



NJDEP Research and Monitoring Initiative: Project Fact Sheet



An ecological and oceanographic baseline to inform offshore wind development over the continental shelf off the coast of New Jersey

Research Motivation

- To understand how seasonal ocean conditions vary throughout New Jersey's coastal waters.
- Provide baseline data to evaluate OSW impacts on the environment (physical/chemical) and ecosystem (biological).

Principal Investigators and Institutions

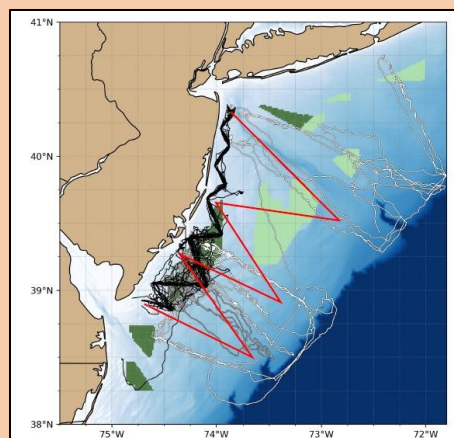
- Dr. Josh Kohut & Dr. Grace Saba (Rutgers Statue University, Center for Ocean Observing Leadership, Dept. of Marine & Coastal Sciences)

RMI Research Priorities Addresses

- Environmental Change
- Fishes and Invertebrates
- Marine Mammals

Geographic Scope

Map (right) indicates the coverage of three relevant glider missions; NJDEP water quality (black), NOAA and NYSERDA pH (white), and Orsted Marine Mammal Monitoring (grey). The proposed environmental survey track is shown in **Red**. The offshore wind lease areas are shown in shades of green.



Methods or Approaches Used

- Slocum gliders (autonomous underwater vehicles) fitted with an array of sensors follow predetermined routes, collecting and recording high resolution data throughout the water column
- Integrated sensors measure environmental conditions (e.g., water temperature, salinity, pH, oxygen, chlorophyll-a)
- Gliders are equipped with multi-frequency echo sounders to detect pelagic fish or plankton, acoustic telemetry receivers to record tagged organisms, and DMON passive acoustic sensors for marine mammal monitoring
- Gliders are deployed 3-4 weeks per survey. Paired deployments occur in Jan, April, July, and Oct of each year. Three additional deployments occur May-Oct.

Expected Outcomes or Deliverables

- Characterize seasonal variability for a range of physical, chemical, and biological variables that support multiple RMI research priorities
- Final Report will be made publicly available on the RMI webpage

Regional Coordination / Collaboration / Data Sharing

- Data will be shared on the Thematic Real-time Environmental Data Distribution system (THREDDS) and the Mid-Atlantic Regional Associate Coastal Ocean Observing System (MARACOOS)
- Partner with Woods Hole Oceanographic Institute to share marine mammal detection data across platforms in near-real time

Project Completion Date

November 2024

Total Project Budget

\$2,503,552



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