



**Canopy**  
Offshore Wind Farm

**RWE**

## DRAFT Survey Plan

Pacific Fishery Management Council  
Marine Planning Committee  
February 20, 2024



# DRAFT Survey Plan Purpose and Elements

## 2-Year Plan With Discrete Phases

### Purpose

Required by BOEM for the development of the construction and operations plan (COP) & informs the Project design stages leading to project execution and installation



Geophysical surveys of the seabed



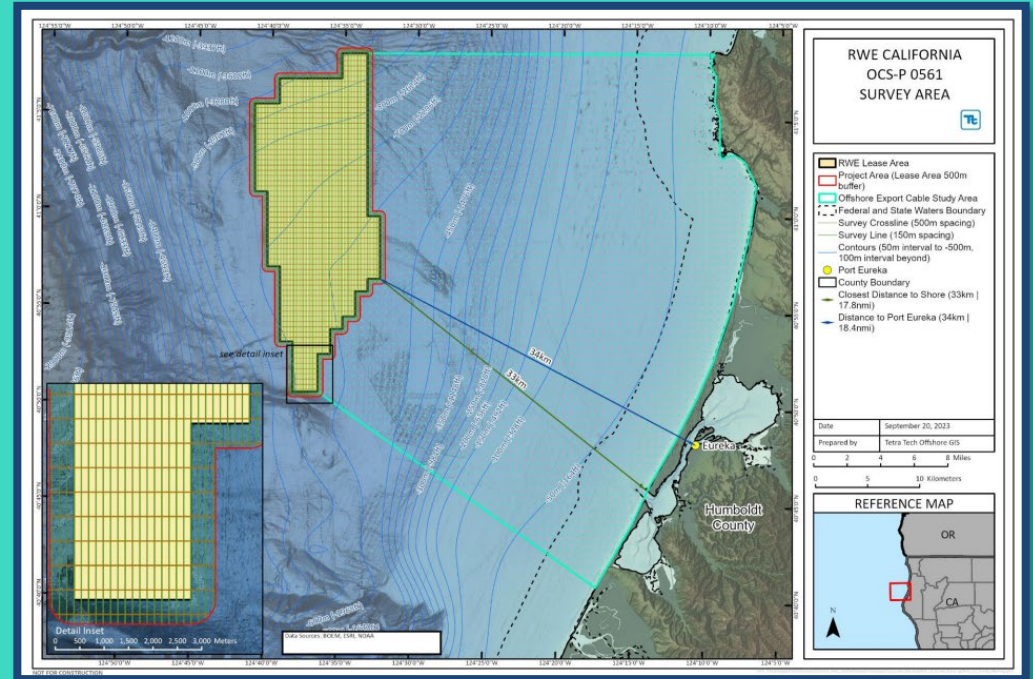
Geotechnical collections and testing of sediment samples



Evaluation and assessment of geotechnical engineering properties

# Proposed Geophysical and Geotechnical Survey Location

- Geophysical and geotechnical surveys will be conducted within lease area OCS-P 0561 (including 500-meter buffer) and the offshore export cable study area.
- The lease area is sited 17.8 to 28.6 nm offshore, in water depths ranging from ~550 to 1,100 meters (m).
- Geophysical survey line acquisition planning is Draft. BOEM requires 150 m x 500 m spacing (east/west orientation) in water depths > 130 m. For water depths < 130 m, 30 m x 500 m spacing is required.
- One or two Notional Investigative Routes (NIRs) will be surveyed within the potential export cable study area inshore of the lease up to a water depth of ~50 m to study geohazards in the area.



# Proposed Geophysical Survey Technology —AUV ‡

- Deepwater (~50 m and deeper) Geophysical Survey will be conducted from an Autonomous Underwater Vehicle (AUV) deployed from Support Vessel with a launch and recovery cradle
- AUV is monitored remotely by crewed surface deployment vessel and is NOT towed
- Offshore AUV operates ~ 40 m above the seabed at 3 -4 knots in water depths >130 m and ~6 m above the seabed to acquire camera images
- Surface vessel and AUV have operational flexibility to avoid hazards
- Estimated June 1 start, estimated 40 days of AUV work plus weather
- 2024 survey work will be conducted in federal waters



Example Offshore AUV

## CA Low-Energy Compliant HRG Package

- Multibeam Echosounder
- Side Scan Sonar
- Gradiometer
- Camera
- Ultra -short Baseline Acoustic Positioning
- Sub-bottom Profiler

# Proposed Geotechnical Investigation and Benthic Sampling

- The Geotechnical Investigation (GI) will follow the Geophysical Survey
- Geotechnical sampling locations must avoid hard substrate, rock outcroppings, seamounts, deep - sea coral/sponge habitat and must be reviewed and cleared by a QMA and benthic SME *before* sampling that location
- Geotechnical Investigation and Benthic Sampling will be conducted at BOEM -recommended spacing intervals within the lease and along the Notional Investigative Route(s)
- Geotechnical vessel is stationary during sampling operation
- Q3 projected start, estimated 40 days of Geotechnical and Benthic Sampling, plus weather
- 2024 survey work will be conducted in federal waters



## Geotechnical Sampling

- Box Cores or Grab Samples
- Piston Core or Vibrocore
- Cone Penetration Test
- Jumbo Piston Core

# Future Surveys and Metbuoy Considerations


## Proposed Survey Activities (2025)

- A second potential geophysical survey is planned for summer of 2025
- Survey would assess seabed mobile sediments and geohazards
- Equipment would include a vessel - mounted MBES and medium penetration low-energy system. These systems usually require an IHA permit from NOAA Fisheries



## Metbuoy Deployment

- RWE does not plan a metbuoy deployment within the lease area in 2024
- RWE may consider a metbuoy deployment within the lease area in 2025
- RWE is aware that a buoy company plans to deploy a buoy outside of the lease area in Q1 2024
- Metbuoy deployments will plan to include recoverable anchors

# Draft Mobile Gear Fisheries Survey    Impact Avoidance Measures

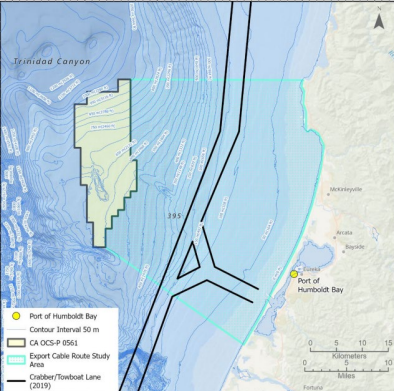
Potential Fisheries Interaction	Mitigation Strategies	Measures
Mobile Gear Fisheries	Onboard Fisheries Liaison (OFL)	Bridge -to-bridge communications Real-time coordination with fleet OFL monitors VHF 16
	Fisheries Communications Plan	Proactive meetings and communications Fisheries Liaison available
	Technology - AUV	Untowed AUV‡ Operational flexibility for AUV and Support Vessel to avoid F/Vs
	24/7 Watch and AIS	Marine crew maintain combined visual and electronic watch 24/7 PSO visual watches Support vessels transmit AIS at all times when underway
	CA Low-Energy Compliant HRG Survey Equipment	Geophysical survey sound sources are CA Low-Energy Compliant

# Draft Fixed Gear Fisheries Survey Impact Avoidance Measures

Potential Fisheries Interaction	Avoidance Strategies	Measures
Fixed Gear Fisheries	Onboard Fisheries Liaison (OFL)	Bridge-to-bridge communications Real-time coordination with fleet OFL monitors VHF 16
	Technology - AUV 	Untowed AUV‡ Operational flexibility for AUV and Support Vessel to avoid gear
	24/7 Watch and AIS	Marine crew maintains combined visual and electronic watch PSO visual watches Support vessel transmits AIS at all times when underway
	CA Low-Energy Compliant HRG Survey Equipment	Geophysical survey sound sources are CA Low-Energy Compliant
	Scout Boat	May pre-scout survey area for fixed fishing gear. Scouting is based on need and the nature of the surveying operations. Subject to vessel availability and vessel assurance.
	Sequencing	Offshore (lease) surveyed first; inshore area surveyed last as Dungeness effort decreases
	Fisheries Communications Plan	Proactive meetings and communications Fisheries Liaison available Potential use of App <i>Gear Loss Claims Process</i>



# Draft Survey Vessel Transit Impact Avoidance Measures

Vessel Transits and Logistics	Mitigation Strategies	Measures
Survey Vessel	Onboard Fisheries Liaison (OFL)	Bridge -to-bridge communications Real-time coordination with fleet OFL monitors VHF 16
	24/7 Watch and AIS	Marine crew maintains combined visual and electronic watch PSOs maintain visual watch Support vessel transmits AIS at all times when underway
	Vessel Selection	Large, High -endurance Support Vessel to minimize weather standby and transits to port ~3-4+ week offshore duration expected
	Crabber/Towboat Lane	Geophysical and Geotechnical support vessels will use the Crabber/Towboat lane when transiting between the lease and port to minimize interactions with crab fishery. Vessel may scout NIR prior to data acquisition.
	Vessel Speed Limited	Surface vessel is speed limited to 10 kts during transits

# Fisheries Communications Plan

## Communications Highlights

- Joint fisheries communications plan updated and finalized following additional fishery comments & input
- Plan includes gear loss claim process flow chart and specific example
- Fisheries Liaisons hired
- Joint Fisheries Communications Plan available at:

RWE: <https://americas.rwe.com/-/media/RWE/RWE-USA/documents/rwe-vineyard-offshore-joint-fcp.pdf>

Vineyard Offshore:  
<https://www.vineyardoffshore.com/california>



## Fisheries Communications Plan

Lease Area OCS-P 0561 and Lease Area OCS-P 0562

Document # 005000083 | Revision 02

January 29, 2024

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RWE Revision 02

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Vineyard Offshore Document # 005000083  
Vineyard Offshore Revision 02

# RWE's Planned Fisheries Communications

## 1 Regular Fisheries Meetings

- 1.1 Targeting monthly hybrid meetings w/local associations beginning 2/27
- 1.2 Periodic virtual meetings with regional associations as needed
- 1.3 Periodic virtual or hybrid updates to PFMC MPC and CCC Working Group

## 2 Fisheries Liaison

- 2.1 Availability to answer questions from fishing industry
- 2.2 Participates in daily calls with survey vessel
- 2.3 Receives daily reports from Onboard Fisheries Liaison (OFL)
- 2.4 Coordinates with local fisheries as needed
- 2.5 Coordinates with Scout Boat as needed

## 3 Fisheries Notices

- 3.1 Primary communication method to inform fisheries of survey activities
- 3.2 Widely distributed by email to network of fisheries contacts
- 3.3 Issued 2 weeks in advance of survey activities

## 4 Other Measures

- 4.1 Additional engagement with fixed gear fishermen in advance of surveys
- 4.2 Communications APP in development
- 4.3 Text notices
- 4.4 USCG local Notices to Mariners (NTMs)
- 4.5 Local independent Fisheries Liaison/coordinator planned
- 4.6 Adaptive Fisheries Communications Plan – will evolve to meet comms needs

# RWE

# Thank you.

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