

A graphic element of the NROC logo, showing a stylized coastline with waves in shades of blue and white.

NROC

Northeast Regional
Ocean Council



Northeast Regional Ocean Council Ocean Acidification Outreach

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NROC Meeting

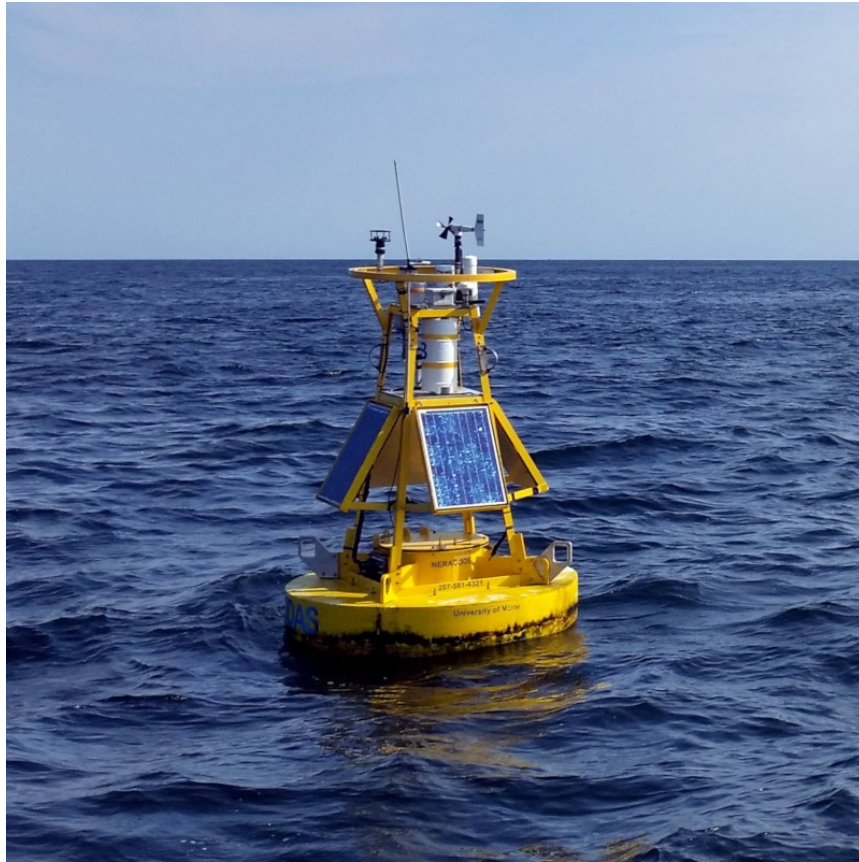
November 12th, 2024

Ocean Acidification in the U.S. Northeast



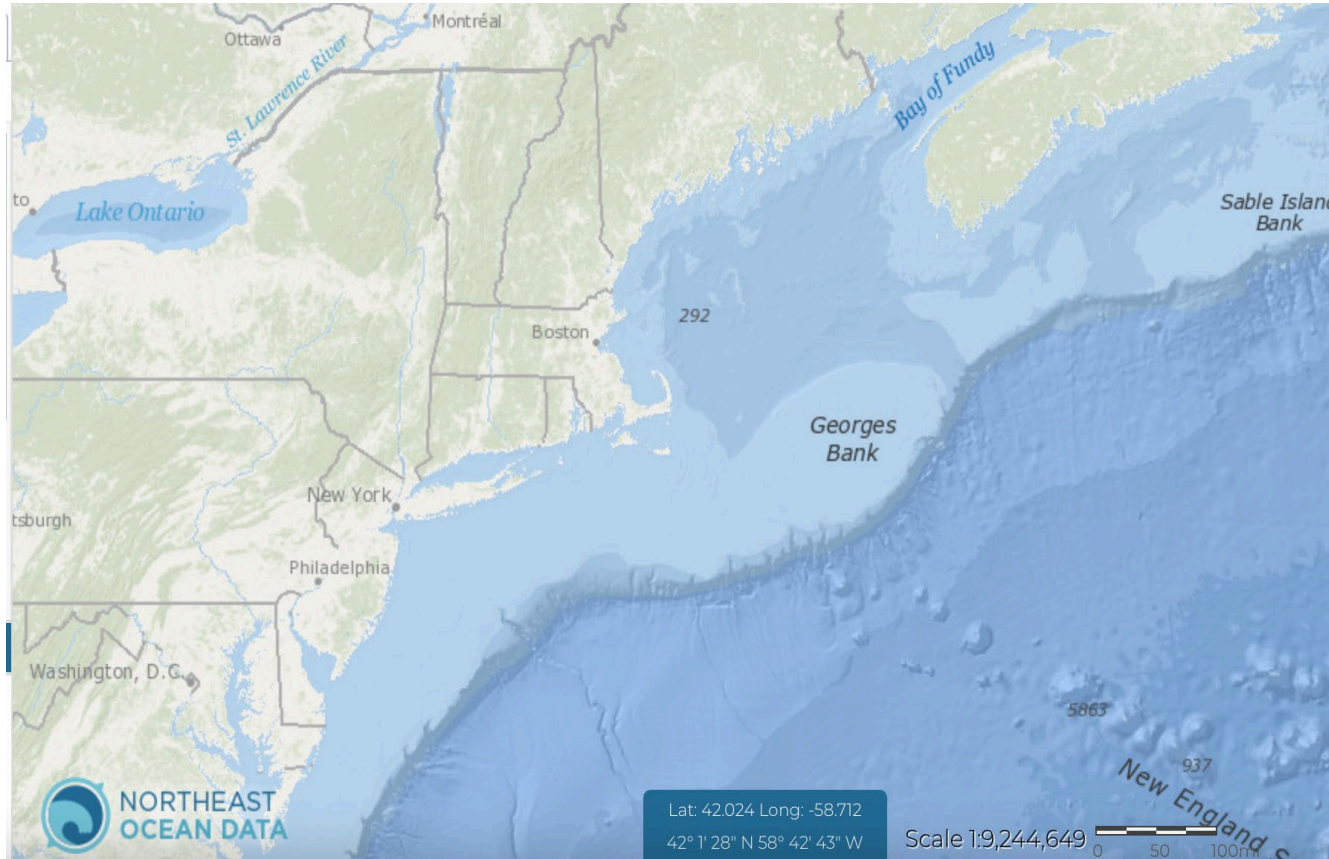
- Climate induced ocean acidification has become more prevalent on a global scale.
- Increased absorption of atmospheric carbon dioxide causes water to become more acidic.
- Leads to the dissolution of organisms whose structures are composed of calcium carbonate.
- This includes species of commercial importance to the Northeast such as oysters, mussels, scallops and lobsters.
- Ocean acidification also impacts rates of reproduction, growth, calcification, behavior, feeding patterns and mortality.

Data Needs and Gaps in Ocean Acidification Monitoring



- Robust data collection and monitoring of environmental variables associated with OA are essential.
- Northeast Coastal Acidification Network (NECAN) works to improve understanding OA and potential impacts in the region.
- In November 2023, NECAN-NROC hosted workshop to identify priorities for understanding OA in the region and impacts.
- Workshop outcomes served as basis for development of draft Ocean Acidification Monitoring Plan.

Development of Ocean Acidification Theme in Northeast Ocean Data Portal



- One major recommendation for the improvement of OA monitoring is knowing where regional monitoring is occurring.
- In response to this need, NROC is prioritizing the development of an OA theme in the Northeast Ocean Data Portal.
- Aims to provide information on the location of current and ongoing OA monitoring assets.

Development of Ocean Acidification Outreach Concept



- To inform development of theme, NROC will spearhead engagement with ocean managers, planners, industry and Tribes.
- The goal of engagement is to understand ocean acidification data products, data gaps and needs to inform siting, permitting and business decisions.
- NROC will also engage biologists and other experts to understand OA thresholds for key species.

Development of Ocean Acidification Outreach Concept



- Outreach concept formulation also included carrying out preliminary research to determine:
- The impact of OA on commercially significant fisheries species in the Northeast.
- Environmental parameters that might be used to monitor OA (i.e., $p\text{CO}_2$, saturation state, pH, Ω_{ca} , temperature, salinity, etc.)
- Impact of OA on other species (i.e. seagrass, algae, deep sea coral).
- OA management in other regions (i.e. Pacific Coast).

Stakeholder Outreach and Engagement



- NROC will be carrying out management focused outreach to the following groups:
- Decision makers
- Coastal managers
- Industry partners
- Tribes

Potential preliminary questions include:

1. What are the most species of concern as it relates to OA in the Northeast?
2. What types of decision-making tools/data are crucial for OA supporting management in your region?

Stakeholder Outreach and Engagement



- NROC will be carrying out science focused outreach to the following groups:
- Biologists
- Biogeochemists
- Ecologists

Potential preliminary questions include:

1. What are the most important parameters needed to monitor OA in the Northeast?
2. What are the thresholds that exist for species of interest likely to be impacted by OA in the Northeast?

Feedback/Questions?



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