

Status Reports: Current State of Operational Oceanography: USA



Our Planet is Changing



We need advanced tools to understand and monitor our Oceans, Coasts and Great Lakes



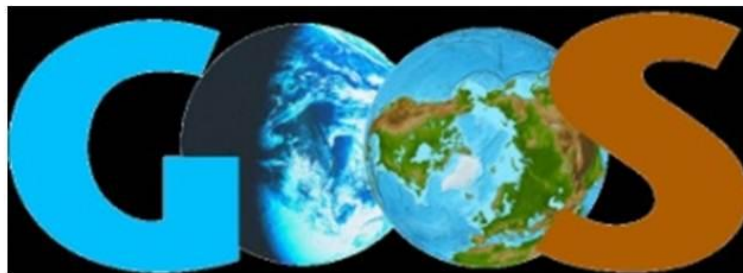
U.S. Integrated Ocean Observing System (IOOS)

U.S. IOOS: Program Overview



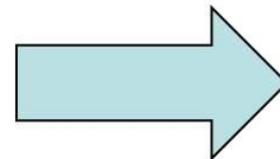
A National Endeavor

But Part of a Global Framework



Global Ocean Observing System

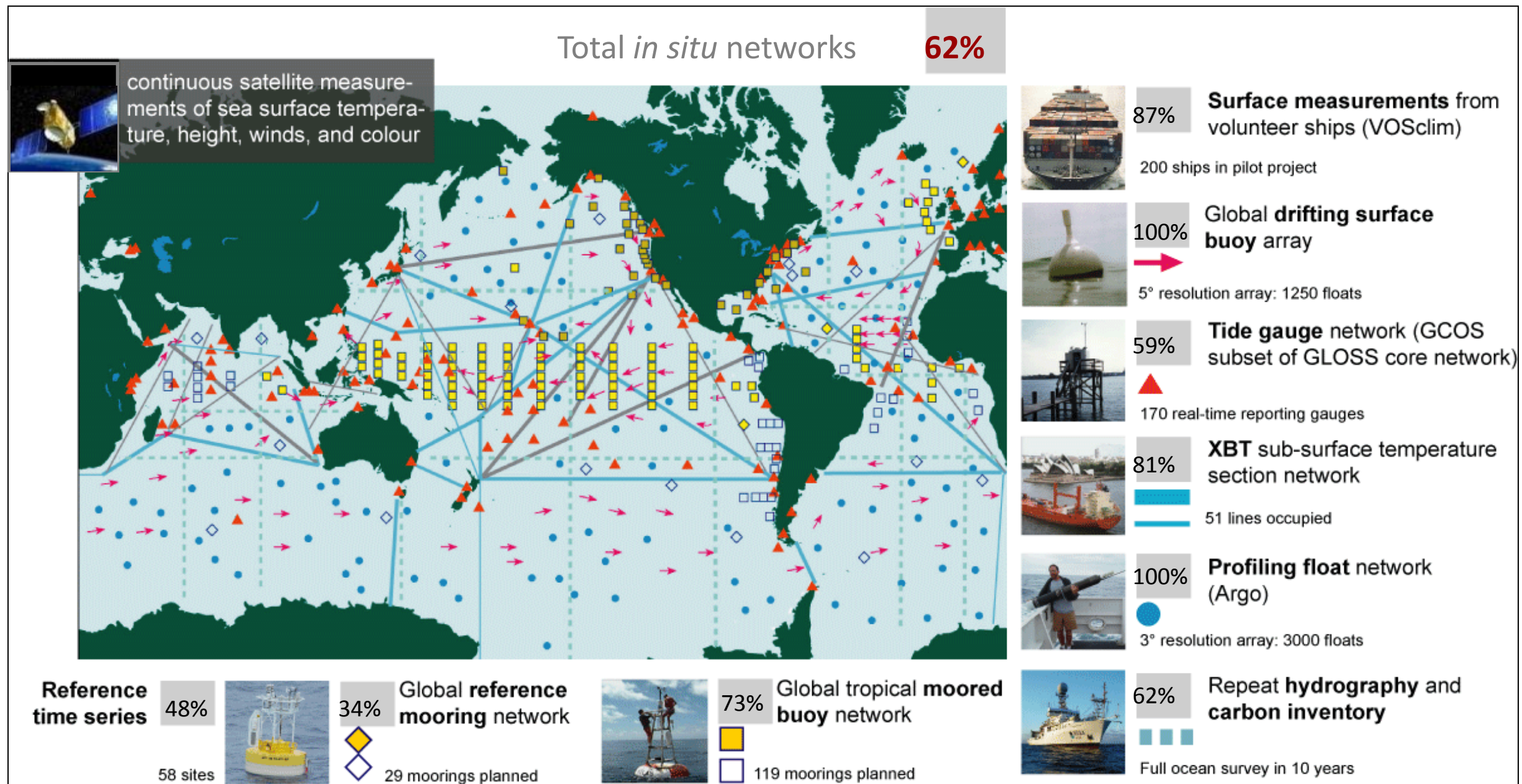
Coastal (EEZ to tidal waters)



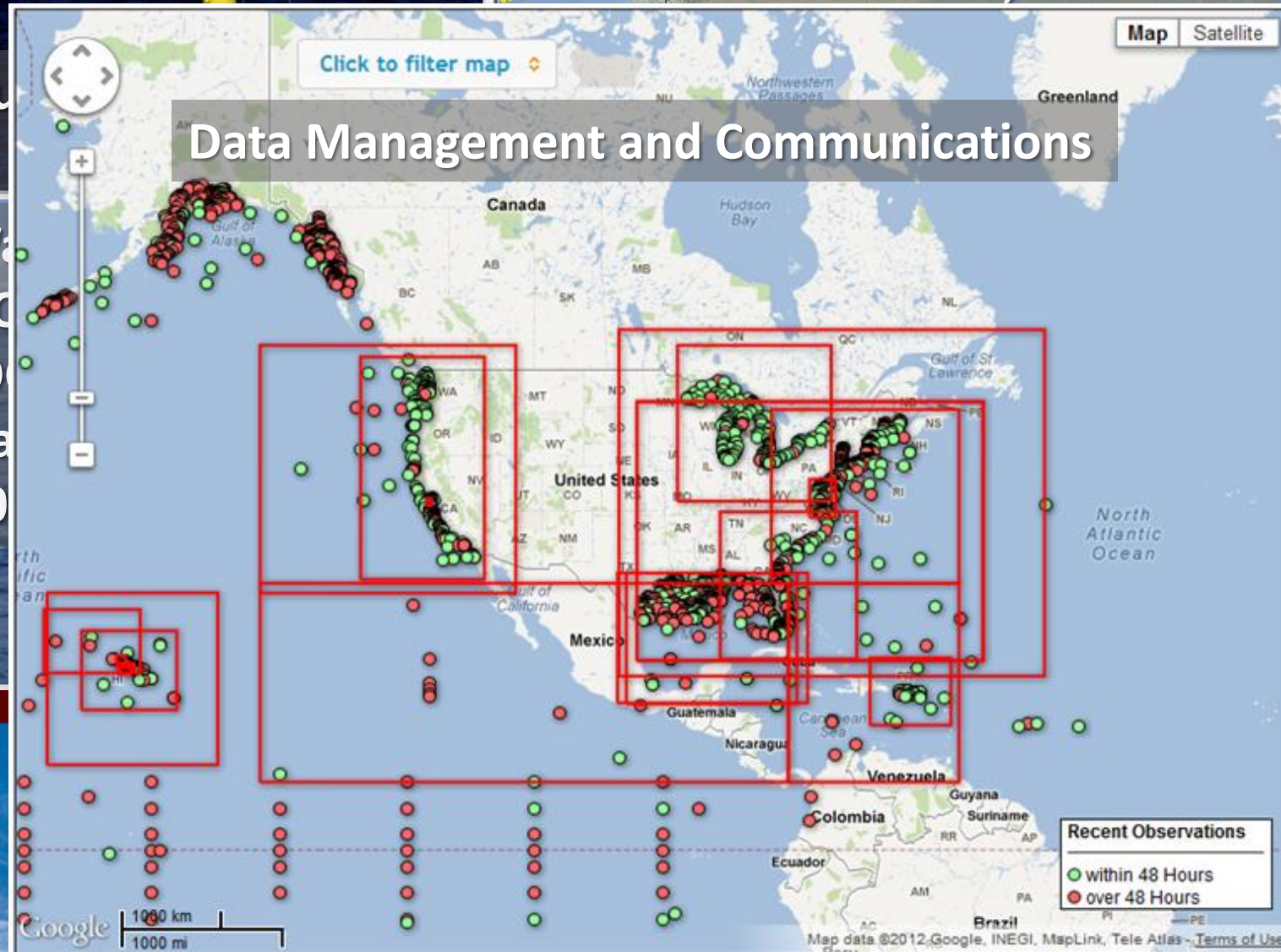
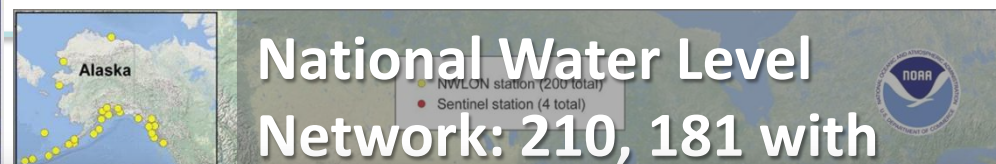
Global Earth Observation System of Systems

Sustain living marine resources

Global Component: Global Ocean Observing System for Climate



Observing System – Coastal Focus



QA/QC

U.S. IOOS Manual for Real-Time Quality Control of Dissolved Oxygen Observations

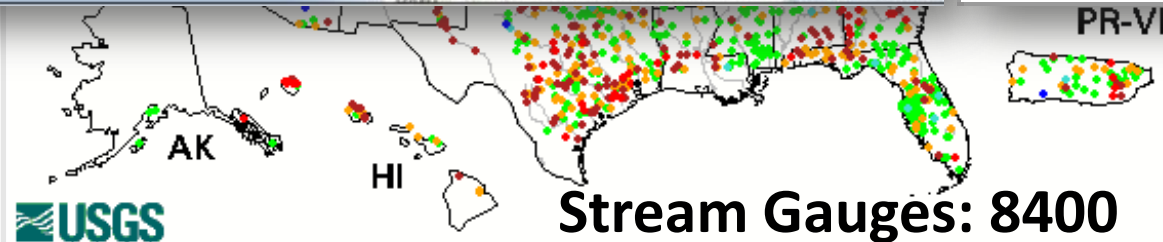
A Guide to Quality Control and Quality
Assurance for Dissolved Oxygen Observations
in Coastal Oceans

Version 1.0
December 2012



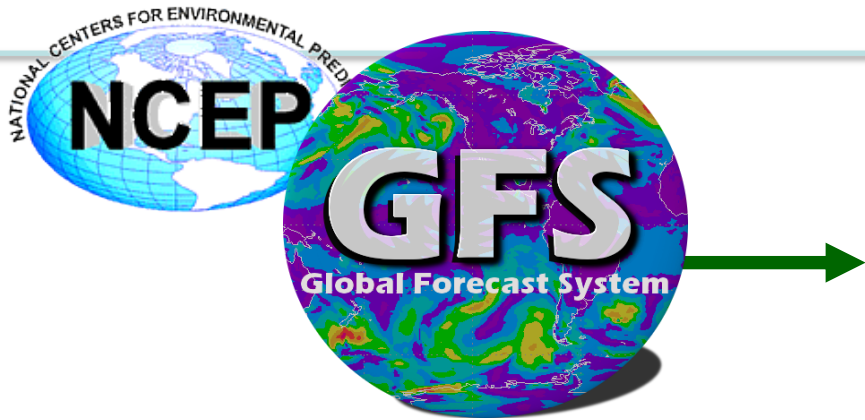
REAL-TIME SYSTEM
(PORTS®)

PORTS®: 22 systems



GO GROUP ON
EARTH OBSERVATIONS

Modeling and Forecasting



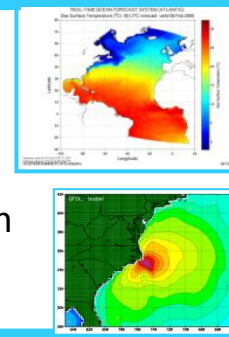
Hurricane
GFDL
HWRF

Coupled

Oceans

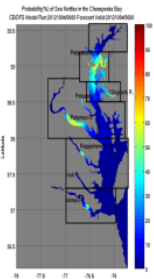
HYCOM

WaveWatch
III

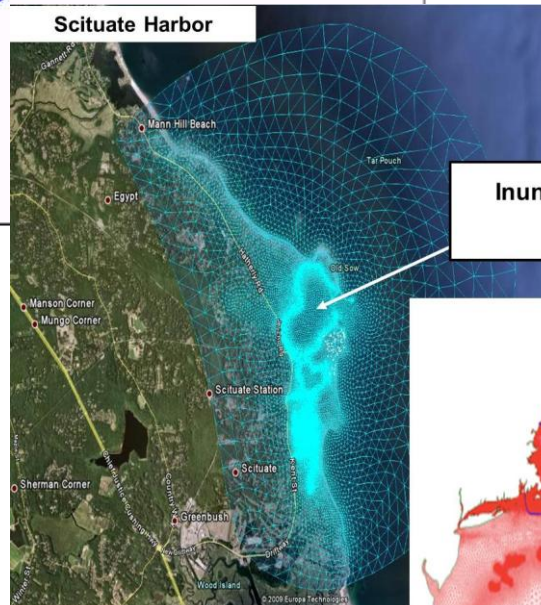
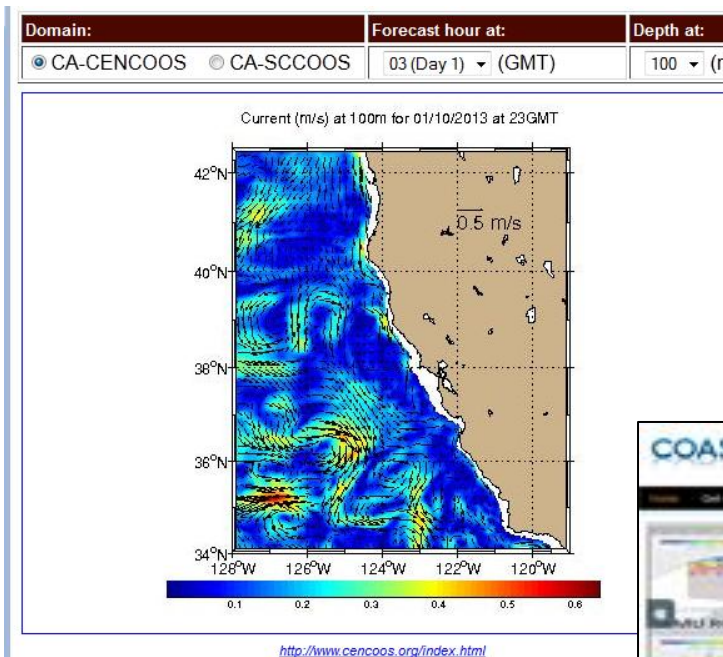
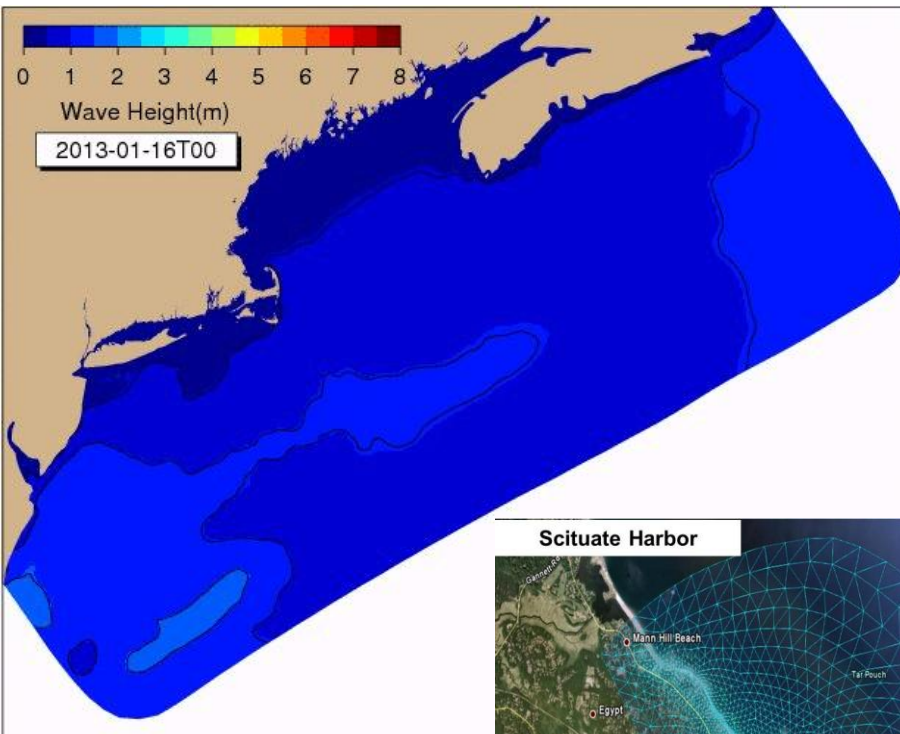


NOS – OFS

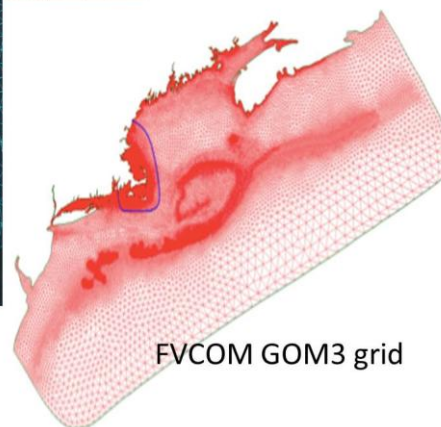
- Great Lakes
- Northern Gulf of Mex
- Columbia R. Bays
- Chesapeake
- Tampa
- Delaware



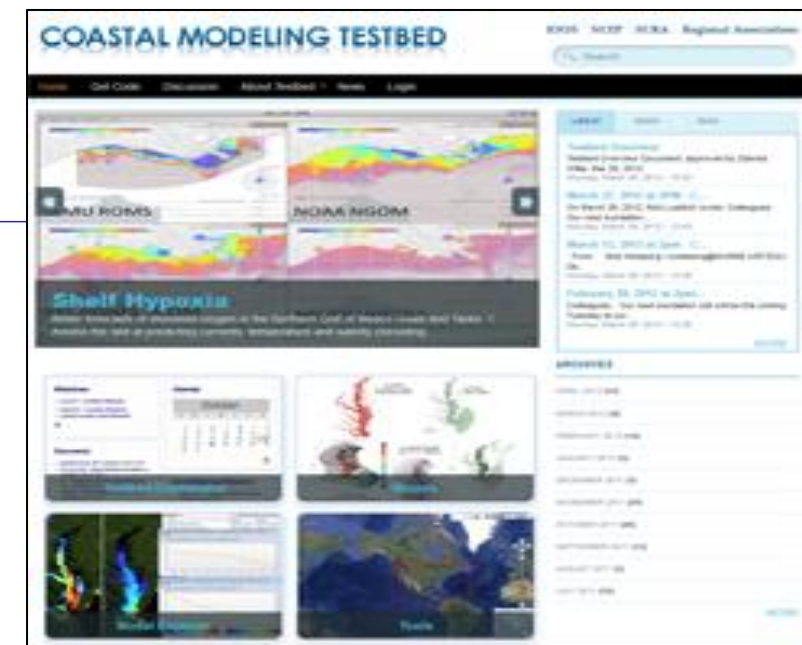
Sea
Nettle
Forecast



**Inundation Forecast
System**



FVCOM GOM3 grid



Challenges

- Design
 - What information is required?
 - What technology is fit for purpose?
 - What are the links between observations and models?
 - What organizational structure / jurisdiction?
- Implementation
 - How do you sustain systems?
 - How do you ensure data quality?
 - How do you manage the data / information?
 - How do you integrate across the systems?
 - How do you deliver the information?