



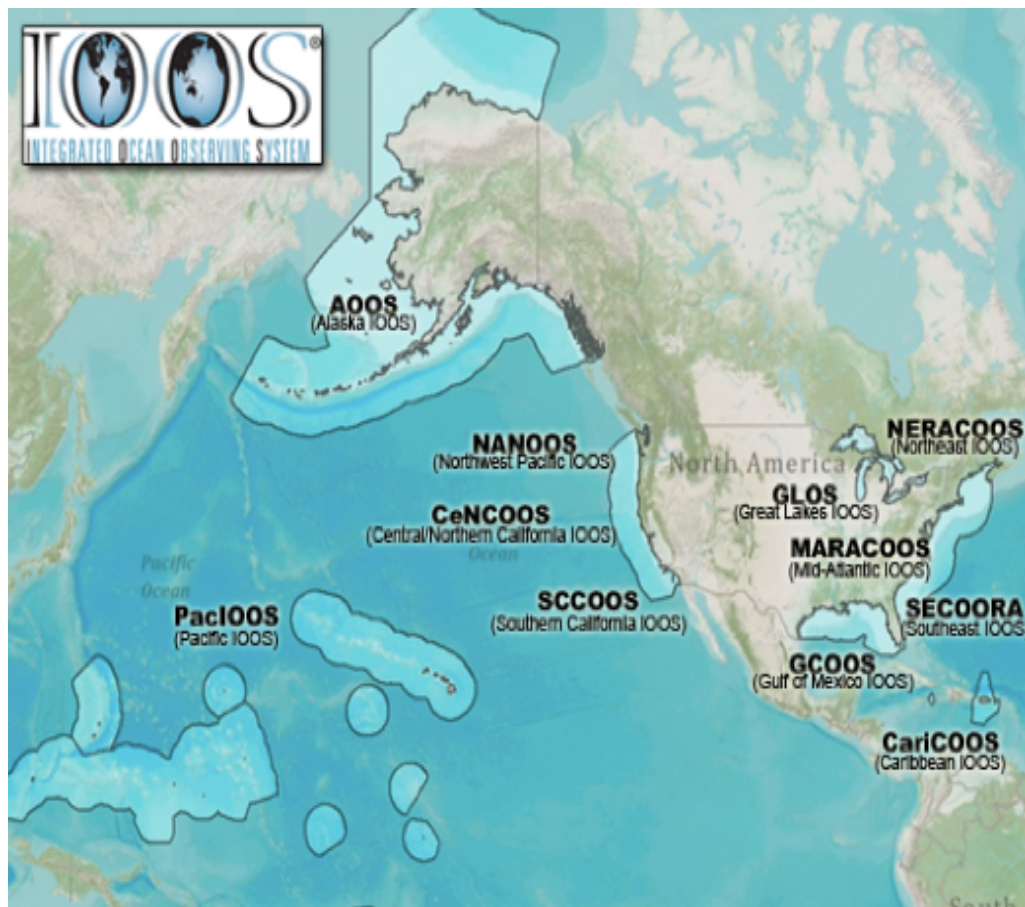
## SECOORA Meeting

Josie Quintrell, Director  
IOOS Association  
May 2017



## Observing our oceans, coasts and Great Lakes

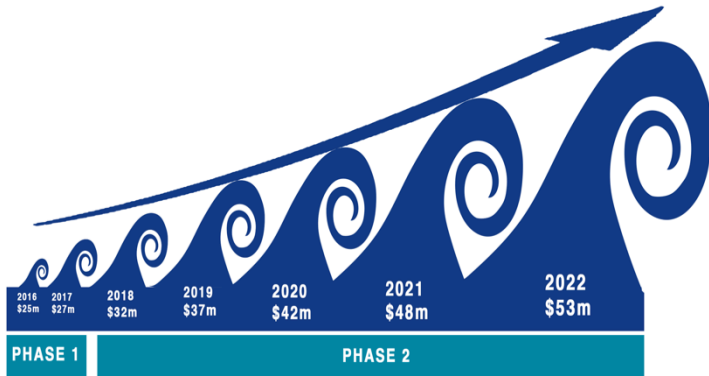
*Providing information to those who need it, when they need it*



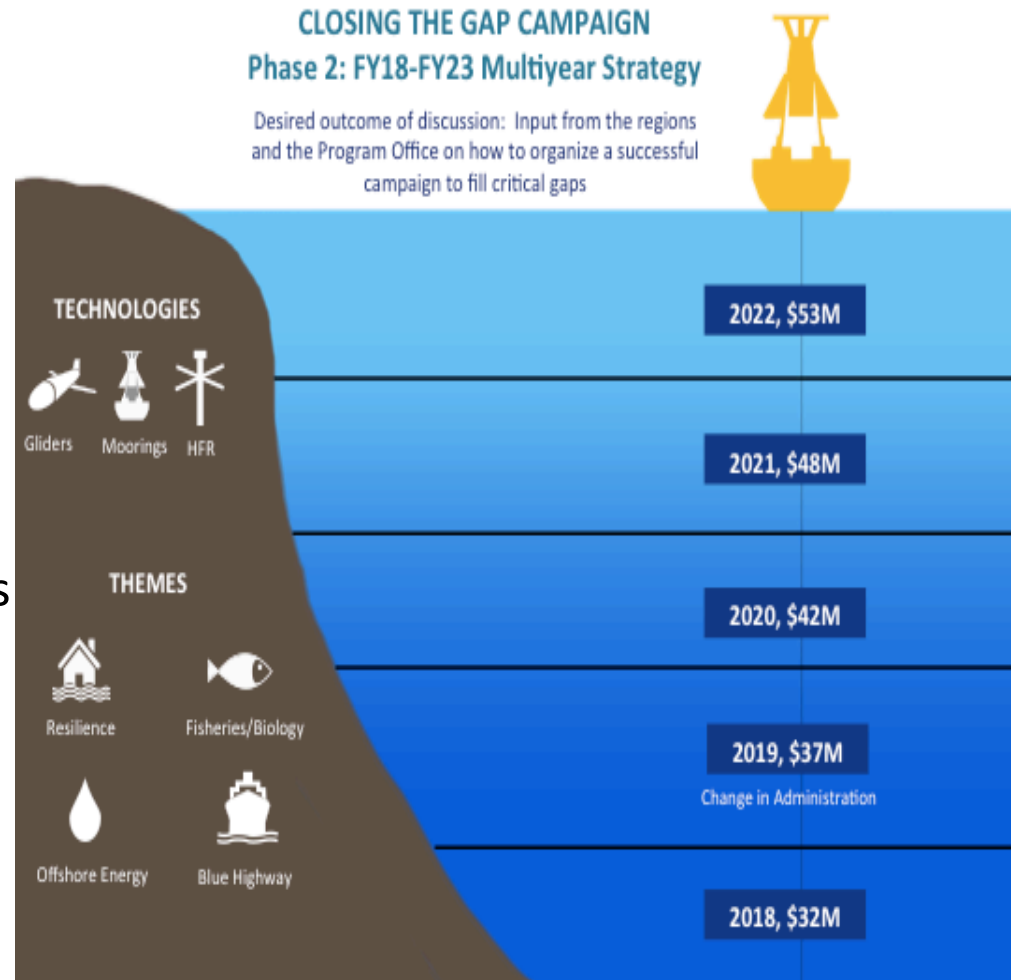
- Objectives:
  - Advocacy
  - Common Issues
  - IOOS federal/non-federal partnership
    - Administration
    - Congress
    - National Partners
  - Emerging Issues



# Closing the Gaps: 5 yr Campaign



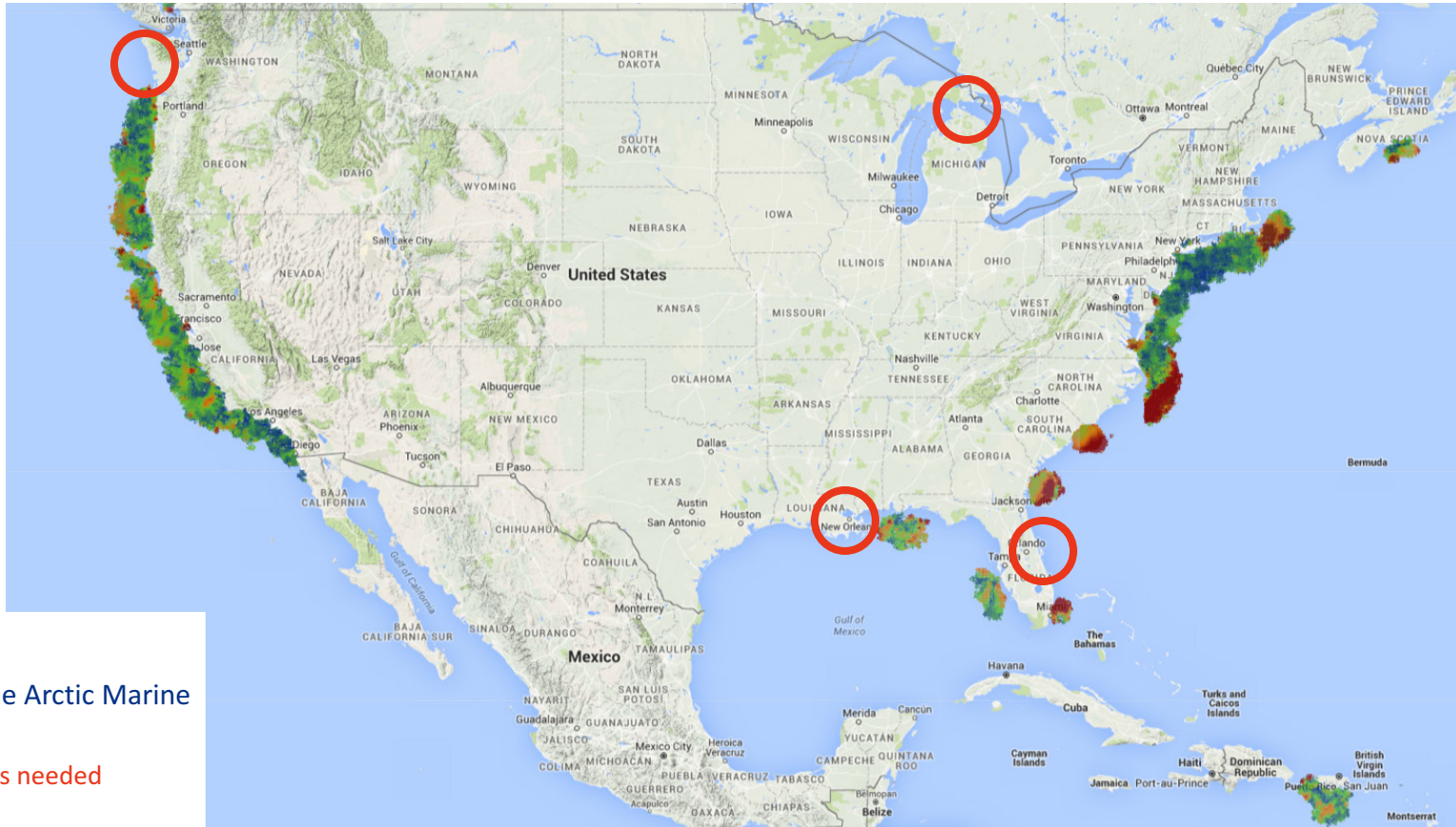
- Scalable campaign
- Tangible outcomes
- Align with Administration Priorities
- Filling targeted gaps in:
  - HR Radars
  - Gliders





# US IOOS FY 17 High Frequency Radar Request

\$3.1 million to install 12 high frequency radar systems



Safeguarding the Arctic Marine Highway

2 remote radars needed



Protecting Lives and Public Health in the Pacific Northwest

3 radars needed



Cleaning up the Great Lakes

3 radars needed



Saving Lives off Florida's Coast

2 radars needed



Saving Millions in the Gulf of Mexico

3 radars needed

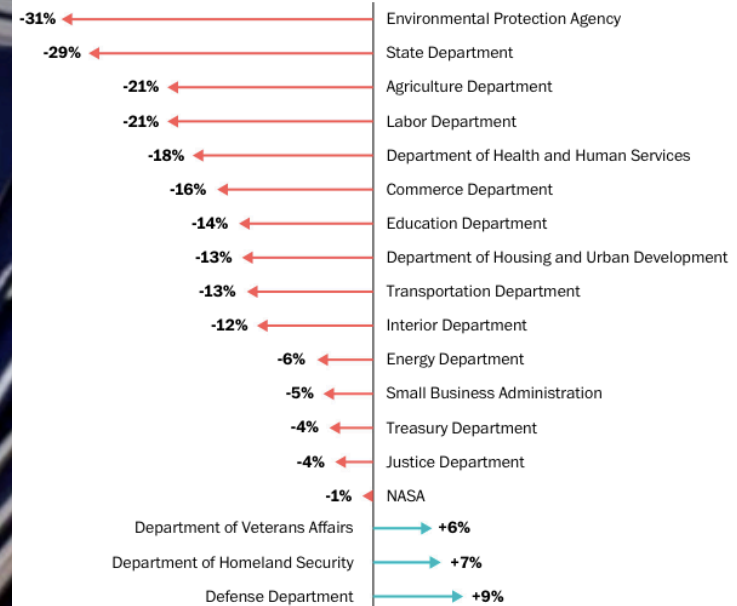
# Appropriations



IOOS Appropriations	FY10 Enacted	FY11 Spend Plan	FY 12 Spend Plan	FY 13 Spend Plan	FY 14 Enacted	FY 15 Enacted	FY 16 Enacted	FY 17 Enacted	FY 18 IA Request
<b>Regional IOOS Total</b>	<b>\$27m</b>	<b>\$21.9m</b>	<b>\$23 m</b>	<b>\$26.5m</b>	<b>\$28.5m</b>	<b>\$29.5m</b>	<b>\$29.5m</b>	<b>\$30.7 m</b>	<b>\$37.6m</b>
<i>National network of regional infrastructure systems, gaps in radars and gliders</i>	<i>\$20m</i>	<i>\$20m</i>	<i>\$22m</i>	<i>\$23.5m</i>	<i>\$24.3m</i>	<i>\$24.5 m</i>	<i>\$24.5m</i>	<i>\$25.2m</i>	<i>\$31.6m \$25.2m for systems, \$3.1m for radars, \$3.3m for gliders</i>
<i>Marine Sensor Innovation Grants, Modeling Test bed, Sensor Verification</i>	<i>\$7m</i>	<i>\$1.9m</i>	<i>\$1m</i>	<i>\$3m</i>	<i>\$4.2m</i>	<i>\$5 m</i>	<i>\$5m</i>	<i>\$5.5m</i>	<i>\$5m</i>
<b>U.S. IOOS Program Office*</b>	<b>\$6.5m</b>	<b>\$6.5m</b>	<b>\$6.4m</b>	<b>\$5.9m</b>	<b>\$6.6m</b>	<b>\$6.6m</b>	<b>\$6.6m</b>	<b>\$6.6m</b>	<b>\$6.7m</b>
<b>Total U.S. IOOS</b>	<b>\$33.5m</b>	<b>\$28.4m</b>	<b>\$29.4m</b>	<b>\$32.4m</b>	<b>\$35.1m</b>	<b>\$ 36.1m</b>	<b>\$36.1 m</b>	<b>\$38.1 m</b>	<b>\$44.6m</b>

- Starting in FY 14 included in the Navigation, Observations and Predictions budget line
- ...provides no less than \$1,500,000 for ACT within NOS for fiscal year 2017.

# FY 18 Budget “Skinny Budget”



“Zeroes out \$250M in targeted NOAA grants and programs supporting coastal and marine management, research, and education including Sea Grant, which primarily benefit industry and State and local stakeholders. These programs are a lower priority than core functions maintained in the Budget such as surveys, charting and fisheries management”



# FY 18 IOOS Request



## INTEGRATED OCEAN OBSERVING SYSTEM - IOOS

Saving Lives, Protecting Health & Promoting Commerce

IOOS is essentially the weather service for the coastal oceans and Great Lakes, providing the ability to "see" what is happening both above and below the surface and making the information readily available. IOOS is led by NOAA's National Ocean Service and includes 17 Federal agencies and a national network of 11 regional observing systems.

IOOS is efficient; it builds on and leverages local and regional partnerships. IOOS provides the coastal infrastructure necessary to support jobs, economic development, maritime safety and environmental health.

### MAPPING SURFACE CURRENTS

Search and rescue, oil spill response, harmful algal bloom tracking and forecasting, water quality monitoring, and port and harbor navigation all depend on real-time surface current mapping. IOOS operates nation's only network of high-frequency radars (HF radars) providing this information.



Despite the far-ranging use of this data, there are critical gaps in coverage.

### SEEING UNDERWATER WITH COASTAL GLIDERS

IOOS gliders provide an underwater view and support a range of operations including improving hurricane warnings, detecting harmful algal blooms, ensuring safe navigation, supporting offshore energy operations, fishermen and fisheries management, and enhancing public health and safety.



Gliders are underwater robots that are flexible and cost-effective, gathering data at a fraction of the cost of ships.



#### Who Uses IOOS Data?

- Emergency managers
- Fishermen
- Oil spill responders
- Ports
- Public health officials (e.g. beaches, water quality)
- Recreational boaters
- Researchers
- Seafood safety officials
- Shellfish growers
- Tribes
- Bureau of Ocean Energy Management
- Environmental Protection Agency
- National Oceanic and Atmospheric Administration
- Office of Naval Research
- U.S. Arctic Research Commission
- U.S. Army Corps of Engineers
- U.S. Coast Guard
- U.S. Department of State

The demand for data about our oceans, coasts and Great Lakes is high. The IOOS Independent Cost Estimate, required by Congress and conducted by NASA's Jet Propulsion Lab, estimates that a total of \$534 million is needed to fulfill the nation's identified coastal observing needs.

IOOS regions have peer-reviewed and "boat-ready" projects estimated at a \$22 million investment that are needed to support safe and efficient maritime commerce and robust coastal economies and to reduce risks to public health and safety. The requested increase of \$6.4 million in the 2018 IOOS budget line is a start at addressing these critical needs.

### ICOOA ACT REAUTHORIZATION

The ICOOA Act provides the foundation for coordinating the observing efforts of the Federal agencies and the regional systems. To ensure citizens have continued access to quality data - please support reauthorization of the ICOOA Act. Contact Senators Wicker and Cantwell and Representative Young for more information.



### FY 18 REGIONAL SYSTEM REQUEST: \$35.9 MILLION

**\$6.4 million**

\$3.1m to install 12 high-frequency radar systems to close key gaps in the U.S. surface current mapping system AND

\$3.3m to support underwater gliders to improve hurricane warnings, detect harmful algal blooms, and ensure safe navigation

**\$24.5 million**

for the national network of 11 regional coastal observing systems

**\$5.0 million**

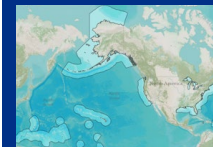
for research and development, including competitive grants, modeling and verification to develop new products and systems to ensure comprehensive coverage



Here's what top decision-makers are saying about IOOS data...

"Ocean information matters if you want to eat seafood, or buy anything that comes from shipping."

"IOOS is like putting your headlights on when you're on a dark road."



**IOOS Coverage in U.S. Waters**  
The national network of regional observing system provides services to the entire coastline of the U.S. The 11 Regional Associations design, maintain and operate regional coastal observing systems.

### FY 18 NATIONAL SYSTEM REQUEST: \$6.7 MILLION

These funds will support the IOOS Program Office effort to:

- + integrate Federal and non-Federal data
- + develop the nation's first quality control standards for real-time data
- + coordinate across NOAA and the 17 Federal IOOS agencies and
- + certify the regional systems.

	FY 11 Spend Plan	FY 12 Spend Plan	FY 13 Spend Plan	FY14 Enacted	FY 15 Enacted	FY 16 Enacted	FY 17 Pending House Senate	FY 18 Assoc. Request
<b>Regional IOOS Total</b>	<b>\$21.9m</b>	<b>\$22.9m</b>	<b>\$26.5m</b>	<b>\$28.5m</b>	<b>\$29.5m</b>	<b>\$29.5m</b>	<b>\$31.5m</b>	<b>\$35.9m</b>
National Network of Regional Ocean Systems	\$20m	\$22m	\$23.5m	\$24.3m	\$24.5m	\$24.5m	\$24.5m	\$24.5m
Gaps in Radars and Gliders							\$2m	\$2m
Marine Sensor Innovation Grants, Modeling Test Bed, Sensor Verification	\$1.9m	\$1m	\$3m	\$4.2m	\$5m	\$5m	\$5m	\$5m
<b>U.S. IOOS Program Office*</b>	<b>\$6.6m</b>	<b>\$6.4m</b>	<b>\$6m</b>	<b>\$6.5m</b>	<b>\$6.6m</b>	<b>\$6.7m</b>	<b>\$6.7m</b>	<b>\$6.7m</b>
<b>Total U.S. IOOS</b>	<b>\$28.5m</b>	<b>\$29.3m</b>	<b>\$32.5m</b>	<b>\$35m</b>	<b>\$36.1m</b>	<b>\$36.2m</b>	<b>\$38.2m</b>	<b>\$42.6m</b>

\* Funding included in the Navigation, Observations and Positioning funding line

Contact: Josie Quintrell, Executive Director, IOOS Association | 207-798-0857 | [Josie@ioosassociation.org](mailto:Josie@ioosassociation.org) | [www.ioosassociation.org](http://www.ioosassociation.org)

[www.ioosassociation.org](http://www.ioosassociation.org)

# HFR and Gliders

## Seeing Underwater with Coastal Gliders

Saving Lives, Protecting Health & Promoting Commerce

IOOS gliders provide data to support a range of operations including improving hurricane warnings, detecting harmful algal blooms, ensuring safe navigation, supporting offshore energy operations, fishermen and fisheries management and enhancing public health and safety.



An interagency Federal regional partnership in NOAA's National Ocean Service

Gliders are underwater robots that relay information about subsurface conditions. The U.S. Navy estimates gliders are 1/100th of the cost of ship-collected data. Gliders are revolutionizing ocean observing by being cost effective, safe and flexible.

### IOOS FY 18 GLIDER REQUEST: \$3.3m

Where our nation needs gliders to support safe navigation, public health and safety, and the economy:



#### Great Lakes: Protecting Drinking Water

Over 35 million people depend on the Great Lakes for their drinking water. Gliders provide the flexibility to focus on issues impacting local areas and to better predict the risk of harmful algal blooms (HABs).



#### Northeast: Enhancing Maritime Industry By Reducing Endangered Right Whale Collisions

Ship strikes and fishing gear entanglements threaten the endangered right whales. Gliders equipped with acoustic sensors can detect the whales and alert mariners and fishermen in real time about the location of the whales, thus minimizing impacts.



#### Mid-Atlantic: Protecting Lives and Property From Hurricanes

Gliders are a safe method for seeing below the surface of the coastal ocean, where strong winds stir cold water upwards, affecting the intensity of the storm. Such information improves warnings that can protect lives and property.



#### Southeast: Saving Lives, Supporting Fisheries and Detecting HABs

Information gathered from gliders along the Southeast coast is critical for predicting riptides, optimizing fisheries management models, improving hurricane intensity forecasts and detecting marine mammals and HABs.



## MAPPING SURFACE CURRENTS

Saving Lives, Protecting Health & Commerce

Search and rescue, oil spill response, harmful algal bloom tracking and forecasting, water quality monitoring, and port and harbor navigation all depend on real-time surface current mapping. IOOS operates our nation's only network of high-frequency radars (HF radars) providing this information.

Despite the far-ranging use of this data, there are critical gaps in coverage.



An interagency Federal regional partnership in NOAA's National Ocean Service

## WHAT ARE HIGH-FREQUENCY RADARS?

Land-based HF radar uses radio-wave backscatter to map the speed and direction of surface currents in real time. Because of the large coverage area, HF radar data are also valuable input for ocean models and for assisting with search and rescue operations and oil spill response.



Image courtesy of MARACOOS

Map of IOOS high-frequency radars that provide real-time surface currents.



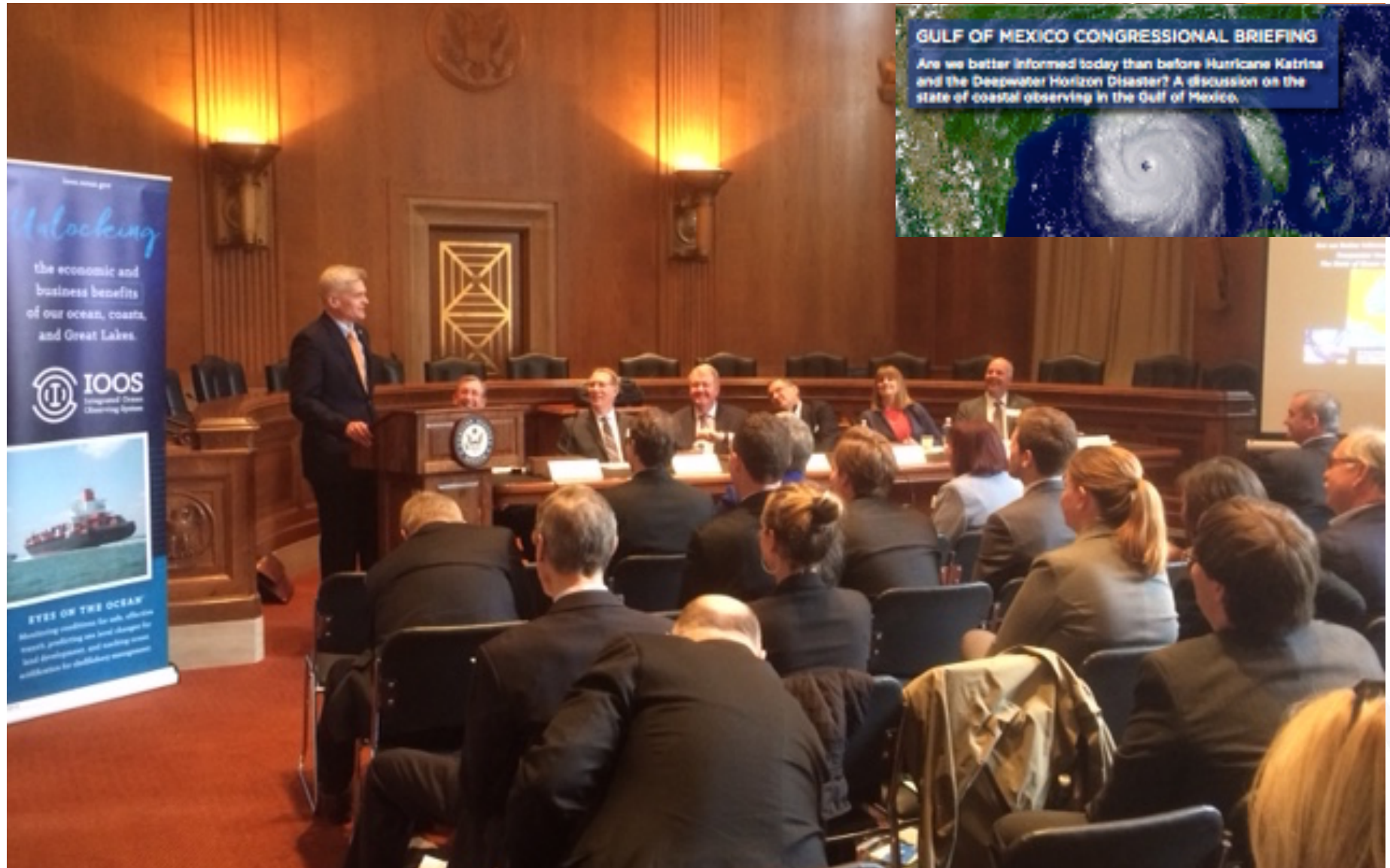
For more information, contact  
Josie Quintrell, Executive Director, IOOS Association  
207-798-0857 | [Josie@ioosassociation.org](mailto:Josie@ioosassociation.org)

**IOOS**  
ASSOCIATION

EYES ON THE OCEAN™



# Gulf of Mexico Briefing



# March Madness



- Strategic Planning
- Jt DMAC Meeting
- Congressional Visits
  - \*Over 75 Offices visited
  - \* OMB

# Appropriations Support

## HOUSE Dear Colleague Letters

Rep Pingree (D-ME) and  
Carbajal (D-CA)

43 Signatures

Rep Posey (R-FL) and Young  
(R-AK)

## SENATE IN MAY - TBD

NC – Burr and Tillis  
SC – Graham and Scott  
GA – Isakson and Purdue  
FL – Rubio and Nelson





# Reauthorization

## SENATE



Senators Wicker and Cantwell expected to reintroduce S 1886 this spring

**Weather Research and Forecasting Innovation Act of 2017**



115TH CONGRESS  
1ST SESSION

## H. R. 237

To reauthorize the Integrated Coastal and Ocean Observation System Act of 2009, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JANUARY 3, 2017

Mr. YOUNG of Alaska introduced the following bill; which was referred to the Committee on Natural Resources, and in addition to the Committee on Science, Space, and Technology, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

## House



## Water, Power and Ocean

- Webster (R-FL-11)
- Hice (R-GA-10)
- Rouzer (R-NC-07)

# RA Certification



- 5 RAs certified!
  - Congratulations to
    - PacIOOS, GLOS, MARACOOS, SCCOOS
    - CariCOOS
- All others in process
- Opportunity to engage federal agencies
  - Operational forecasting
  - Regional data sharing
  - Agency engagement
  - Fisheries- PacIOOS

## UPCOMING

- Senate Ocean Caucus Briefing - Technology and Innovation – June
- House Briefing - ICOOS Act
- House Ocean Caucus Reception - Fall
- Congressional Site Visits - Summer
- Messaging IOOS
  - Series of regional editorials –Op Ed
    - Professional publications – MTS
    - Local papers
- Foundation Funding – explore national campaign



# Thank you

