



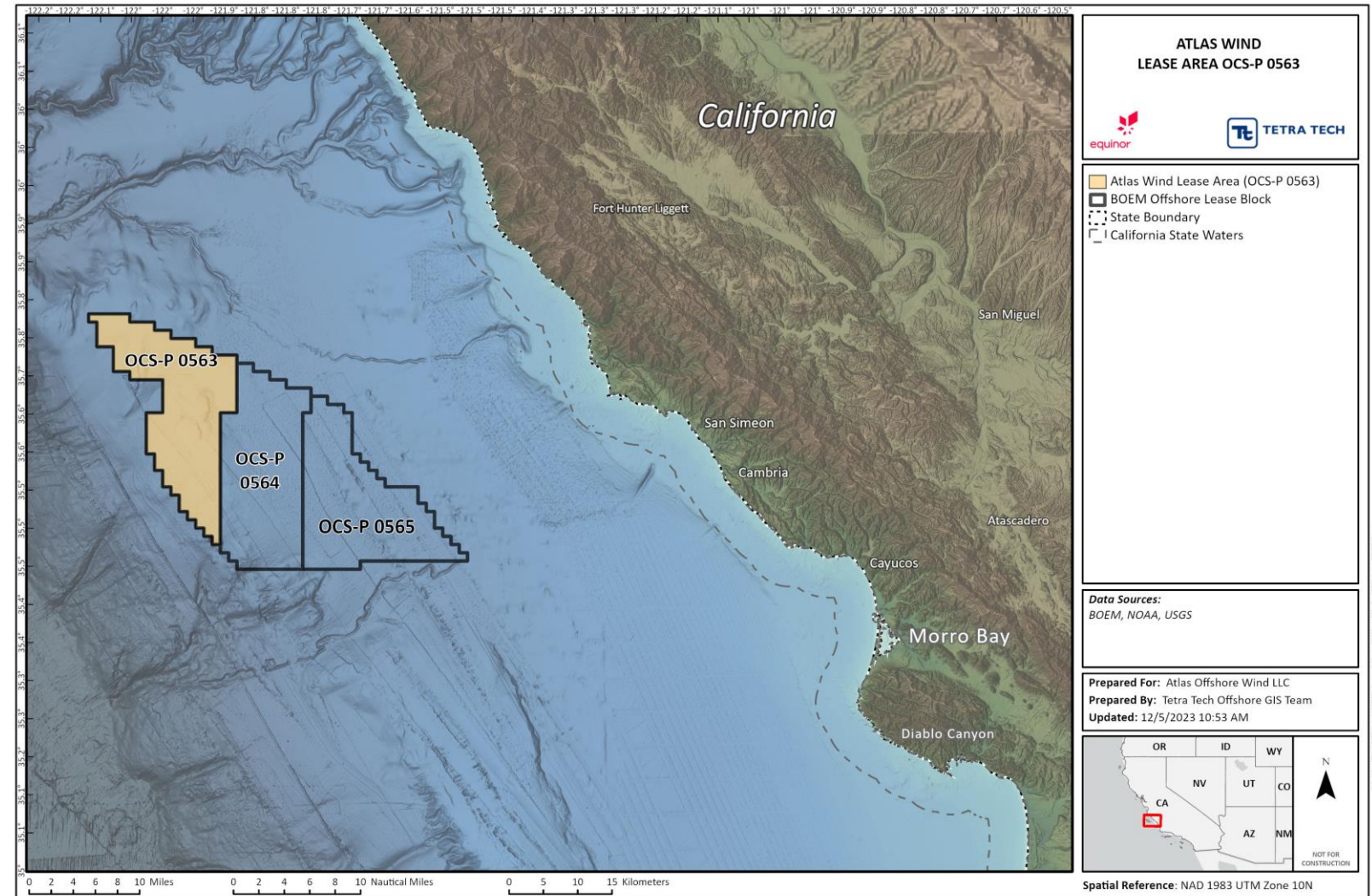
Atlas Wind

Proposed 2024 - 2025 Marine Site Characterization Survey
Pacific Fisheries Management Council

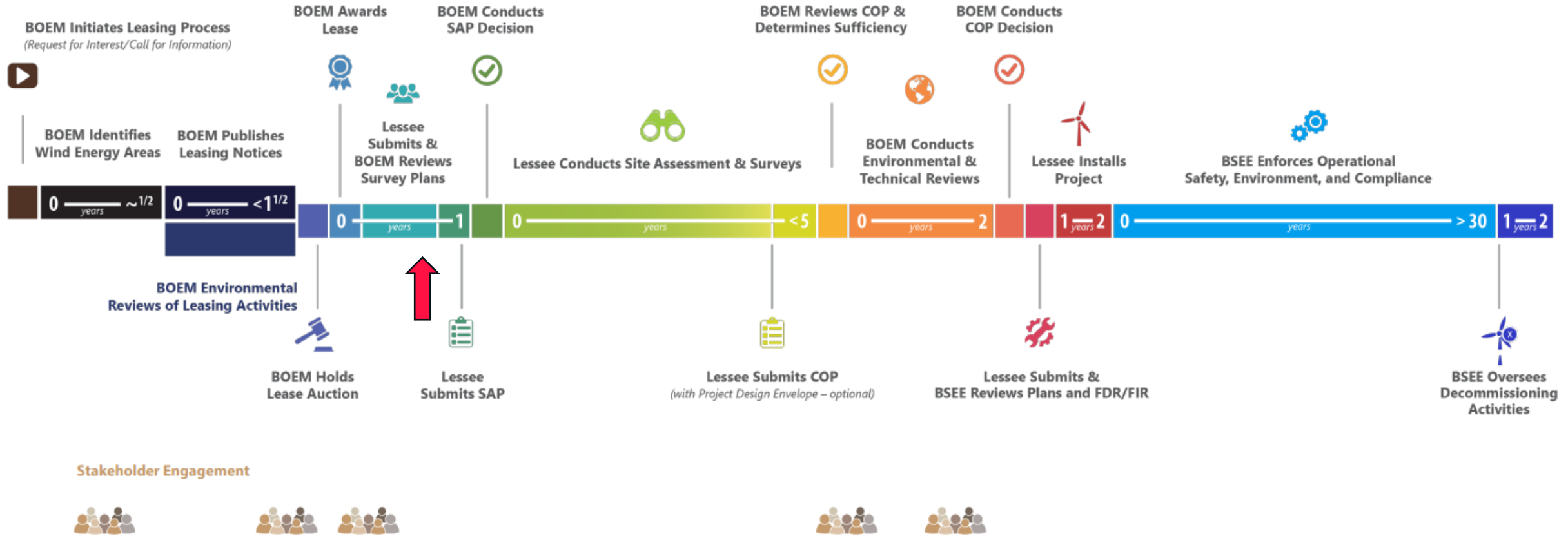
February 20, 2024

Atlas Wind Lease Area OCS-P 0563

- 80,062 acres (324 km²)
- Located approximately 60 statute miles (52 nm, 96.5 km) NW of Morro Bay
- Water depths range from ~3,200 ft (976 m) to 4,500 ft (1,372 m)



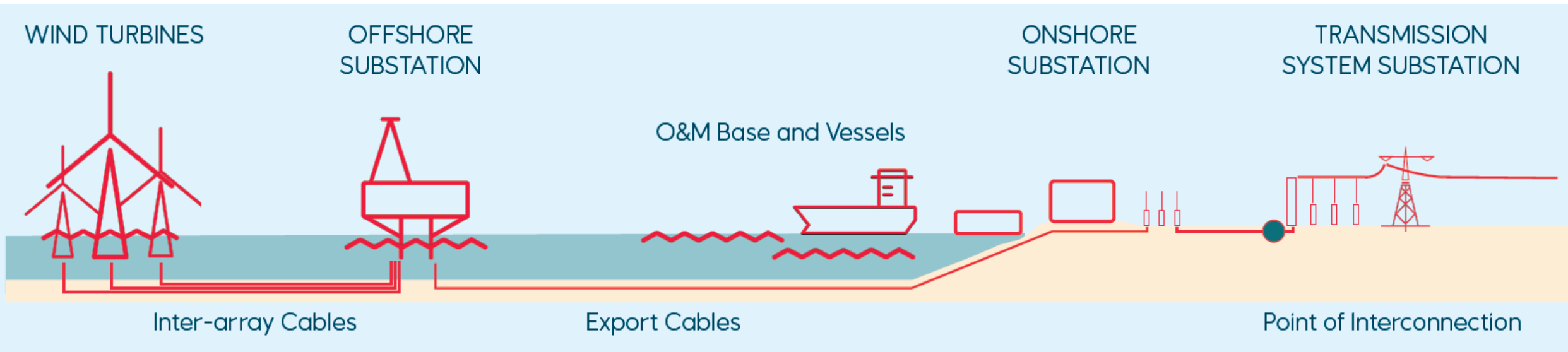
Offshore Wind Development Process



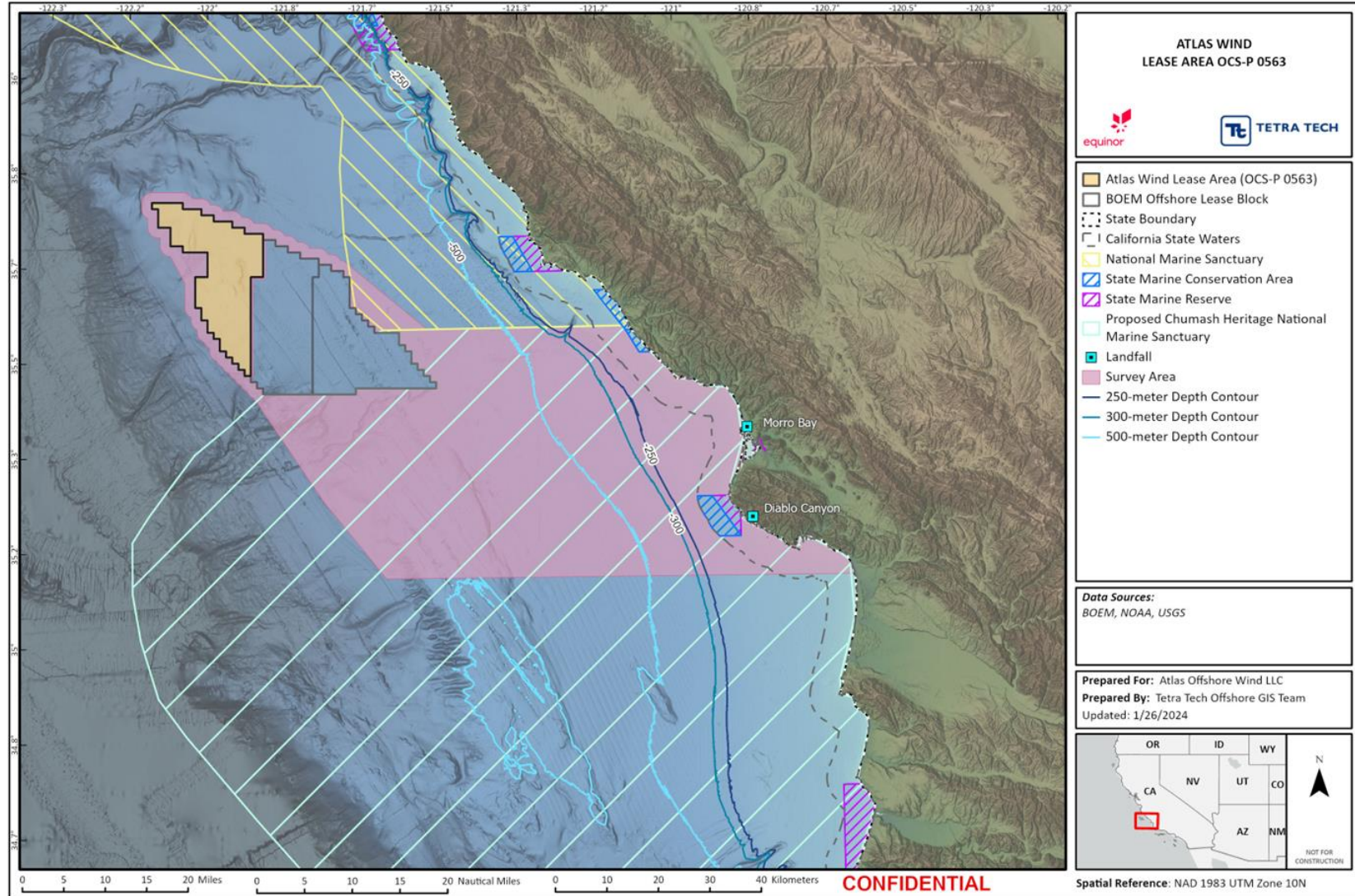
Purpose of Marine Site Characterization Surveys

Surveys are conducted to support development of:

1. The Site Assessment Plan (SAP)
2. Construction and Operation Plan (COP)
3. Project design and engineering
4. Environmental analysis and permitting



Proposed Survey Area



Vessels



Larger/offshore (~340 feet)

- Vessel will be deployed from ports such as Port Hueneme and Port of San Francisco
- Offshore in survey area/deeper waters for 6 weeks
- Will not enter local ports



Smaller/nearshore (~30 feet)

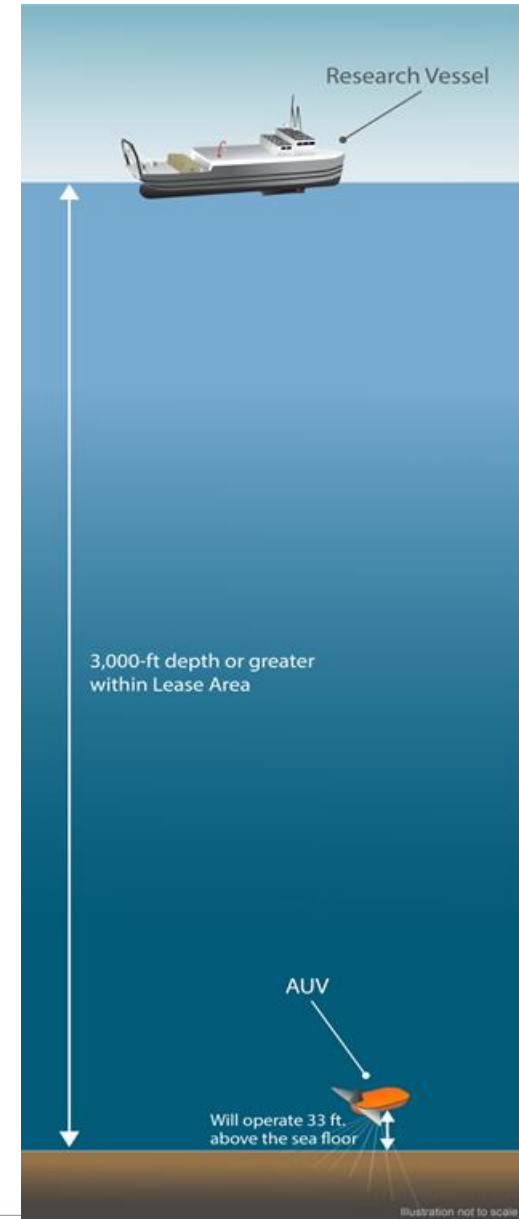
- Used for surveys in shallow waters approx 100 m or less
- This ship will return to local ports each night

High Resolution Geophysical (HRG) Surveys

HRG surveys use a variety of technologies, including:

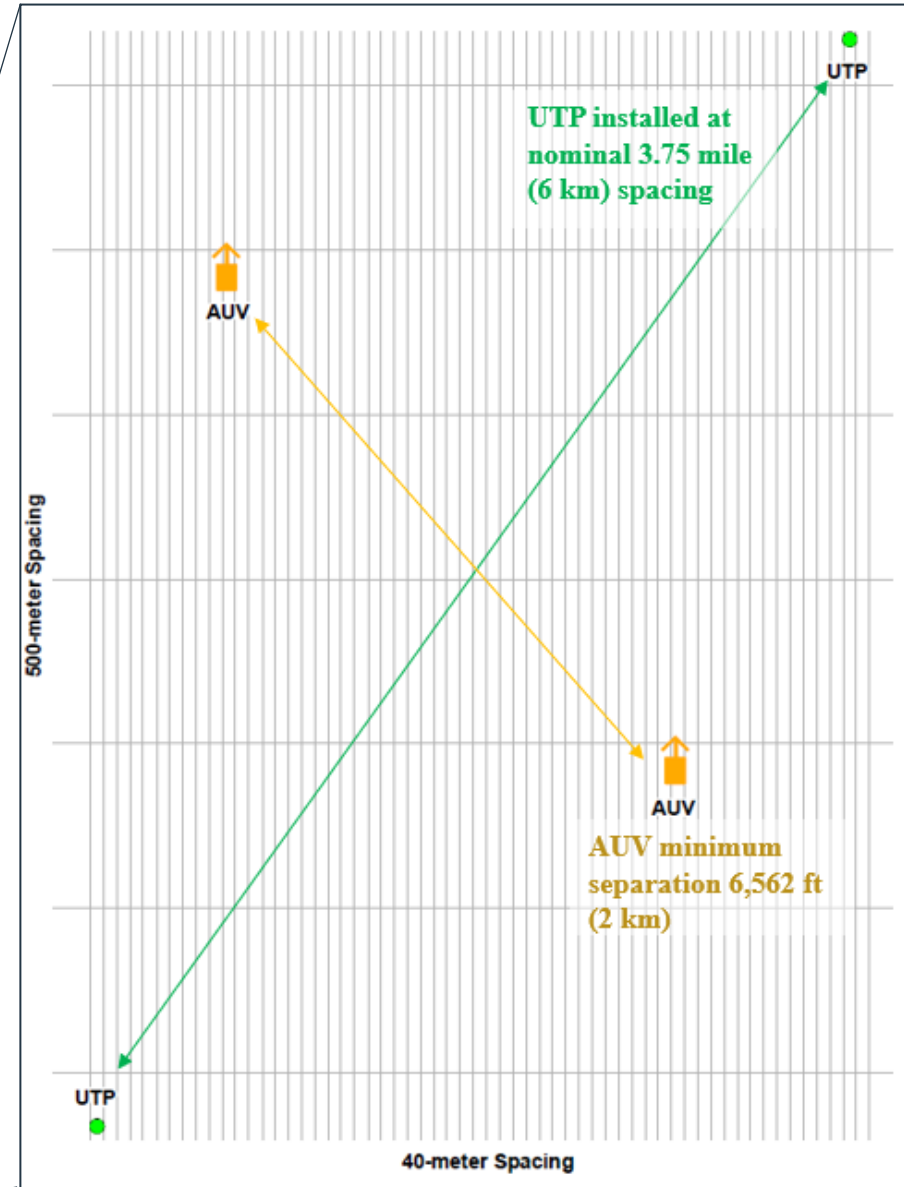
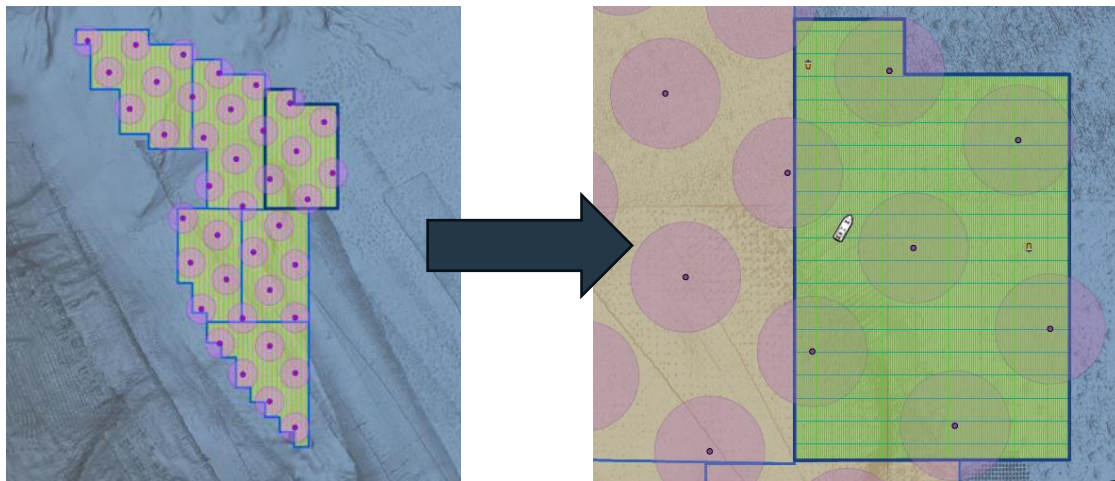
- Multi-Beam Echosounders (Kongsberg EM2040 and Kongsberg EM2040-40) to determine water depth.
- Side Scan Sonar (Edgetech 2205 ROV and Edgetech 2205) to process echoes that reflect off the seafloor or other objects to map the target area.
- Magnetometers to detect objects on or in the seabed.
- Sub-Bottom Profilers (Edgetech DW216) to create images of what lies below the seafloor.

Atlas Wind is proposing to use Autonomous Underwater Vehicles (AUVs) to carry out the surveys



HRG Surveys: Underwater Transponder Positioning (UTP) and Autonomous Underwater Vehicles (AUV) Operation

- Depths < 427 ft (130 m)
 - Vessel and smaller AUV survey
- Depths > 328 ft (100 m)
 - 2-3 larger AUVs, no UTP
- Depths > 3,200 ft (976 m)
 - 2-3 larger AUV, plus UTP in Lease Area



Geophysical Surveys

Will test the seafloor's physical engineering properties on-site and collect soil samples for lab analysis.

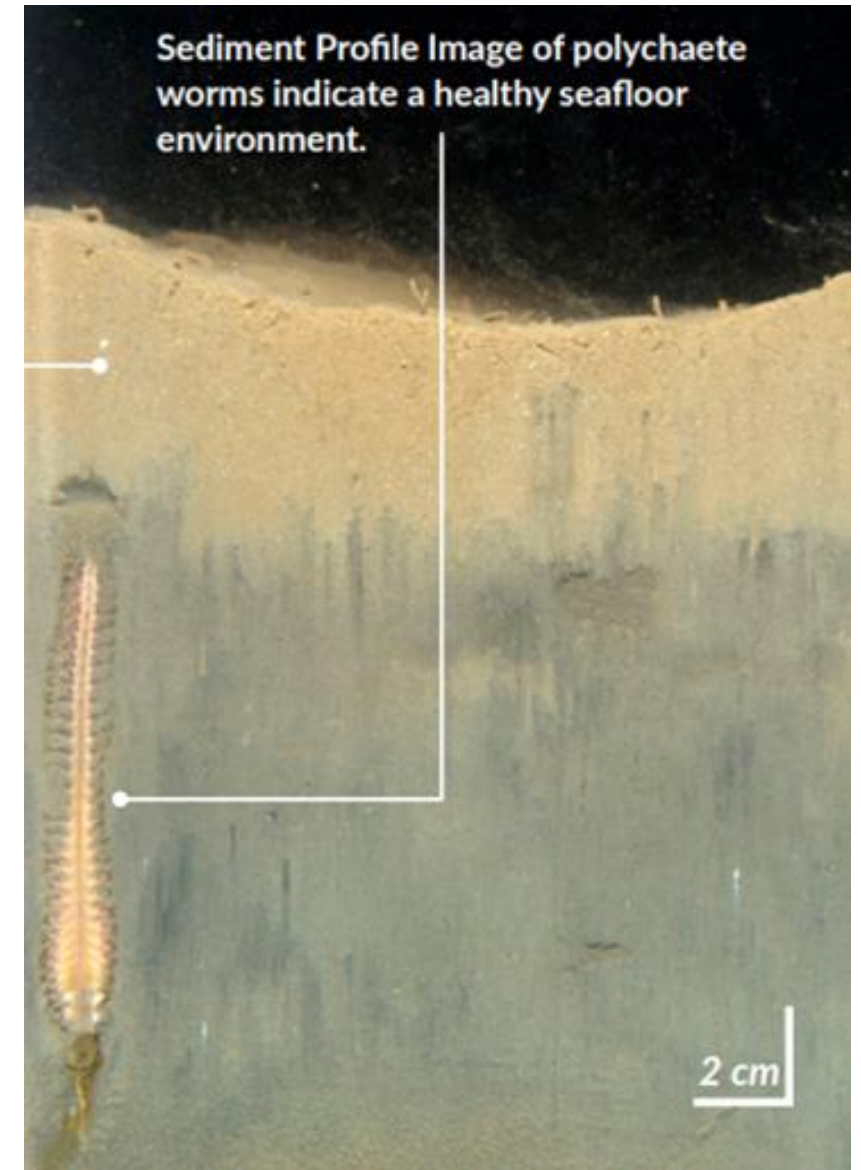
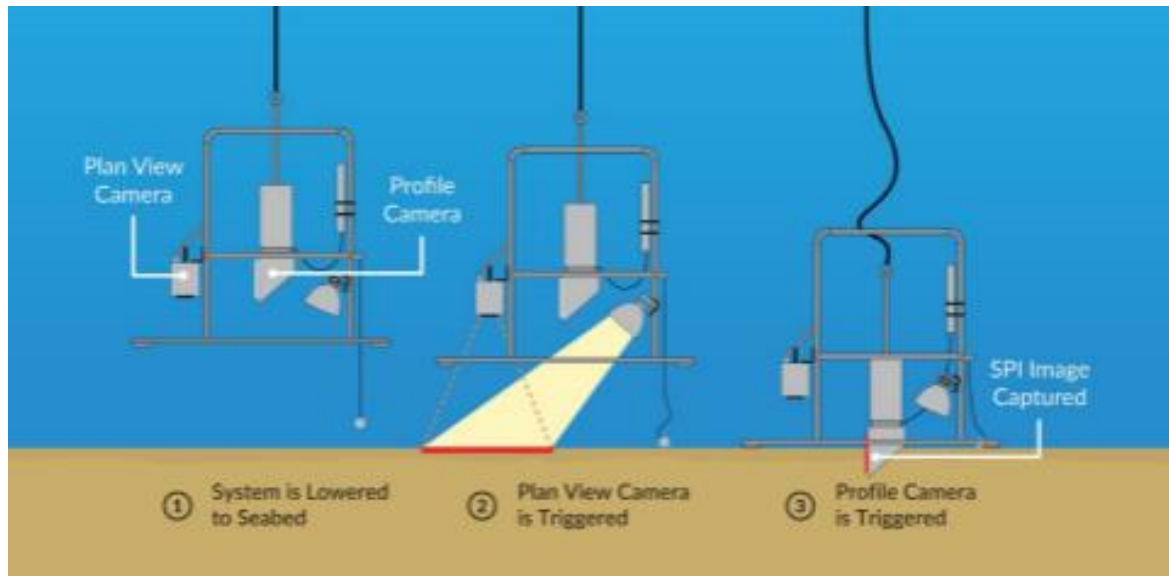
- Cone penetration testing (CPT), Vibracoring (VC), and Piston Coring (PC)
- CPT will record push information
 - Frame lowered to the ocean floor
 - Target push depth 6m
- VC and PC recover sediment samples
 - VC frame will be lowered to seabed, vibrates core, target penetration 6m
 - PC will be lowered, released to impact seabed, target penetration 20m



Benthic Surveys - SPI/PV: Sediment Profile Imaging/Plan View

Will collect imagery and small samples of the top few inches of the seabed. 1 station per each 1-2 km² in the lease area and potential submarine export cable corridor(s).

- Sampling Methods:
 - SPI/PV at all stations
 - Benthic grab samples at 10% of the stations
 - Video where technically feasible



Recent Similar Survey Efforts

California Deepwater Investigations and Groundtruthing (Cal DIG)

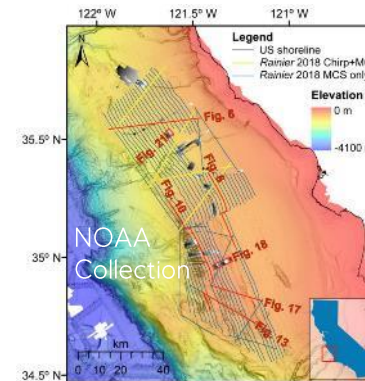
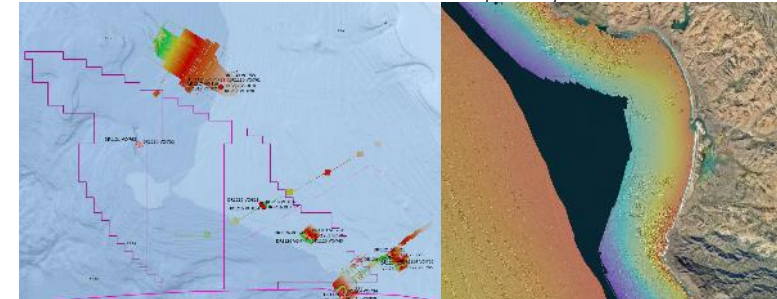
- 2017-2019
- U.S. Geological Survey and BOEM, Monterey Bay Aquarium Research Institute, NOAA, et al.
 - Research vessels:
 - *Rainier, Fairweather, Sally Ride, Rachel Carson, Bold Horizon, and W. Flyer*
 - Remotely operated vehicle (ROV)
 - Autonomous underwater vehicle (AUV)
 - Surface ship systems
 - Sampling/VC
 - Multibeam echosounder systems (MBEs)
 - Sub-bottom profiler (SBP) and multi-channel seismic

California Seafloor Mapping Program (CSMP)

[USGS Data Series 781: California State Waters Map Series Data Catalog](#)

Numerous other state, federal, and commercial surveys

Cal DIG and CSMP Bathymetry Data



Proposed 2024-2025 Marine Survey Timeline

Survey Type	2024				2025	
	Q1	Q2	Q3	Q4	Q1	Q2
High Resolution Geophysical Offshore (> 427 feet [130 meters] water depth)	█					
High Resolution Geophysical Nearshore (to ~ 427 feet [130 meters] water depth)		█				
Benthic Offshore with SPI/PV	█		█			
Geotechnical Offshore VC, PC, and CPT			█			

* Future survey campaigns may be conducted to support Project design.

Environmental Protection/Protected Species Observer (PSO)

- Atlas Wind will:
 - Have a third party that will provide PSOs for the surveys
 - Implement clearance and shutdown zones, and vessel strike avoidance measure as appropriate
 - Submit PSO sightings and track line data to BOEM and NOAA Fisheries monthly
 - Limiting Sound Levels
 - Deploying Autonomous Underwater Vehicles
 - Avoiding Sensitive Seabed Habitats



Fisheries Outreach and Coordination

The Fisheries Communications Plan (FCP) has been developed to present the proposed approach for Equinor to communicate and consult with the fishing industry in relation to the development of the lease area and its associated cable routes and landfall sites.

- Transparency forms the basis of Equinor’s fisheries liaison philosophy
- Regular, open consultation is key
- The Fisheries Communications Plan (FCP) describes the coordination of activities appropriate to the life cycle of the project, through the permitting phase, survey, construction, operation, and decommissioning phases
- The FCP continues to evolve as it is a living document
- The draft FCP was shared with local fisheries May 2023
- Equinor held an open house in September 2023 at the Morro Bay Community Center
- The FCP was submitted to BOEM on September 29, 2023
- Follow up FCP webinar to fisheries February 8, 2023
- The plan is available at AtlasWind.com and on the USGC LNM



Open Discussion



Permitting Manager – Patrick Tennant
pten@equinor.com

Website: www.atlaswind.com