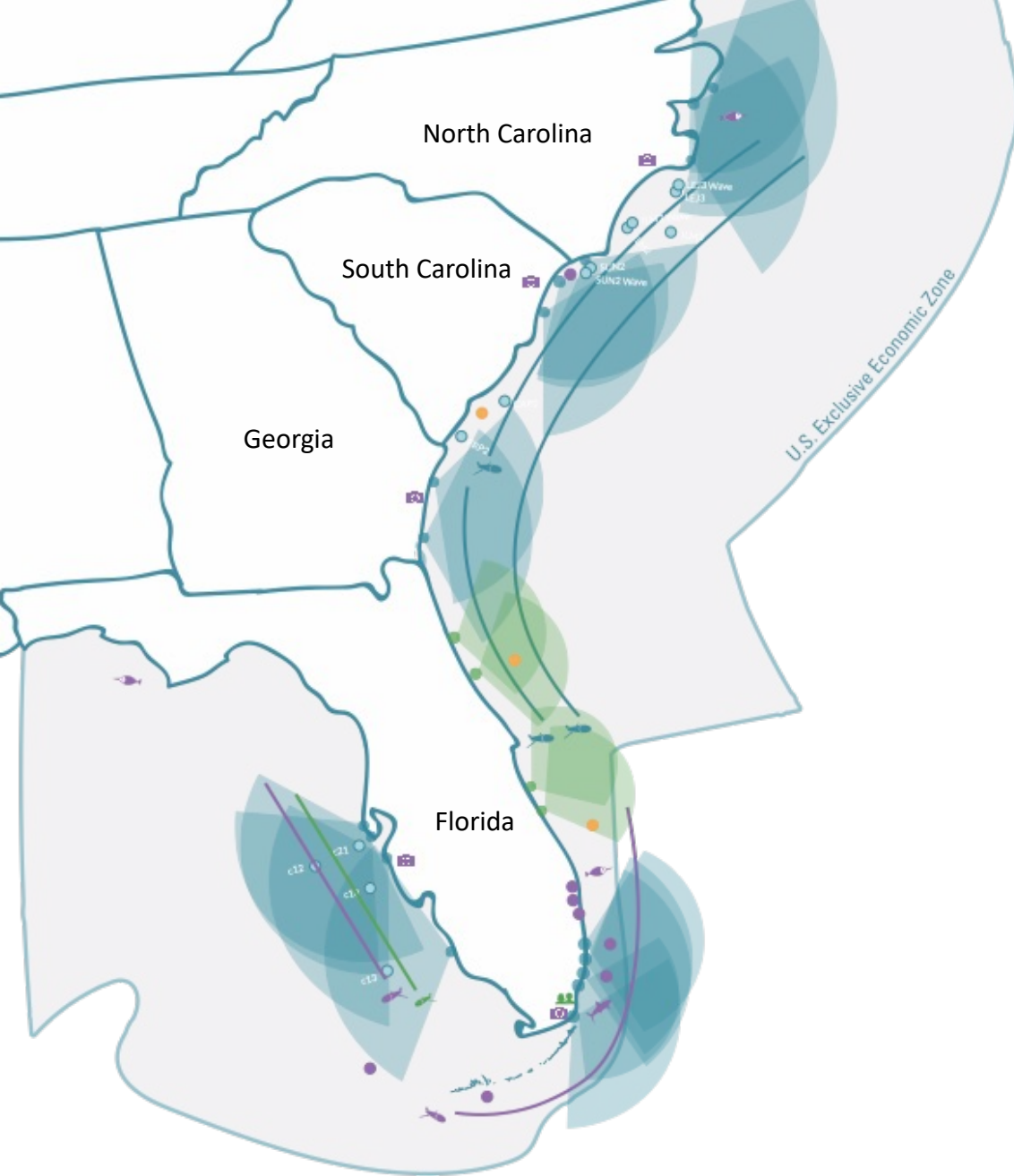


Water Level Network

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

June 8, 2022



A Team Effort

asbpa

American Shore & Beach Preservation Association

Advocating for healthy coastlines


Hohonu

Dr. Nicole Elko & Dr. Brian Glazer

GT

**Georgia
Tech**

Dr. Russell Clark

FIU

**Sea Level
Solutions Center**

FLORIDA INTERNATIONAL UNIVERSITY

Dr. Tiffany Troxler



Dr. Paul Gayes & Dr. Jason Halstrom

FAU

I-SENSE

Division of Research
Florida Atlantic University



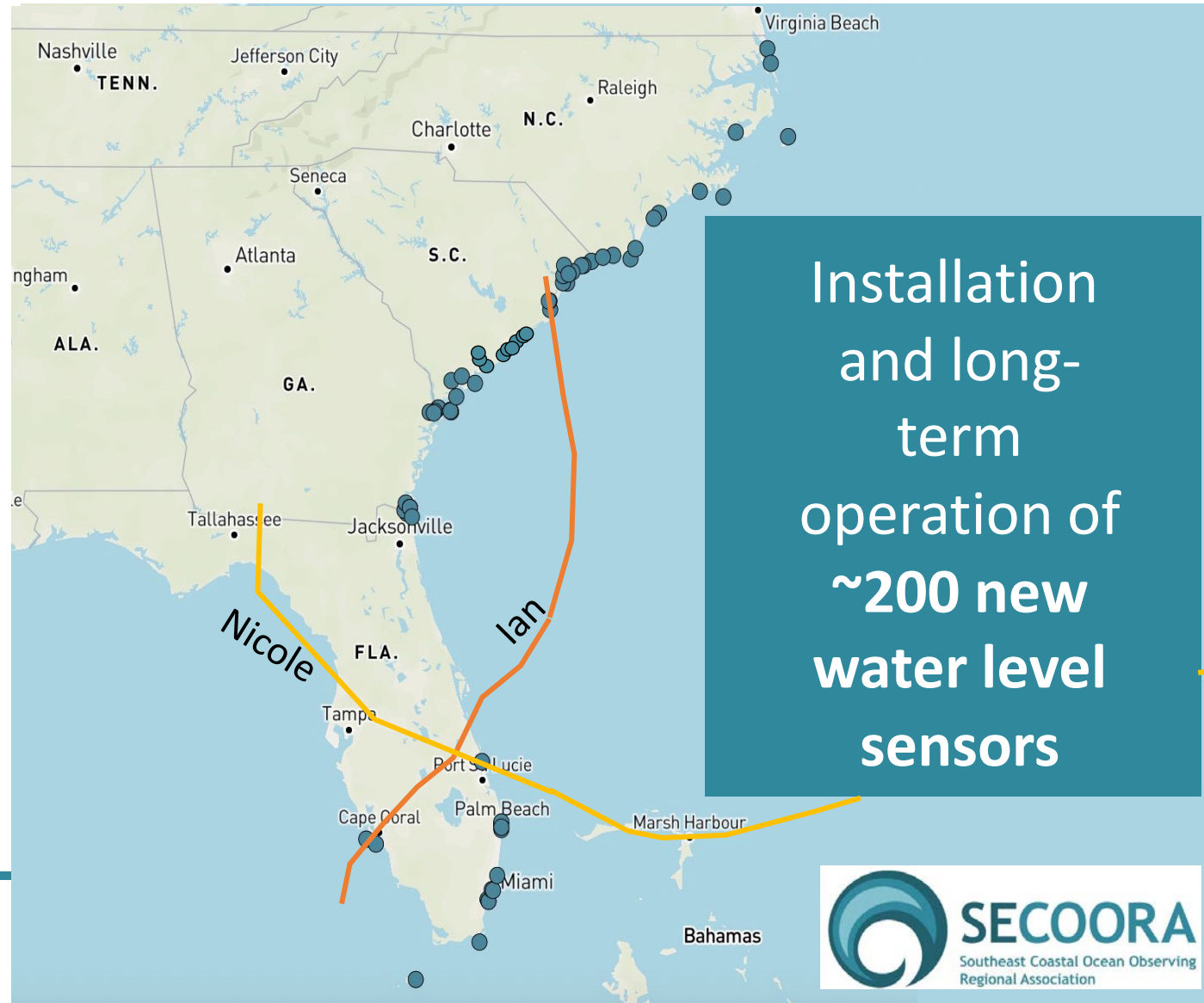
Water Level Network Overview

Network Goals

- Provide local water level data
- Fill geographic data gaps

Challenges

- Meeting demand
- Balancing rigor with intent
- Operations & maintenance



Accomplishments

- 65+ water level sensors installed
- Investment: \$750K by the state of FL to expand the water level, FAU
- Serving the underserved
- Engagement: Building partnerships & trust
- Education: K-12, citizen science, nature centers
- Advocacy: To expand water level network on a National scale
- Benchmarking: Co-located with NOAA CO-OPS, Fernandina

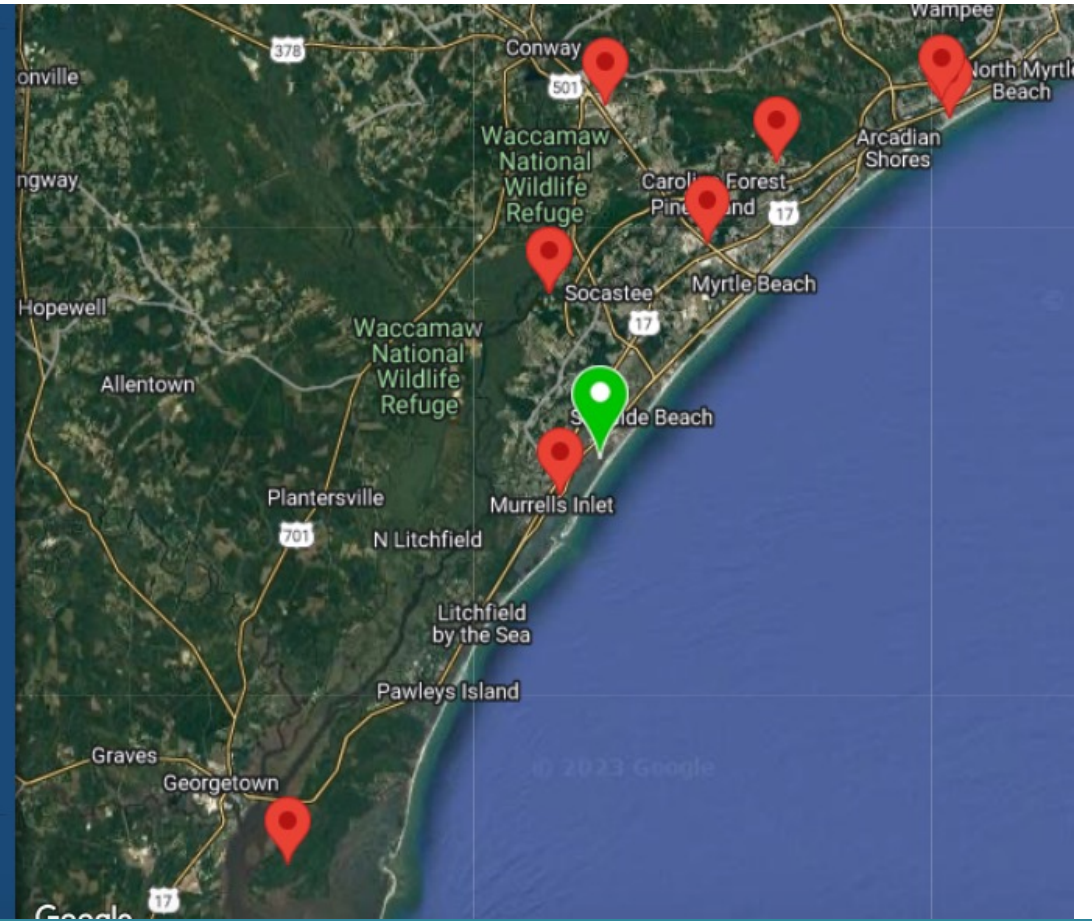
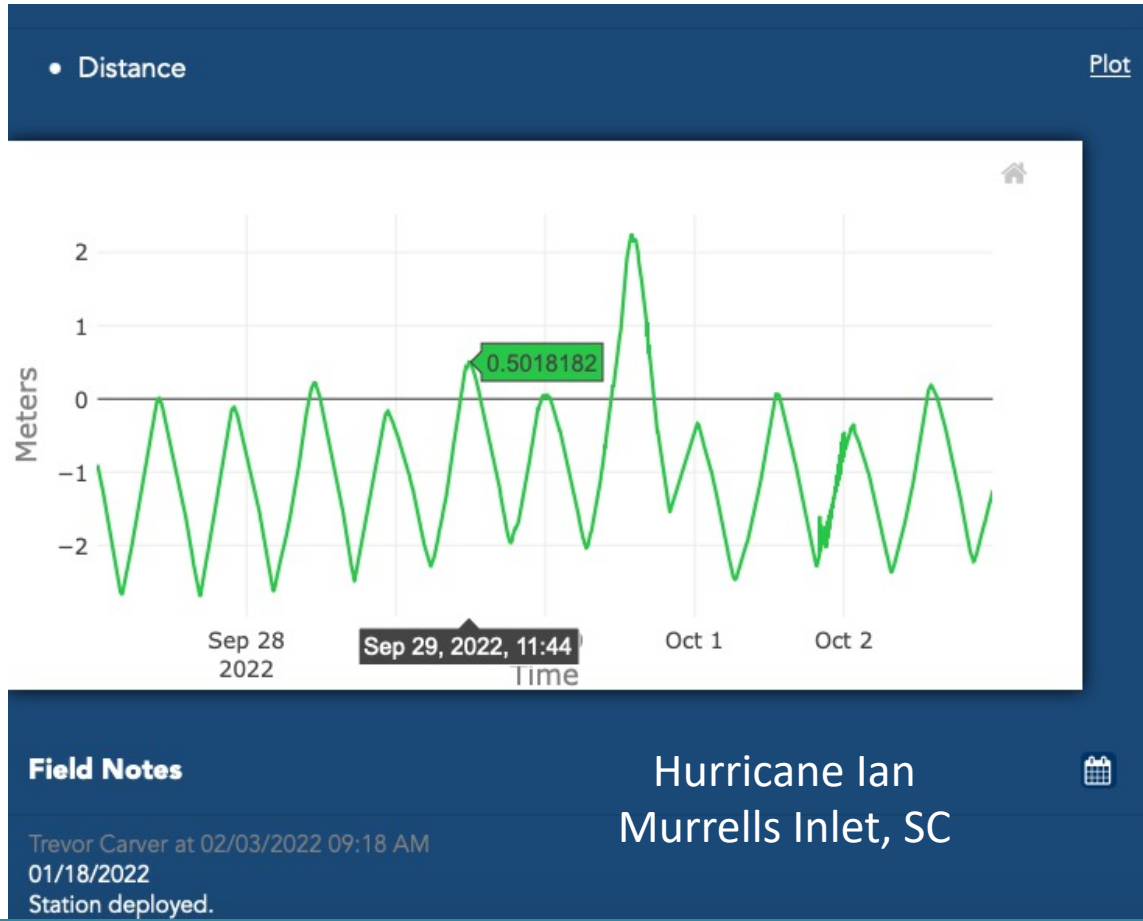


Tropical Storm Nicole: Glynn & Bryan Counties

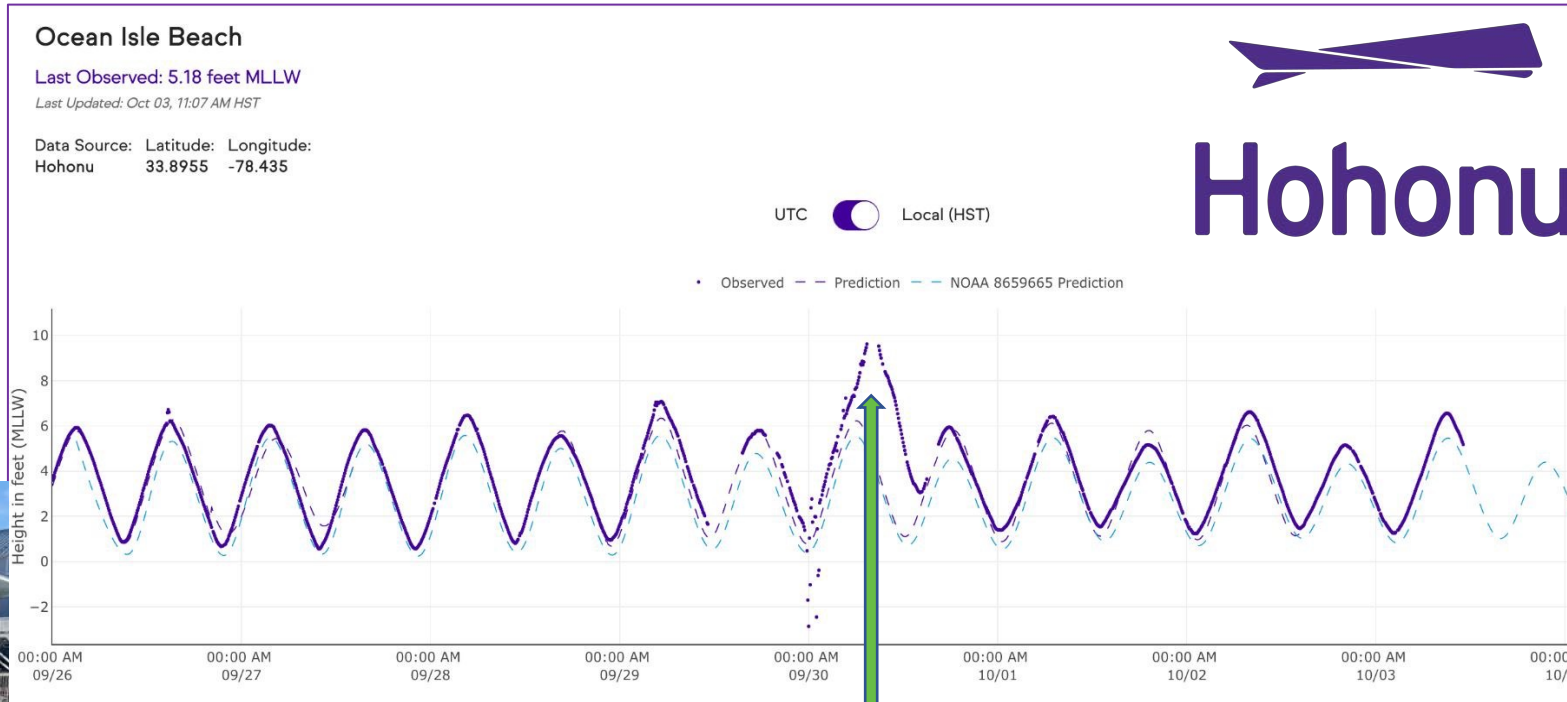
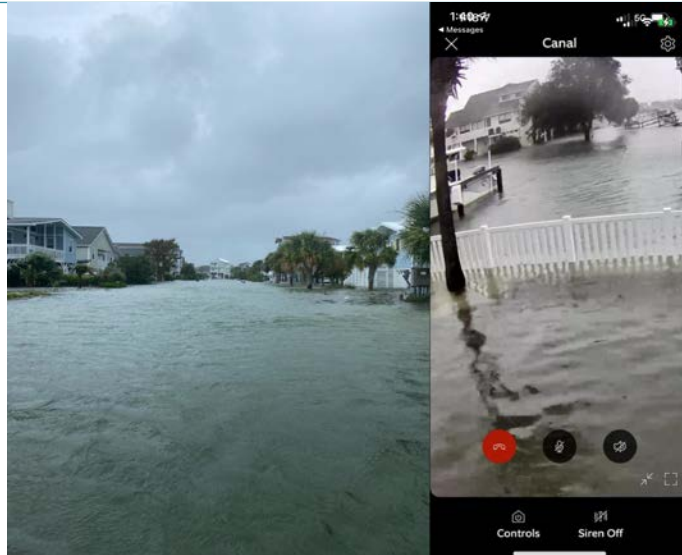
Captured highest water levels on record (past record: Irma)



Hurricane Ian: Murrells Inlet, SC

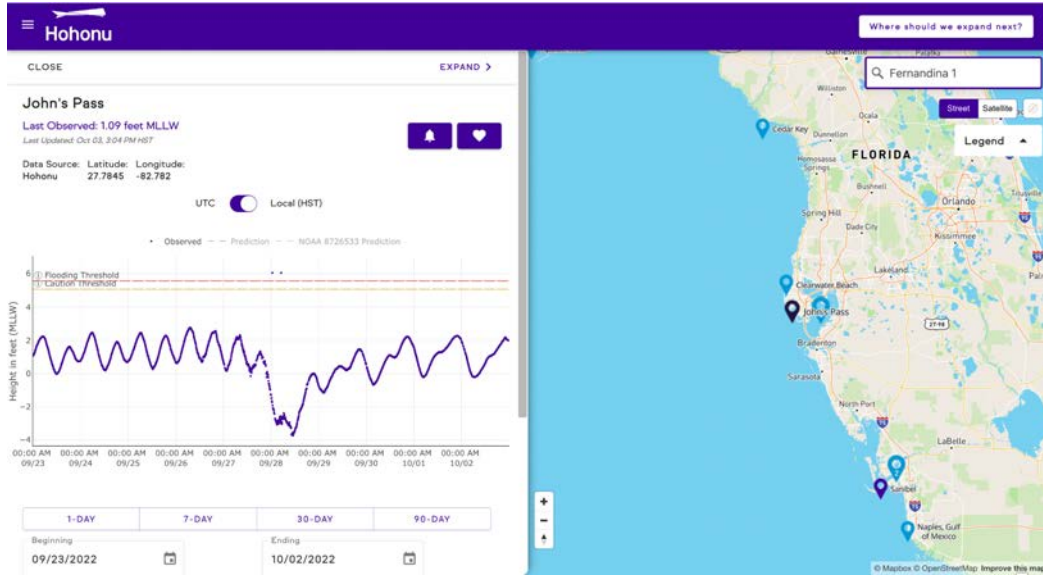


Hurricane Ian: Ocean Isle Beach

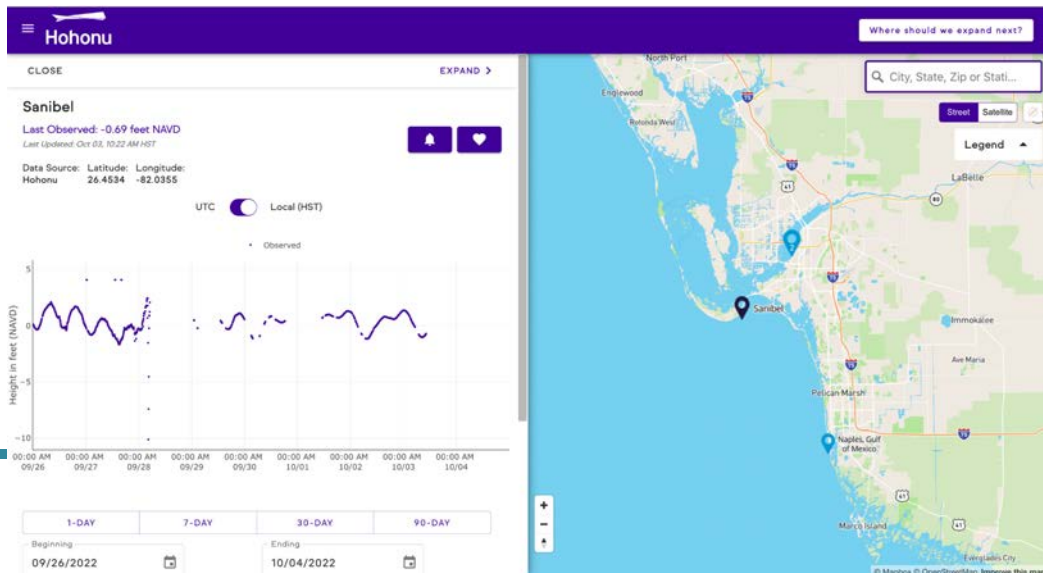


High water levels recorded during Ian, in conjunction with local camera feeds, used to set thresholds for future events

Hurricane Ian: John's Pass & Sanibel, FL



***John's Pass:
Sensor captured
water level draw
down from
Tampa Bay***



***Sanibel: Sensor
inundated at
landfall, stopped
transmitting,
then recovered
and transmitted
data again as
waters receded***



Stakeholder Applications



FEMA



CLOSE

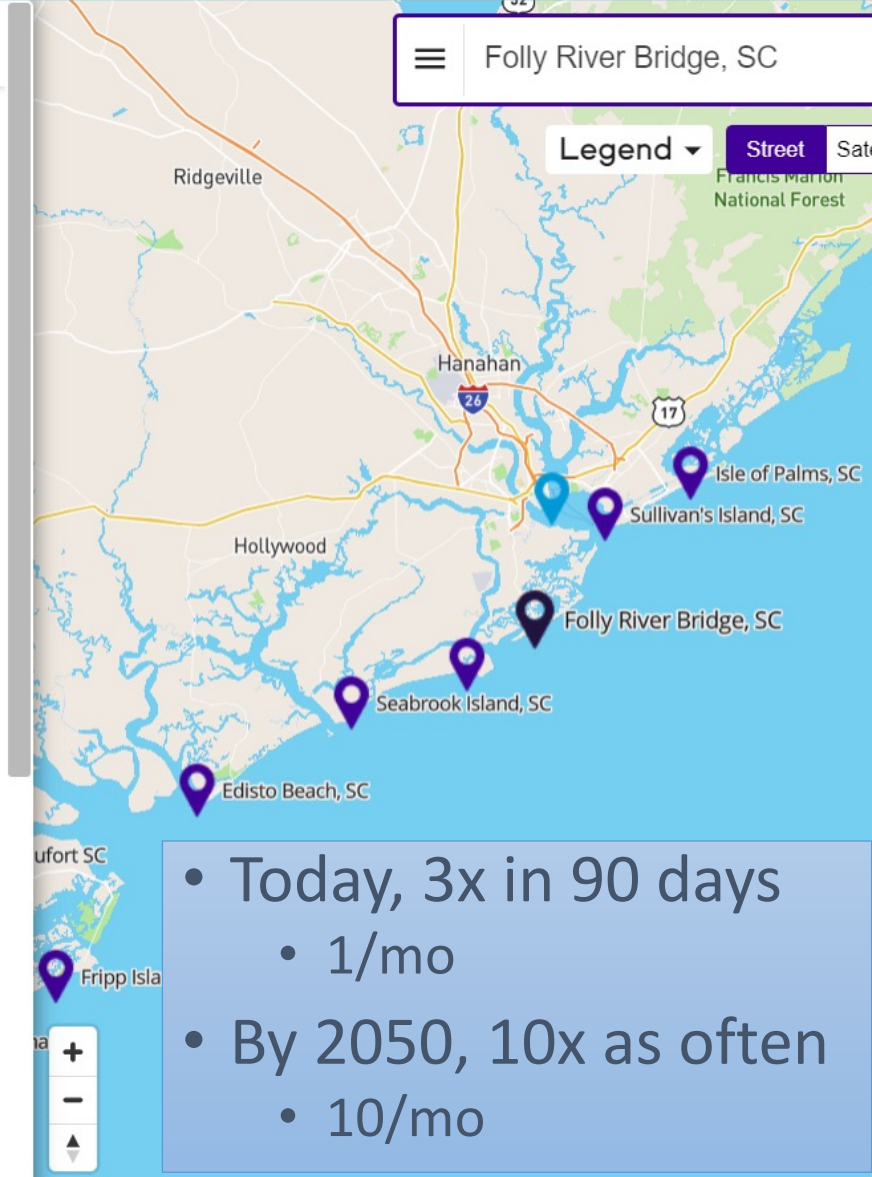
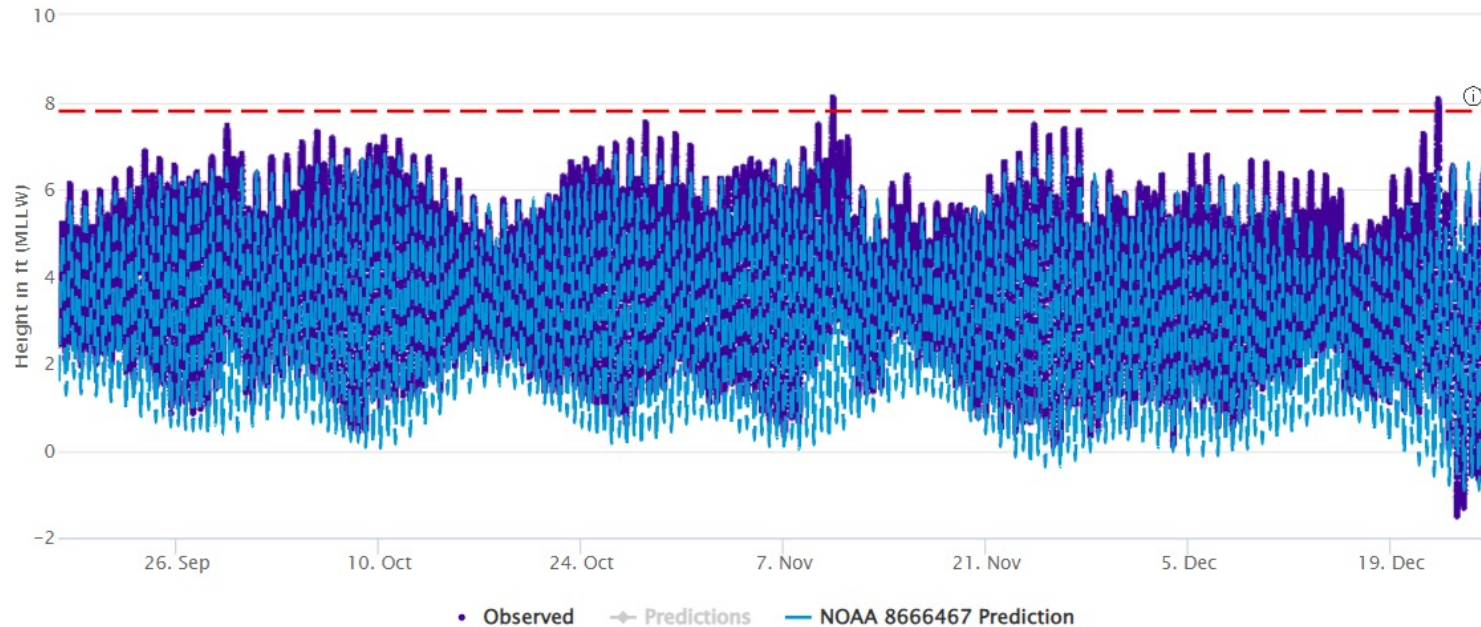
Hohonu

EXPAND >

Folly River Bridge, SC

Last Observed: 3.93 feet

Last Updated: 3 minutes ago



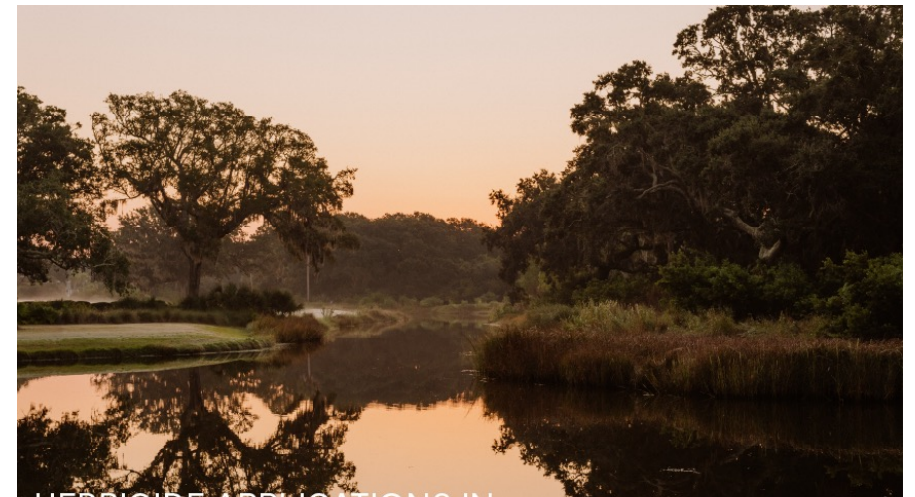
Charleston sea level will rise 1.6 ft by 2050

By 2050: Flooding 10x more often

- Today, 3x in 90 days
 - 1/mo
- By 2050, 10x as often
 - 10/mo

Stakeholder Applications

- Town of Kiawah Island, SC
- 7 golf courses on barrier island
- Water management system:
 - Sophisticated series of 122 ponds
 - Automated gates
 - Controls over 75% of water flow on island



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