

CALIFORNIA COASTAL COMMISSION

ENERGY, OCEAN RESOURCES AND FEDERAL CONSISTENCY
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STAFF REPORT: REGULAR CALENDAR

Application No.: 9-24-0411

Applicant: Atlas Wind US LLC

Location: Offshore of Morro Bay, San Luis Obispo County

Project Description: Geophysical, geotechnical sampling, and benthic (seabed) habitat surveys in state waters off of San Luis Obispo County from the coast to the three-mile state water boundary to identify preliminary submarine export cable routing options.

Staff Recommendation: Approval with conditions

SUMMARY OF STAFF RECOMMENDATION

Equinor subsidiary, Atlas Wind US LLC (“Atlas Wind” or “Applicant”), proposes to conduct seafloor surveys in state waters offshore of Morro Bay, San Luis Obispo County, from approximately 0.25 miles from the shore to the three nautical mile state water boundary. The proposed survey area extends northwest of Morro Bay Harbor and does not include areas inside or in front of Morro Bay Harbor. No survey activities are proposed within in front of or within Morro Bay. The proposed surveys include: (1) low energy, high resolution geophysical surveys to map seafloor features, sediment types,

and subsurface sediments; (2) geotechnical sampling to confirm the data interpretation of the geophysical survey mapping, provide information about sediment variability and stratigraphy, and provide samples for geoarchaeological analyses; and (3) benthic (seabed) habitat surveys, consisting of the collection of sediment plan view and profile images to evaluate the presence and abundance of benthic organisms (including rare or sensitive species).

Although the proposed survey activities would generate elevated levels of underwater sound, the majority of those sounds would be at frequencies outside of the hearing range of marine wildlife and would decay below natural background levels within a limited distance from the sound sources. The mapping data from the geophysical surveys would be used to identify locations for geotechnical and benthic samples. The proposed surveys would produce data of the seafloor that would be used to inform future potential development plans for submarine export electric cable routes to serve Atlas Wind's potential offshore wind energy development in federal waters, with the primary purpose of avoiding or minimizing adverse effects to coastal resources and uses. The maps would include information about substrate and sediment type, and the location of potentially sensitive marine resources that the future cable routes should avoid, such as archeological and cultural resources, rocky reefs, and consolidated hard bottom habitat.

The Coastal Act issues raised by this project include potential adverse effects to marine resources, commercial fishing, and cultural resources. To minimize potential adverse effects to marine resources, Commission staff recommends **Special Conditions 1 through 7**. These conditions would memorialize resource protection and minimization measures proposed by Atlas Wind and the California State Lands Commission (CSLC) (**Special Condition 1**). **Special Condition 2, 5, and 6** would require Atlas Wind to submit a Marine Wildlife Monitoring and Contingency Plan (MWMCP), Oil Spill Contingency Plan (OSCP) and Critical Operations and Curtailment Plan (COCP), respectively, to the Executive Director for review and approval. **Special Condition 3** would minimize the risk of vessels striking marine mammals or sea turtles by limiting vessel speeds to 10 knots. **Special Condition 4** would require Atlas Wind to avoid intentional contact with sensitive seafloor habitat, while **Special Condition 7** would protect marine water quality by prohibiting discharges. With these conditions in place, staff recommends that the Commission find the proposed project is consistent with Sections 30230, 30231 and 30232 and 30233 of the Coastal Act.

To minimize potential adverse effects to commercial and recreational fishing, Atlas Wind would be required through **Special Condition 1** to survey the project area for fishing gear prior to commencing surveys. Additionally, Atlas Wind would have a fisheries representative on board the survey vessel to monitor for fishing activity and gear and would contract with a local recreational fishing vessel to scout the survey area for fishing gear and activity. In the event that a survey vessel damages or snags fishing gear, **Special Condition 7** would require Atlas Wind to use all feasible measures to retrieve the gear. Atlas Wind would maintain open communication with local fishermen

through its Fisheries Liaison with information about timing and location of surveys. Atlas Wind has also created a Fisheries Communication Plan that details protocols for avoidance of fishing gear and a claims process for gear that is lost or damaged due to project activities. As conditioned, staff recommends that the Commission find the proposed project protects commercial and recreational fishing and is therefore consistent with Coastal Act Section 30234.5.

Potential adverse effects to cultural resources would be minimized through the inclusion of **Special Condition 8**, which would require Atlas Wind to immediately notify the Executive Director and Native American Tribes with historic ties to the project area of any observations of archaeological or cultural resources. Staff recommends that the Commission find the proposed project is consistent with the protection of archaeological, paleontological, or tribal cultural resources and is therefore consistent with Section 30244 of the Coastal Act.

The motion and resolution to carry out this recommendation are on page 5. The standard of review is Chapter 3 of the Coastal Act.

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EXHIBITS

[Exhibit 1 – Acoustic information for survey equipment](#)

[Exhibit 2 – Atlas Wind Mitigation Measures](#)

[Exhibit 3 – California State Lands Survey Requirements](#)

I. MOTION AND RESOLUTION

Motion:

I move that the Commission **approve** Coastal Development Permit No. 9-24-0411 pursuant to the staff recommendation.

Staff Recommendation:

Staff recommends a YES vote on the forgoing motion. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution:

The Commission hereby approves Coastal Development Permit 9-24-0411 and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse effects of the development on the environment.

II. STANDARD CONDITIONS

The Coastal Development Permit (CDP) No. 9-24-0411 is granted subject to the following standard conditions:

- 1. Notice of Receipt and Acknowledgement.** The permit is not valid and development shall not commence until a copy of the permit, signed by the Applicant or its authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
- 2. Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
- 3. Interpretation.** Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
- 4. Assignment.** The permit may be assigned to any qualified person, provided the assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the Applicant to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

CDP No. 9-24-0411 is subject to the following special conditions:

1. **Avoidance and Mitigation Measures.** All avoidance and mitigation measures identified in Atlas Offshore Wind LLC's CDP application and in California State Lands Commission survey requirements (Cal. Code Regs. Tit. 2, § 2100.07 - Pre-Survey Requirements, Survey Operations, and Post-Survey Requirements) are incorporated herein, and Atlas Wind shall fully implement these measures. The avoidance and minimization measures referenced in **Special Condition 1** are attached to this report as **Exhibits 2 and 3**.
2. **Marine Wildlife Monitoring and Contingency Plan (MWMCP).** PRIOR TO THE COMMENCEMENT OF SURVEY ACTIVITIES, the Permittee shall prepare an MWMCP for review and approval by the Executive Director. The Permittee shall implement the MWMCP during all marine operations. The MWMCP shall include the following elements, and shall be implemented consistent with vessel and worker safety:
 - Prior to the start of offshore activities, the Permittee shall provide awareness training to all Project-related personnel and vessel crew, including viewing of an applicable wildlife and fisheries training video, on the most common types of marine wildlife likely to be encountered in the Project area and the types of activities that have the most potential for affecting the animals.
 - A minimum of two National Marine Fisheries Service (NMFS)-evaluated and approved marine wildlife monitors (MWMs; also known as Protected Species Observers, PSOs) shall be located on the survey vessel to conduct visual monitoring for marine wildlife during all active survey activities/data collection and vessel movements. All visual monitoring shall occur from the highest practical vantage point aboard the survey vessel; binoculars shall be used to observe the surrounding area, as appropriate.
 - Shipboard MWMs/PSOs shall submit weekly reports to the Executive Director no later than noon every seven days from the first day of the survey, provided that electronic communications from the survey vessel are available. The reports shall be of sufficient detail to determine whether observable effects to marine mammals are occurring. At a minimum, MWMs shall collect the following information daily: (1) general location(s) of MWMs and marine wildlife observations; (2) date/time monitoring

begins/ends; (3) activities occurring during each observation period; (4) weather parameters (e.g., percent cover, visibility) and conditions (e.g., sea state); (5) species observed and number of individuals; (6) description of any marine wildlife behavior patterns, including bearing and direction of travel and distance from pile driving activities; (7) other human activity in the area. MWMs shall keep a log book of notes about sightings of marine mammals, special-status birds or sea turtles. Entries in the log shall be made at least hourly, even if the entry is "None observed."

- The Permittee shall submit a Post-Survey Report to the Executive Director not more than 30 days after the completion of the project. The report shall include
 - i. A narrative description of the work performed, including the dates and times during which data collection occurred, and the environmental conditions (i.e., weather and sea state) encountered during survey operations.
 - ii. A chart or map with track lines surveyed and spatial information related to the survey track lines (either Global Positioning System (GPS) coordinates (in decimal degrees format)) or Geographic Information System (GIS) files.
 - iii. A narrative description of any encounters with marine mammals, reptiles, or unusual concentrations of diving birds/seabirds (e.g., species, group size, age/size/sex categories (if determinable), behavior, distance, and bearing from vessel) and the outcome of those encounters.
 - iv. The number of times shutdowns or slowdowns were ordered due to animals being observed in the safety zone or due to poor visibility conditions, as assessed by the MWM(s); and
 - v. If applicable, the number of collision events and type and disposition of animal.
- The Permittee shall make available to the Executive Director, upon request, factual and physical survey results, logs, records, field acquired data, processed records or any other data/information resulting from operations under this permit. The Executive Director shall treat any information marked confidential as such, to the extent permitted by law.
- The MWMs/PSOs shall have the appropriate safety and monitoring equipment adequate to conduct their activities (including night-vision equipment).
- The MWMs/PSOs shall have the authority to stop any activity that could result in harm to a marine mammal or sea turtle. When geophysical survey

equipment is operated, safety zone monitoring shall be consistent with the survey requirements under the California State Lands Commission's offshore geophysical survey permit program (**Exhibit 3**).

- Anytime a vessel is underway (transiting or surveying), the MWMs/PSOs shall monitor a vessel strike avoidance zone around the survey vessel. The avoidance zone shall be 500 meters (1,640 ft.) for the protection of large mammals (i.e., whales) and 100 meters (328 ft.) for the protection of smaller marine mammals (i.e., dolphins, sea lions, seals, etc.) or sea turtles. The vessel must maintain the vessel strike avoidance zone as a minimum separation between the ship and marine mammals and sea turtles.
 - In the event that a whale becomes entangled in any cable or lines, the observer shall immediately notify NMFS and the Executive Director, so appropriate response measures can be implemented. Similarly, if any harassment or harm to a marine mammal occurs, the observer shall immediately notify the Executive Director, NMFS and any other required regulatory agency.
 - Propeller noise and other noises associated with survey activities shall be reduced or minimized to the extent feasible.
 - The captain of the survey vessel and the Permittee's Project management team shall be responsible for ensuring that the MWMCP is implemented.
- 3. Minimizing the risk of vessel strikes:** Vessels conducting surveys shall travel at speeds of no more than 10 knots during all related activities, including vessel transit.
- 4. No bottom contact with sensitive benthic habitat:** The Permittee shall avoid intentional seafloor contact within hard substrate, rock outcroppings, seamounts, or deep-sea coral/sponge habitat and include a buffer that fully protects these habitats from bottom contact.
- 5. Oil Spill Contingency Plan (OSCP).** Prior to the commencement of survey activities, the Permittee shall prepare and submit to the Executive Director for review and approval an OSCP for accidental releases of petroleum and/or non-petroleum products. The OSCP shall identify the worst-case spill scenario and demonstrate that adequate spill response equipment will be available. The Plan also shall include preventative measures the Permittee will implement to avoid spills and clearly identify responsibilities of onshore and offshore contractors and the Permittee personnel and shall list and identify the location of oil spill response equipment (including booms), appropriate protocols and response times for deployment. Petroleum-fueled equipment on the main deck of all vessels shall have drip pans or other means of collecting dripped petroleum, which shall be collected and treated with onboard equipment. Response drills shall be in

accordance with Federal and State requirements. Contracts with off-site spill response companies shall be in place and shall provide additional containment and clean-up resources as needed.

- 6. Critical Operations and Curtailment Plan (COCP).** Prior to the commencement of survey activities, the Permittee shall submit a Final COCP to the Executive Director for approval. The COCP shall define the limiting conditions of sea state, wind, or any other weather conditions that exceed the safe operation of offshore vessels, equipment, or divers in the water; that hinder potential spill cleanup; or in any way pose a threat to personnel or the safety of the environment. The COCP shall provide for a minimum ongoing five-day advance favorable weather forecast during offshore operations. The plan shall also identify the onsite person with authority to determine critical conditions and suspend work operations when needed.
- 7. Marine Discharge.** There shall be no marine discharge of sewage or bilge/ballast water from vessels during survey activities or transit. A zero-discharge policy shall be adopted for all project vessels.
- 8. Gear Entanglement.** In the event that the survey vessel, towed equipment or AUVs snag fishing gear or that any other type of entanglement occurs (e.g., involving a whale), the Permittee shall use all feasible measures to retrieve the fishing gear or inanimate object. In the event of an entanglement involving a whale, the Permittee shall notify the NOAA stranding coordinator. The Permittee shall notify the Executive Director within 48 hours of its knowledge of gear loss or other entanglement. Gear loss retrieval shall occur no later than six weeks after discovering or receiving notice of the incident, unless otherwise authorized by the Executive Director. If full removal of gear is not feasible, the Permittee shall remove as much gear as practicable to minimize harm to wildlife (e.g. fishes, birds, and marine mammals). Within two weeks of completing the recovery operation, the Permittee shall submit to the Executive Director a report describing: (a) the nature of and location of the entanglement (with a map), and the retrieval method used for removing the entangled gear or object or the method used for minimizing harm to wildlife if gear retrieval proves infeasible.
- 9. Tribal Notification.** (a) If tribal cultural and/or archaeological resources are discovered during seafloor-disturbing activities, all seafloor-disturbing activities shall cease within 150 feet diameter of the site of discovery, and the Permittee shall immediately notify and retain a tribal cultural resource specialist and, if needed, at the recommendation of the tribal cultural specialist, a qualified archaeologist to analyze the significance of the find in consultation with the Native American Tribes listed in Section B, Tribal Outreach and Consultations. A qualified Archaeologist means an individual who meets the Secretary of the Interior's Professional Standards for an Archaeological Principal Investigator and/or is listed as Registered Professional Archaeologist. The tribal cultural

resource specialist and archaeologist, if needed, shall immediately notify the Tribes in Section B, Tribal Outreach and Consultations. Significance testing may be carried out only if acceptable to the affected Native American Tribe(s), in accordance with a Significance Testing Plan. An “exclusion zone” of 150 feet diameter where further seafloor disturbance and unauthorized personnel are not permitted shall be established around the discovery area. Project activities may continue outside of the exclusion zone.

- (b) Should human remains be discovered in sediment samples or during visual or geophysical surveys during the course of the project, immediately after such discovery, the qualified archaeologist and/or Native American monitor shall notify the county coroner within 24 hours of such discovery, and all seafloor-disturbing activities shall be temporarily halted until the remains can be identified. An “exclusion zone” shall be established around the discovery area. If the county coroner determines that the human remains are those of a Native American, the coroner shall contact the NAHC within 24 hours, pursuant to Health and Safety Code Section 7050.5. The NAHC shall deem the Native American most likely descendant (MLD) to be invited to participate in the identification process pursuant to Public Resources Code Section 5097.98. The Permittee shall comply with the requirements of Section 5097.98 and work with the MLD person(s) to preserve the remains in place, move the remains elsewhere onsite, relinquish the remains to the descendants for treatment, or determine other culturally appropriate treatment. Within five (5) calendar days of notification to NAHC, the permittee/ landowner shall notify the Coastal Commission’s Executive Director of the discovery of human remains and identify any changes to the proposed development or mitigation measures that may be needed related to the inadvertent discovery. The Executive Director shall maintain confidentiality regarding the presence of human remains on the project site. The Executive Director shall determine whether the identified changes are de minimis in nature and scope.
- (c) A permittee seeking to recommence project activities within an exclusion zone following discovery of tribal cultural and/or archaeological resources (excluding the discovery of human remains, which shall follow Section 5097.98 as noted in above) shall submit a Supplementary Archaeological Plan (SAP) prepared by the project archaeologist in consultation with the Native American Tribes listed in Section B, Tribal Outreach and Consultations. The SAP shall be submitted for the review and written approval of the Executive Director. If the Executive Director approves the SAP and determines that the SAP’s recommended changes to the proposed development or mitigation measures are de minimis in nature and scope, surveys may recommence after this determination is made by the Executive Director in writing. If the Executive Director approves the SAP but determines that the changes therein are not de minimis, construction may not

recommence until after an amendment to this permit is approved by the Commission.

10. Indemnification. By acceptance of this permit, Atlas Offshore Wind LLC agrees to reimburse the Coastal Commission in full for all Coastal Commission costs and attorney's fees -- including (1) those charged by the Office of the Attorney General, and (2) any court costs and attorney's fees that the Coastal Commission may be required by a court to pay -- that the Coastal Commission incurs in connection with the defense of any action brought by a party other than the Atlas Offshore Wind LLC against the Coastal Commission, its officers, employees, agents, successors and assigns challenging the approval or issuance of this permit. The Coastal Commission retains complete authority to conduct and direct the defense of any such action against the Coastal Commission.

IV. FINDINGS AND DECLARATIONS

A. PROJECT DESCRIPTION

Atlas Offshore Wind US LLC (Atlas Wind) proposes to conduct low energy, high resolution geophysical surveys, geotechnical sampling, and benthic (seabed) habitat surveys in state waters off San Luis Obispo County from approximately 0.25 mile offshore (in 20 feet of water, referenced to the mean lower-low water level) to the three-mile state water boundary (Figure 1). The purpose of these surveys is to gather data and information to guide future potential development plans for a potential submarine export electric cable corridor between Atlas Wind's offshore wind lease area in federal waters and potential cable landfall locations in San Luis Obispo County. The proposed survey area extends northwest of Morro Bay Harbor and does not include areas inside or in front of Morro Bay Harbor. Atlas Wind has reduced the proposed survey area since it withdrew its CDP waiver request from the May 2024 Commission Hearing and will no longer be surveying in state waters near Diablo Canyon. The proposed survey area is depicted in the map below.

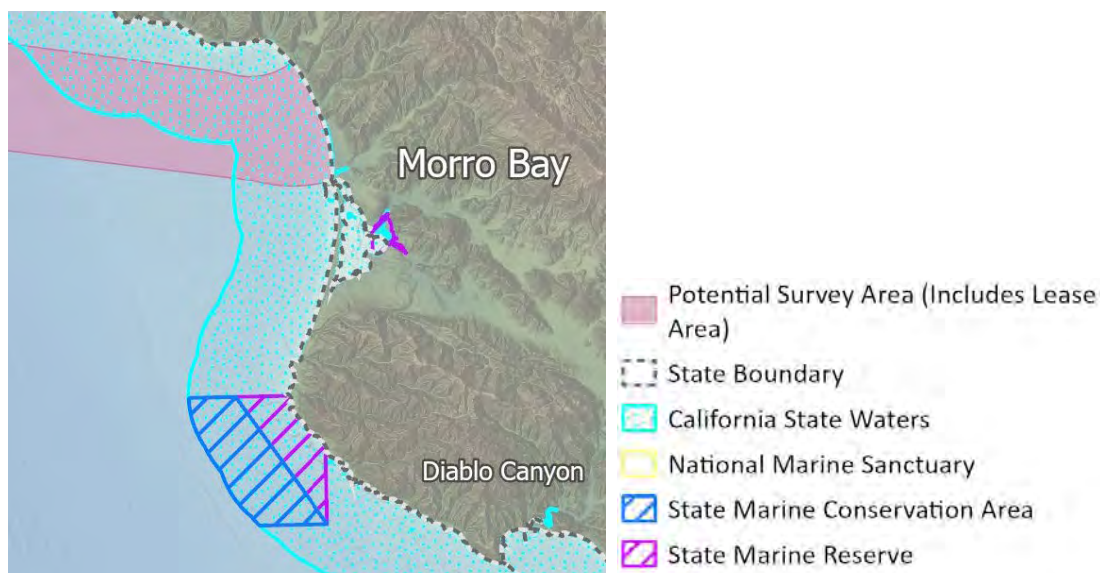


Figure 1 Map of Morro Bay showing Atlas Wind's proposed survey area, where the pink and blue dotted layers overlap, area in California State waters

In June 2022, the Commission conditionally concurred with the Bureau of Ocean Energy Management's (BOEM) leasing of a wind-energy development area offshore of Morro Bay (CD-0004-22). That project includes the federal waters portions of the surveys proposed here. Those surveys in federal waters began in the spring of 2024. The proposed state water survey methods and survey equipment considered in this application are the same as the methods, activities and equipment that the Commission reviewed and conditionally concurred with for federal waters as part of the BOEM consistency determination. Specifically, both sets of surveys would use low energy, high resolution geophysical survey equipment, involve small seafloor disturbance footprints for sediment coring and benthic sampling equipment, and be conducted from survey ships with protected species observers (PSO) (also known as marine wildlife monitors (MWM)) using best practices to avoid marine mammal and sea turtle strikes from the survey vessel and minimize potential adverse effects to fisheries.

Geophysical Survey

The proposed low energy, high resolution geophysical (HRG) surveys would produce maps of the seafloor that would be used to inform future potential development plans for submarine cable routes. The maps would include information about substrate and sediment type, and the location of potentially sensitive marine resources that the future cable route should avoid, such as archeological and cultural resources, rocky reefs, sea mounts, submarine canyons, deep sea corals and consolidated hard bottom habitat. The maps would be created using a combination of acoustic and nonauditory equipment. All acoustic equipment proposed to be used is classified as low-energy imaging/sensing equipment and includes multi-beam echo sounders, side scan sonar, and sub-bottom profilers (**Exhibit 1**). None of this geophysical survey equipment would contact the seabed. Depending on bathymetry and hazards, the HRG survey equipment will be either mounted on underwater autonomous vehicles (AUVs), be hull-mounted on

a survey vessel, and/or towed by the survey vessel. A hull-mounted, ultra-short baseline (USBL) acoustic positioning system would be used to improve navigational and positional accuracy of the AUVs and towed geophysical survey equipment.

Geotechnical and Benthic Habitat Surveys

Geotechnical and benthic sampling would confirm the data interpretation of the geophysical survey mapping, provide information about sediment variability and stratigraphy, and provide samples for geoarchaeological analyses. The mapping data from the geophysical survey would be used to identify locations for geotechnical and benthic samples. Atlas Wind anticipates collecting a total of 11 vibracores, 11 piston cores, six cone penetration tests, two sediment grab samples, and three sediment plan view and profile images during their geotechnical and benthic sampling surveys. If a cone penetration test or core does not meet its target depth, an additional sampling attempt may be tried in a slightly offset location. The vibracore would collect 4-inch diameter, 6 meter (m) vertical sediment cores, the piston core would collect 3.3-inch diameter, 20 m vertical sediment cores, the cone penetration test would involve extension of a 6 m long rod through the sediment without collecting any sediment, and the sediment grab would collect the top 2 to 4 inches of sediment from a one square foot area. In total, approximately 2.35 cubic yards (CY) of sediment would be removed during the combined geotechnical and benthic sampling surveys. The total area of seabed contact during sampling is anticipated to be 845.2 square feet, based on the footprint and number of samples collected by each instrument. Sediment plan view and profile view images would collect image information about the presence and abundance of benthic organisms. These images would be analyzed for rare or sensitive species living in the sediments prior to conducting sediment grab samples. Sediment grab samples would only be collected when rare or sensitive species are absent from the sediment images.

Project Vessels and Timing

Atlas Wind proposes using a combination of offshore and nearshore vessels, and autonomous underwater vehicles (AUVs) to deploy the equipment that will perform its geophysical, geotechnical, and benthic surveys. Generally, an offshore vessel (250 – 360 feet in length) would be used in water deeper than approximately 130 m and a nearshore vessel (30 feet in length) would be used to survey water less than approximately 130 m deep. The vessels have overlapping operational depth ranges—the vessel used will depend on bathymetry and hazards, distance to port, and availability. When the offshore vessel is used, up to three AUVs would collect geophysical data. When the nearshore vessel is used, geophysical surveys would be conducted with one smaller AUV or with hull-mounted and/or towed equipment. Atlas Wind anticipates conducting the majority of the proposed state water surveys with the nearshore vessel.

Atlas Wind estimates that geophysical surveys would be completed over a maximum of 40 days. Geotechnical sample collection would take up to four days, and benthic

surveys would take up to four days. The nearshore vessel would operate for 12 hours a day and the offshore vessel would operate for 24 hours a day. In total, the surveys would be conducted over a maximum of 48 days, which includes time for bad weather. Surveys would be conducted between June 2024 to July 2025 with geophysical surveys anticipated in 2024 and geotechnical and benthic surveys in 2025.

B. OTHER AGENCY APPROVALS

California State Lands Commission (CSLC)

The CSLC has regulatory authority over geophysical and geotechnical surveys on State sovereign lands, including submerged lands, to ensure the surveys are consistent with the allowable uses of public trust resources. The survey contractor that Atlas Wind has hired, Ocean Infinity, possesses a nonexclusive General Offshore Geophysical Survey Permit to conduct geophysical surveys using low-energy equipment and a General Permit to Conduct Geologic Surveys from CSLC. CSLC updated the Offshore Geophysical Permit Program (OGPP) in 2013 to incorporate the latest science on ocean acoustics and effects to marine life. The CSLC conducted environmental review of the OGPP, with public review and adopted a Mitigated Negative Declaration (MND) pursuant to California Environmental Quality Act (CEQA) that identified protective measures to avoid or mitigate potentially significant effects to marine life and the coastal environment from the use of low-energy geophysical surveys to a point where no significant effects would occur from the surveys. In 2015, through AB 1274, the Legislature found that the updated regulations protect marine life and improve public transparency through the inclusion of pre-survey noticing requirements. All upcoming OGPP surveys can be found on the CSLC's OGPP website:

<https://www.slc.ca.gov/ogpp/>.

State Water Resources Control Board (SWCRB)

The SWCRB regulates discharge of dredged or fill materials to the waters of the State. SWCRB issued a Notice of Applicability for the proposed projects enrollment under General Order No. WQ 2021-0048-DWQ on April 26, 2024.

United States Army Corps of Engineers (USACE)

USACE regulates the placement of fill in waters of the United States. A Nationwide Permit 6 (NWP 6) was issued May 2, 2024, and authorizes survey activities such as core sampling and soil sampling. The NWP 6 does not obviate the need to obtain other Federal, state, or local authorizations as required by law.

California Department of Fish and Wildlife (CDFW)

CDFW regulates the collection and possession of wildlife for scientific, educational, or propagation purposes through Scientific Collecting Permits. CDFW issued Atlas Wind a scientific collecting permit for benthic and geotechnical survey sampling on April 11, 2024.

Tribal Outreach and Consultations

During the review of this project, Commission staff reached out to representatives from the following Native American Tribes understood to have current or historic connections to the project area: Barbareño/Ventureño Band of Mission Indians, Chumash Council of Bakersfield, Coastal Band of the Chumash Nation, Northern Chumash Tribal Council, Salinan Tribe of Monterey San Luis Obispo Counties, Santa Ynez Band of Chumash Indians, Tule River Indian Tribe, Xolon-Salinan Tribe, yak tityu tityu yak tithini – Northern Chumash Tribe.

Commission staff received one request for consultation and one request for notification of discoveries of archaeological and cultural resources. Following the initial request for consultation, Commission staff responded with clarifications about the project design and an offer to schedule a consultation meeting; however, the tribe requesting consultation did not respond to this outreach and no consultation occurred. Another Tribe requested notification of any cultural resources encountered during surveys.

Special Condition 9 incorporates notification of archaeological and cultural discoveries to the Tribes listed here with current and historic connections to the project area.

C. MARINE RESOURCES AND WATER QUALITY

Section 30230 of the Coastal Act states:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 of the Coastal Act states:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Section 30232 of the Coastal Act states:

Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.

In general, geophysical surveys, geotechnical sampling of the seafloor, and benthic habitat surveys have the potential to minimally affect marine resources in several ways. Marine organisms may detect the generation of underwater sound from low energy, high resolution geophysical survey equipment and, generally, the movement of any vessel operating in the ocean increases the risk of potential collisions between vessels and marine wildlife. There is also some risk that towing, and deploying geophysical and geotechnical survey equipment tethered to the ship could entangle marine wildlife in the towing and deployment ropes/cables. Without adequate safeguards, there is also some risk that geotechnical and benthic habitat surveys could adversely affect benthic habitat and water quality during core sampling and collection of benthic habitat data. As discussed in the analysis below, the proposed project, as conditioned, avoids or minimizes these potential effects on marine resources and water quality.

Underwater Sound

Some of the sound generated during the low energy, high resolution geophysical (HRG) survey could minimally affect marine mammals and select fish species that can detect high frequency sound for a brief period of time. The proposed survey equipment is not expected to adversely affect any marine mammals, fish, sea turtles, invertebrates, or larvae.

Anthropogenic activity in the ocean creates a wide range of sounds that vary in pitch, intensity, and duration. Some sounds are created as byproducts of activities, such as the noise from a ship during transit, or the impact noise from pile driving. Other sounds are purposefully created, controlled, and used in the ocean to map and explore the seafloor, visualize sediment and sub-bottom features, and communicate and track remote devices. Controlled sounds would be created from the use of geophysical survey equipment during the surveys proposed by Atlas Wind. Incidental sound would also be created from the operation and movement of survey vessels. The potential for these sounds to adversely affect marine resources depends on the physical characteristics of the sound, the biological characteristics of the organism experiencing the sound, and the organism's position relative to the sound source. The hearing ranges of some marine taxa in relation to anthropogenic sound sources are shown in Figure 2 from the publication Duarte et al. (2021).⁸

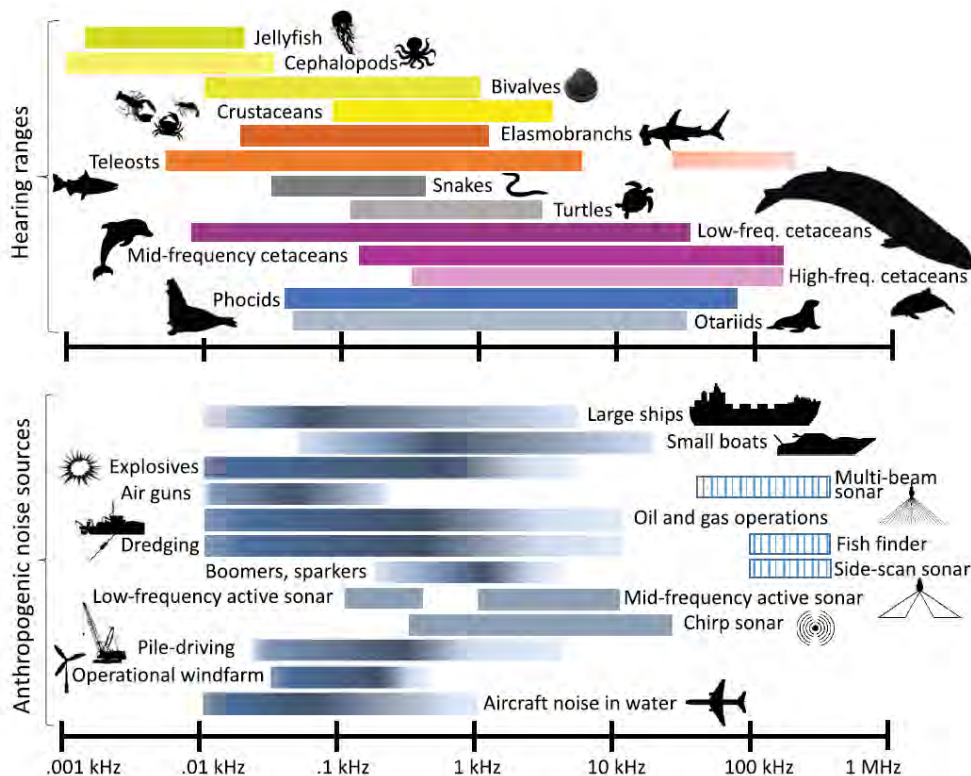


Figure 2. Image from Duarte et al (2021).⁸ Hearing ranges of marine taxa and frequency ranges of selected anthropogenic sound sources. These ranges represent the acoustic energy over the dominant energy band of each source. Dashed lines represent the multiple frequencies of sonar sources.

Environmental Review and Research on HRG survey equipment

The propagation of sound from HRG survey equipment and its potential to adversely affect marine animals has been studied, reviewed and verified through several programs. The CSLC has overseen and permitted low energy, offshore geophysical survey activities in California state waters since 1941. Since 1984, CSLC has relied on a mitigated negative declaration (MND) to comply with CEQA when issuing geophysical permits for low energy survey activities under the offshore geophysical survey permit program (OGPP). In 2011, recognizing that a considerable amount of research had been conducted since the MND was first adopted, CSLC received funding to update and modernize the OGPP. In 2013, CSLC adopted an MND when it approved the OGPP update and found that “project revisions and/or survey activity requirements have been incorporated into the Project that avoid or mitigate those impacts to a point where no significant impacts would occur.”¹ The OGPP lists a range of representative equipment, including multi-beam echo sounders (MBES), side scan sonar (SSS), and sub-bottom profilers, that are covered by the program. OGPP Permittees must demonstrate that the radius around the sound source where the intensity decreases to a

¹ Mitigated Negative Declaration: [Low-Energy Offshore Geophysical Permit Program Update | CA State Lands Commission, pg. ES-1.](#)

sound pressure level (SPL) of 160 decibels in reference to one micropascal, written as 160 dB re 1 μ Pa, (which is the National Marine Fisheries Service's threshold for behavioral disturbance or "Level B harassment")² can be reasonably monitored by protected species observers to ensure that the equipment is not operated when marine wildlife are present in the area of elevated sound. As required under the OGPP, the permittee provides CSLC with the sound propagation model using the current accepted calculation for peak and cumulative effects using the 20LogR spherical spreading loss method. Atlas Wind's proposed survey equipment is permitted under the OGPP and thus will follow all the OGPP requirements identified in the MND. Those requirements and protective measures are further incorporated into this coastal development permit through **Special Condition 1**, to ensure that Atlas Wind's survey activities will not have a significant adverse effect on the environment.

Research on HRG survey equipment has continued since CSLC adopted its updated MND and modernized its OGPP. The Bureau of Ocean Energy Management (BOEM) has also funded a number of studies on HRG sources. In 2016, BOEM contracted with the Naval Undersea Warfare Center (NUWC) to study and quantify the characteristics of sounds radiated by 18 different types of geophysical survey systems.³ The results from the NUWC study provided detailed laboratory measurements of the acoustic field radiated by marine geophysical acoustic survey systems to better understand the potential for these surveys to impact marine ecosystems. In 2018, a team of scientists conducted open water testing of 30 HRG sources to understand open water sound propagation and inform potential impacts on marine life.⁴ The results from the open water tests were used to revise models of sound propagation that are used to determine the appropriate PSO monitoring distances and safety zones under the National Environmental Policy Act, the Marine Mammal Protection Act, and the Endangered Species Act.⁵ In 2022, a group led by researchers at U.S. Geological Survey (USGS) published a study that categorized geophysical survey equipment into four tiers based

² The National Marine Fisheries Service (NMFS) through the marine mammal protection act (MMPA) protects marine mammals from take, which includes harassment. The MMPA has two levels of harassment: Level A has the potential to result in injury, and Level B harassment has the potential to cause disturbance to essential behaviors such as feeding, breeding, or migrating. Level B (behavioral or incidental harassment) criterion in water is currently source pressure level (SPL) of 160 dB re 1 μ Pa for all marine mammal species for non-continuous (intermittent) sources and 120 dB re 1 μ Pa for continuous sources. [NMFS Summary of Marine Mammal Acoustic Thresholds \(noaa.gov\)](https://www.noaa.gov/media/press-releases/2019/05/20190520-nmfs-marine-mammal-acoustic-thresholds)

³ Crocker and Fratantonio (2016) BOEM report 2016-044; <https://apps.dtic.mil/sti/pdfs/AD1007504.pdf>

⁴ Halverson and Heaney (2018) BOEM report 2018-052; https://espis.boem.gov/final%20reports/BOEM_2018-052.pdf

⁵ Heaney and Halverson (201) BOEM report 2021-021: <https://www.boem.gov/sites/default/files/documents/environment/environmental-studies/NT-14-03d.pdf>

on their potential to affect marine mammals.⁶ Equipment with the highest potential to generate adverse impacts was categorized into Tier 1 and includes high-energy airgun surveys with large volume and/or multiple airguns that are likely to result in physical injury or mortality to marine mammals. Tier 1 seismic survey equipment produces sounds of 15-60 Hz with source levels of 228-259 dB re 1 μ Pa @ 1 m.⁷ In previous actions, the Commission has denied or objected to projects proposing use of Tier 1 equipment because of the potential significant adverse effects to marine species including marine mammals, sea turtles, fish and invertebrates (e.g., PG&E's proposed seismic survey project, CDP No. E-12-005). In contrast, the lowest impact category, Tier 4, includes most HRG survey and communication/tracking sources. Tier 4 equipment is widely considered by the scientific community⁸ to be de minimis and unlikely to result in disturbance or injury to marine wildlife. This is because the equipment has some combination of factors including, low source level, narrow beams, directional transmission, short pulse lengths, and/or sound frequencies outside known marine mammal hearing ranges. In short, the "de minimis" classification is based on the frequency of the sound outside of the hearing range of most marine wildlife and the resulting low potential for animal exposure to the sound. Potential exposure to a sound in turn is based on the area/volume of water exposed to the noise and the number of sound pings to which an animal could be exposed. All the equipment proposed for use by Atlas Wind is classified as Tier 4 and is permitted under the CSLC OGPP based on its 2013 MND.

Characteristics of HRG equipment in the CDP application

Atlas Wind proposes to use three types of low energy, high resolution geophysical acoustic devices: multi-beam echo sounder (MBES), side scan sonar (SSS), and sub-bottom profiler. Ultrashort baseline (USBL) technology would also be used for positioning and navigation of survey equipment. Acoustic information, including frequency and maximum source level intensity of generated sound, and the make and model of proposed geophysical equipment are provided in **Exhibit 1**. The intensity levels (decibel, dB) provided in **Exhibit 1** are specified by the manufacturer and represent the highest intensity possible for a given instrument. Operators may choose to run the instrument at a lower intensity depending on data needs and environmental setting; the instruments cannot physically exceed the limits identified in **Exhibit 1**. **Special Conditions 1 and 2** require noises associated with survey activities to be

⁶ Ruppel, C.D.; Weber, T.C.; Staaterman, E.R.; Labak, S.J.; Hart, P.E. Categorizing Active Marine Acoustic Sources Based on Their Potential to Affect Marine Animals. *J. Mar. Sci. Eng.* **2022**, *10*, 1278.

<https://doi.org/10.3390/jmse10091278>

⁷ From Ruppel et al. (2022): Acoustic sources are often described in terms of their source level (SL) which is the sound pressure level (SPL) provided at a reference distance of 1 m from the acoustic center of the source.

⁸ "Morro Bay group says offshore wind development surveys kill marine life. Is that true?"

<https://www.sanluisobispo.com/news/local/environment/article285819371.html>

reduced or minimized to the extent feasible. The sounds generated from the MBES, SSS, sub-bottom profilers, and USBL have a low potential to affect marine animals because of the high frequency of sound produced and low potential exposure of animals to the sound.

Sound created from two of the HRG devices, the MBES and SSS, are not expected to have any auditory effects on any marine animals because the frequencies of sound produced by these devices are higher than the known hearing detection limit of marine organisms (Figure 2).⁹ The MBES and SSS proposed by Atlas Wind produce sounds that range in frequency from 200 kHz to 850 kHz (**Exhibit 1**). Fish and sea turtles detect sounds up to 2 – 4 kHz, while marine mammals are capable of detecting sounds over a broader range of ~7 Hz – 160 kHz. In all cases, the hearing ranges of these animals are well below the sound frequencies emitted by the MBES and SSS. The most sensitive marine animals to high frequency sound are mid- and high-frequency cetaceans that can detect sound up to 160 kHz,² which is also below the frequency emitted by the MBES and SSS. Thus, the use of this survey equipment would not cause animals to alter their behavior, nor would it have the potential to injure or harm marine animals.

The frequencies of sound produced by the sub-bottom profiler (2 – 16 kHz) and USBL beacons (20 – 34 kHz) are within the hearing range of marine mammals but are outside the hearing range of sea turtles and most fish species. The maximum hearing frequency for sea turtles, including juveniles, is understood to be 2 kHz. The maximum hearing frequency of most fish is 1 – 2 kHz with some hearing specialist species able to detect sounds up to 4 kHz. However, the potential for sound to harass or harm an animal depends on both the ability of the animal to detect the noise and the potential for an animal to be exposed to high intensities (dB) of the sound. The National Marine Fisheries Service (NMFS) threshold for behavioral disturbance of marine mammals is 160 dB.² The sub-bottom profiler creates short, intermittent pings of a relatively narrow beam of sound (17 – 24°). Available mathematical and computer modeling shows that the intensity of the sound decreases below behavioral disturbance threshold levels (160 dB) within 5 m of the sound source. These characteristics make it unlikely that an animal would be exposed to sound that would be considered capable of causing behavioral disturbance by NMFS. Thus, sub-bottom profilers have been classified as de minimis in the Ruppel et al. (2022) study, by NMFS precedent, and in the CSLC MND. The USBL beacon has a narrow beam width, produces intermittent and transitory sound for approximately three seconds and has a 160 dB radius of roughly 45 m. NMFS determined that a USBL system was unlikely to lead to incidental harassment or injury to marine mammals.

Despite the low potential for the proposed survey equipment to adversely affect marine wildlife, Atlas Wind has nevertheless incorporated measures into its proposed survey to further limit the potential auditory effects from the sub-bottom profiler when it is hull mounted or towed behind the survey vessel. These measures are incorporated into the

⁹ C. M. Duarte et al., *Science* 371, eaba4658 (2021). DOI: 10.1126/science.aba4658

CDP through **Special Conditions 1 and 2**, which require protected species observers (PSOs) to monitor the area around survey instruments with sources operating less than 200 kHz. If a marine mammal or turtle enters the “shutdown zone” (established at 500 m for whales, 100 m for smaller marine mammal and sea turtles), use of all active acoustic sources below 200 kHz will immediately cease.

While implementation of shutdown zones is more difficult for AUVs operating underwater and away from survey vessels, AUVs allow survey activities to be conducted 40 feet or less above the seafloor, thus significantly reducing the amount of water column exposed to underwater sound compared to the vessel-mounted and towed survey equipment. PSOs will also be responsible for monitoring the area around the known AUV position to determine if marine wildlife is present. The exact position of the AUV would be known based on ultrashort baseline (USBL) positioning technology and the survey vessel would remain near the AUV during operation.

In summary, the sound that would be generated by the proposed geophysical survey equipment is either high frequency, beyond the range that can be detected by marine animals, or is unlikely to adversely affect marine animals due to the narrow beam of sound created, the short duration of the sound, and the low probability of an animal coming close enough to the sound sources to be exposed to high levels of the sound. This is due in part to the proposed use of AUVs and the additional protection that would be provided by the measures included in **Special Conditions 1 and 2**. Thus, as conditioned, the proposed geophysical survey is consistent with the protection and maintenance of marine resources and healthy populations of marine organisms.

Project-Related Vessel Noise

The movement of the survey vessel to and from the project location and during survey activities would contribute to underwater sound. Vessel transit creates sound from propeller movement (cavitation), onboard machinery, and the flow of water around the ship. Sounds from vessel operation and transit are typically low frequency, ranging from 5 Hz to 1 kHz,¹⁰ and thus audible to marine mammals, turtles and fish. The intensity of the sound depends on ship design, size, and transit speed. Source levels for vessels typically range from 150 – 170 dB at reference to 1 micropascal and sound intensity generally increases with increases in ship speed.⁹ Noise from temporary or occasional ship traffic is likely to result only in temporary behavioral changes in marine animals, but the global trend of increasing ship noise especially near major shipping lanes is a growing concern.⁸

The survey vessels used by Atlas Wind would temporarily and incrementally increase sound near the active survey area. The continuous sound generated from the vessels would be relatively low intensity for much of the project, due to the low vessel speeds (2 – 5 knots) during surveying, would attenuate to levels below the NMFS marine mammal behavioral disturbance threshold within a relatively short distance from the source, and

¹⁰ [Sound Source List \(boem.gov\)](http://boem.gov)

would be limited in time and space due to the nature of the project. Vessel speed restrictions (as required through **Special Condition 3**) and implementation of the marine wildlife monitoring program required in **Special Condition 2** would further limit exposure of marine wildlife to noise levels that would be sufficiently high to result in adverse effects. Sound generated from AUVs themselves is expected to be very minimal because they are electric, and have very few moving parts, and are built to minimize resistance in the water.¹¹

Ship Strikes

The proposed surveys include the transit of vessels to, from and within the project area for an estimated 48 days. The larger offshore vessel would operate at sea for up to six weeks at a time and return to port in San Francisco. The smaller nearshore vessel would operate 12 hours a day and return to a port near the survey area daily. The vessel traffic associated with the project increases the potential for collision between a ship and marine animal. Larger, faster moving vessels, like the offshore survey vessel proposed here, are more often associated with collisions that result in injury or death to marine wildlife. However, collision and injury risk decrease when vessel speeds are reduced below 10 knots.¹² **Special Condition 3** would integrate this well-established protective measure into the proposed project by requiring project vessel speeds to be limited to 10 knots and below. When surveys are being conducted, vessel speeds would be further reduced to 2 – 5 knots by the necessity of tracking survey equipment. Additionally, **Special Condition 2** would decrease the potential for ship strike by requiring PSOs to monitor and maintain a 500 m or greater distance from any whale species or large unidentified marine mammal and 100 m distance from any turtle visible at the surface. PSOs would use infrared cameras and night-vision devices with thermal clip-ons and a handheld spotlight to monitor vessel safety zones at night and during poor visibility.

Wildlife Entanglement

Some geophysical surveys and all geotechnical and benthic surveys would be conducted using equipment that is tethered to the survey vessel by wire or rope. When geophysical surveys are conducted with towed equipment, up to 300 m of wire would separate the vessel and tow-body carrying the survey instrumentation. The distance between the vessel and the towed equipment would depend on water depth. The tow-body would remain above 4 – 10 m depth above the seafloor. Cores, sediment penetration testing, grab samples and sediment images would be conducted by instrumentation deployed from the survey vessel on a wire or rope. The length of tether separating the vessel from the sampling equipment would vary based on bottom depth.

¹¹ [On the radiated noise of the Autosub autonomous underwater vehicle \(psu.edu\)](https://psu.edu)

¹² Vanderlaan, A. S. M., and C. T. Taggart. 2007. Vessel collisions with whales: The probability of lethal injury based on vessel speed. *Marine Mammal Science* 23:144–156

Bathymetry in the proposed project area is generally < 100 m in depth. The risk of wildlife becoming entangled in the tethers between survey instruments and the vessels is low because instruments would continually be monitored, lines would be taut, and PSOs monitoring would provide the vessels with instructions on how to avoid interaction with marine species (as required through **Special Condition 1, 2, and 3**). Additionally, **Special Condition 6** requires Atlas Wind to submit and adhere to a critical operations and curtailment plan which outlines safe weather conditions in which geophysical and geotechnical survey activities can and cannot take place. These weather conditions are often present during the winter months and coincide with gray whale migrations and other periods of high marine mammal density. As such, survey activities during winter months when whale density in the project area is high are likely to be limited by weather and implementation of the critical operations and curtailment plan.

Seafloor disturbance and Marine Water Quality

Collection of sediment cores and benthic habitat samples would disrupt localized seafloor habitat and species, and temporarily decrease water clarity by increasing turbidity. Data from the USGS California Seafloor Mapping Program indicates that the benthic habitat offshore of Morro Bay is a combination of soft sediment and hard-flat and rugged rock outcroppings. All geotechnical and benthic habitat samples would be collected from soft substrates (as required through **Special Condition 4**), minimizing adverse effects to potentially sensitive habitats associated with hard bottom substrate. The exact sampling location of cores, cone penetration tests, sediment images, and sediment grabs, would be decided based on the data collected during the geophysical survey. Additionally, Atlas Wind would only collect sediment grab samples after verifying that the sample location does not contain any rare or sensitive benthic species from the sediment profile and plan images. Given the limited amount of sediment that would be collected and disturbed, the abundance of adjacent habitat of a similar type and the likely low density of marine organisms within the sample areas, the soft bottom sediment and associated marine life is expected to recover quickly from disturbances related to sample collection. In total, geophysical and benthic sampling would have a combined footprint of 845.2 square feet and collect 2.35 cubic yards of sediment, spread across approximately 30 sites. To provide additional protection for areas of special biological significance and sensitivity, **Special Condition 4** would require Atlas Wind to avoid intentional contact with hard substrate, rock outcroppings, seamounts, or deep-sea coral and sponge habitat during all aspects of the project, including sample collection.

Project vessels could adversely affect water quality and marine habitats through the accidental discharge of fuel or other chemicals during operation or transit. To help ensure this risk is minimized, **Special Condition 5** would require the applicant to submit an oil spill avoidance and response plan to the Executive Director for review which demonstrates that appropriate spill avoidance measures are implemented, and adequate spill response equipment is available for the worst-case spill scenario.

Special Condition 6 would also require Atlas Wind to implement an Executive Director-

approved Critical Operations and Curtailment Plan (COCP) that defines the limiting weather conditions that would hinder the safe operation of vessels or potential spill cleanup. Marine water quality effects could also result from the intentional or accidental release of sewage or bilge/ballast water or debris from project vessels. As such, **Special Condition 7** would require the implementation of a zero-discharge policy for all project vessels.

Conclusion

For the reasons discussed above, the Commission finds that the proposed project, as conditioned by **Special Conditions 1 through 7**, would be carried out in a manner that maintains marine resources, sustains the biological productivity and quality of coastal waters, protects against the spillage of hazardous substances into the marine environment, and is therefore consistent with Coastal Act Sections 30230, 30231, and 30232.

D. COMMERCIAL AND RECREATIONAL FISHING

Coastal Act Section 30234.5 states:

The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.

Commercial and recreational fishing are important components of the regional economy in San Luis Obispo County. The proposed project is located in an area used for commercial fishing, encompassing areas designated by the National Oceanic and Atmospheric Administration as Essential Fish Habitat (EFH) for the Pacific Coast Groundfish and Coastal Pelagic Species.¹³ Based on landings data collected by the California Department of Fish and Wildlife, high value fisheries in the project area (Fishing Block 607) in 2023 included rockfish, groundfish, flatfish and crab.¹⁴ Recreational fishing for a variety of fish species also occurs in the project vicinity. Consistency with Section 30234.5 of the Coastal Act requires that the proposed survey activities protect commercial and recreational fishing. In this case, that would be accomplished by avoiding damage to fish habitat, minimizing underwater noise that would be audible or damaging to marine wildlife (as described in section C of this report, above), and by minimizing the potential for interference with fishing activities.

Gear Interactions

The proposed project could adversely affect fishing through interactions between survey equipment and fishing gear. To help minimize potential adverse impacts to fishing activities, Atlas Wind would not request fishing activities to stop during survey activities and would not request that fishermen relocate gear placed in the project area. However, this would also mean that there is the potential that the survey vessel could

¹³ https://www.habitat.noaa.gov/apps/efhmapper/?page=page_4&views=view_31

¹⁴ <https://wildlife.ca.gov/Conservation/Marine/Data-Management-Research/MFDE/Landings-Block>

inadvertently snag fishing gear in the project area or in transit routes. The potential for interactions with fishing gear is greater when geophysical survey equipment is being towed because the tether from the equipment to the boat increases the underwater profile of the survey activity. Geophysical surveys that make use of autonomous underwater vehicles (AUVs)—such as those proposed by Atlas Wind—are less likely to entangle or interact with fishing gear because the AUV is untethered from the survey vessel and the AUV body is streamlined with few physical points that could catch fishing gear. The proposed geotechnical and benthic habitat samples would be collected from vertical deployments of sampling equipment and are unlikely to interact with fishing gear.

To minimize adverse effects to fishing from gear interactions, **Special Condition 1** includes minimization measures from the California State Lands Commission's Offshore Geophysical Permit Program that require the survey vessel to traverse the survey corridor prior to commencing survey operations and states that no survey line shall be conducted within 30 m of observed fishing gear. To further minimize potential impacts to fishing and fishing gear, Atlas Wind has also committed to hiring a local fisherman to be a fisheries representative on the survey vessel. The fisheries representative would monitor the survey area for active fishing vessels and fishing gear and communicate with any fishermen in the area over VHF radio. Additionally, Atlas Wind has proposed to contract with a local recreation fishing boat to be a scout vessel that would monitor the area around the survey vessel to further minimize fishing gear interactions. **Special Condition 8** would add to these protective measures by requiring Atlas Wind to recover any snagged fishing gear and lost survey gear to minimize debris that could become a hazard to subsequent fishing or survey activities. Additionally, Atlas Wind's Fisheries Liaison would provide advanced notification and regular updates to the fishing community about the timing and location of survey activities. Atlas Wind's protocols for communication can be found in its Fisheries Communication Plan (FCP) on its Mariners and Fisheries webpage.¹⁵ The FCP details Atlas Wind's fishing gear loss prevention and claim procedure if there is gear loss or damage caused by Atlas Wind's survey activities.

Catch Rates

The proposed survey activities are unlikely to affect fishing catch rates. As discussed in the Marine Resources section (Section C of this report, above), the sound frequencies created by the high resolution geophysical (HRG) survey equipment proposed to be used are above the hearing range of the majority of fish species. Most fish can detect sound up to 2 kHz; a few fish species that are considered hearing specialists can detect sound up to 4 kHz.¹⁶ Sound generated by the sub-bottom profiler (2 – 16 kHz) could

¹⁵ [Mariners & Fisheries - Atlas Wind](#)

¹⁶ Popper AN, Hawkins AD, Sisneros JA. Fish hearing "specialization" - a re-evaluation. Hearing Research. 2022 Nov;425:108393. DOI: 10.1016/j.heares.2021.108393. PMID: 34823877.

thus be detected by some fish. However, the potential exposure of fish to sound from the sub-bottom profiler would be brief because of its intermittent ping rate and narrow beam of sound. If a fish is exposed to the sound, and can hear the sound, it might alter its behavior—depending on the species and its activity at the time (e.g., foraging)—but any such behavioral changes would be of limited duration due to the limited amount of time exposure to survey sounds would occur. These sounds would extend outward a limited distance from the survey vessel/AUV within a narrow, directed band and would move through the ocean with the survey vessel/AUV at a speed of two to five knots, thus exposing particular areas and the wildlife within them for a very short time.

While acoustic induced injury to fish could potentially occur from intense, repeated exposure to low frequency (~10 – 100s of Hz) noise from activities like pile-driving and seismic airgun surveys, no such injury is expected from exposure to the high frequency sounds that would be produced during the proposed geophysical surveys (Personal communication, Dr. Arthur Popper).

Despite the body of work that suggests HRG surveys would not adversely effect fishing, Coastal Commission staff has received public comment that fishing catch decreases substantially during and after geophysical surveys. In addition to these general comments, staff received testimony from two fishermen fishing in unknown proximity to Atlas Wind's federal water survey area in the Morro Bay wind energy area. The fishermen stated that after one week of surveys, catch decreased up to 67% per unit effort of fishing. One fisherman presented data, in terms of total pounds landed and hours spent on the water, from three days in early April prior to surveys beginning and one day, April 24th, after the survey vessel had been on site for 6 days. The second fishermen provided total pounds landed for only April 24th. The pounds landed per unit effort on the 24th are lower than the pounds of fish landed per unit effort in early April.

However, without historical context and a large amount of additional data, it is impossible to determine if the differences in catch are attributable to the survey activities, or whether they are the result of natural variability, randomness or changes in ocean conditions. In other words, it is unclear whether early April days reported were simply "good" fishing days or whether April 24th was an anomalously poor fishing day. The fishermen reported that their general fishing area for all days reported was between Point Conception and Point Sur. One fisherman stated on April 24th, that he was approximately 10 miles away from Atlas Wind's survey vessel and the other fisherman reported seeing the survey vessel's lights at night. However, Commission staff have confirmed that Atlas Wind's survey vessel was in port in San Fransisco on April 24th. While Commission staff appreciates the concerns raised by local fishermen regarding the project's potential to adversely affect fishing catch rates, and welcomes all forms of public input that can help inform its analysis, in this case the information and data provided by the fishermen does not provide sufficient evidence that the differences in catch exceeded natural fishing catch variability, nor does it establish a significant correlation or causal relationship between the survey activities and reduced rates of fish catch.

To date, Commission staff are not aware of any scientific studies demonstrating adverse effects to fisheries from HRG surveys. Several studies have examined changes in fishing catch in relation to acoustic surveys, but these have focused specifically on seismic airgun surveys. Seismic airguns produce extremely high decibel sound at the low frequencies most audible to fish and marine wildlife and thus have the highest potential to adversely affect marine animals among the acoustic survey equipment types evaluated in the recent comparative study carried out by the U.S. Geological Survey (Ruppel et al. 2022). The available science also indicates that the effects of seismic airgun surveys on fishing catch rate are variable. Some studies documented decreased catch rates in and near the airgun survey area,¹⁷ while other studies found that catch rate increased for some species and decreased for others after seismic airgun surveys.¹⁸ As discussed previously, the HRG survey equipment proposed for use by Atlas Wind has far less potential than seismic airguns to be heard by fish or affect their health and behavior. Rather, the proposed types of HRG survey equipment have acoustic profiles similar to the echosounders, fish finders and depth finders frequently used by fishermen and researchers to map and track fish abundance and distribution (see reference Footnote 9).

Offshore Wind and Fisheries Working Group

The California Offshore Wind and Fisheries Working Group (Working Group) is tasked with developing and completing a statewide strategy on or before January 1, 2026, to avoid, minimize and mitigate adverse impacts to fishing and fisheries from offshore wind development, prioritizing fisheries productivity and long-term resilience. The Working Group was formed in response to Condition 7c of the Commission's conditional concurrences with the consistency determinations the Bureau of Ocean Energy Management submitted for offshore wind area lease sales and subsequent survey and site assessment activities (Consistency Determination Nos. CD-0004-22 and CD-0001-22). The Working Group was codified, and its tasks refined, by State Senate Bill (SB) 286 (McGuire 2023), which created section 30616 of the Coastal Act. Working Group membership includes commercial and recreational fishermen, offshore wind leaseholders, and representatives of California Native American Tribes. State and federal agency staff support the Working Group as expert advisors. The working group has spent many hours meeting together since its first meeting in December 2023 both in full working group meetings and in smaller subgroups to draft and discuss the required components of the statewide strategy.

An important component of the statewide strategy detailed in SB 286 is the development of a Best Practices for Surveys and Data Collection document that

¹⁷ Engas, Arill & Lokkeborg, Svein & Ona, Egil & Vold, Aud. (1996). Effects of seismic shooting on local abundance and catch rates of cod (*Gadus morhua*) and haddock (*Melanogrammus aeglefinus*). *Canadian Journal of Fisheries and Aquatic Sciences*. 53. 2238-2249. 10.1139/f96-177.

¹⁸ Bruce, Barry, et al. "Quantifying fish behaviour and commercial catch rates in relation to a marine seismic survey." *Marine environmental research* 140 (2018): 18-30.

identifies measures to minimize the potential for adverse effects to commercial and recreational fisheries during survey activities. Atlas Wind has actively contributed to discussions and the work to create a draft of this document. Consistent with SB 286, a final version of the Best Practices for Surveys and Data Collection document will be presented to the Commission in 2026 as part of the statewide strategy which the Commission will have the opportunity to review, modify and adopt. While the final version of Best Practices for Surveys and Data Collection is forthcoming, Atlas Wind has actively incorporated key best practices from the current version drafted by the Working Group into its survey plans. For example, Atlas Wind has committed to not conducting surveys during important fisheries season openings and to increasing the frequency of survey updates to fishermen through multiple communication platforms.

Conclusion

The Commission finds that, as conditioned by **Special Conditions 1 and 8**, the proposed project would not adversely impact the economic, commercial and recreational importance of fishing and is thus consistent with Coastal Act Section 30234.5.

E. CULTURAL RESOURCES

Coastal Act Section 30244 states:

Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

Coastal Act Section 30604(h) states:

When acting on a coastal development permit, the issuing agency, or the commission on appeal, may consider environmental justice, or the equitable distribution of environmental benefits throughout the state.

Project activities, including seafloor disturbance during the collection of sediment cores and samples, could potentially disturb or damage shipwrecks, archeological and paleontological resources, or Native American artifacts by destroying previously unrecorded resources or disrupting the site such that the resource's historic or archaeological context is altered adversely. The Commission invited tribes to consult on the project, as described under the "tribal outreach and consultation" heading in Section B of this report above.

The proposed geophysical survey would provide high resolution benthic maps that will inform Atlas Wind of previously unknown archaeological or cultural resources in the study area and provide data for the Marine Archaeological Resources Assessment. Geotechnical and benthic habitat samples would avoid identified cultural resources with a minimum buffer of 50 m. The discovery of any cultural resources would be

communicated to the Executive Director and Tribes with historic connection to the survey area through **Special Condition 9**.

The Commission finds that based on these factors and with the above-referenced measures, the project would not adversely impact archaeological, paleontological, or tribal cultural resources and is therefore consistent with Section 30244 of the Coastal Act as well as the principles articulated in the Commission's Tribal Consultation Policy.

F. DREDGING OF COASTAL WATERS

Coastal Act Section 30233 states:

- (a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:
 - (1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.
 - (2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.
 - (3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.
 - (4) Incidental public service purposes, including, but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.
 - (5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.
 - (6) Restoration purposes.
 - (7) Nature study, aquaculture, or similar resource-dependent activities.
- (b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for these purposes to appropriate beaches or into suitable longshore current systems.

The proposed project would include the removal of a limited amount of seafloor sediment in order to "ground truth" and confirm the results of the acoustic survey

results. Specifically, Atlas Wind proposes to collect a total of 11 vibracores, 11 piston cores, and two sediment grab samples. If a core does not meet its target depth, an additional sampling attempt may be tried in a slightly offset location.

The vibracore would collect 4-inch diameter, 6 meter (m) vertical sediment cores, the piston core would collect 3.3-inch diameter, 20 m vertical sediment cores, and the sediment grab would collect the top 2 to 4 inches of sediment from a one square foot area. In total, approximately 2.35 cubic yards (CY) of sediment would be removed during the combined geotechnical and benthic sampling surveys. The total area of seabed contact during sampling is anticipated to be 845.2 square feet, based on the footprint and number of samples collected by each instrument.

The proposed collection of seafloor sediment described above is considered “dredging” of open coastal waters and is only allowable under the Coastal Act if three separate tests are met, each of which is described in Section 30233(a) of the Coastal Act.

Nature Study and other Resource-Dependent Activities

The first test for a proposed project involving dredging in open coastal waters is whether the dredging is for one of the seven allowable uses under Section 30233(a). The proposed project objective is to conduct “Nature study...or similar resource-dependent activities,” which is identified as an allowable use under Section 30233(a)(7). The purpose of the proposed sediment core and grab samples is to study the seafloor geology within the survey area, to gain a better understanding of the composition and characteristics of the benthic sediments and habitat, and to ground truth and confirm the results of the acoustic mapping efforts. The maps would include information about substrate and sediment type, and the location of potentially sensitive marine resources that the future cable routes should avoid, such as archeological and cultural resources, rocky reefs, and consolidated hard bottom habitat. This understanding and study cannot be accomplished without direct sampling and collection of the seafloor sediments and is thus resource-dependent. The proposed project therefore fits under one of the allowable uses of Section 30233 and satisfies the first of its three tests.

Alternatives

The second test for a proposed project involving fill is that “there is no feasible less environmentally damaging alternative.” To analyze the project’s conformance with this test, Commission staff and Atlas Wind evaluated several potential alternatives to the proposed collection of seafloor sediment samples. These alternatives included assessing the sediment geology through visual observations using divers or remotely operated vehicles and the use of different types of sampling equipment.

The first of these alternatives was determined to be infeasible because visual observations of surface sediments alone would not provide an accurate representation of subsurface geology and benthic habitat. The proposed core samples would include collection of materials from up to 20 meters below the sediment surface, and at these depths, the geology and sediment characteristics may deviate significantly from what is

indicated by surface layers. While Atlas Wind would make use of visual observations to the extent possible to refine and limit the extent of benthic sampling efforts, some direct sampling would nevertheless be necessary to provide the information and understanding of seafloor geology and habitat it is seeking.

Other types of sediment sampling equipment, including different methods of dredging such as hydraulic suction dredging, were also considered but similarly rejected as infeasible or having more environmentally damaging effects on marine resources. Other larger types of dredging equipment would either not provide the resolution and stratification of samples needed to accurately assess seafloor geology and habitat within the survey area or would result in the removal of substantially larger volumes of sediment, which would have more adverse effects on marine resources, such as entrainment or impingement of marine organisms. The use of larger dredging equipment could also result in dispersal of turbidity plumes, injury or mortality to more marine organisms, and/or greater risks of spills or marine wildlife entanglement.

Therefore, the Commission finds that the proposed project is the least environmentally damaging feasible alternative and meets the second test of Coastal Act Section 30233(a).

Mitigation Measures

The third and final test for a proposed project involving dredging is that “feasible mitigation measures have been provided to minimize adverse environmental effects.” The Marine Resources and Water Quality Section of this report above describes feasible mitigation measures that would require Atlas Wind to: avoid all hard bottom substrates and sensitive seafloor habitats during sediment geotechnical and benthic sampling, and avoid intentional contact with hard substrate seafloor (**Special Condition 4**); submit and implement Oil Spill Avoidance and Response and Critical Operations and Curtailment plans to minimize the risk of spills of hazardous substances and ensure an effective spill response (**Special Conditions 5 and 6**); and prohibit the discharge of sewage, bilge, ballast water or debris from project vessels (**Special Condition 7**).

With the inclusion of these mitigation measures and the ten Special Conditions, the Commission finds that the third test of Coastal Act Section 30233(a) has been met.

Conclusion

With these measures, the Commission concludes that the project is consistent with the dredging policy of the Coastal Act because it: (1) is an allowable use under and otherwise complies with Section 30233(a); (2) there is no less damaging feasible alternative; and (3) contains monitoring and mitigation measures adequate to minimize adverse environmental effects. The Commission therefore finds the proposed project consistent with Section 30233 of the Coastal Act.

G. CALIFORNIA ENVIRONMENTAL QUALITY ACT

The Commission is the responsible agency under the California Environmental Quality Act (CEQA), while the CSLC is the lead agency for this project. In its role as the responsible agency, section 13096 of the Commission's Code of Regulations requires Commission approval of coastal development permits to be supported by a finding showing the permit, as conditioned, to be consistent with any applicable requirements of CEQA. Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment. The Commission's regulatory program for reviewing and granting CDPs has been certified by the Resources Secretary to be the functional equivalent of environmental review under CEQA (14 CCR § 15251(c).) The Commission incorporates its findings, above, on the project's Coastal Act consistency as if set forth in full in this CEQA section of the report. As discussed in the findings, the project as conditioned incorporates mitigation measures necessary to avoid any significant adverse environmental effects, and there are no less environmentally damaging feasible alternatives or mitigation measures. Therefore, the Commission finds that the proposed project, as conditioned, is the least environmentally damaging feasible alternative, has no remaining significant environmental effects, either individual or cumulative, and complies with the applicable requirements of the Coastal Act to conform to CEQA.