

US IOOS®

Coastal and Ocean Modeling Testbed: Roundup and Progress

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COMT Annual Updates and Highlights

- Transitioning to new framework for COMT
- New FFO cycle in progress. Merit Review complete. Final decisions expected in next 2 months.
- Communications training for project teams
- Finishing submissions for a special issue of JGR, expecting ~12-15 articles.
- Project teams finishing work for September project completion

Chesapeake Bay Hypoxia

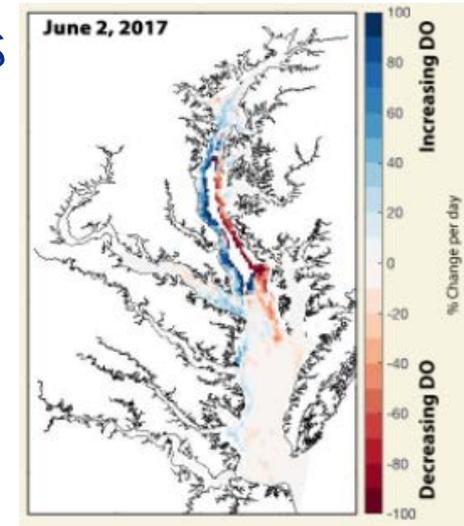
Objective: Assess suite of estuarine dissolved oxygen models to make recommendations for producing predictions of hypoxia within Chesapeake Bay

FY17:

- DO Code in CBOFS
- Product delivered to MARACOOS
- Manuscript development

FY18:

- Add CBOFS output at MARACOOS
- 5 manuscripts for JGR



The West Coast Project

Objectives:

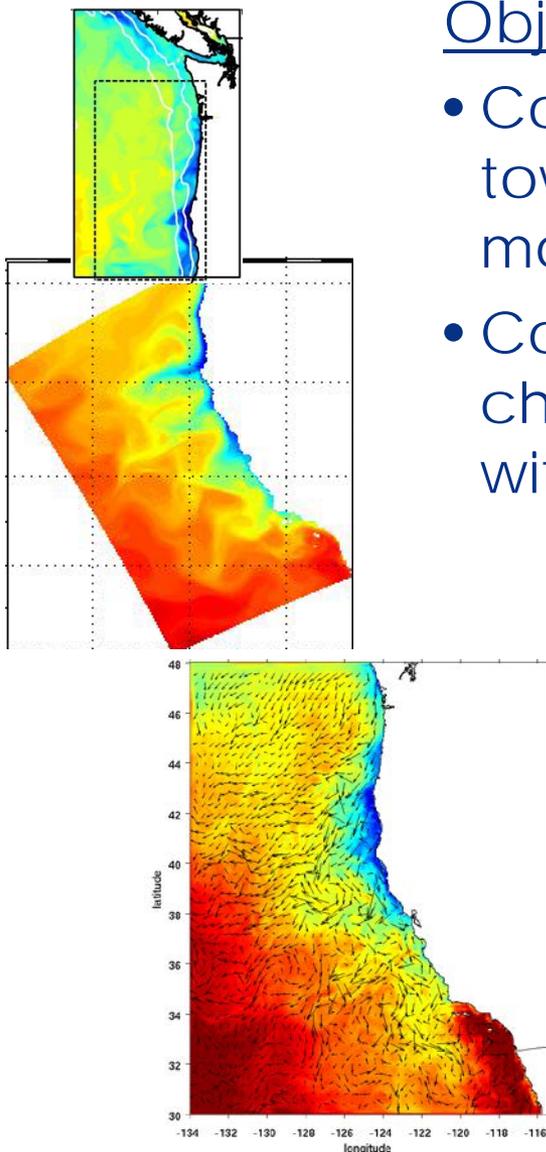
- Compare 3 ROMS based models as a step toward a coordinated super-regional modeling capability for the U.S. West Coast.
- Compare performance of 3 different bio-chemical models (NPZDO, NEMURO, COSINE) within a single ROMS domain.

FY17:

- Evaluated impact of glider DA
- Evaluated BGC in WCOFS 4km setup
- Work on new methods to assess impact of obs systems
- Non-DA WCOFS transitioned to CO-OPS for real time ops

FY18:

- Finalize results; 3 manuscripts for JGR



Hypoxia Prediction in the Northern Gulf of Mexico

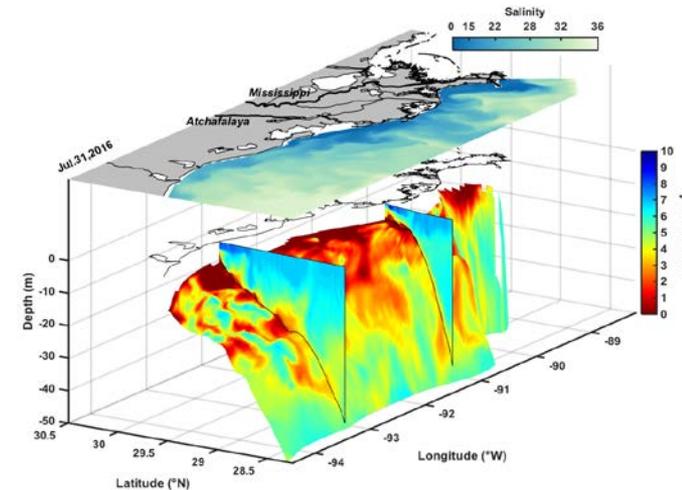
Objective: Implement and demonstrate a real-time hypoxia forecasting system applicable to the hypoxia-prone Northern Gulf of Mexico.

FY17:

- Multi-model retrospective analysis of the 2017 hypoxia season

FY18:

- Report summarizing recommendations for operational use of hypoxia models
- 1 manuscript for JGR



Fennel et al. report to NCCOS (2016)

Puerto Rico/U.S. Virgin Islands Surge and Wave Inundation

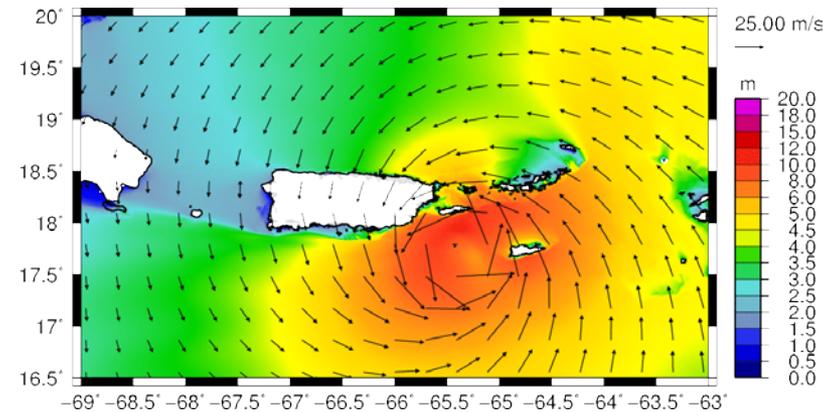
Objectives: Extend wave/surge operational forecasting capability from mild-sloped coastal areas to steep-sloped areas such as around Caribbean and Pacific islands

FY 17:

- SLOSH surge coupled with efficient parametric wave model
- 3D Model evaluated during Hurricane Maria

FY18:

- Finalize recommendations
- 2 manuscripts for JGR



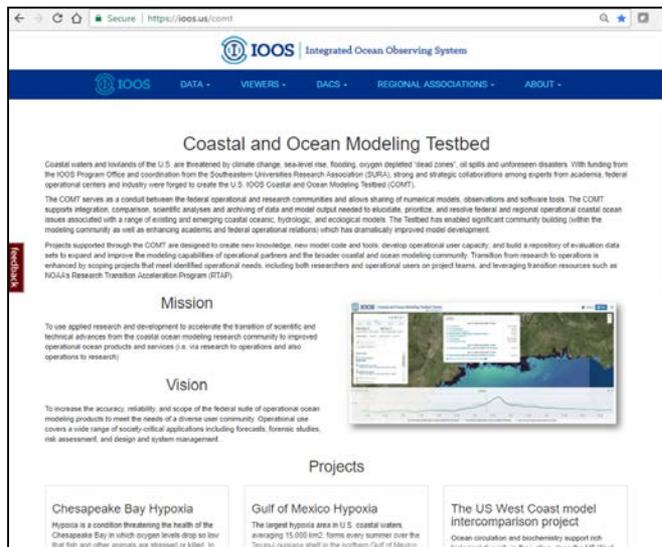
Cyberinfrastructure for COMT

Objective:

- Improve function and performance of SciWMS so it can be used to visualize all compliant model results and observational data stored on the COMT archive server
- Develop a SciWMS based web client to perform the visualization

FY17:

- Completion of [ioos.us/COMT](https://ioos.us/comt)



FY18:

- Development of universal data upload tool
- Support to project teams to archive seminal data sets

COMT FY17 Transition Metrics

Major Tests Conducted	Transitioned to Operations (RL9)	Recommended for Transition to Operations (RL9)	Advanced To Experimental Testing (RL8)	Further Demonstration/ Development (RL 5-7)	Notes
Chesapeake Bay Hypoxia Forecast Product	X	X			- DO code in CBOFS - Product hosted at MARACOOS
West Coast Operational Forecast System (WCOFS)			X	X	- RL 8 for non-DA WCOFS - RL6 for DA WCOFS - RL5 for Ecosystem components
Hypoxia Prediction in the Northern Gulf of Mexico				X	
Puerto Rico/U.S. Virgin Islands Surge and Wave Inundation			X		- Experimental testing during Hurricane Maria
Cyber Infrastructure			X	X	- Visualization at ioos.us/comt - Data upload tool in development

Thank You

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<https://ioos.noaa.gov/project/comt/>

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