

Carolina Long Bay 2023 Offshore Wind Activities

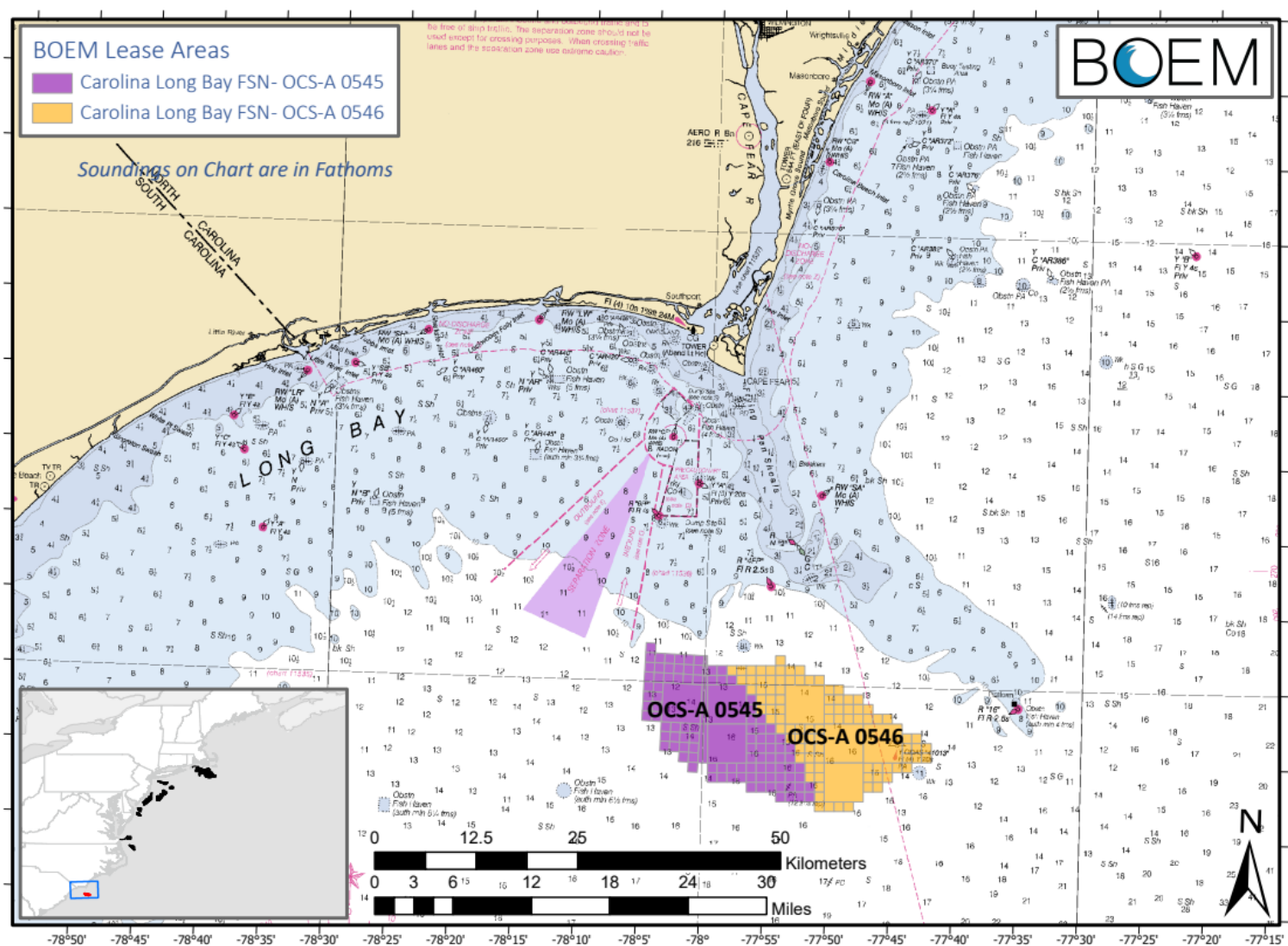
Lease Area OCS-A 0545
TotalEnergies Renewables USA, LLC

Lease Area OCS-A 0546
Cinergy Corp., a direct non-regulated
subsidiary of Duke Energy

NC TOWERS
November 2, 2023

Jen Banks
Permitting & Development Director
TotalEnergies

Carolina Long Bay Offshore Wind Lease Auction – May 2022



Auction Winners

OCS-A 0545: TotalEnergies Renewables USA, LLC

- 54,937 acres

OCS-A 0546: Cinergy Corp.

- 55,154 acres

OCS-A 0546 Lease Reassignment:

- July 12, 2023: Assignment of the lease from Duke Energy Renewables Wind LLC to Cinergy Corp. was approved.
- Cinergy Corp. is a direct non-regulated subsidiary of Duke Energy (“Duke Energy”).¹

1) Cinergy Corp is not regulated by the North Carolina Utilities Commission (Commission) or in any way sanctioned by the Commission.

Fisheries Communications Plan (FCP)

Communications strategy for fisheries stakeholders prior to and during activities

Drafts submitted October 2022 - each Lessee submitted individual plans

Final plans to be posted on Project websites within 30 days of issuance of BOEM's final guidance

Fisheries Engagement

Commercial & recreational fishermen

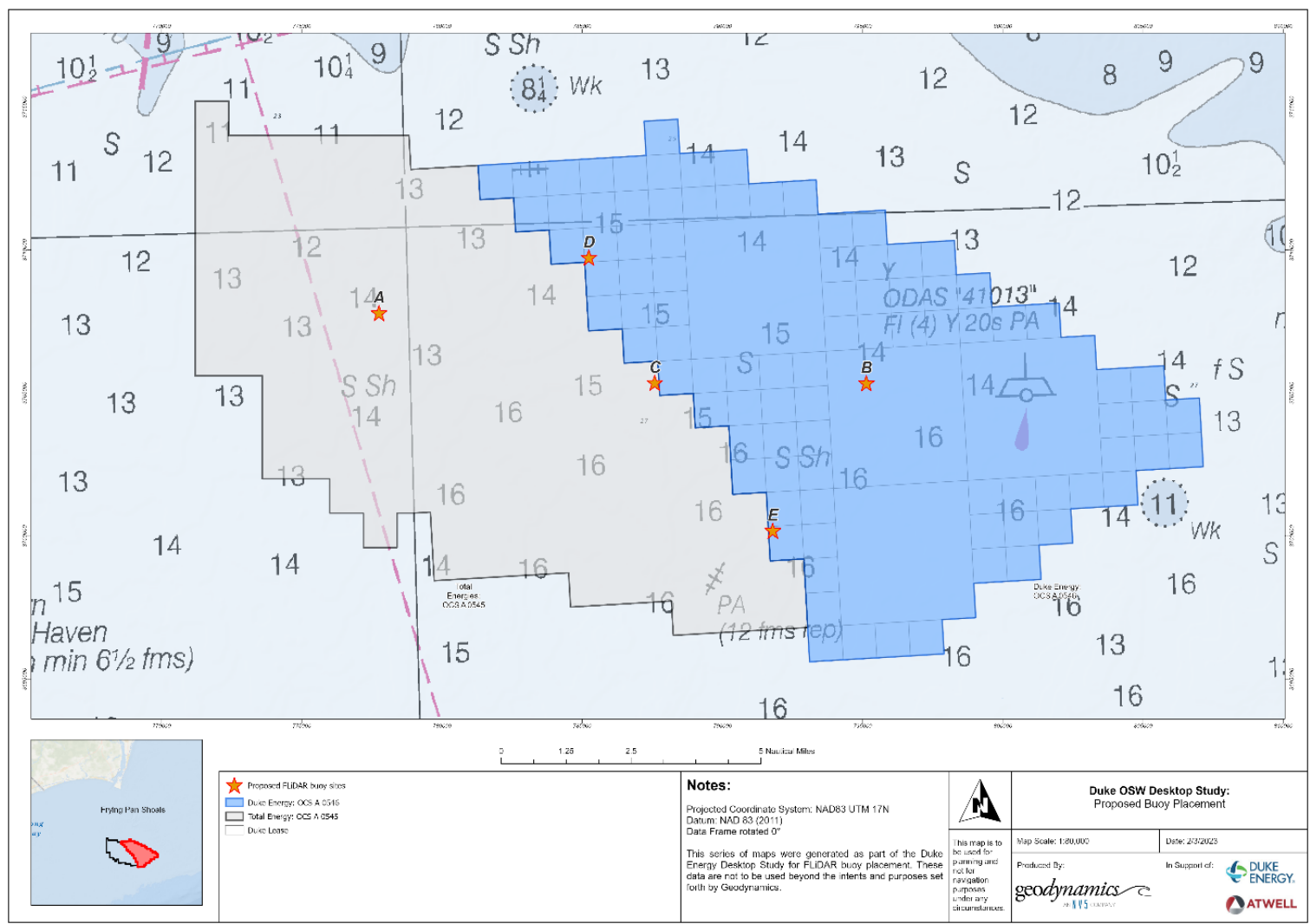
Seafood markets & seafood buyers

Fishing associations

Universities, agencies & researchers

Survey Locations

(locations being considered for deployment of buoys)



Plan for Buoys

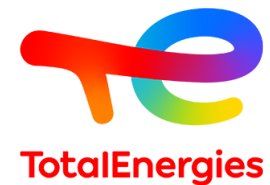
Meteorological Buoys: Two buoys (one within each lease area) equipped with floating light detection and ranging (LiDaR) and other sensors

Environmental Buoy: Wildlife monitoring; triangulation for locating whale and other marine mammal activity

*No more than 3 buoys are planned

Survey Locations

Survey Location	Latitude	Longitude
Location A	33.477819N	78.0119996W
Location B	33.447271N	77.830528W
Location C	33.442476N	77.913567W



SAP survey to assess buoy locations:
August 15, 2023 – August 24, 2023

Survey Contractor:
Geodynamics, an NV5 Company

Protected Species Observer Contractor:
RPS

Offshore Fisheries Liaison Contractor:
RPS

Vessel: R/V Shackleford

Survey Stats



Equipment

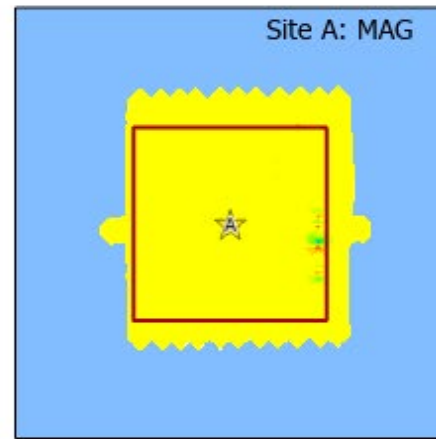
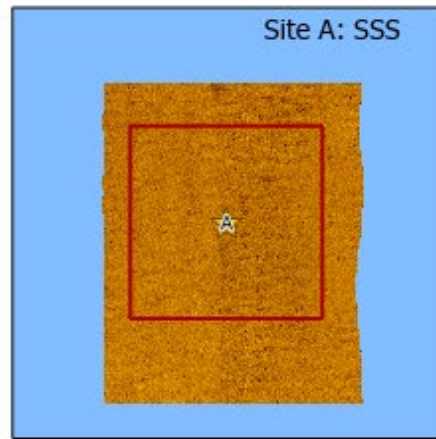
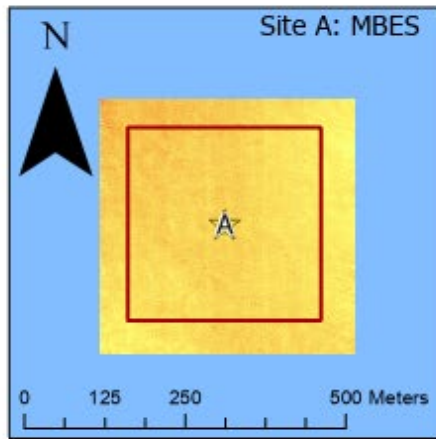
- Sidescan Sonar (SSS)
- Multibeam Echosounder (MBES)
- Magnetometer in Transverse Gradiometer configuration (TVG)
- Sub-bottom Profiler (SBP)
- Young-Modified Van Veen Grab (0.04m²)
- Video transects

Agency/SAFMC Feedback

- Positive feedback on combined permitting
- HRG review ahead of benthic grabs
- Real-time review of video transects to ensure visibility
- Use of Modified Van Veen for grab samples

Still-shot from Site A video transect:





Legend

GDX Proposed Locations

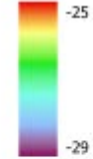


300m Survey Box



Bathymetry

Elevation (m, MLLW)

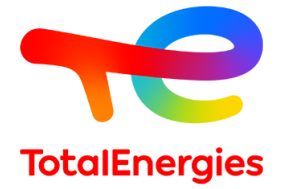
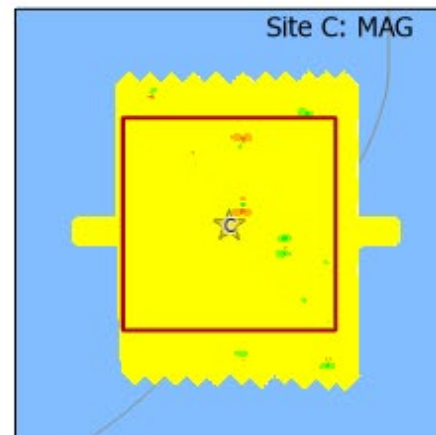
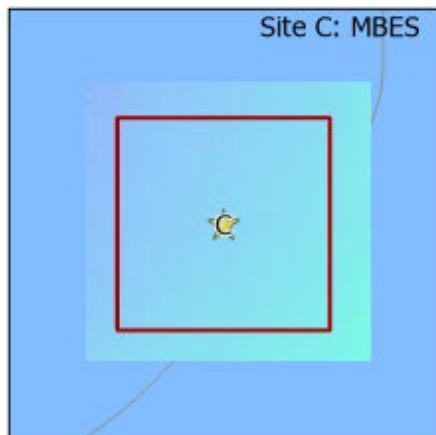
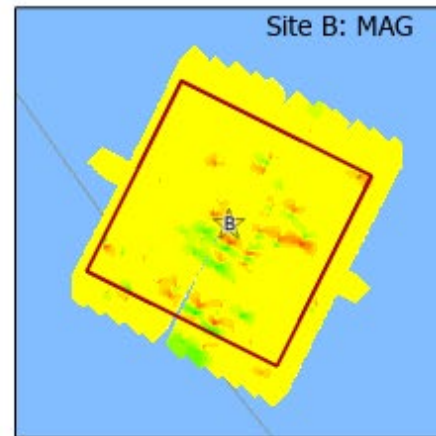
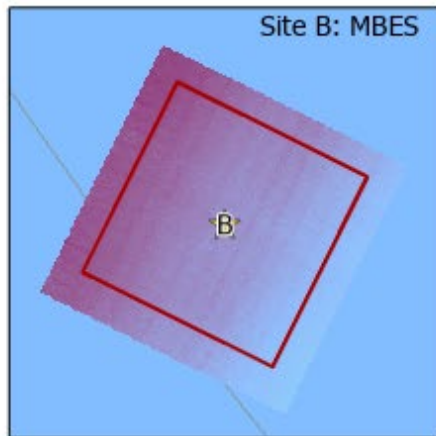
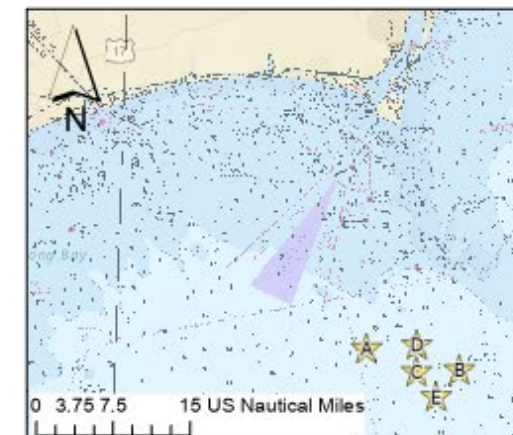
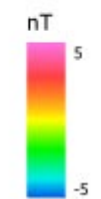


SSS

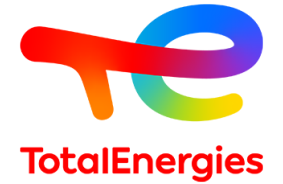
Reflectance



Residual Field



Protected Species Observers (PSOs)



Vessel Strike Avoidance Procedures

- One PSO on watch from the time that the vessel leaves the dock until when the vessel returns to the dock
- Speed Restrictions
 - 10 knots or less inside SMAs and DMAs.
 - 4 knots or less through areas of visible jellyfish aggregations or floating vegetation
 - 4 knots or less in areas with less than 4 ft of clearance between vessel and bottom

Mitigation Distances:

Species / Species Group	Separation Distance (m)
North Atlantic right whale (NARW)	500
ESA-listed or Unidentified whales	500
Other whales	200
Dolphins, porpoises, seals	N/A
Sea turtles	Forward path (any distance)**
Giant manta rays	Forward path (any distance)**

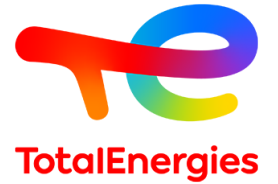
TotalEnergies and Duke Energy voluntarily committed to a 10-knot speed restriction during surveys

The efforts by The Companies to protect right whales while advancing these initial surveys shows that we do not need to choose between clean energy development and wildlife protection.

- National Resources Defense Council blog
(<https://www.nrdc.org/bio/francine-kershaw/nc-offshore-wind-surveys-advance-protections-right-whales>)

Protected Species Observers (PSOs)

PSOs Monitored for Vessel Strike Avoidance



Total visual monitoring effort: 58:51 hours

Avoidance Actions	Project Total
Maintain course	11
Maintain speed	10
Total # of avoidance maneuvers	21

Description of Detections	Detection Events	Number of Animals
Sea turtle visual sightings	0	0
Delphinid visual sightings	14	48
Whale visual sightings	0	0
Pinniped visual sightings	0	0
All protected species detections	14	48

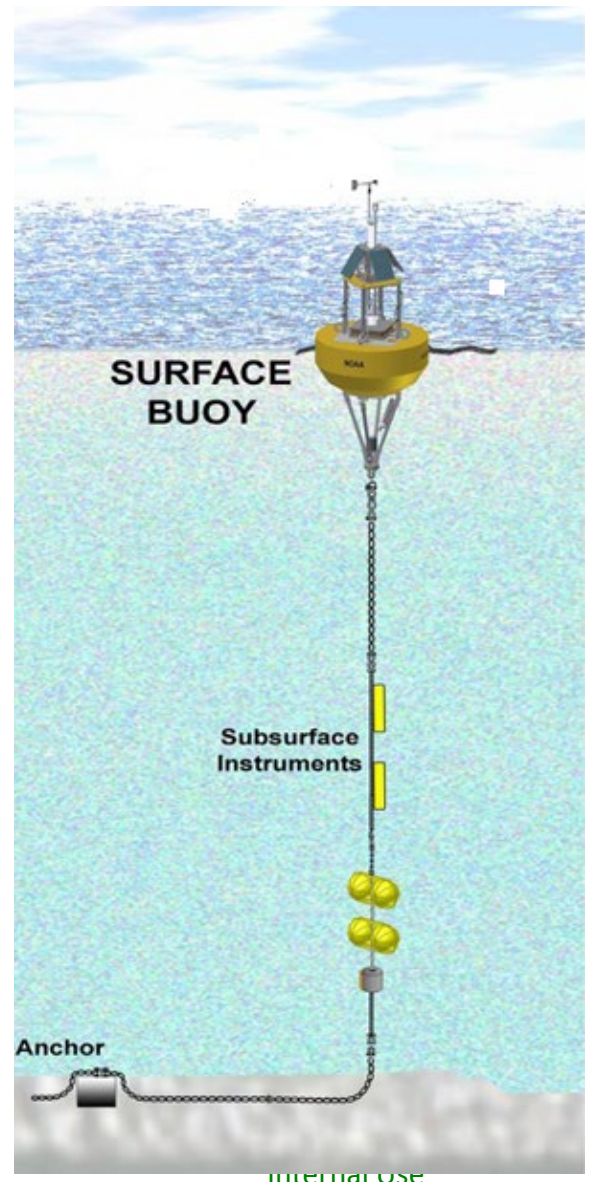


8/20/23: Common bottlenose dolphin

Preliminary Plan – Meteorological Buoys (Floating LiDaR)

Objective	Collect data on the wind resource and other parameters to inform the design of the facility
	Collect data on the presence of wildlife
	Collect data on water quality parameters

Configuration Two buoys (one within each lease area)



Preliminary list of Data Collection Equipment (subject to change)

Floating LiDaR

- Meteorological data (wind speed & direction, relative humidity, air temperature, atmospheric pressure, precipitation)
- Wave sensor / buoy
- Current sensor
- Tide / Water Levels

MOTUS Station

Passive Acoustic Monitoring (PAM) System

- Monitoring of North Atlantic Right Whale
- C-POD Click Detector (toothed whales, dolphins and porpoises)

Fish Tag Acoustic Receivers (passive)

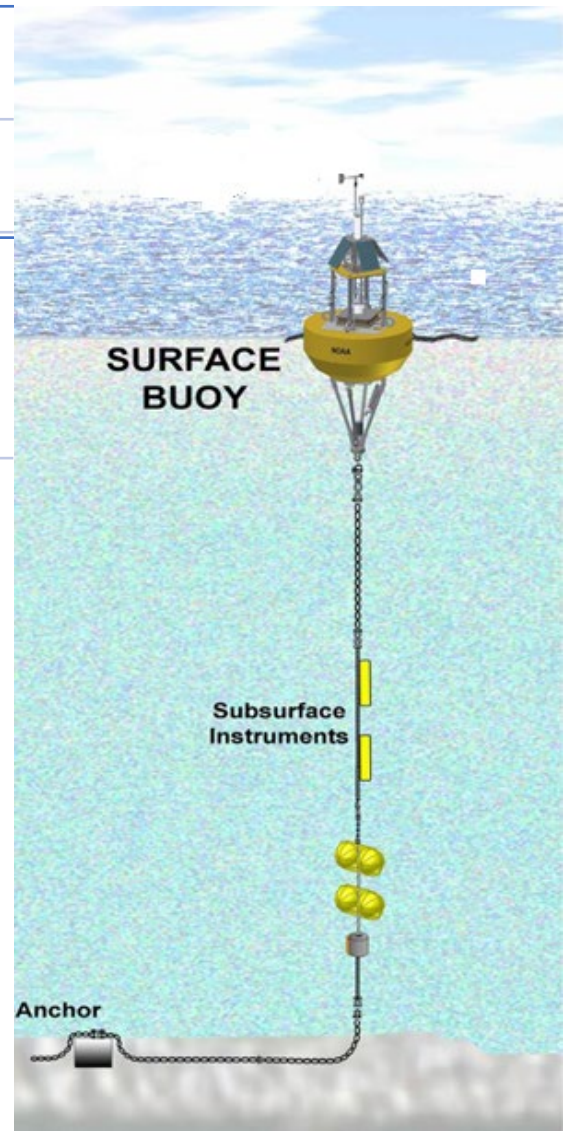
- InnovaSea – Underwater Receiver

Water Quality Sensors

- Dissolved oxygen, water temperature and pressure, conductivity, salinity, pH, turbidity, and chlorophyll-a

Preliminary Plan – Environmental Buoy

Objective	Collect data on presence of wildlife Support the detection (presence and spacio-temporal distribution) of marine mammals
Configuration	One buoy centrally located within the lease areas



Preliminary list of Data Collection Equipment (subject to change)

Bird Acoustic Sensor

- Record diurnal and nocturnal bird calls for species identification

Bat Ultrasonic Sensor

- Record migrating bat calls for species identification

Passive Acoustic Monitoring (PAM) System

- Monitoring of North Atlantic Right Whale
- C-POD Click Detector (toothed whales, dolphins and porpoises)

Fish Tag Acoustic Receivers (passive)

- InnovaSea – Underwater Receiver

Wave Sensor, if warranted

Upcoming Activities

Submit Joint Site Assessment Plan (SAP)

Submittal anticipated October/November 2023

BOEM coordinates review with U.S. Fish & Wildlife (USFWS) and National Marine Fisheries Service (NMFS)

Buoy Call for Tenders

Underway; reviewing proposals received

Buoy installation TBD - 2024

Fisheries Outreach

Reviewing NOAA Fisheries data to better understand fishing within leases

Continued fisheries outreach to expand understanding of day-to-day use of leases

Mooring Design Review

U.S. Coast Guard to review mooring design

Leaseholders will coordinate with selected buoy firm

MOTUS Coordination

Install Motus stations on meteorological or environmental buoys in coordination with USFWS's Offshore Motus network

Leaseholders will coordinate with selected buoy firm and USFWS

Questions & Discussion

