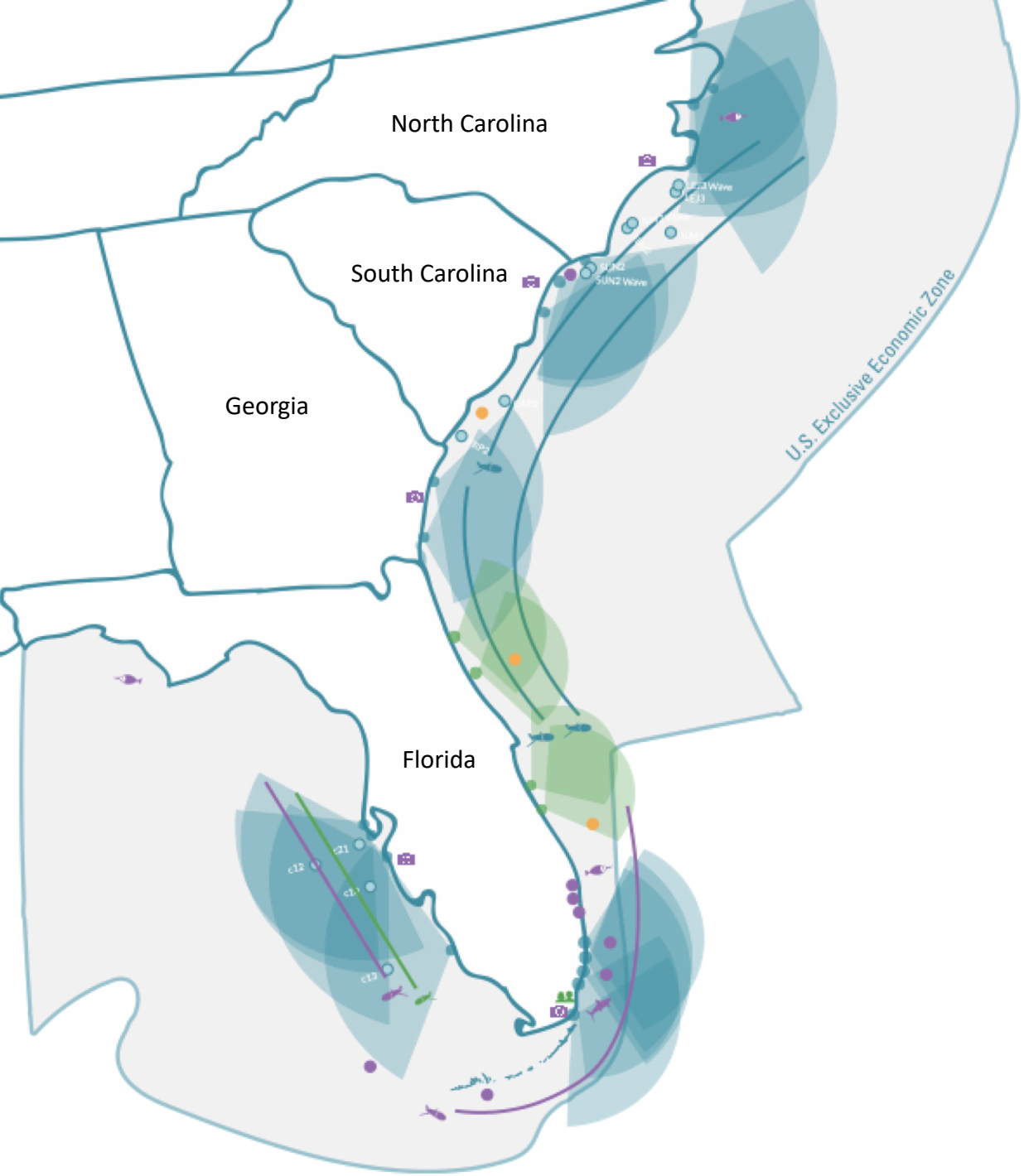


SECOORA
Southeast Coastal Ocean Observing Regional Association

Water Level Network

Nicole Elko, Science Director,
American Shore & Beach Preservation Association (ASBPA)

June 8, 2022

CODAR OCEAN SENSORS

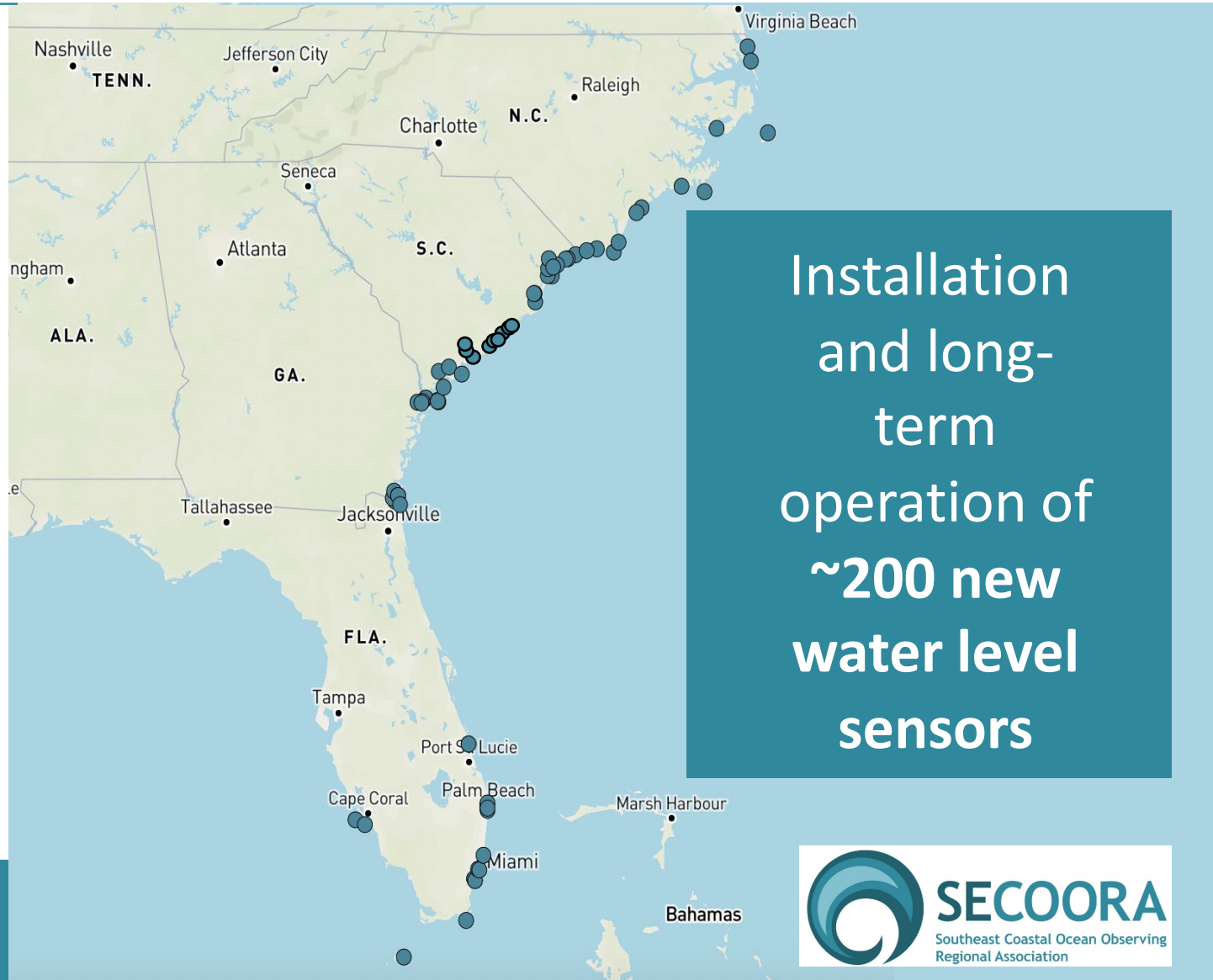
In-Situ

IOOS Integrated Ocean Observing System

Water Level Network Overview

Network Goals

- Provide water level data!
- Fill geographic data gaps
- Support historically underserved communities



Installation and long-term operation of **~200 new water level sensors**

CODAR OCEAN SENSORS · In-Situ · IOOS Integrated Ocean Observing System

SECOORA Southeast Coastal Ocean Observing Regional Association

A Team Effort

asbpa
American Shore & Beach Preservation Association
Advocating for healthy coastlines

Hohonu

Dr. Nicole Elko & Dr. Brian Glazer

Georgia Tech

Dr. Russell Clark

FIU | Sea Level Solutions Center
FLORIDA INTERNATIONAL UNIVERSITY

Dr. Tiffany Troxler

BURROUGHS & CHAPIN CENTER FOR MARINE & WETLAND STUDIES
COASTAL CAROLINA UNIVERSITY

FAU I-SENSE
Division of Research
Florida Atlantic University

Dr. Paul Gayes & Dr. Jason Halstrom

Accomplishments

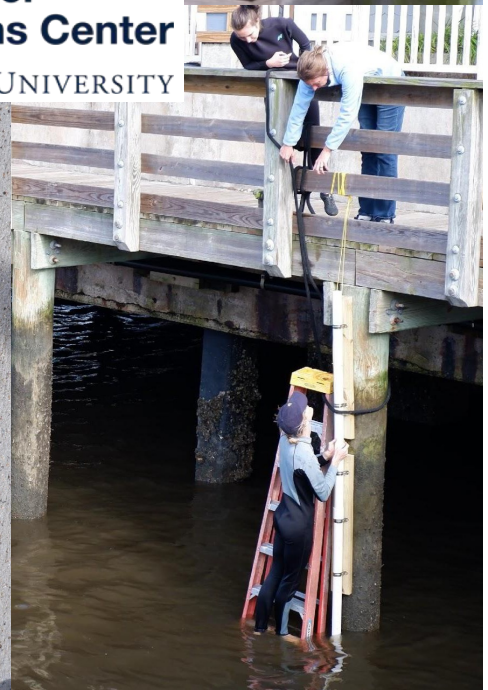
- **47** water level sensors installed: NC, SC, GA FL
- "*The data allowed us to plan for road closures about a day in advance*"
  - Mayor Steve Smith, Topsail Beach, NC
- Sensor improvements, reduce costs, improve performance
- Integration into project teams' existing data interfaces/data delivery platforms
- Building partnerships/trust with communities
- Education: K-12, citizen science, nature centers

Two County Nature Centers Collect Real-Time Information With New Tidal Gauges Donated By Beaufort County

Fernandina Beach Testbed – Install Fall 2021

Georgia Tech

FIU Sea Level Solutions Center
FLORIDA INTERNATIONAL UNIVERSITY



asbpa
American Shore & Beach Preservation Association
Advocating for healthy coastlines

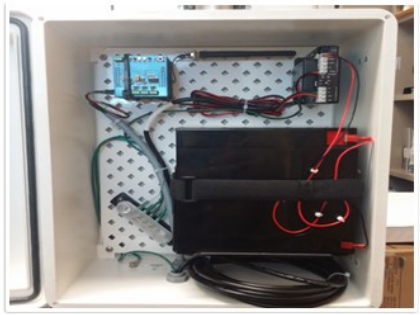
Hohonu

FAU
INSTITUTE FOR SENSING AND EMBEDDED NETWORK SYSTEMS ENGINEERING
Division of Research
Florida Atlantic University

FAU

Burroughs & Chapin Center for Marine & Wetland Studies, Coastal Carolina University

Georgia Tech

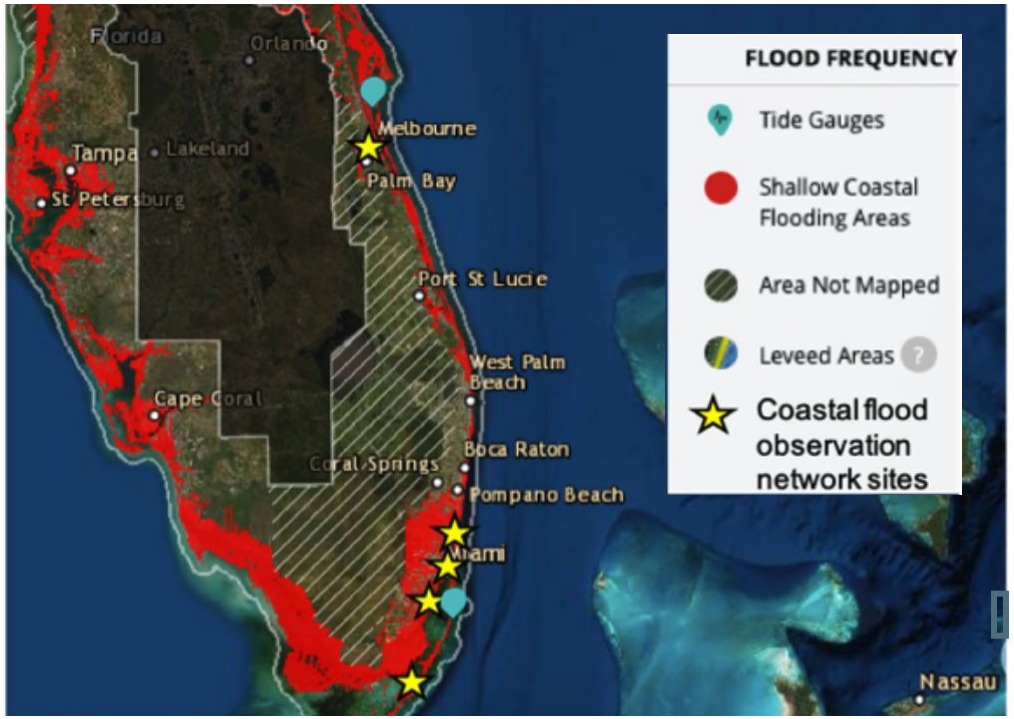


SEA Econet

EMERGENCY MANAGEMENT CHATHAM COUNTY

SAVANNAH savannahga.gov

FIU Sea Level Solutions Center
Florida International University



High tide flooding (in red, DigitalCoast, NOAA) and coastal flood observation sites (yellow stars)

MIAMI-DADE COUNTY

CORAL GABLES The City Beautiful

The City of Miami Florida

The sixth annual
Sea Level Solutions Day 2021
Citizen Science Flood Monitoring Project

S.E. Coastal Communities Water Level Network

Sullivan's Island, SC

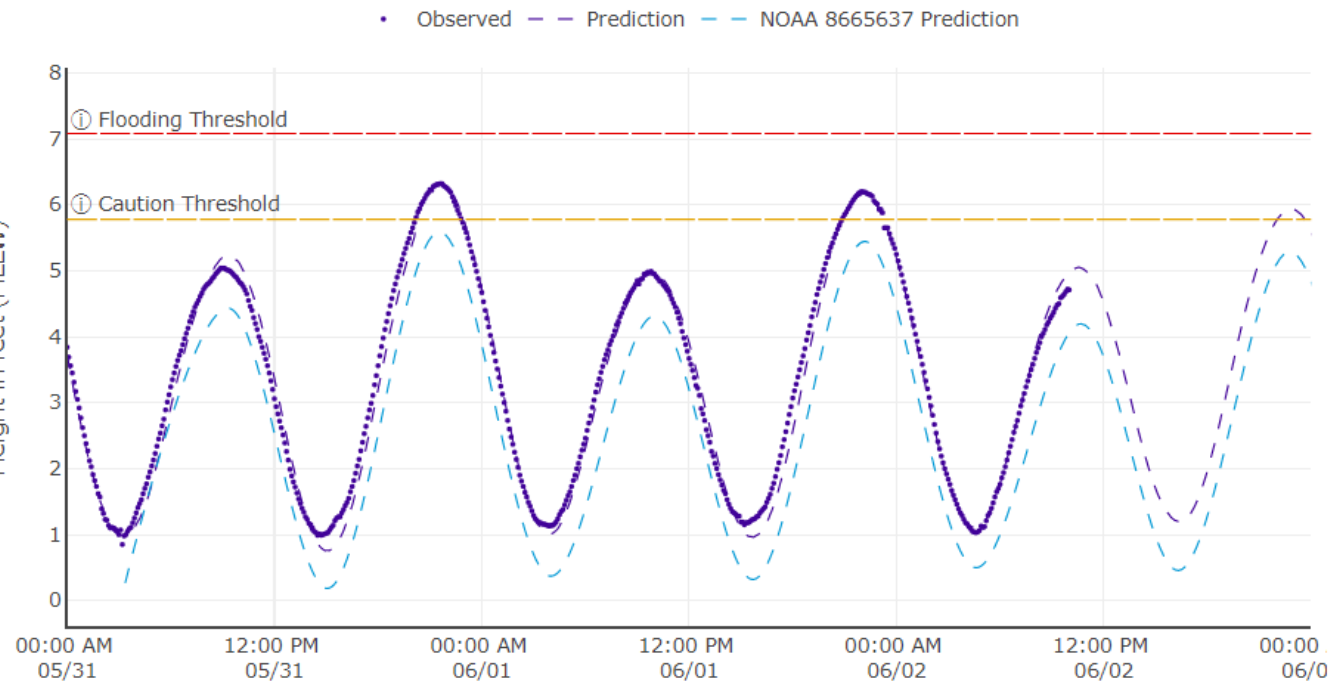
Data Source: Hohonu
Latitude: 32.7654
Longitude: -79.8614

UTC Local (EDT)

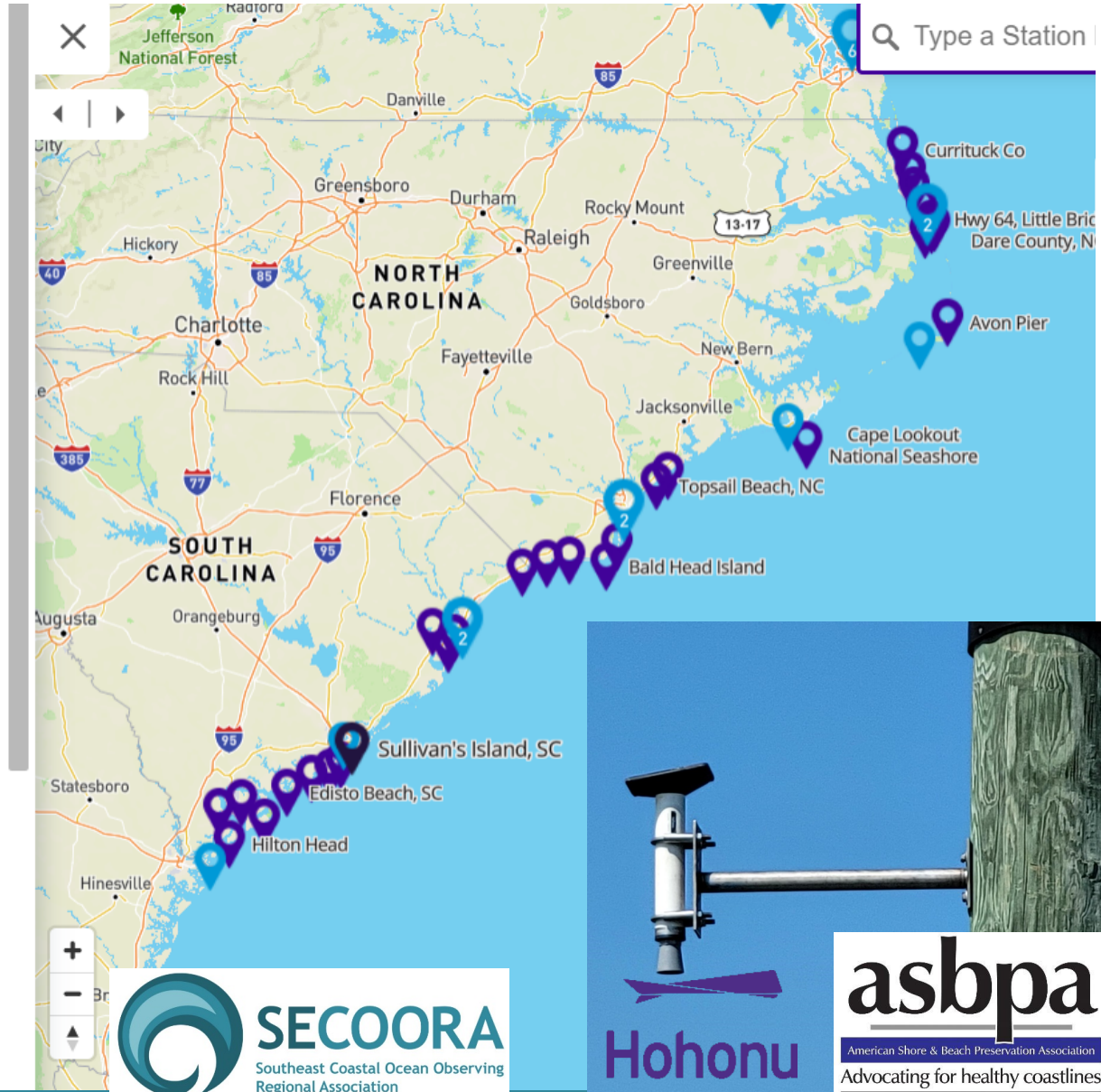
Last Observed: 4.71 feet

Last Updated: Jun 02, 10:02 AM EDT

GET ALERTS



BACK 1 DAY | FORWARD 1 DAY



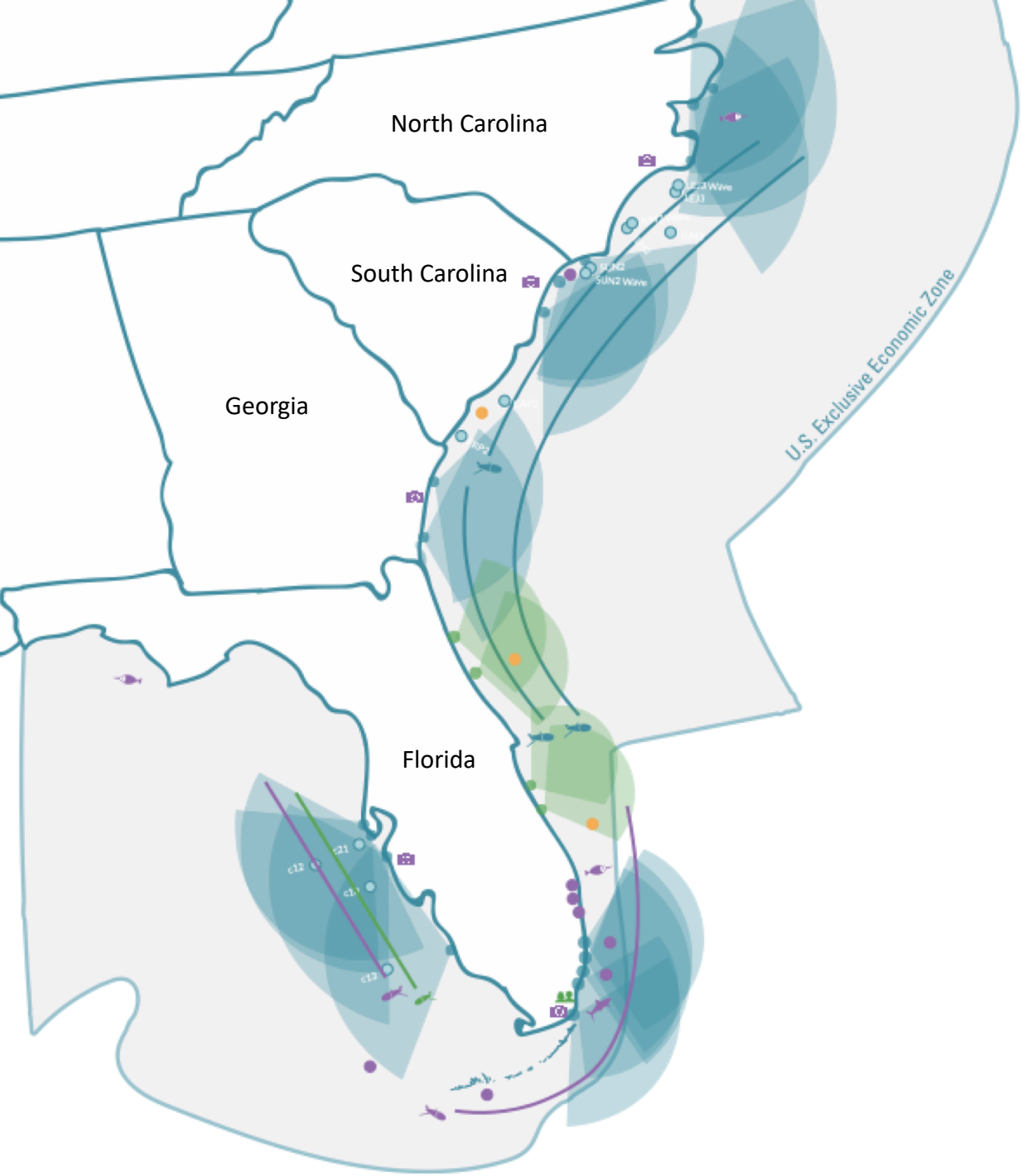
Water Level Advisory Committee

- **Holly Edmond**, *Environmental Manager at Florida Department of Agriculture and Consumer Services*
- **Victor Engel, Ph.D.**, *Director of the USGS South Atlantic Water Science Center*
- **Laurie Hogan**, *Deputy Chief at Hydrologic Services Division of the National Weather Service*
- **Jennifer Kline**, *Coastal Hazards Specialist for the Georgia Department of Natural Resources Coastal Resources Division*
- **Douglas Marcy**, *Coastal Hazards Specialist at the NOAA Office for Coastal Management*
- **Dwayne Porter, Ph.D.**, *Professor at the Arnold School of Public Health (ASPH) and the Baruch Institute for Marine and Coastal Sciences at the University of South Carolina*
- **Raimundo Rodulfo**, *Director of Information Technology and Chief Innovation Officer at the City of Coral Gables*
- **Sarah Spiegler**, *Coastal Resilience Specialist for North Carolina Sea Gran*t
- **David Sumner, Ph.D.**, *Director of the USGS Caribbean-Florida Water Science Center*
- **Gary Thompson**, *Assistant Director at North Carolina Emergency Management's Risk Management*
- **Charles White**, *Director of the Emergency Management Agency for Camden County Georgia*
- **David Wolcott**, *Oceanographer at NOAA Center for Operational Oceanographic Products and Services*

Challenges and Looking Ahead

- Challenges: Scheduling, weather, logistics, supply chain issues, streamlining surveys, cat herding, controlling costs/resource investment
- Year 2: Adoption of common survey protocol to report water level data consistently across 4 teams in the SECOORA portal
  - Install 30+ additional sensors

CODAR OCEAN SENSORS In-Situ IOOS Integrated Ocean Observing System



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