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Northwest • [nanoos.org](http://nanoos.org)

**CeNCOOS**  
Central/Northern California • [cencoos.org](http://cencoos.org)

**SCCOOS**  
Southern California • [sccoos.org](http://sccoos.org)

**PacIOOS**  
Pacific Islands  
[pacioos.org](http://pacioos.org)

**GLOS**  
Great Lakes • [glos.us](http://glos.us)

**IOOS Headquarters ★**  
(NOAA)

**GCOOS**  
Gulf Coast  
[gcoos.org](http://gcoos.org)

**NERACOOS**  
Northeast • [neracoos.org](http://neracoos.org)

**MARACOOS**  
Mid-Atlantic • [maracoos.org](http://maracoos.org)

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# SECOORA Annual Meeting

IOOS Association

Josie Quintrell

Dec 2, 2021



# IOOS Association

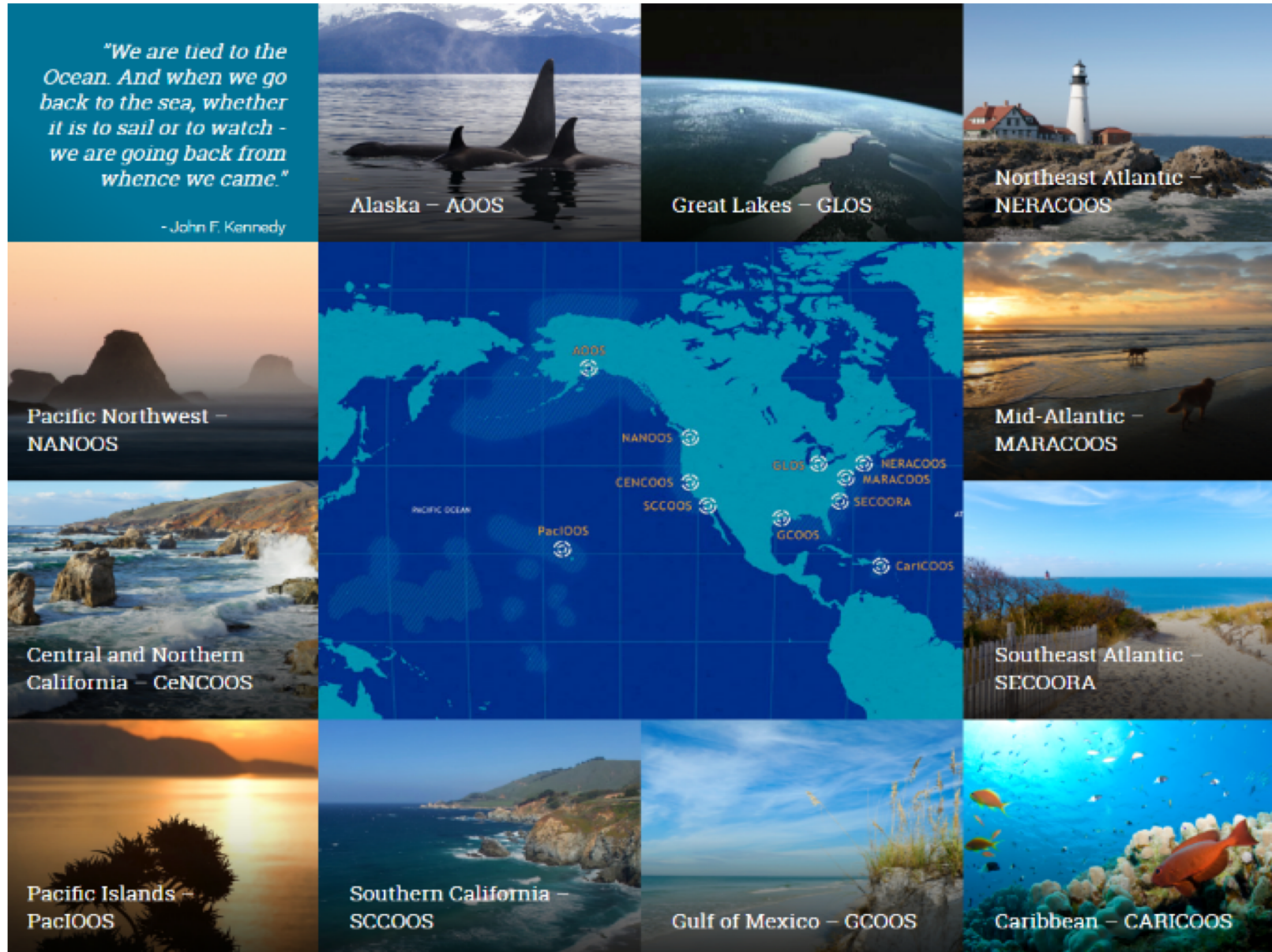
- **Advocacy**
- **Common Issues**
- **IOOS federal/non-federal partnership**
  - *Administration*
  - *Congress*
  - *National Partners*

- **Emerging Issues**
- **Special Projects**

## Board Members from SECOORA:

- **Debra Hernandez**
- **Michael Crosby**

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





# Strategic Plan



## STRATEGIC PLAN 2021-2026

ADOPTED OCT 2020

## MISSION

*The IOOS Association promotes regional and national ocean, coastal, and Great Lakes observing systems*

## VISION

*The IOOS enterprise has the resources to measure and predict the coast, ocean and Great Lakes to deliver sustained information, support decision making, and bring outstanding value to society.*

1

Increase funding for IOOS  
by 100 percent

2

Increase ability of IOOS to be  
responsive and innovative

3

Increase coordination across  
all IOOS agencies & regions

4

Increase diversity and inclusivity  
of network and partnerships

5

Increase visibility and reach of  
IOOS

6

Ensure the health and sustainability  
of IOOS Association





# Appropriations

## Fill the Gaps Campaign:

Inc regional funds \$8M over last 4 years

## IA FY 22 request:

- Increase in RA Base
- Gaps funding for HFR, gliders and resilience
- HAB ON
- Coastal modeling testbed and OTT
- CR expires tomorrow

	FY 21	FY22 IA Req	FY 22 Pres Bud	FY 22 House	FY 22 Senate	FY 22 Final
Regional IOOS	\$40.5	\$56.5	\$69.5	\$50	\$47	TBD
National IOOS	\$6.8	\$7.3	\$13.8	TBD	TBD	TBD
<b>Total</b>	<b>47.3</b>	<b>63.8</b>	<b>83.3</b>			

## President's FY 22 Budget for IOOS:

Regional line – Up \$29 M (\$10m COMT, \$4m ecosystem,\$15m for Marine Life. IOOS Office - Up \$ 9M (data, marine life, costal modeling )

## House - Regional IOOS Line Up \$9.5 M

Not less than \$3m for HAB observing

## Senate – Regional IOOS Line Up \$6.5M

HFR, Gliders, Mooring, HABs



# State of Play

## 3 funding bills in play:

- Senate Bipartisan Infrastructure bill (enacted)
- Reconciliation
- FY 22 Appropriations – CR until tomorrow!

## DEBT LIMIT

- Raised by \$480 B, through Dec 3<sup>rd</sup>

## NDAA

## BIPARTISAN INFRASTRUCTURE (BIF; HR 3684)

### ENACTED

- \$150 M for coastal and ocean observing systems
  - \$100 M in Operations, Research and Facilities (ORF)
  - \$50 M in Procurement, Acquisition Construction (PAC)
- IOOS not specifically named but Congressional intent is for IOOS to receive funds
- NOAA has 90 days for spend plan

## BUILD BACK BETTER (Budget Reconciliation – “soft infrastructure”)

- House: Passed, \$6 B - “conserve, restore, and protect coastal and marine habitats to increase climate resilience of coastal communities or sustain coastal and marine resource-dependent communities.”
  - Final cut from \$3.5 trillion to \$1.75 trillion
    - NOAA cut from \$11.9 billion to \$8.2 billion
- Senate: TBD, additional cuts expected



# Infrastructure - \$3b for NOAA over 5 years (Passed)

- **\$150 M- Improved and enhanced coastal, ocean, and Great Lakes observing systems**
- \$492 M - National Oceans and Coastal Security Fund grants to improve resilience of coastal communities to flooding by restoring natural ecosystems.
- \$491 M- Marine, estuarine, coastal, or Great Lakes ecosystem habitat restoration
- \$492 M - Coastal and inland flood and inundation mapping and forecasting and water modeling
- \$400 M - Enhance fish passage by restoring barriers and technical
- \$25 M - Data acquisition for soil moisture and snowpack
- \$200 M- Marine debris assessment, prevention, mitigation, and removal
- \$207 M - Coastal Zone Management Act habitat restoration
- \$77 M- Habitat restoration through the National Estuarine Research Reserve System
- \$56 M - Regional Ocean Partnerships
- \$50 M- Wildfire observations
- \$80 M - Research supercomputing infrastructure for weather and climate model
- \$172 M - Pacific Coastal Salmon Recovery



# Spend Plan – Summary of Regional 5 yr needs



## INFRASTRUCTURE SPEND PLAN

*The Integrated Ocean Observing System (IOOS) enterprise has the resources to measure and predict the coast, ocean and Great Lakes to deliver sustained information, support decision making, and bring outstanding value to society.*

Infrastructure Needs	Cost Estimate	Units
HFR	\$27,403,037	157
Glider	\$24,538,341	101
Moorings	--	--
Wave	\$10,705,520	68
Met ocean	\$5,365,000	82
Ecosystem	\$19,690,000	129
Animal Sensors	\$7,952,160	273
Water level sensors	\$3,825,760	282
Cyberinfrastructure	\$13,333,200	11
Drones, webcams	\$2,525,050	35
Fixed stations	\$10,304,335	132
Acoustic Arrays	\$2,710,000	56
Other	\$8,567,500	45
<b>TOTAL</b>	<b>\$136,919,903</b>	--

*Investing in the IOOS regional observing systems will stabilize, modernize and enhance delivery of the data and information necessary to ensure coastal communities have the information they need to prepare and respond to changing coastal conditions, including flooding, increased harmful algal blooms and extreme storms.*

# It's not just about infrastructure....

## Coastal Resilience

Regional and community level information for preparing and responding to changing conditions such as:

- Flooding, inundation, weather extremes, and sea level rise
- Increased harmful algae blooms and other ecological stressors
- Impacts of extreme events such as hurricanes, marine heat waves, marine spills and rip tides

## Coastal Economies

Coastal and Great Lakes information in support of local economies including:

- Observations to support public health and safety including drinking water quality, pollution, and ocean and beach conditions
- Support for fisheries, aquaculture and other maritimes industries
- Information for siting wind and other energy operations
- Sea state conditions for safe maritime operations

## Service Delivery

IOOS Regions work with stakeholders and others to develop products and services such as:

- Tailored products that are specific to the unique characteristics of the region
- Federally- certified data integration centers for ready access to information
- Testbeds for developing new technologies and methodologies



# Build Back Better (House language)

Section 70201. Investing in Coastal Communities and Climate Resilience.

\$6b over 5 years:

“to provide direct funding, grants, cooperative agreements, and technical assistance

to states, Tribes, the District of Columbia, nonprofit organizations, local governments, and institutions of higher education

for projects that conserve, restore, and protect coastal and marine habitats to increase climate resilience of coastal communities or sustain coastal and marine resource-dependent communities.”

Funds may also be used for administrative expenses. None of the funds shall be subject to cost-sharing or matching requirements.

# Build Back Better – Other NOAA Provisions (in House bill)

- \$1 billion over five years for habitat restoration for Pacific salmon and steelhead
- \$400 million over five years for marine fishery hatchery infrastructure
- \$500 million over five years for fishery stock assessments, electronic monitoring, and transitional gear research
- \$300 million over five years to repair/replace aging facilities
- \$200 million over ten years for enhanced reviews and stakeholder engagement
- \$2 million over five years for implementing the Seafood Import Monitoring Program
- \$200 million to “accelerate advancements in research, observation systems, modeling and dissemination related to weather, coasts, oceans, and climate.”
- \$100 million for competitive climate research grants
- \$100 million for development of climate science information products
- \$100 million for research infrastructure and procurement
- \$20 million for contracts, grants, and technical assistance to improve public understanding of climate change
- \$200 million for high performance computing
- \$139 million for acquisition of hurricane hunter aircraft

# Securing IOOS infrastructure support

- Congressional Outreach
  - RA outreach to key members on importance of infrastructure
    - Draft email, one page spend plan
    - SECOORA – key members:
      - Sen: Graham, Rubio (appropriators)
      - House Crist (appropriator), Desoto, Hice, Posey, Castor, Buchanan, Wasserman Schultz, Diaz Balert, Price, Clyburn, Bishop
- Administration
  - Association met with Dr. Spinrad, Nicole LeBeouf, Kim Miller
  - **Regional influencers - stakeholders, partners**
    - Contact NOAA, DOC or other Administration leaders

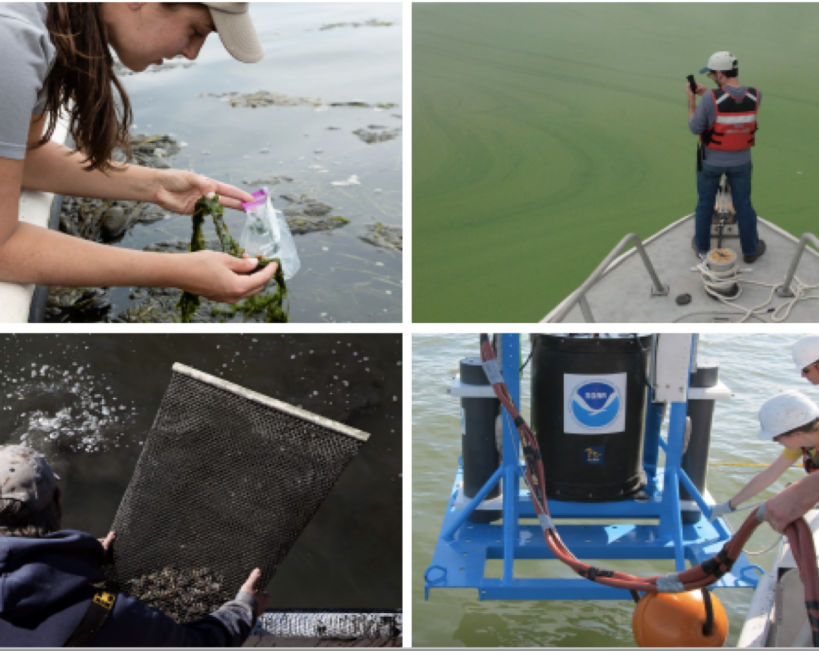
*Time sensitive - NOAA sending spend plan to DOC in "next few weeks!"*



# Harmful Algal Blooms

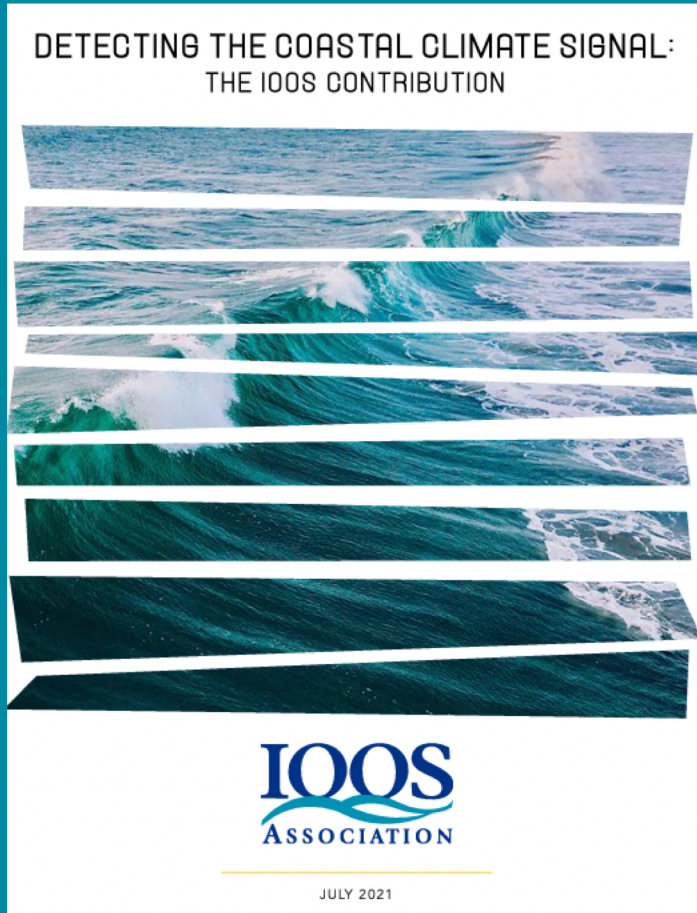
## IMPLEMENTATION STRATEGY FOR A NATIONAL HARMFUL ALGAL BLOOM OBSERVING NETWORK (NHABON)

JANUARY 2021



- HAB Observing Network FRAMEWORK (NCCOS and IOOS) (2019)
- FY 20 - Congress provides \$1M for HAB observing network pilot project
- HAB Observing Network Implementation Strategy (2021)
- FY 21 - \$2.5M for HAB observing network pilot projects, including SECOORA
- FY 22 (pending)
  - House mark - \$3M
  - Senate mark – no less than FY21
- HAB Observing Group
  - Brings together feds, non-feds
  - Webinar series

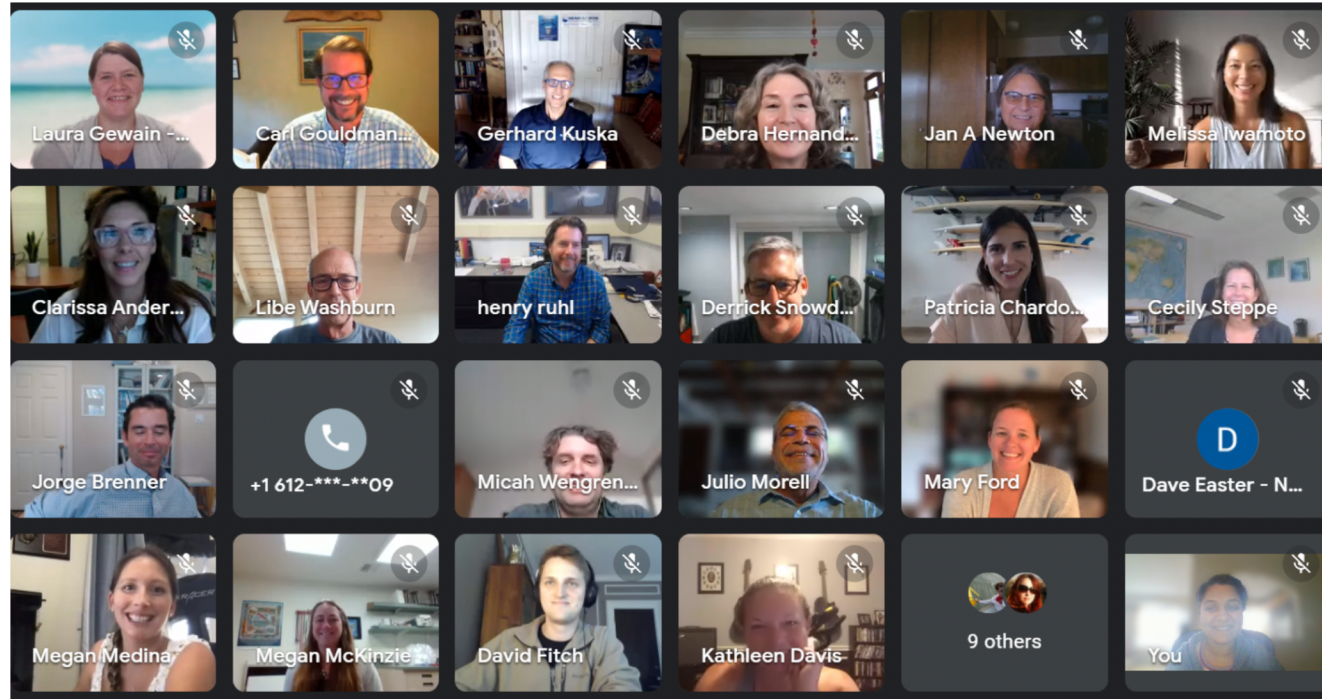
# Detecting the Coastal Climate Signal



- Climate change is global but impacts vary regionally
  - *Sea level, inundation, lake water levels*
  - *HABs, OA, hypoxia*
  - *Marine heat waves*
  - *Extreme storms*
- 5 broad recommendations:
  - *Expand coastal obs*
  - *Modernize and recap*
  - *Technology innovation*
  - *Data integration*
  - *Equitable services*
- Climate Dialog series (on-going)
- Workshop to develop recommendation for improving coastal climate observations products

# IOOS Meetings

- Association Annual Meeting
  - Elected New Officers:
    - Gerhard Kuska, Chair
    - Jan Newton, Co-Chair
    - Henry Ruhl, Treasurer
    - Julio Morell, Secretary
    - Debra Hernandez ,Past Chair
- Spring Meeting
  - March 8-10, 2022
  - In person, in DC
  - Congressional visits
- Fall 2020
  - Community Meeting



- Fall Meeting – VIRTUAL (again!)
- Presentations – Dr. Spinrad NOAA Administration  
Ms. Nicole LeBeouf, NOS AA
  - IOOS plays roles in Dr. Spinrad’s top priorities
    - Climate, new blue economy and equity
- Marine Life Discussion – matching national needs with on-the-ground (ocean?) needs



# CARAID Award

*Celebrating vision,  
coordination and  
collaboration*



Dr. Libby Jewett, NOAA OA Program  
2021 CARAID Award recipient



## THE CARAID AWARD

*Recognizing outstanding  
contributions to ocean and  
coastal observing*

## About

The IOOS Association created the Caraid Award in 2020 as an annual award to recognize those who have made outstanding contributions to observing and understanding our oceans, coasts and Great Lakes through vision, leadership, friendship and collaboration. The word "Caraid" is a Scottish Gaelic word, meaning "care" or "love" and is pronounced like "courage." These are the attributes - caring and the courage to do what matters - that makes IOOS work. The first recipient of the award was Dr. Ru Morrison whose Scottish heritage and collaborative nature inspired us to learn about Caraid, not only as a word, but also as an ethos he brings to all of his work.

## Seeking Nominations for 2022 Award

**NOMINATIONS SOUGHT FOR  
2022 CARIAD AWARD  
DEADLINE 12/10/21**

# Questions?



IQQS  
ASSOCIATION

© Ru Morrison

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ASSOCIATION



# Diversity, Equity Inclusion and Accessibility

Ashley Peiffer,  
2022 IOOS DEIA Fellow



- Ashley will work with RAs and IOOS Office:
  - to amplify existing and planned efforts to improve DEIA and service equity,
  - Research and recommend best practices for improving service equity including co-development
  - Training opportunities for staff,
  - Workforce development opportunities and support,
  - Seek partnerships, and
  - Identify next steps including possible funding opportunities



# RA Biological Activities and Needs

Impact of changing conditions on life in the coastal oceans and Great Lakes

Impact of multiple stressors – OA, HABs, hypoxia, biodiversity

Users:

Indigenous communities, commercial, recreational and subsistence fisheries, aquaculture, managers, etc

- Observations:
  - Ecosystem moorings, ship transects, gliders, acoustic tags
  - New technology – IFCBs, eDNA, BGC sensors
- Data and Modeling
  - AI, machine learning to help with large data sets
  - Data standards for biological observations
- Products
  - Forecasts – HABs, OA, fisheries
  - Soundscapes
  - Visualizations
  - Products for remote communities