#### COMIT CENTER FOR OCEAN MAPPING AND INNOVATIVE TECHNOLOGIES

UNIVERSITY OF SOUTH FLORIDA • COLLEGE OF MARINE SCIENCE

# Tampa Bay CSB Demonstration

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UNIVERSITY OF SOUTH FLORIDA College of MARINE SCIENCE

# St. Petersburg, FL

USGS

USF St. Pete

FWRI

Campus Florida

Institute of Oceanography

USF College of Marine Science Maritime & Defense Technology Hub

US Coast Guard

Pete Innovation District

Albert Whitted 0.75NM



NOAA SEFSC/OR&R Introduction

## COMIT's Objectives

(1) establish and conduct an innovative program of directed research, to more efficiently map ocean and coastal realms, and provide data, predictions and synthesis products to be used by first responders, resource managers, planners, and the public,

(2) develop and institute an education program to train the next generation of mapping specialists and to establish a public education and outreach capability to communicate COMIT and NOAA's mapping objectives and science products to the general public, and,

(3) expand and augment the capacity of NOAA and its partner organizations to respond to coastal disasters arising from extreme weather events, accidents and other threats to people, property and ecosystems in coastal areas of the United States and the world.

#### About Us

### WHAT WE DO

#### **Uncrewed Systems**

Improving the efficiency of seafloor mapping efforts via advanced technology and processing algorithms.



#### Forecasting & Remote Sensing

Resolving complexity of spatial and temporal scales for hydrodynamic modeling in nearshore environments.

#### Geodetic Observations

Developing tools for high precision measurements of the seafloor in coastal zones.



#### **Professional Development**

Capacity building through training modules, certificate programs, graduate coursework, and seminars.



#### Applied Hydrography

Increasing capacity to rapidly respond to coastal impacts and changes.



#### **Community Outreach**

Community engagement via user-ready content and products for the general public and elementary to high school-aged students.

# Why Here?

- High vessel traffic and economic impact
- Large (shallow) areas of poor coverage
- Susceptible to storm impacts (e.g. storm surge, spring tide flooding)
- St. Petersburg, FL is home to one of the largest marine science complexes in the Southeast.

COMIT Annual Review 2022 (Y2)

Tampa Bay has two of the state's top five counties for vessel registration – Pinellas (53,867) and Hillsborough (41,495).

# More than 1 million boats are now registered in Florida

Latest stories

Jobs

Membership

Selene San Felice

Mar 22, 2022 - News

**AXIOS** Tampa Bay

🎔 in 🖻



https://www.axios.com/local/tampa-bay/2022/03/22/florida-over-1-million-boats-registered

Why Here?





#### Florida Coastal Mapping Program Science and Technical Advisory Committee

Chair: Cheryl Hapke, University of South Florida St Petersburg College of Marine Science
Co-Chair: Rene Baumstark, FL Fish and Wildlife Conservation Commission - Fish & Wildlife Institute
Co-Chair: Ashley Chappell, NOAA Office of Integrated Ocean and Coastal Mapping

#### State Agency Members



Why Here?



## COMIT's Role

"Buy-In" Needs:

- Documented regional-scale success
- SOPs, Frameworks
  - Survey-based feedback
  - A-Z documentation
- Clear benefits to community



Kamolov, Ahmadhon & Park, Suhyun. (2021). Prediction of Depth of Seawater Using Fuzzy C-Means Clustering Algorithm of Crowdsourced SONAR Data. Sustainability. 13. 5823. 10.3390/su13115823.

# Test and evaluate existing technology by considering:

Cost

Participant Effort

Data Quality



COMIT Annual Review 2022 (Y2)

## Opportunities

- Community
  - Boat rental clubs
  - Relationship with harbor pilot association
  - Year-round boating community
- Academic Institution
  - Graduate students
  - Communications department
  - Coastal modeling group within COMIT
- Environment
  - Dynamic, varied, vulnerable

# Plan Outline

#### **3-Phase, Additive Approach**



# Possible Project Outputs

- Clear, concise "How To" documentation
- FL-focused CSB website hosted by COMIT
- New outreach materials
- Results and analyses from surveys



All for now!

Contact: grastys@usf.edu www.marine.usf.edu/comit https://www.linkedin.com/company/usfcomit/ Twitter: @COMITusf

#### CSB Landscape

# Leverage & Amplify Existing Work



3D view of northern GBR showing all vessel tracks as of December 2019







Ali Graham

