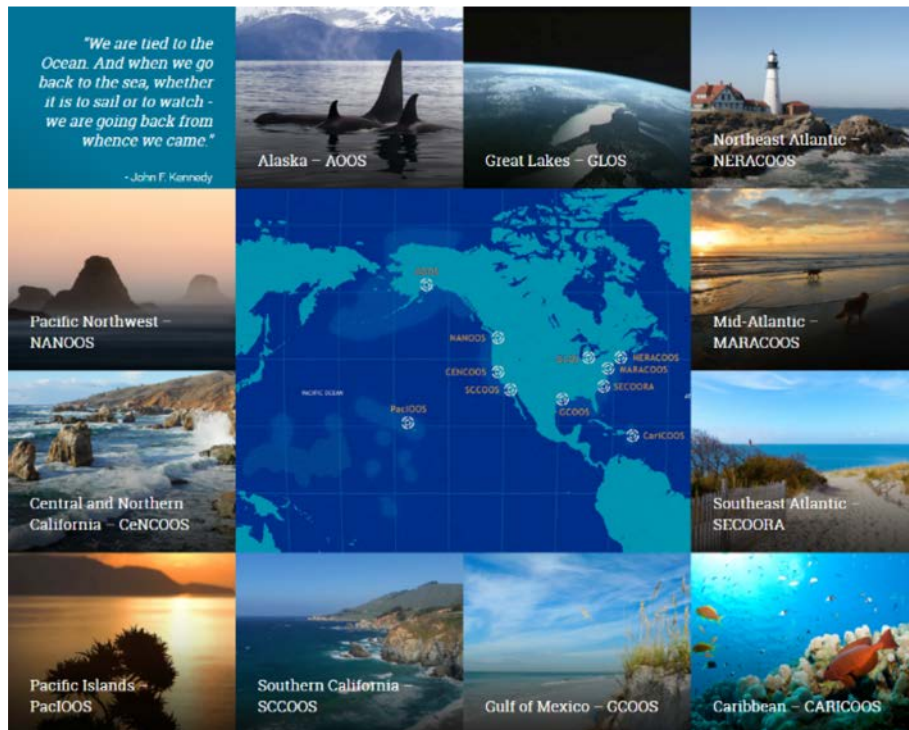




SECOORA Annual Meeting

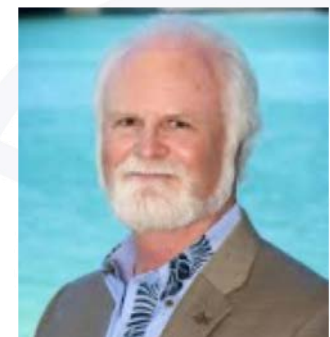
Josie Quintrell, Director
IOOS Association
May 2018





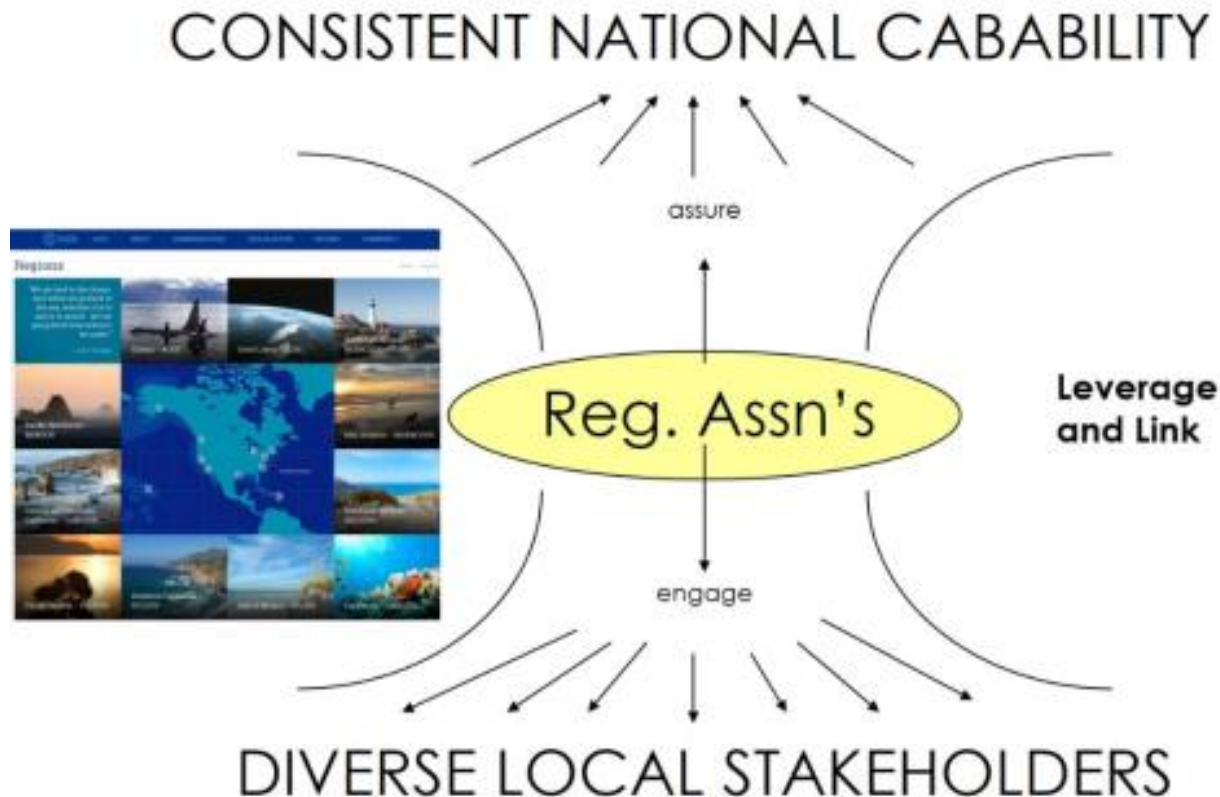
- Advocacy
- Common Issues
- IOOS federal/non-federal partnership
 - Administration
 - Congress
 - National Partners
- Emerging Issues
- Special Projects

Observing our oceans, coasts and Great Lakes
*Providing information to those who need it,
 when they need it*



IOOS is a Team Effort

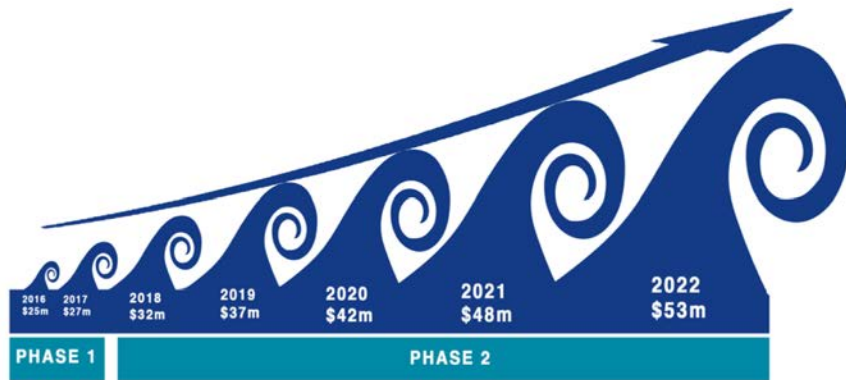
- Stakeholder-driven, science-based and policy-neutral



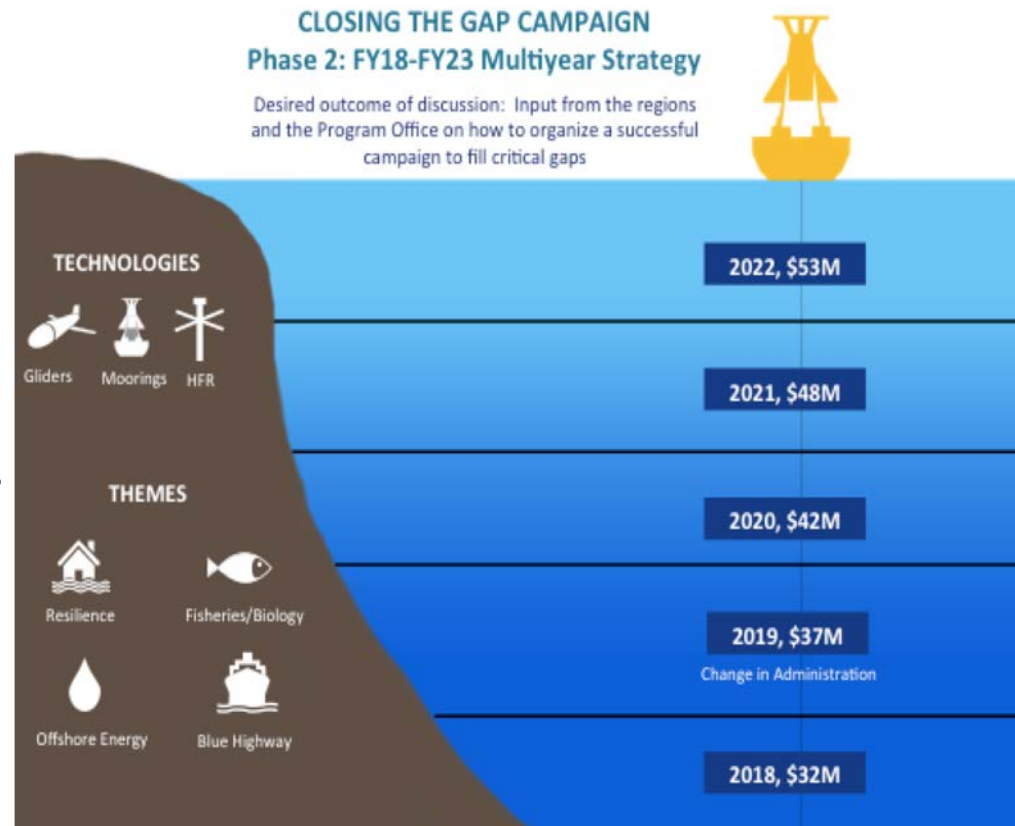
Congressional Meetings



Closing the Gaps: 5 yr Campaign

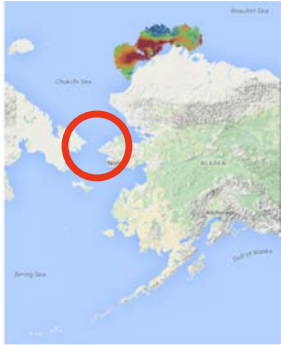


- Scalable campaign
- Tangible outcomes
- Align with Administration Priorities
- Filling targeted gaps in:
 - HR Radars
 - Gliders
 - And Moorings?



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

FY 18 and FY 19 IOOS Requests



INTEGRATED OCEAN OBSERVING SYSTEM - IOOS

Saving Lives, Protecting Health & Promoting Commerce



Image courtesy of NOAA

Mapping Surface Currents



Image courtesy of USC

Seeing Underwater with Coastal Gliders



Image courtesy of Ben Hollings, Blue Ocean Monitoring

Appropriations



	FY 12 Spend Plan	FY 13 Spend Plan	FY 14 Enacted	FY 15 Enacted	FY 16 Enacted	FY 17 Enacted	FY 18 Omnibus Enacted	FY 19 Pres Budget	FY 19 IA Request	FY 19 House	FY 19 Senate
Regional IOOS Total	\$23 m	\$26.5m	\$28.5m	\$29.5m	\$29.5m	\$30.7 m	\$35m	\$19m	\$37.7m	\$37.5m	TBD
<i>National network of regional observing systems, gaps in radars and gliders</i>	<u>\$22m</u>	<u>\$23.5m</u>	<u>\$24.3m</u>	<u>\$24.5 m</u>	<u>\$24.5m</u>	<u>\$25.2m</u>	<u>\$29.5m</u> \$25.2m RAs \$4.3m HFR and gliders		<u>\$32.2m</u> \$25.2m RAs \$3.7m HFR \$3.3m Glider		
<i>Marine Sensor Innovation Grants, Modeling Testbed, Sensor Verification</i>	<u>\$1m</u>	<u>\$3m</u>	<u>\$4.2m</u>	<u>\$5 m</u>	<u>\$5m</u>	<u>\$5.5m</u>	<u>\$5.5m</u>		<u>\$5.5m</u>		
U.S. IOOS Program Office*	\$6.4m	\$5.9m	\$6.6m	\$6.6m	\$6.6m	\$6.6m	\$6.7m		\$6.6m		
Total U.S. IOOS	\$29.4m	\$32.4m	\$35.1m	\$ 36.1m	\$36.1 m	\$37.3 m	\$41.7 m		\$44.3m		

- Starting in FY 14 included in the Navigation, Observations and Predictions budget line

FY 18 CONGRESSIONAL REPORT



“Within funds provided for IOOS grants, cooperative agreements, or contracts, the Committee directs **each regional entity** to assess current spending practices for resources that become damaged or unworkable as a result of hurricanes or other significant storms, including continually replacing damaged assets instead of repairing them or seeking to use hardened designs, and provide a cost-benefit analysis to the Committee on such practices within 120 days of this Act (e.g., July 20, 2018)”

Reauthorization

SENATE



Senators Wicker and Cantwell
sponsored S 1425

PASSED

**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 deter-
mined 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
Subcommittee

**DEAR COLLEAGUE
LETTER
CIRCULATING!!**

**HABHRCA - HAB
Reauthorization**

Building Support in DC

GULF OF MEXICO CONGRESSIONAL BRIEFING

Are we better informed today than before Hurricane Katrina and the Deepwater Horizon Disaster? A discussion on the state of coastal observing in the Gulf of Mexico.



SENATE OCEANS CAUCUS BRIEFING

Coastal Innovations: Enhancing security, economy and the environment



Major Milestone: Certified National Network



- All 11 RAs will be certified soon
 - Regional Governance
 - Federal data standards
 - Liability coverage
- Developing Messaging and Engagement Strategy
 - Compelling talking points
 - High level role out
 - Engagement with Fed Agencies
 - Fisheries- PacIOOS

Philanthropy

- the effort or inclination to increase the well-being of humankind, as by charitable aid or donations



Upcoming

- June Executive Committee Meeting
 - Certification, Gaps Campaign, Discussion with Program Office
- Senate Ocean Caucus Briefing on Blue Economy
- Fall Annual Meeting - Annapolis
 - Biology
 - NASA Partnership
- Partnerships – FoNOAA, Blue Group, NOS Roundtable
- Hill - Monitor legislation - HABs, Weather CeNOTE Bill, OA
- Outreach Committee - Web survey, data portals, newsletter



Thank you



IOOS OpEd Project



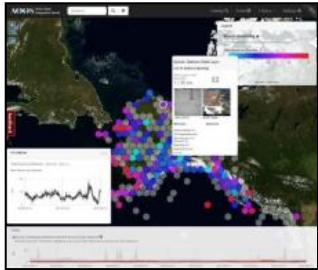
- Raise awareness of sustained observations
- 1 OpEd in each region (or more)
- Will work with RAs to find compelling stories and authors
- Editorial assistance to frame story for publishing
- Link to social media

Happy Congressman



Addressing diverse needs...

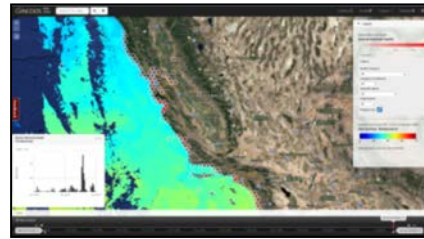
AOOS



CARICOOS



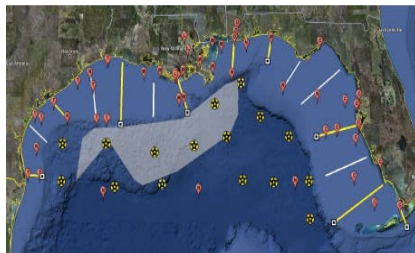
CeNCOOS



GLOS



GCOOS



MARACOOS



NANOOS



NERACOOS



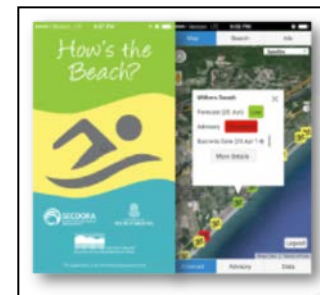
PacIOOS



SCCOOS



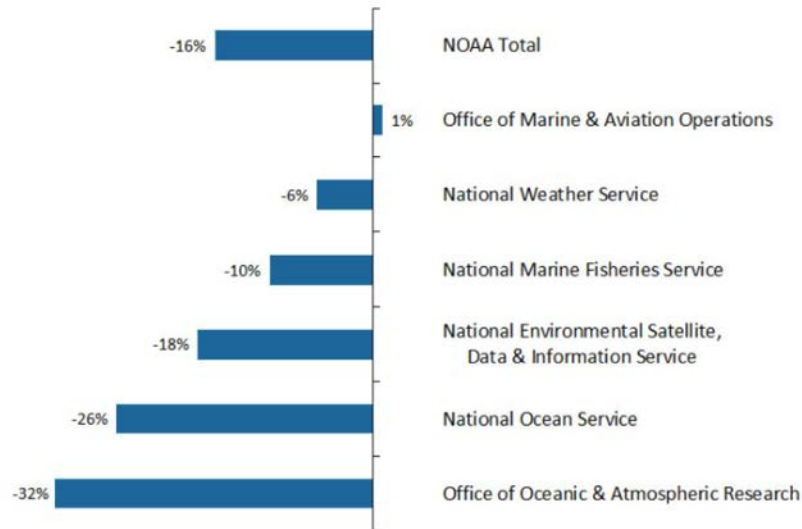
SECOORA



Budgets

America First A Budget Blueprint to Make America Great Again

NOAA FY18 Budget Request (% change from FY17 enacted)



Figures based on the sum of the Operations, Research, and Facilities (ORF) and Procurement, Acquisition, and Construction (PAC) accounts. The NMFS figure also incorporates the Pacific Coastal Salmon Recovery Fund.

FY17
Enacted
(IOOS: +\$1.2M)

FY 18
Pre Bud
(IOOS: - \$1.2M)
Congress - CR to Jan 19

FY 19
- \$11.05 M

IOOS Web User Survey





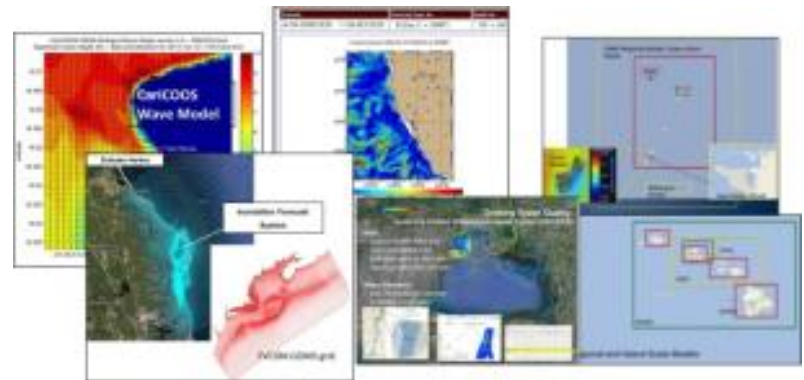
Observations



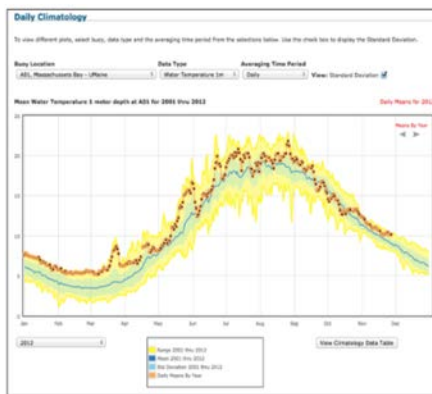
Measure once, use multiple times



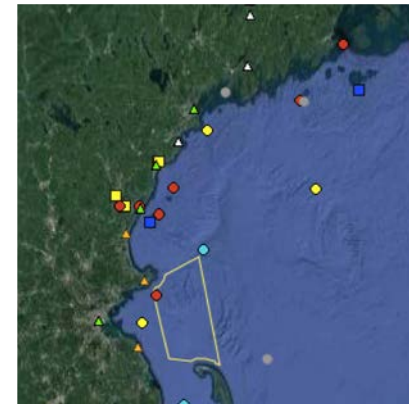
Data Integration



Models- Forecasts

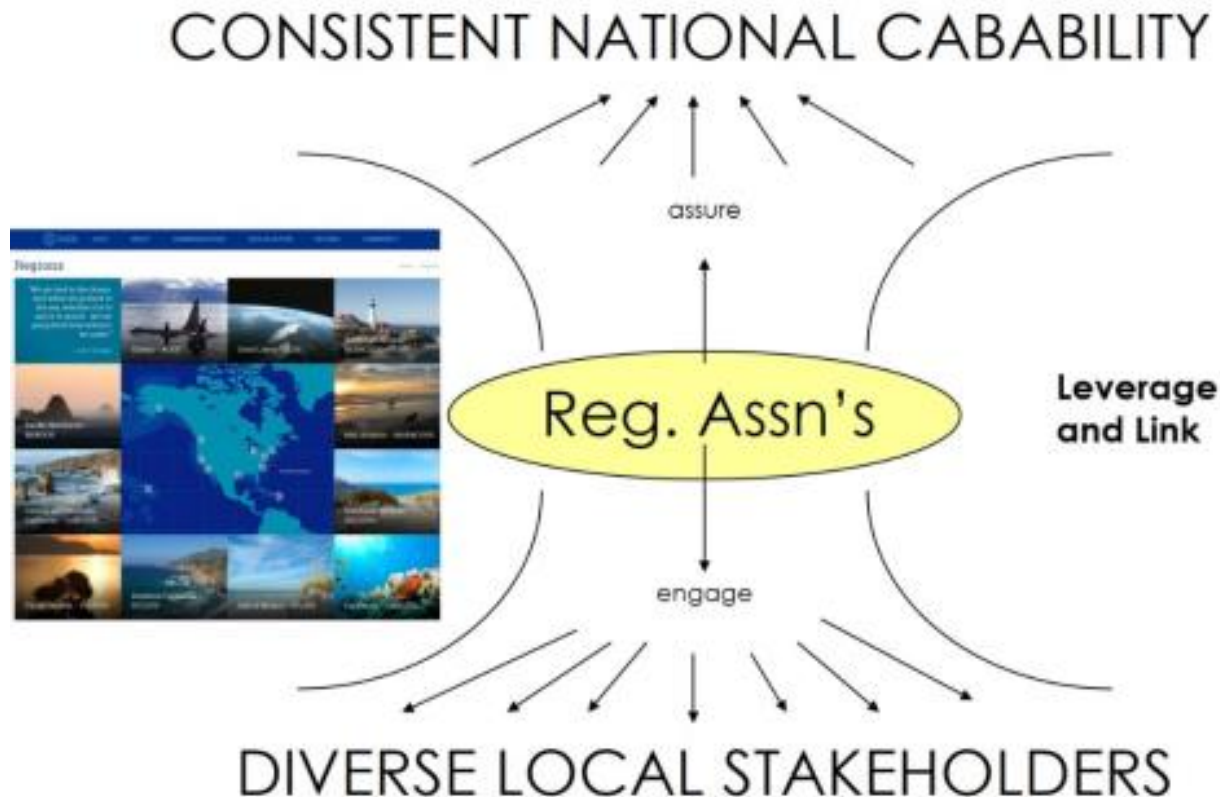


Products



IOOS is a Team Effort

Stakeholder-driven, science-based and policy-neutral



Building Support: in the Region



Appropriators: Key Players

SENATE



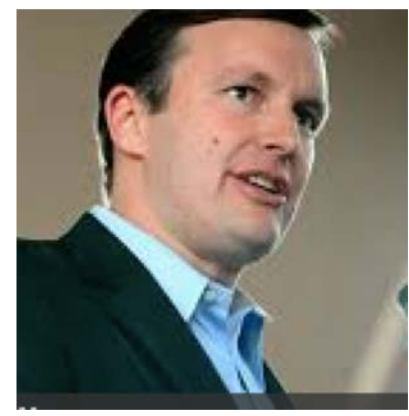
Collins R-ME



Shaheen D-NH



Reed D RI



Murphy D- CT

HOUSE

Pingree D- ME



Dear Colleague

- 3 Circulating
- Senate Dear Colleague : Senators Cantwell and
- House Dear Colleague : Rep Posey, Pingree, Carabajol
- Reauthorization: Congressman Young

Hurricane Supplemental

Hurricanes Harvey, Irma and Maria Supplemental Priorities for the US Integrated Ocean Observing System

Hurricanes Harvey, Irma and Maria devastated the Caribbean, Southeast Atlantic and the Gulf of Mexico, including critical ocean observing infrastructure.

The regional observing systems under the Integrated Ocean Observing System (IOOS) provide real time information on ocean conditions used for safety at sea and for forecasting storm intensity, storm surge and flooding.

While many assets survived the storms, several were damaged, leaving the region without critical information for maritime safety, emergency management and extreme weather event response.

Summary of Major Damages

Quick repairs to the system are needed to ensure NOAA, the Coast Guard, states, local emergency managers and the public have the information they need to make wise decisions.

Damaged: 9 out of 22 Moored Buoys

Although several buoys survived back-to-back category 5 hurricanes, others did not and sensors for monitoring winds, currents and waves need to be replaced.

Data from these buoys provide real-time information on sea state conditions for fishermen and mariners and are used to validate hurricane and wave models for storm surge and flooding forecasts.



Damaged: 11 out of 20 Weather Stations



The non-federal weather stations are located in areas now covered by the National Weather Service and add value to federally-produced weather forecasts.

These local weather stations provide the information necessary to develop detailed and tailored forecasts for local residents.



The NOAA-led U.S. Integrated Ocean Observing System (IOOS) is essentially the National Weather Service for the coastal oceans and Great Lakes, providing the ability to "see" what is happening both above and below the ocean surface, and making that information readily available. IOOS includes 11 regional associations, which focus on local stakeholder needs, and 17 federal agencies.

Damaged: 14 out of 20 High Frequency Radars

Electronics, antennae and wiring are needed to bring these radars back into production.

The Coast Guard uses the real-time current data from the HF radars for search and rescue, and NOAA and other emergency managers use the data for event response and forecast models for storm surge.



Priority 1:
Repair damages (\$2 m)
Priority 2:
Harden assets in regions (\$5.2m)
Priority 3:
System-wide Enhancements: (\$7.7m)

IOOS Coordination Meetings – March & Sept



- Sustaining IOOS – PAC funding for recap
- Mooring Strategy
- IOOS Modeling Working Group, Water, Ecological
- Infrastructure Initiative
- Senate Report Language
- Biology

RA Certification

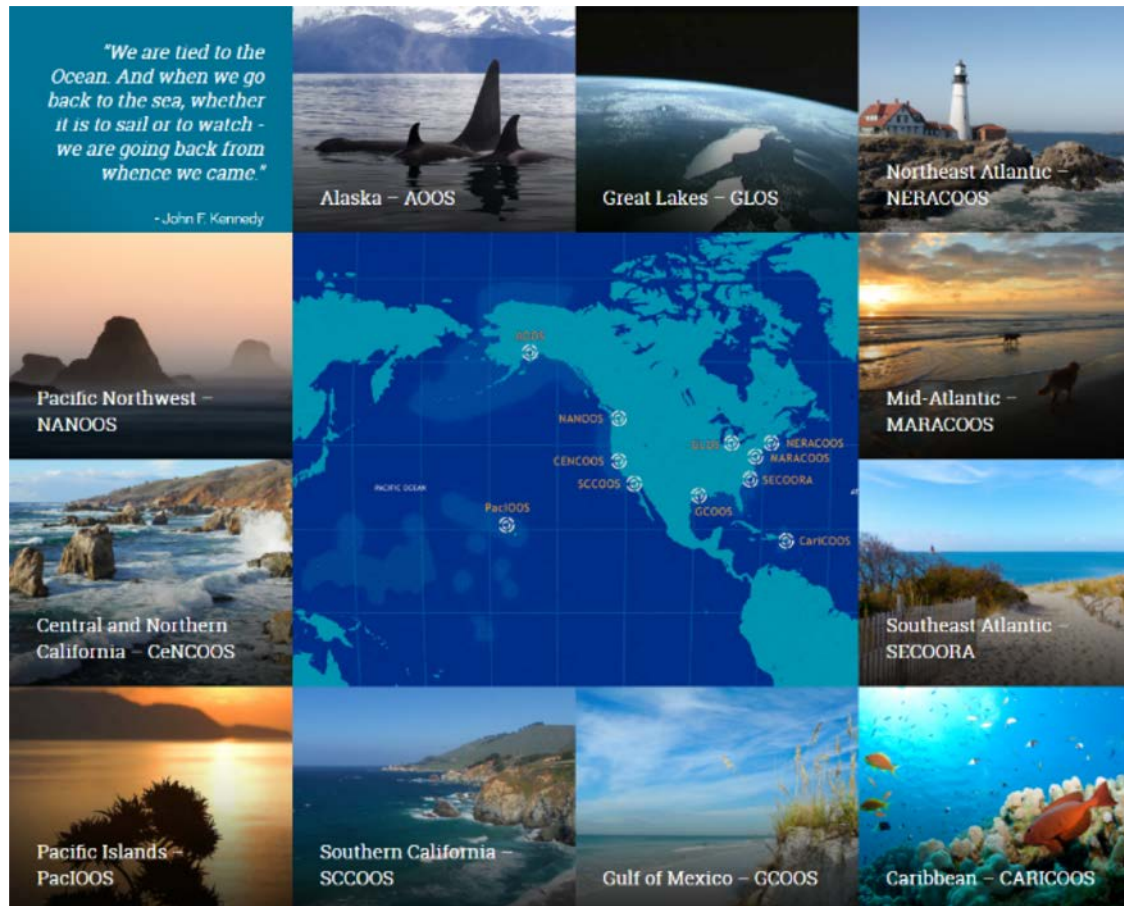


- 9 RAs certified!
 - Congratulations to
 - PacIOOS, GLOS, MARACOOS, SCCOOS, CariCOOS, SECOORA, AOOS, NERACOOOS
- All others in process
- Opportunity to engage federal agencies
 - Operational forecasting
 - Regional data sharing
 - Agency engagement
 - Fisheries- PacIOOS
- Welcome advice from FAC

Regional Certification



- 9 RAs certified
 - AOOS one of the first – Congratulations
 - Meets Federal data standards
 - Liability coverage
- All others in process
- Opportunity to engage federal agencies
 - Operational forecasting
 - Regional data sharing
 - Agency engagement
 - Fisheries- PacIOOS



Observing our oceans, coasts and
Great Lakes
Providing information to those who
need it, when they need it

New Administration

- Wilbur Ross confirmed at Sec't of Commerce
 - *obtaining maximum sustainable yield for our fisheries;*
 - *improving the timeliness, accuracy, breadth and depth of our data output;*
 - *providing the expertise and capital necessary to spur growth and innovation in communities across America;*
 - *setting standards for our increasingly technical society;*
- Budget
 - FY 18 - Increase in Defense offset by cuts in discretionary
 - Need to be prepared
 - Scenario Planning
 - Impacts of cuts
 - Assets removed
 - Who is harmed?
 - Economic implications -

IOOS Spring Meeting

March 14-16

- Russell Callender
- IOOS Strategic Planning
- DMAC Session
- Hill Visits
 - RA Visits
 - OMB
 - Appropriations

HFR and Gliders



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.



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.



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



For more information, contact
Josie Quintrell, Executive Director, IOOS Association
207-798-0837 | Josie@ioosassociation.org



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.



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.



Foundation Brainstorming

1 The Pulse of the Coastal Ocean

What does IOOS data tell us about the coastal ocean?

2 Water Quality – OA, HAB, hypoxia

3 Information Products –

Visualization tools for displaying subsurface information –

Integrated hurricane tracking

West coast index

Ocean sound map - develop baseline for ocean sound

4 Capacity building for Association

5 Economics benefit of sustained observations

6 Fisheries

7 Other ideas

-

On Going Issues

- Policy Position Papers and Memorandum
 - to OA Program and IOOS PO regarding funding for ocean acidification efforts (sustained West Coast Shellfish sensors)
 - Memorandum to Russell Callender re: Eco Forecasting
- Presentations -IOOS Fed Advisory Committee, MARACOOS, SECOORA, NERACOOS.
- Honorary Directors calls - Dec and July
- Partnerships – FoNOAA, Blue Group, JOCI staff and members,
- Hill - Meeting, suggested amendments to HABHRCA to strengthen IOOS collaborations
- Outreach Committee
- Gliders Strategy, Mooring Strategy, Modeling, Strategic Plan, DMAC

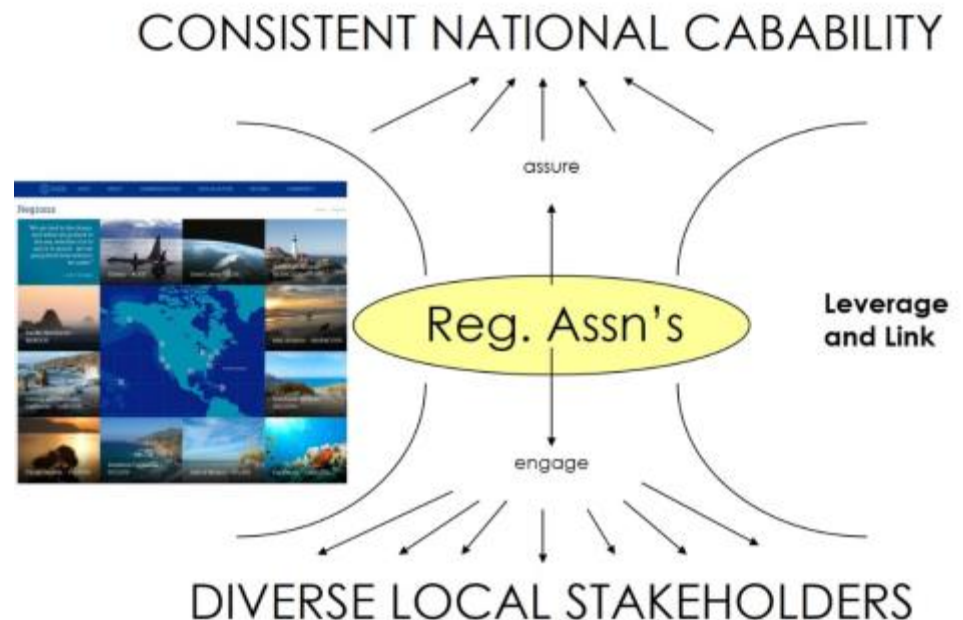
Upcoming Events

- IOOS Web Survey
- Foundation Support
- Ocean Obs19
- FY 19 Request
 - Include in University and State requests
 - Reach out to congressional members
 - User support letters
- Spring Meeting – March 6-8, 2018



U.S. Integrated Ocean Observing System (IOOS®)

Stakeholder-driven, science-based and policy-neutral



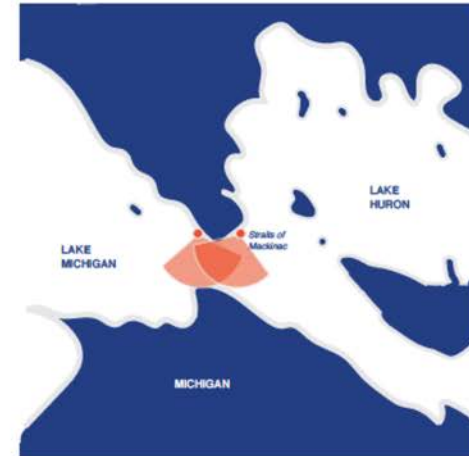
GLOS Request



Cleaning up the Great Lakes

The 645-mile oil pipeline under the Straits of Mackinac is showing serious signs of deterioration. Better monitoring would allow a quicker and more effective response for oil spills that could threaten this major source of drinking water for millions of people.

2 radars needed



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



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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).