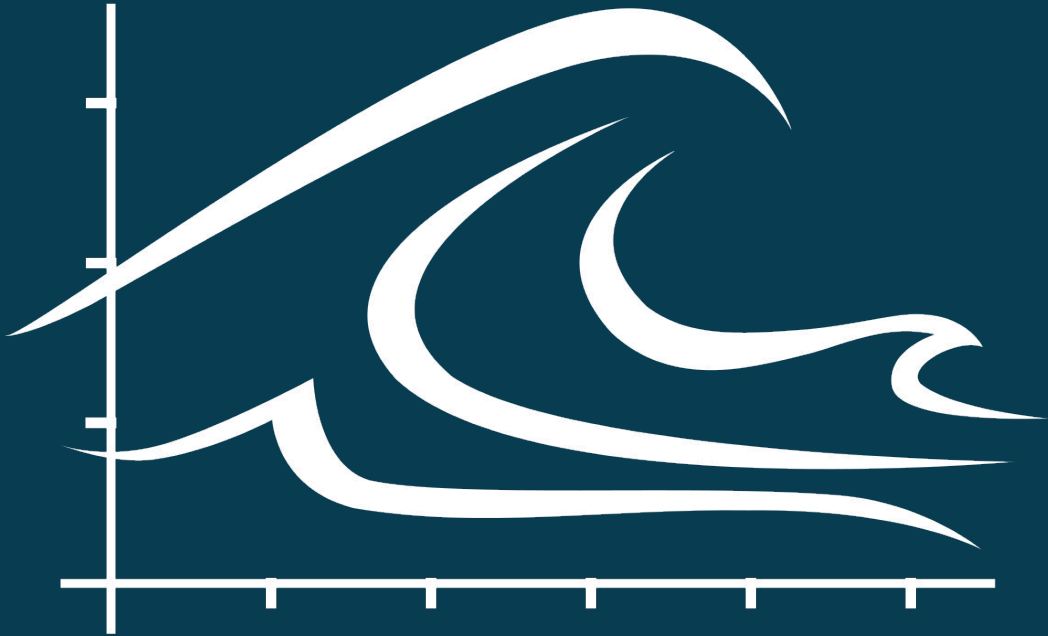


NERACOOOS



NORTHEASTERN REGIONAL ASSOCIATION
OF COASTAL OCEAN OBSERVING SYSTEMS

The U.S. Integrated Ocean Observing System in the Northeast

Jake Kritzer

Gulf of Maine Monitoring & Research
Symposium

Northern Essex Community College
Haverhill, MA

April 9, 2025

U.S. Integrated Ocean Observing System (IOOS)

IOOS is our eyes on the ocean, coasts, and Great Lakes. We are an integrated network of people and technology gathering observing data and developing tracking and predictive tools to benefit the economy, the environment, and public safety at home, across the nation, and around the globe.



- 17 federal partners
- 11 regional associations
- 34 core variables
- Buoys, gliders, HFR, satellites, ship-based surveys, coastal stations, etc.
- Variety of models
- Federally-certified data management



The NERACOOS Team

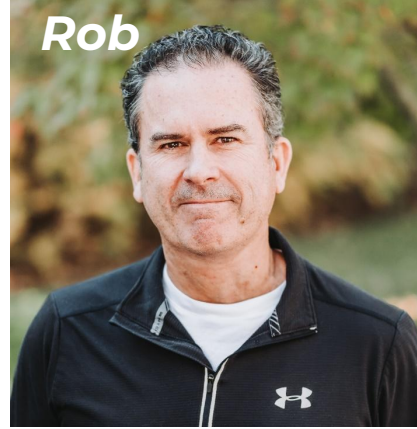
Tom



Jackie



Rob



Emily



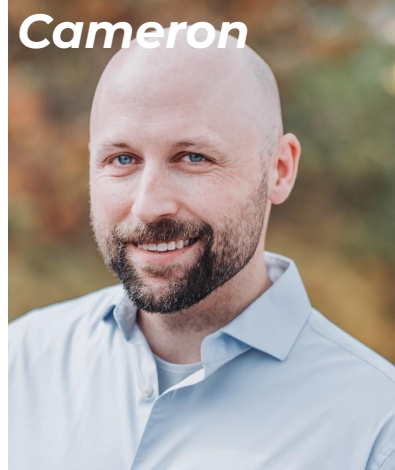
Katy



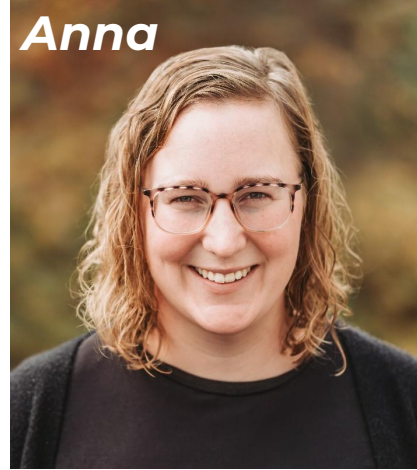
Austin



Cameron



Anna



Caitlin



Brenda

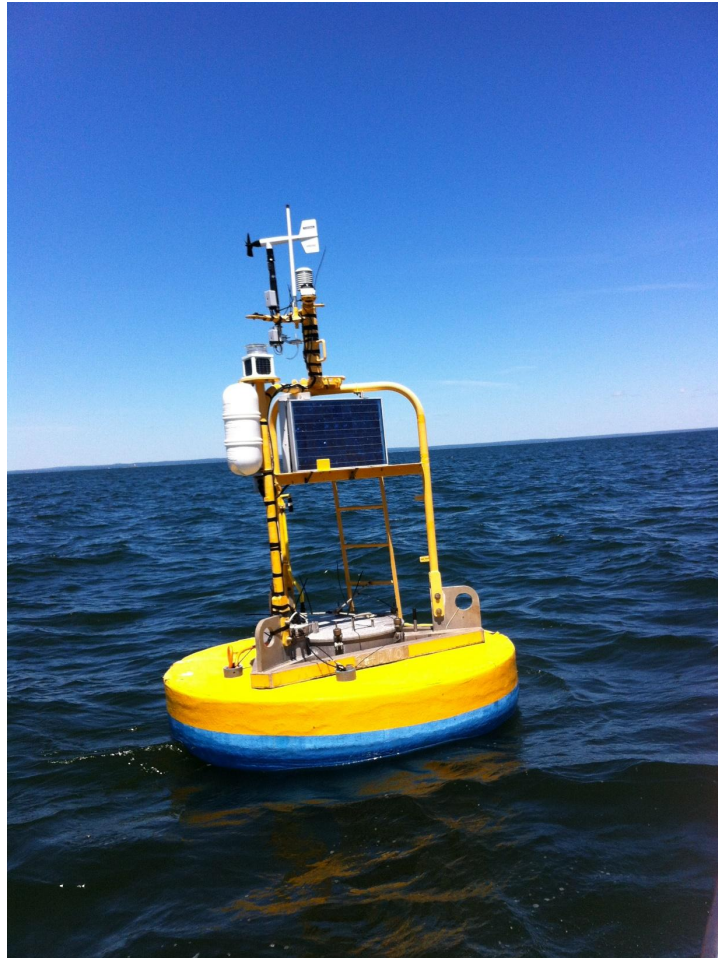


Our Board of Directors

- Nicole Bartlett (NOAA North Atlantic Regional Team)
- Diane Foster (University of New Hampshire)
- Larry Alade (NOAA Northeast Fisheries Science Center)
- Aleck Wang (Woods Hole Oceanographic Institution)
- Dave Hebert (Bedford Institute of Oceanography)
- Neal Pettigrew (University of Maine)
- Steve Lohrenz (University of Massachusetts Dartmouth)
- Chris Williams (NH Dept. of Env. Services)
- Kevin O'Brien (Connecticut NERR)
- Prassede Vella (MassBays NEP)
- Rebecca Peters (ME Dept of Marine Resources)
- Todd Morrison (Nobska Development Corp.)
- Rhonda Moniz (Underwater Investigative Group)
- Hung Pham (Mass. Maritime Academy)
- Janet Dully-Anderson (Gulf of Maine Research Institute)



System Operators

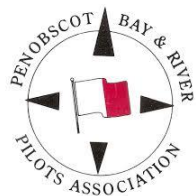
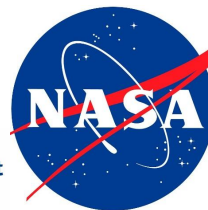
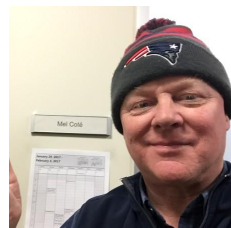
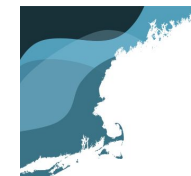


NORTHEAST OCEAN OBSERVING SYSTEM





Members & Funders



Who We Serve

	Government	Private company	NGO	Academic	Other	Total
AOOS	24	14	22	10	4	74
	32.4%	18.9%	29.7%	13.5%	5.4%	
CARICOOS	22	26	10	10	6	74
	29.7%	35.1%	13.5%	13.5%	8.1%	
CenCOOS	26	12	10	33	5	86
	30.2%	14.0%	11.6%	38.4%	5.8%	
GCOOS	3	4	7	11	0	25
	12.0%	16.0%	28.0%	44.0%	0.0%	
GLOS	18	62	7	10	20	117
	15.4%	53.0%	6.0%	8.6%	17.1%	
NERACOOS	52	45	16	26	34	173
	30.1%	26.0%	9.3%	15.0%	19.7%	
PacIOOS	33	28	6	21	10	98
	33.7%	28.6%	6.1%	21.4%	10.2%	
SCCOOS	23	4	7	12	2	48
	47.9%	8.3%	14.6%	25.0%	4.2%	
SECOORA	27	14	7	52	7	107
	25.2%	13.1%	6.5%	48.6%	6.5%	
Total*	234	278	95	185	4	802
	29.2%	34.7%	11.8%	23.1%	0.5%	

There is no typical NERACOOS user!

We provide services to a wide variety of people interested in or reliant on the ocean.

This broad user base is consistent with the mission of U.S. IOOS.

What Users Need

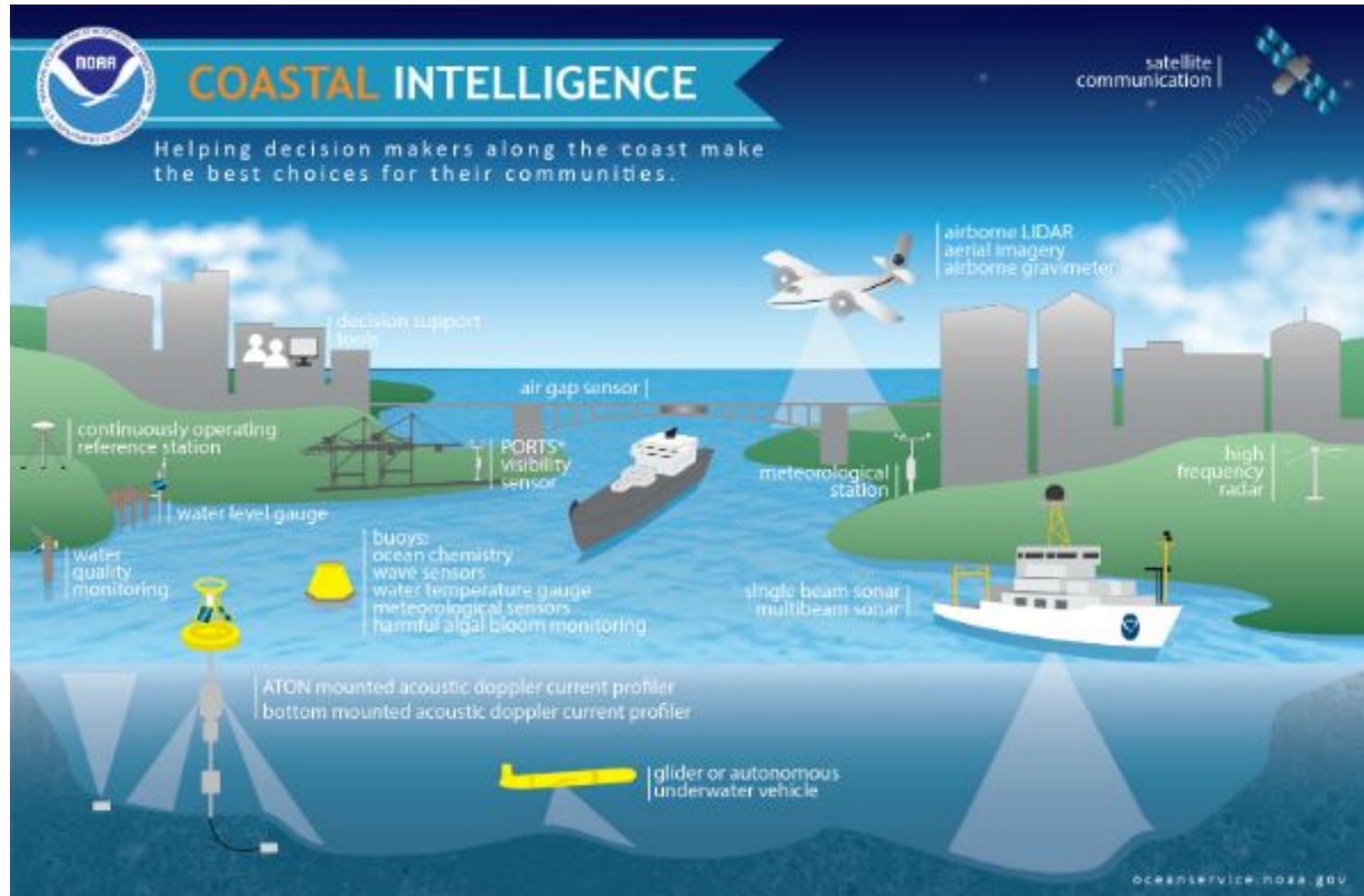
	Current Conditions	Forecast Conditions	Historical Data
AOOS	37.6	15.1	28.2
CARICOOS	51.5	32.2	7.4
CenCOOS	49.5	15.9	19.5
GCOOS	47.2	12.5	18.0
GLOS	75.3	15.6	4.0
NERACOOS	59.1	16.1	20.2
PacIOOS	56.6	33.2	6.8
SCCOOS	41.2	15.4	30.0
SECOORA	44.7	15.1	20.7
All RAs	64.3	9.5	18.8

Most users are looking for real-time data, primarily for navigation and operations.

Forecasts are also important for nav/ops, as well as predictive analyses.

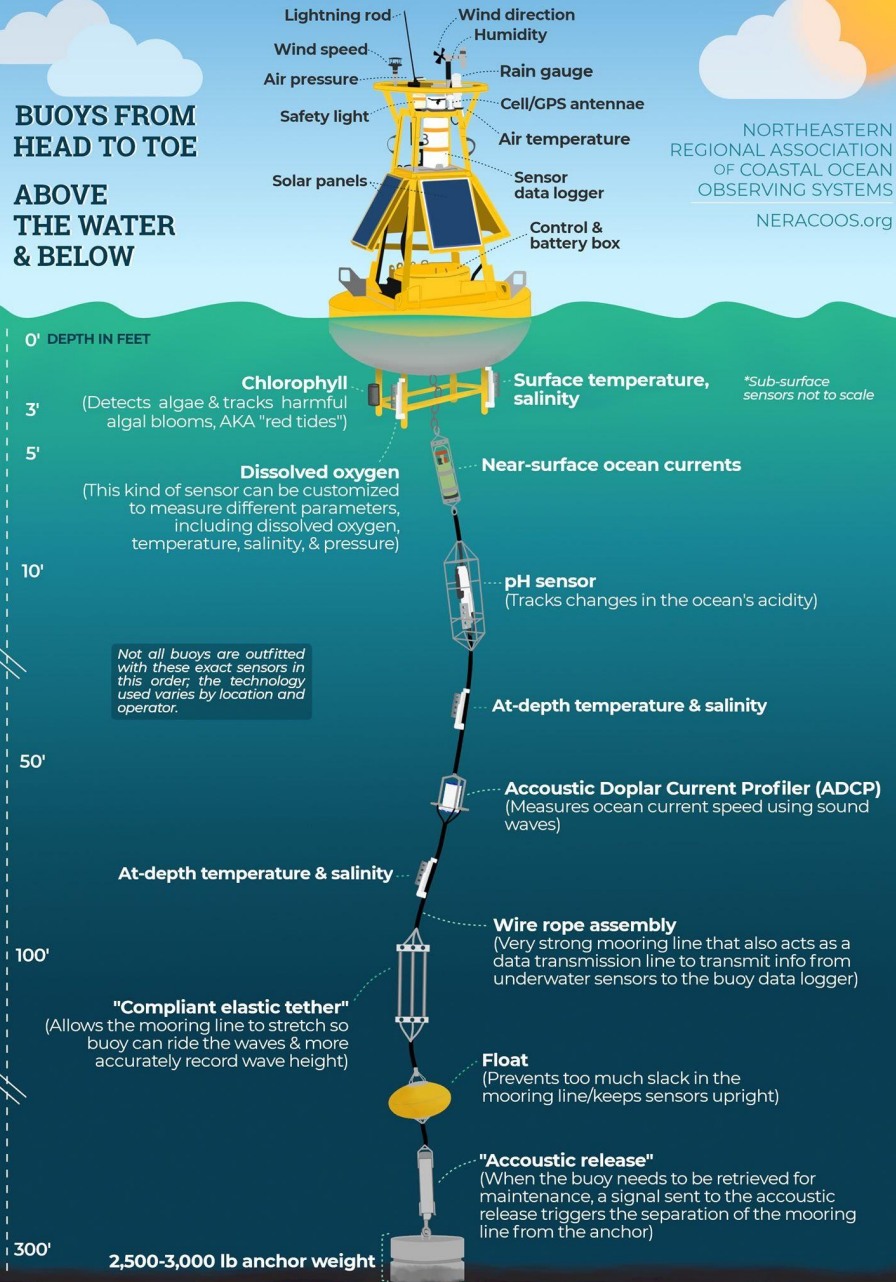
Time series support research and policy.

Ocean Observing Tools

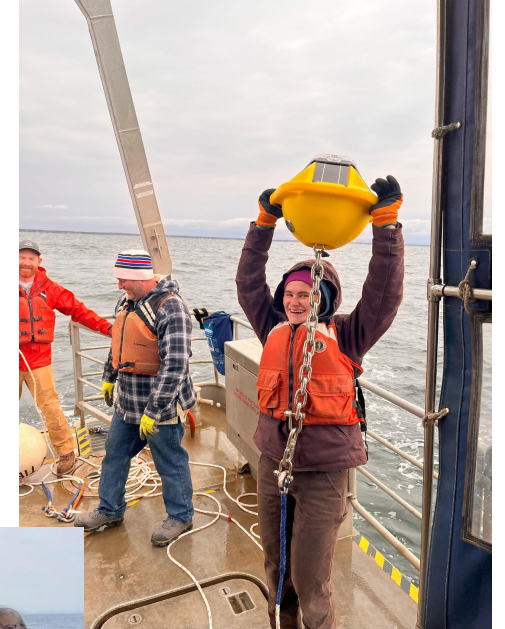


BUOYS FROM HEAD TO TOE

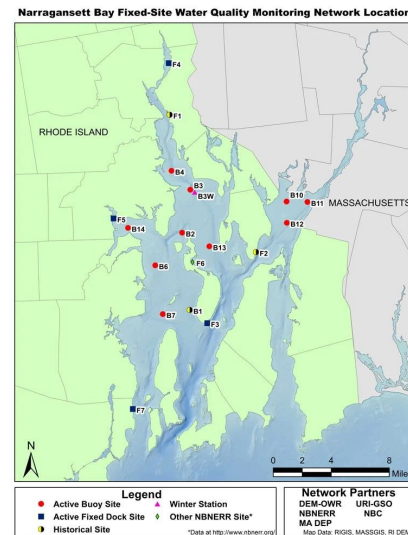
ABOVE THE WATER & BELOW



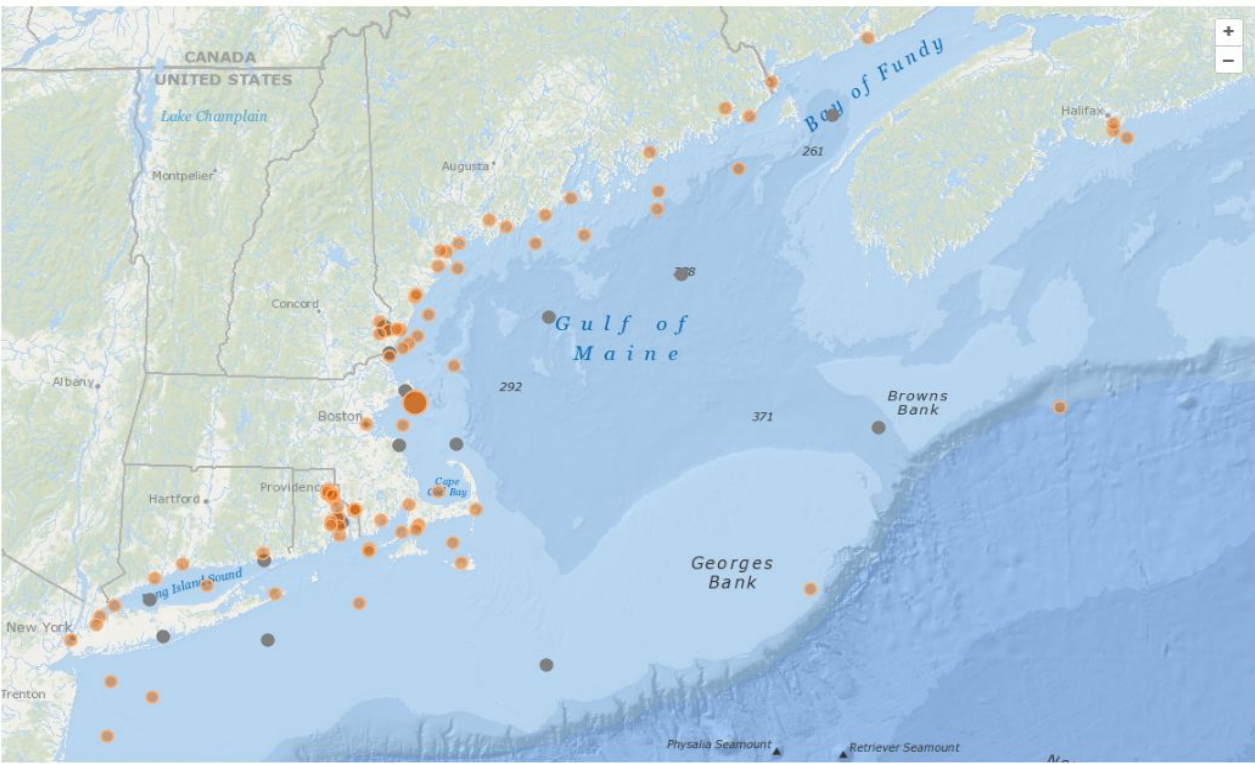
Oceanographic Buoys: The System Backbone



Coastal & Estuarine Stations



NATIONAL
ESTUARINE
RESEARCH
RESERVE
SYSTEM



Station A01

Massachusetts Bay

NDBC ID: 44029

Lat: 42.53 Lon: -70.56

[University of Maine](#)

The Mariners' Dashboard

Last updated at: Apr 7, 09:00 AM

Wind Speed: 12.7 Knots

Wind Gust: 14.5 Knots

Wind Direction: NEbN

Significant Wave Height: 3.3 ft

Dominant Wave Period: 7.2 Seconds

Barometric Pressure: 14.7 psi

Air Temperature: 37.6 Fahrenheit

Water Temperature @ 1m: 41.8 Fahrenheit

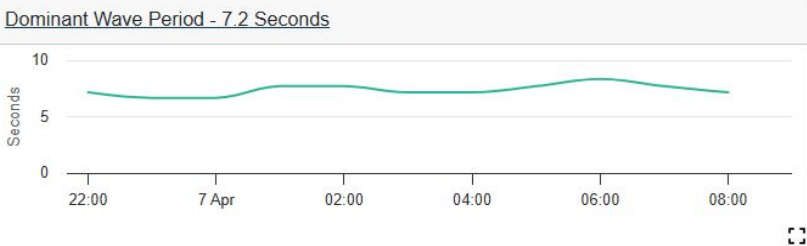
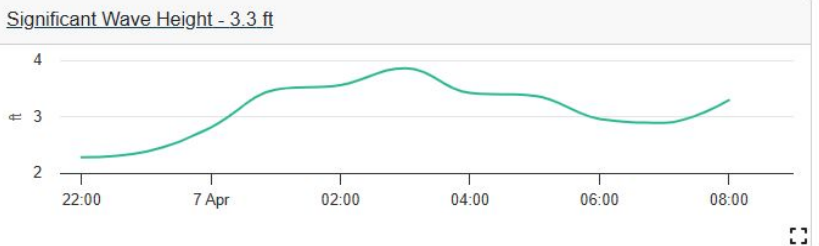
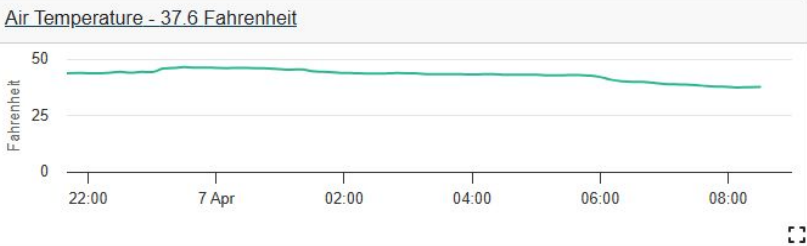
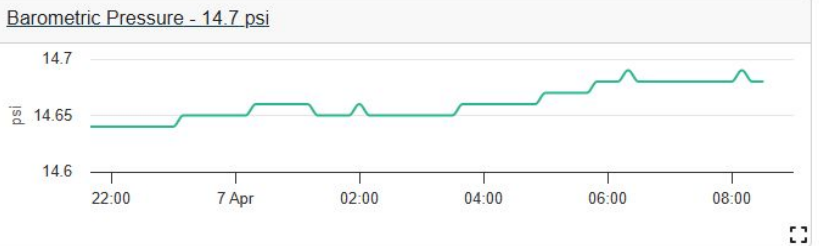
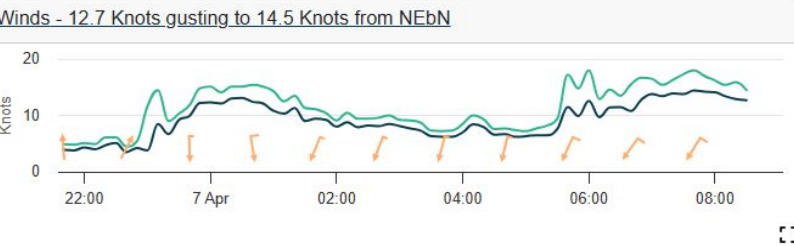
Visibility: 1.7 Nautical Miles

Unit system: Metric **English**

mariners.neracoos.org



Observations ▾ Latest Conditions Forecasts ▾ More info ▾



Ocean Climate Tool

Daily Climatology

To view different plots, select buoy, data type and the averaging time period from the selections below. For more information on the product, view the [information page](#). For an overview of how to use the display, or if you are having problems viewing the page, go to the [How To Guide](#).

Buoy Location

Data Type

Averaging Time Period

A01, Massachusetts Bay - UMaine

Water Temperature 1m

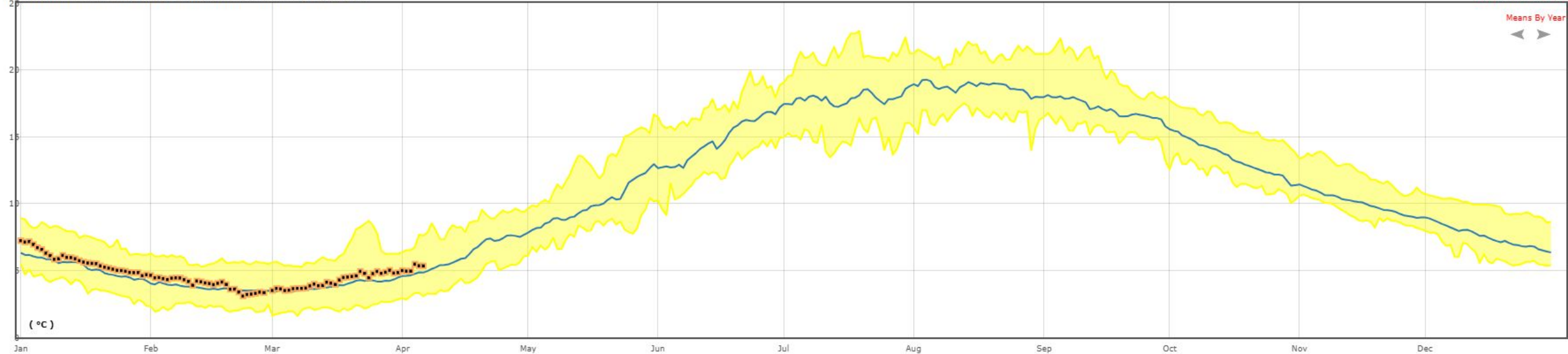
Daily



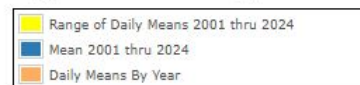
Mean Water Temperature 1 meter depth at A01 for 2001 thru 2025

Daily Means for 2025

Means By Year
◀ ▶

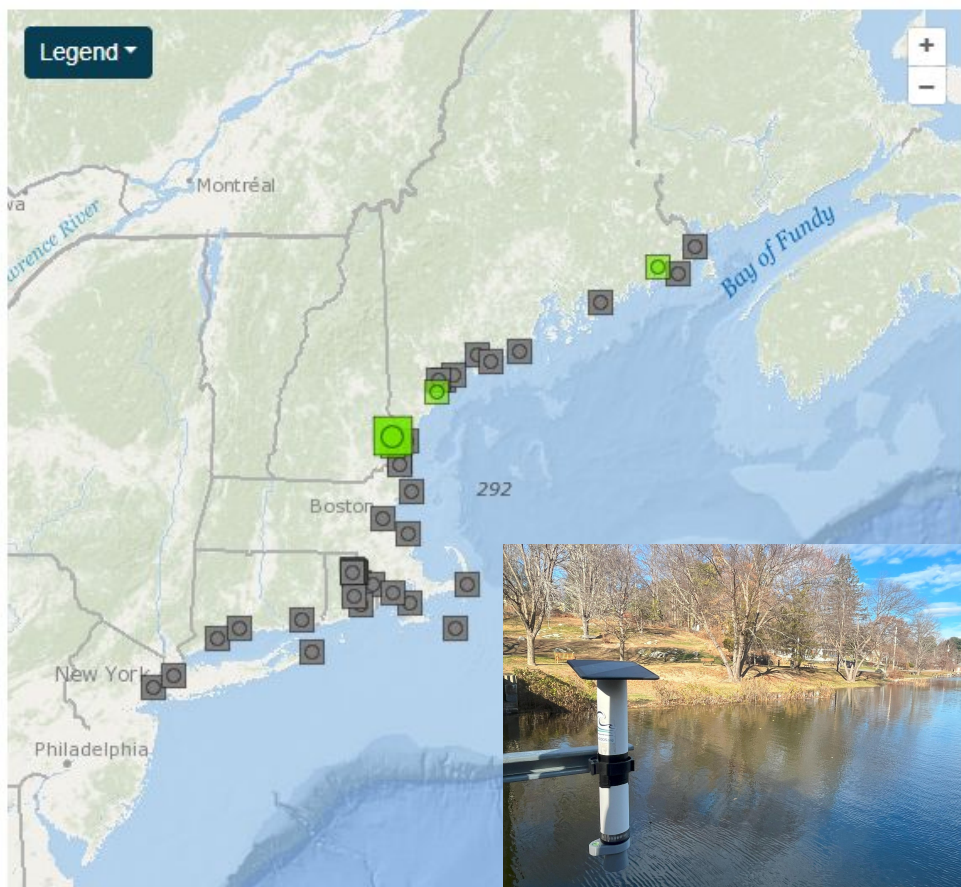


2025



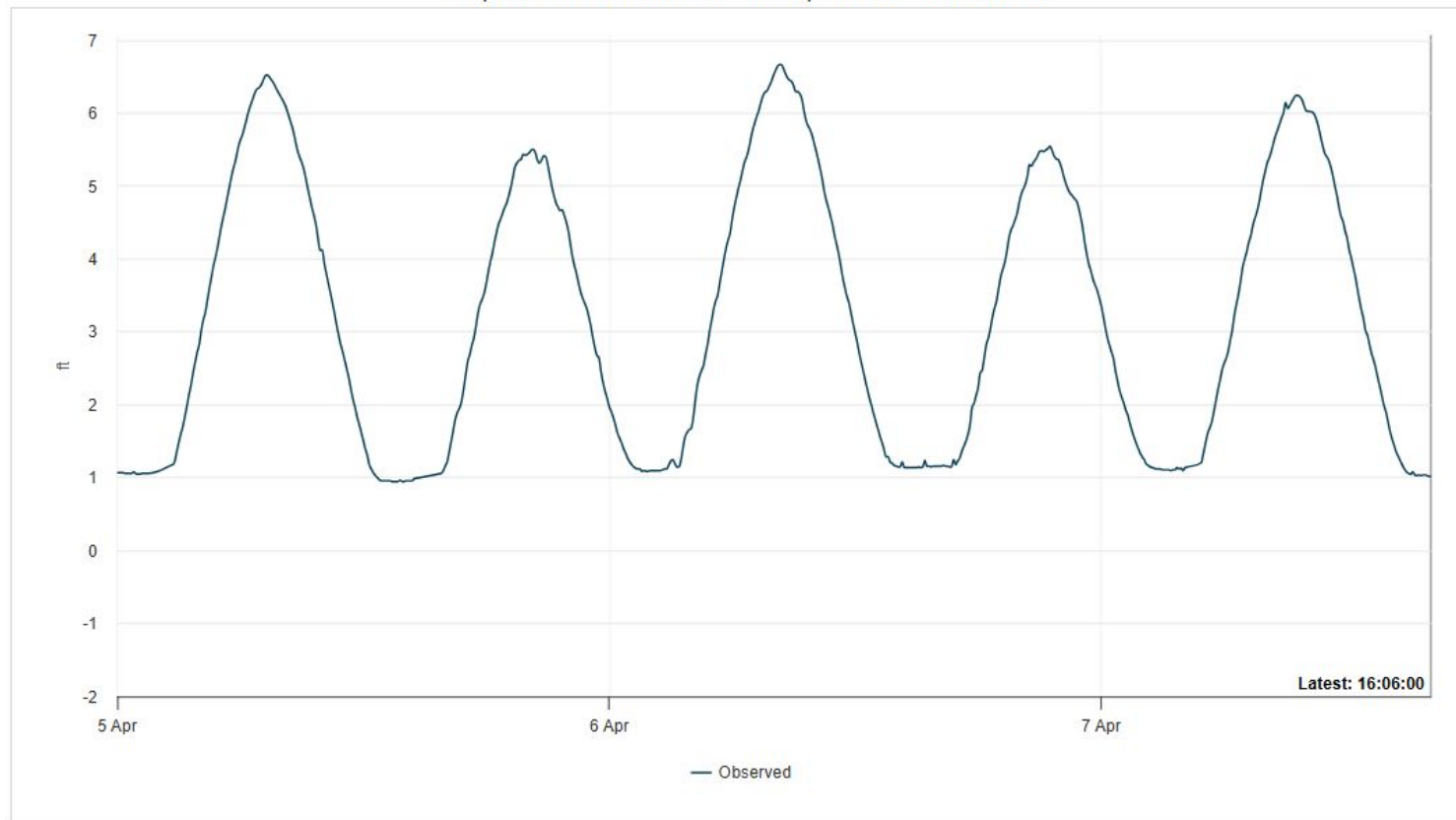
View Climatology Data Table

Water Level Monitoring

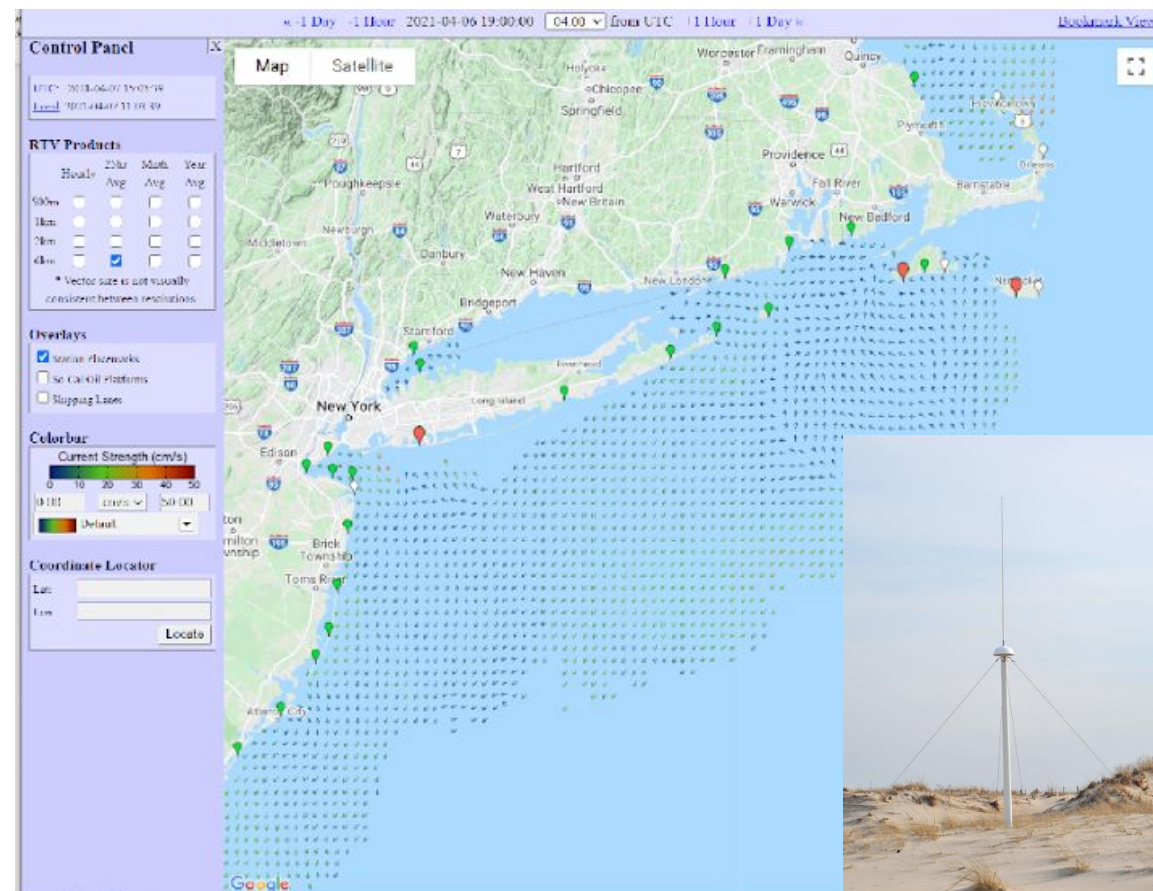
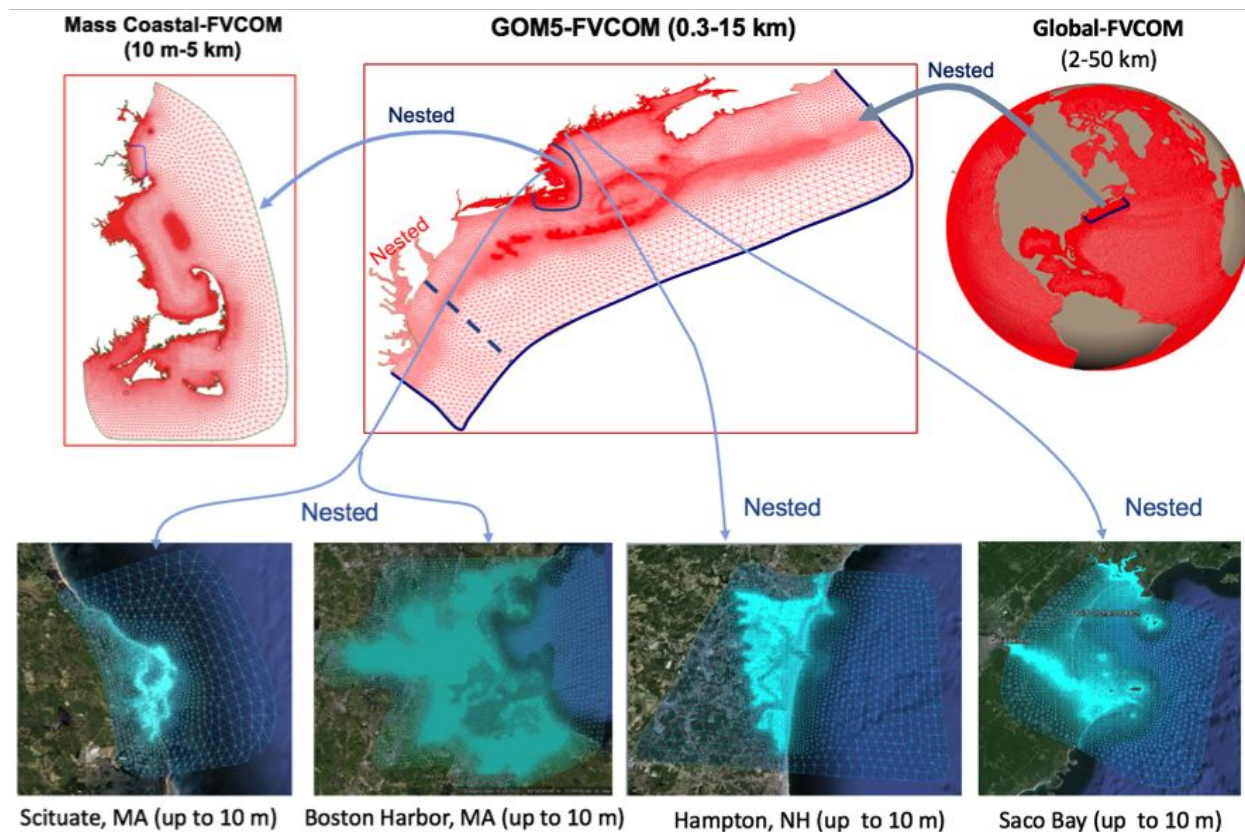


Mean Low Low Water for Station: NH_TLD

Sat Apr 05 2025 00:00:00 EST - Mon Apr 07 2025 16:06:00 EST

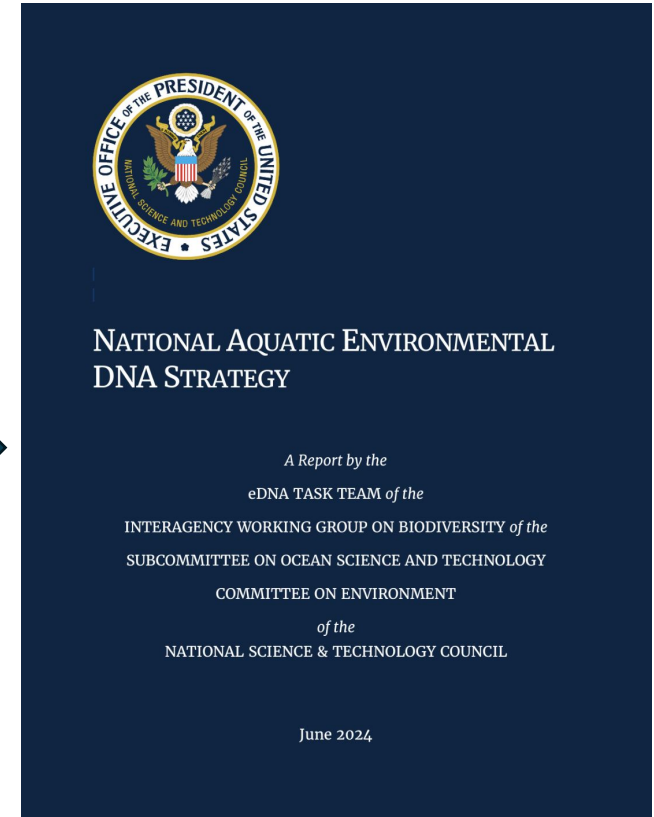
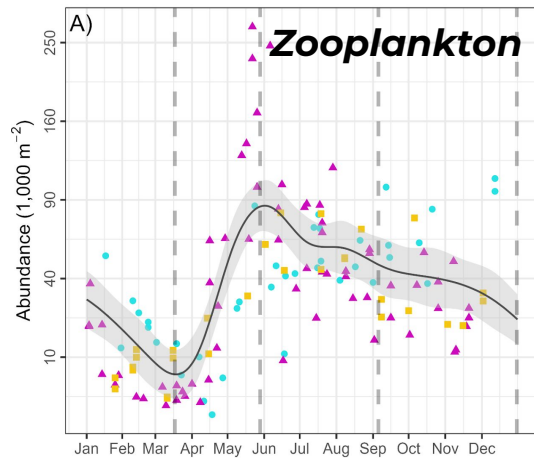
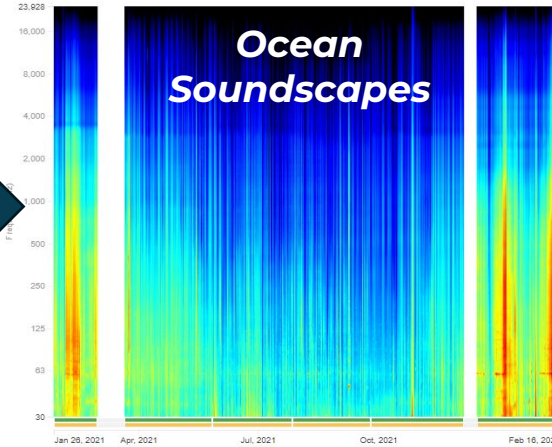
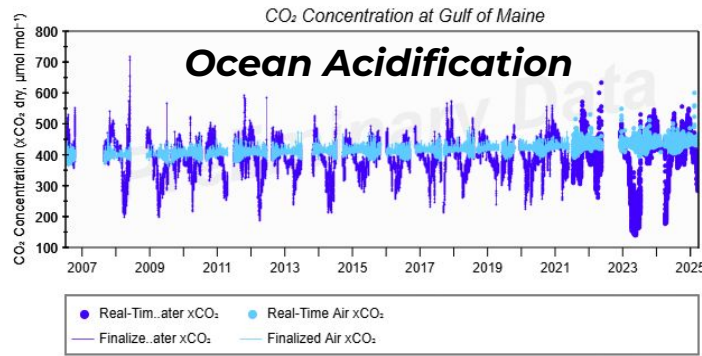


Oceanographic Models



Stay tuned for Prof. Chen's talk!

Ecosystems & Marine Life



**Thank You!!!
Questions?**

jake@neracoos.org