during the workshops. Yellow sticker dots were available for participants to mark areas where they had observed flooding. Red sticker dots were available for participants to mark areas of concern. These maps have been digitized and are displayed below.

Public Input on Flooding at the Beaufort County Sea Level Rise Adaptation Workshop



## Public Input on Flooding at the Beaufort County Sea Level Rise Adaptation Workshop



## Next Steps

The project team will use participant input to write a report on adaptation options for Beaufort County. The document will review the study methodology, highlight findings, and provide a series of recommendations derived from Beaufort County participants.

## Relevant Links

NOAA Coastal Services Center Sea Level Rise and Coastal Flooding Impacts Viewer

<http://www.csc.noaa.gov/digitalcoast/tools/slrviewer>

DHEC SC King Tides Initiative

<http://mycoast.org/sc/king-tides>

Climate Central Surging Seas Tool

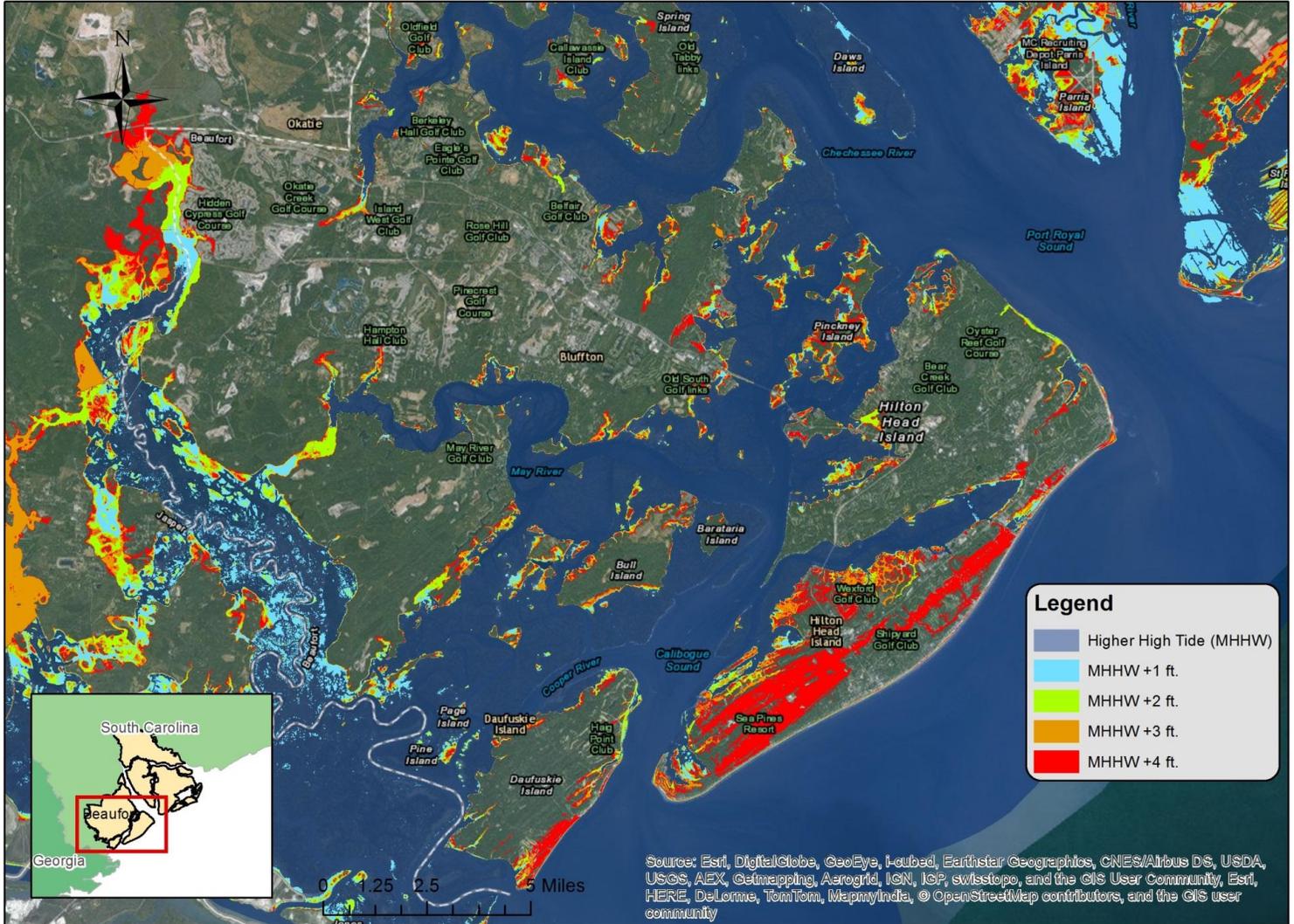
<http://sealevel.climatecentral.org/>

# APPENDIX A

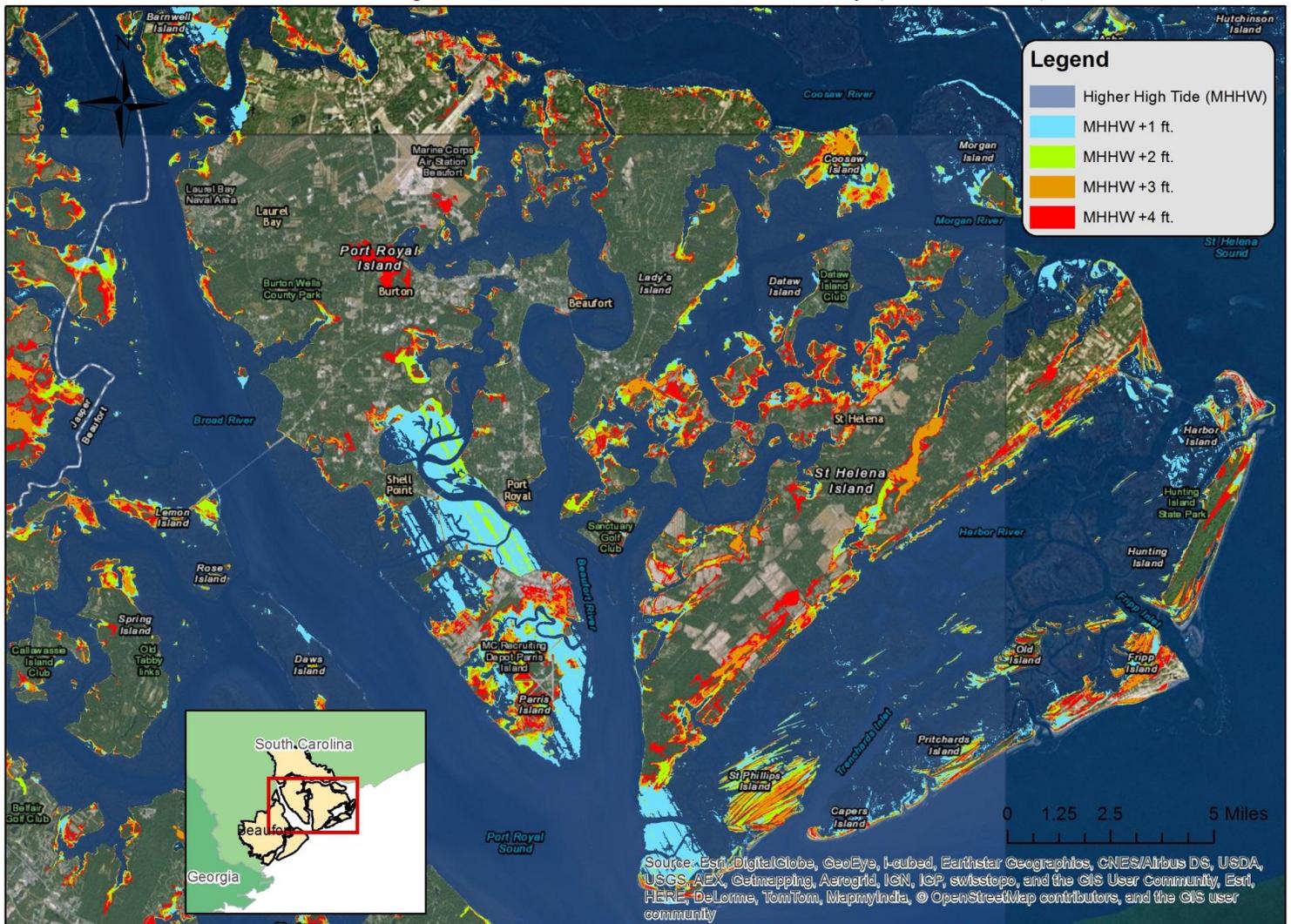
## Sea Level Rise Model of Beaufort County

Mean Higher High Water is the average of the higher of the two daily tides over a ~20 year period. Extreme high tides frequently peak at 1-2 ft. above MHHW. When base sea level rises 1-2 ft., regular extreme tides may peak 3-4 ft. above MHHW.

Potential Impact of Sea Level Rise in Beaufort County (south section)



Potential Impact of Sea Level Rise in Beaufort County (middle section)

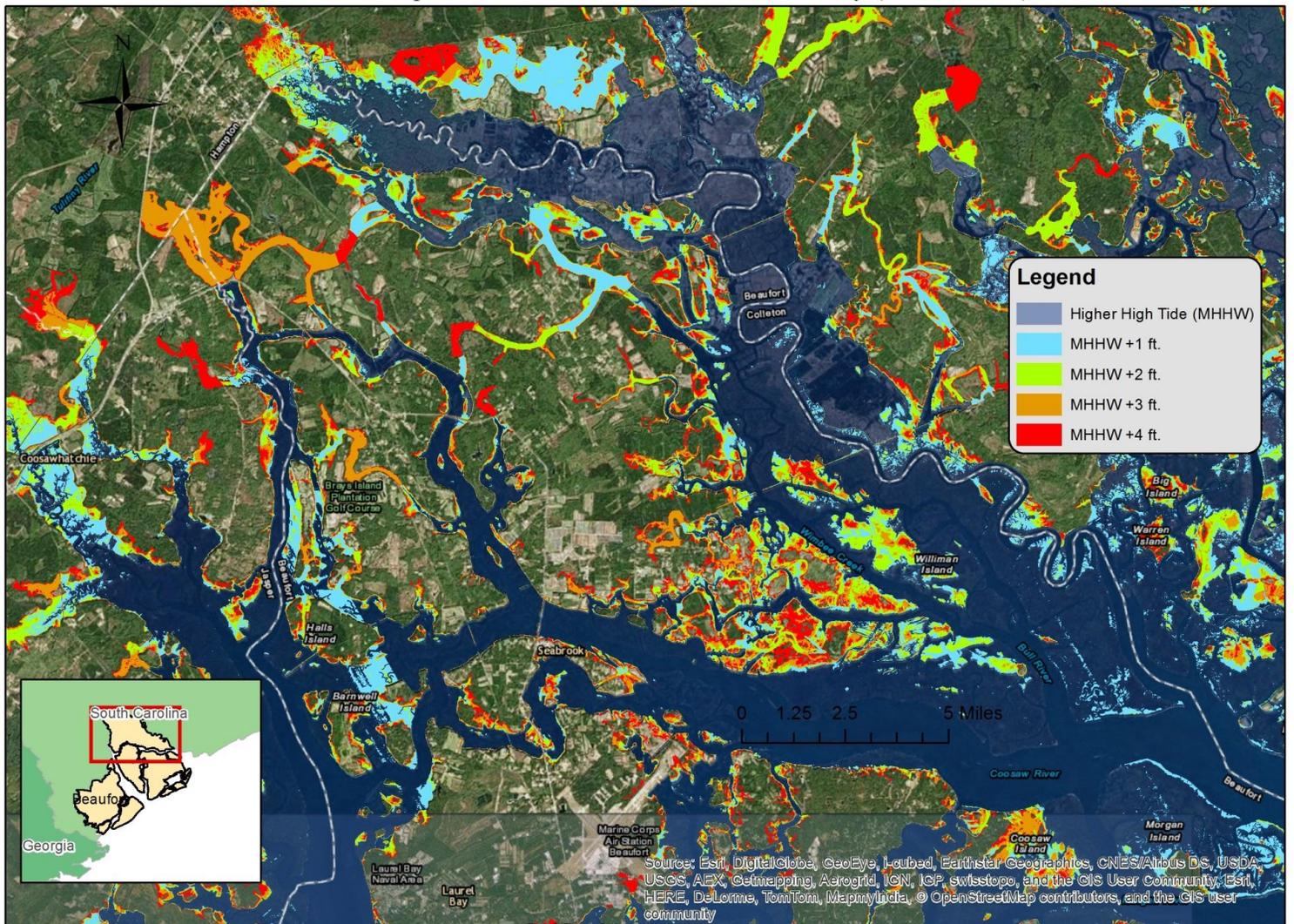


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Potential Impact of Sea Level Rise in Beaufort County (north section)



APPENDIX B  
 Beaufort County Sea Level Rise Adaptation Strategies  
 Identified and Ranked by Working Group  
 WORKING DOCUMENT

Rank	Action	Notes
	Maintain setback policy on shorelines	
2	Improve coordination with relevant state agencies (DHEC, DOT, etc.)	
3	Provide disclosure notice that the county will not be held liable for damages to high risk properties or from not maintaining services	
4	Use sea level rise information to inform disaster recovery plan	
5	Elevate existing roads and causeways	
6	Begin a dialogue on how to balance public & private interests	
7	Coordinate efforts with municipalities	
8	Identify planning thresholds (i.e. determine when sea level rise should be addressed by policy)	
9	Change road elevation requirements	
10	Provide sea level rise information on county website to inform & educate	
11	Collect more information (on flooding locations, sea level trends, erosion patterns, infrastructure vulnerabilities, etc.)	
12	Improve regional planning efforts	
13	Revise building codes to higher quality standards & use incentives	
14	Consider social & cultural vulnerability & resilience	
15	Establish new regulations for septic systems	
16	Monitor the health of salt marshes	
17	Require lagoon / storm water pond maintenance	

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Rank	Action	Notes
18	Establish funding structures and/or tax districts to help property owners	
19	Develop affordable housing in safer areas	
20	Control water access points through low-lying ditches	
21	Restore ferry services to isolated communities	
22	Develop a transfer of development rights program for low elevation properties	
23	Increase awareness of the Open Lands Trust fund	
24	Install tidal gates	
25	Purchase lower elevation lands	
26	Assist with beach renourishment	
27	Purchase higher elevation lands	
<b>Additional Strategies; choose rank you feel most appropriate</b>		