

CALIFORNIA COASTAL COMMISSION

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Th8a

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TO: Coastal Commissioners and Interested Parties

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SUBJECT: Addendum to Staff Report for Consistency Determination No. CD-0001-22, Bureau of Ocean Energy Management.

This addendum is provided for the purpose of distributing comments received after the initial staff report was issued, making revision to condition language, and providing additions and revisions to specific findings in the March 17, 2022 staff report. This addendum hereby incorporates into the staff recommendation for agenda item Th8a (CD-0001-22) and into the pertinent Coastal Commission findings otherwise set forth in the March 17th staff report, the following changes or additions to the findings that were not completed prior to the publication of the staff report. In responding to comments received, Commission staff also hereby revises the staff report and, thereby, its proposed Commission findings, consistent with the responses provided herein.

I. CHANGES TO STAFF REPORT

The following are revisions to the text of the staff report and recommendation. Language changes were made to enhance clarity of the conditions and findings, specifically:

- Replacing references to “sampling and analysis plan” with “site assessment plan” or SAP, which aligns with BOEMs terminology.
- Making small technical edits to clarify condition references to survey plans, rather than to surveys.

Proposed deletions are marked with ~~strikethrough~~ text and additions are marked with underlined text.

- a) Addition and revision of text in Condition 1(f)(i)(5): Marine Wildlife Protection and Monitoring Measures, page 12:

A final report summarizing the results of monitoring activities will be submitted to

BOEM and a copy also sent to the Coastal Commission's Executive Director and other appropriate agencies no more than 90 days following completion of survey activities. The report shall include: (a) an evaluation of the effectiveness of monitoring protocols and (b) reporting of: (i) marine mammal, sea turtle, and other wildlife sightings (species and numbers); (ii) any wildlife behavioral changes; (iii) any interactions or conflict with marine wildlife, including reporting of any project delays or cessation of operations due to the presence in the project area of marine wildlife species subject to protection.

b) Addition of text in Condition 1(f)(iv)(2): Anchoring Plan, page 13:

The Plan...shall include the following information:

...

2. Detailed maps showing proposed anchoring sites that are located at least 40 feet (12 meters) from hard substrate; the distance between the proposed anchoring sites and any hard substrate shall be sufficient to fully protect the hard substrate from anchors and related infrastructure;

c) Addition of text in Condition 3, page 13:

BOEM will require vessels conducting lease characterization studies, surveys, metocean buoy installation, maintenance, or decommissioning or any other survey activities to travel at speeds no more than 10 knots during all related activities including vessel transit along the California coast. If future consultation with NMFS, USFWS or other state or federal agency results in different vessel speed requirements, BOEM will work with Commission staff to ensure that any new requirements remain consistent and do not diminish the level of resource protection provided by this requirement.

d) Addition of text in Condition 5, page 14:

BOEM will ~~encourage~~ require lessees to make reasonable efforts to conduct outreach with local affected communities—and in particular to demonstrate long-term engagement with environmental justice communities, including but not limited to low-income communities and communities of color—on all elements of the lessees' project development process, including, but not limited to, a workforce plan, survey plan and SAPs, and a construction and operations plan (COP). This engagement should be coordinated to the maximum extent practicable with other Lessees in the region to reduce the burden on communities. The Lessee is strongly encouraged to compensate members of environmental justice communities for their time participating in engagement activities and events. Development of any Engagement Plan should be conducted in coordination with communities and should include strategies to reach individuals with Limited English Proficiency who may be affected by future offshore wind development.

As part of the Lessee's engagement with environmental justice communities, the lessee is strongly encouraged to work with the community to develop specific frameworks for community leadership and capacity building. This may include the establishment of grant or lessee-funded, independent, community-centered and governed working groups that center environmental justice communities to ensure

that community decision-making at all stages of the project beyond a consultative position. Lessees and environmental justice communities may choose to develop a formal agreement to monitor community impacts and implement community benefits, which may be amended over time to reflect subsequent analysis of impacts and opportunities for environmental justice.

- e) Addition of text in Condition 6, page 14:

BOEM will ~~encourage~~ require lessees to make reasonable efforts to demonstrate engagement with federally recognized and non-federally recognized California Native American Tribes that could be affected by future development associated with a lease on all elements of the lessees' project development process, including, but not limited to, a workforce plan, survey plan and SAPs, and a COP. The Lessee is strongly encouraged to develop an engagement framework with Tribes and retain a qualified tribal liaison with knowledge of local tribal law, local indigenous cultures, and tribal ecological science and other traditional knowledge. More specifically, as part of any survey plan or SAP, lessees should work with Tribes to develop a protocol for communication directly with Tribes in the event of an unanticipated discovery of a potential tribal resource as well as a post-discovery process for evaluation of a discovery. Lessees are encouraged to engage with Tribes on other topics of interest to the Tribes that relate to or address impacts that wind-related development will have on the Tribes, which may include the potential to strengthen energy infrastructure on tribal lands and development of tribal economic enterprise related to offshore wind.

- f) Addition of text in Section B, page 24 at end of section on "Proposed Lease Area":

Port-development related projects are not included under this CD and would need their own separate analysis and authorizations in the future. Discussion of potential Humboldt Harbor District development is included to provide context and information on high-level potential coastal impacts.

Although there is adequate electrical transmission capacity at this time, if and when BOEM's leases are built out, multiple stakeholders have identified the need for upgraded or new transmission infrastructure to carry the power generated from the Humboldt WEA to areas of high demand. Construction of this transmission, whether onshore or offshore, has the potential to affect coastal resources and would be considered under a separate authorization.

- g) Addition of text in Section D., page 33:

In its consistency determination and communications with Commission staff, BOEM indicates that it may engage in the following legal or agency consultations as part of its federal environmental review process for offshore renewable energy projects; BOEM has indicated that most consultations will begin at a later date, if BOEM issues a lease and later receives a project-specific SAP or COP...

- h) Revisions of text in Section D., page 34:

In 2016, BOEM sent formal letters to all federally recognized ~~and non-federally-recognized~~ Tribes with known or potential interest in California's offshore environment, inviting them to join the BOEM California Intergovernmental Renewable Energy Task Force.

...

Through outreach and invitations, Commission staff contacted the following Native American Tribes ~~with connections to~~ that may be affiliated with the Humboldt area; contact information for these Tribes was provided by the Native American Heritage Commission:

- Bear River Band of Rohnerville Rancheria
- Big Lagoon Rancheria...

~~Contact information for these Tribes was provided by the Native American Heritage Commission.~~

i) Revisions of text in Section E., page 49

Humboldt Bay also hosts a variety of important habitats and species including extensive areas of eelgrass habitat. Eelgrass is critical to the ecology of Humboldt Bay and has cultural value to local communities. Future development in the Humboldt Harbor District has the potential to affect eelgrass both directly and indirectly, including through redevelopment of Redwood Marine Terminal 1 as well as the potential for increased dredging of Humboldt Bay and establishment of a wider navigation channel. Depending on their siting, cable landings may also impact eelgrass habitat. Future development, ~~including cables and Humboldt Harbor District development,~~ will need to be sited, constructed and operated to ensure that these habitats are maintained, enhanced and where feasible, restored. Mitigation will be expected for any impacts to eelgrass in Humboldt Bay. Because of the biological significance of eelgrass and other nearshore and coastal habitats, these areas are afforded special protection under the Coastal Act.

j) Addition and revision of text in Section E., turbine strikes, starting on page 50:

Major factors influencing the likelihood of turbine strikes include bird or bat abundance in the area, flight heights, environmental factors such as fog or low light conditions, turbine rotation speeds and wind farm or turbine avoidance or attraction, as discussed above. For birds that are attracted to offshore wind farms, there is a greater risk of turbine strikes and mortality. The seabird discussions that follow are a starting point and are not comprehensive for all species or taxa; more information is needed on seabird distribution within the Humboldt WEA to comprehensively assess impacts. The following analysis focuses on special-status species and species that may occur at higher concentrations within the Humboldt WEA. Analyses of future projects will need to provide a more comprehensive assessment of potentially impacted seabirds.

...

Of the species represented in this table, loons, grebes, sea ducks, and alcids (including murrelets, puffins and auks), have high displacement vulnerability from the area, and gulls and cormorants have attraction vulnerability (Kelsey et al., 2018).

...

In addition to the species included in Table 2-5, a few species that are listed under the California Endangered Species Act also have the potential to be present in the vicinity of the Humboldt WEA including the marbled murrelet, Scripps's murrelet, short-tailed albatross, and brown pelican.

...

Although the Humboldt WEA falls within the ranges of the Brown pelican, and Scripps's murrelet, the likelihood of ~~these~~ this species being found in the vicinity is low; Scripps's murrelet is more common in Southern California. ~~Both the brown pelican and Scripps's murrelet are more common in Southern California.~~ Brown pelicans also nest in Southern California, but they are common in coastal Northern California in the summer and fall. Although they primarily stay close to the coast, brown pelicans have been found further offshore and may occur in vicinity of the Humboldt WEA.

Similarly, although the Humboldt WEA falls within the range of the short-tailed albatross, the likelihood of these species being found in the vicinity is low; short-tailed albatross breed on islands off Japan, and their primary feeding grounds are in the Aleutian Islands in Alaska. Juvenile short-tailed albatross have been known to use the waters off the West Coast for foraging, focusing on the shelf break areas. Short-tailed albatross sightings along the west coast from 2002-2019 totaled 207; in short, they are very rare (USFWS 2020).

In addition to the marbled murrelet, ~~federal~~ special-status seabirds with the potential to be found in or near the Humboldt WEA include:

...

In general, the types of birds that are found in high densities in the Humboldt WEA are gulls, terns, jaegers and skuas. Stakeholders identified additional seabirds that may be found in the Humboldt WEA in higher densities, including: shearwaters, Northern Fulmars, Leach's storm-petrel, and Fork-tailed storm-petrel.

k) Additions to text in Section E, pages 53-54:

Primary and secondary entanglement risk at floating turbines is influenced by a number of factors including:

- The diameter of mooring lines and inter-array cables;...
- Detection of mooring lines and inter-array cables by animals, which will be influenced by configuration and material used for mooring lines and inter-array cables;...

Inter-array cables are also expected to be of large enough diameter to preclude primary entanglement. The inter-array cables proposed in Vineyard Wind's draft construction and operations plan had a maximum diameter of 6.1-6.5 inches (Vineyard Wind 2020)....

Due to the novelty of floating offshore wind development and the novelty of extensive floating inter-array cable systems in the marine environment, the Commission expects BOEM's lessees to develop and assess a suite of alternatives for inter-array cable water depths and configurations as part of their COPs and CCs, including alternatives that minimize the potential for interactions with marine wildlife. The Commission also expects BOEM's lessees to develop a similar suite of alternatives for mooring lines. The Commission expects lessees to propose a robust monitoring program to detect any entanglements on inter-array cables, mooring lines, or other equipment.

Entanglement monitoring such as aerial and drone surveys, remote sensing technologies (e.g., infrared sensors and radar), passive acoustics, animal tagging, underwater cameras, and the use of underwater vehicles to detect and remove marine debris could help mitigate the effects of entanglement on marine species.

- l) Addition to text in Section E., page 55:

Data for gray whale density is currently unavailable in the offshore wind energy gateway, but maps of potential gray whale presence and migration routes show that gray whales have the potential to be present in the WEA, but are more likely to be found much closer to shore, along existing migration routes. Similarly, data for southern resident killer whale density is not available in the vicinity of the Humboldt WEA, but their critical habitat is located east of the Humboldt WEA, and closer to shore. Exhibit 2-3 includes summer and fall density maps for selected baleen and toothed whales in the vicinity of the Humboldt WEA, and a map depicting gray whale migration. A map of southern resident killer whale critical habitat has been added to Exhibit 2-3.

- m) Addition and revision of text in Section E., Marine Species Displacement, Avoidance, and Attraction, page 58:

Recent research on lesser black-backed ~~black-beaked~~ gulls has shown that birds avoid the inner parts of windfarms, but perch on structures around the edges (Vanerman et al., 2019).

...

Humboldt Bay includes large areas of open intertidal mudflats that attract significant proportions of overwintering and migratory shorebird populations, including waders, loons, and grebes. Although exact numbers vary by season, more than half a million birds can occupy the area during peak migration times. Stakeholder concerns have focused on black brant and whimbrel as migratory shorebirds of concern both due to their offshore migration flights, where they may be vulnerable to turbine strikes, and use of Humboldt Bay as habitat.

- n) Addition and revision of text in Section E., page 61:

... In the North Sea of Europe, a modeling study on the decrease of wind speeds on the downwind side of offshore wind farms found that the lower wind speeds affected horizontal currents and stratification of the water column. These changes in currents and stratification also resulted in shifting water temperatures and changed salinity distribution (Christiansen et al., 2022). There are many differences between Europe's North Sea and the California current, but this study points to the need for ongoing research and modeling as offshore wind is developed on the West Coast. The Commission expects that BOEM's lessees will submit modeling studies with their COPs assessing potential impacts to upwelling, both of their individual project and cumulatively with other projects and buildout of BOEM's WEAs. This is an important area where additional research is needed and a topic that will need to be addressed as the Commission reviews future offshore-wind projects, both individually and cumulatively.

- o) Addition of text in the last paragraph on page 75:

... to the ocean. In correspondence provided to the Commission, a North Coast seafood market owner states that each commercial vessel supports 1-4 households and then offloads to a processor that employs two (or more) persons that then distributes to local markets feeding thousands of people. The commenter further elaborated that the average yield of the species harvested from the North Coast could amount to more than 20,000,000 servings of fish provided to the nation each year. Tribes and other entities...

- p) Addition of text at the end of the first paragraph on page 77:

...removal of any installed metocean buoys and associated gear that may have been anchored to the ocean floor.

- q) Addition of text after the second paragraph on page 84:

Feedback received from the fishing industry in Eureka, CA, conveyed that a primary processing facility in the port, Pacific Choice Seafood, relies on a portfolio of pink shrimp and groundfish species to maintain economically successful operations. Although not currently known what fraction of landings is required for the business to continue operating, the industry expressed significant concern over the potential future loss of trawling grounds associated with development within the WEA to their business and employees.

- r) Revision of text in section K., page 104:

A map of these resources predicting where submerged cultural resources may be located is available in Exhibit 7-2.

...

The inventory is still in progress and will be reviewed is-undergoing review by cultural resources staff of the Wiyot and Yurok Tribes in the Spring of 2022.

- s) Addition of text in section L, pages 112-113:

It is worth noting that although some impacts to Tribes are discussed in this section, impacts that were raised as a part of formal Tribal consultation are discussed in section K. Additionally, some North Coast communities that have a large proportion of fishermen may also be environmental justice communities. Impacts to environmental justice communities are addressed here, and impacts to the fishing industry are addressed in section F. In this section, staff evaluated environmental justice impacts resulting from lease activities and future development necessary to support offshore wind energy.

- t) Additional citations added to the Citations List at the end of the staff report (starting on page 126):

Christiansen N., Daewel U., Djath B., and Schrum C. (2022) Emergence of Large-Scale Hydrodynamic Structures Due to Atmospheric Offshore Wind Farm Wakes. *Frontiers in Marine Science*, 9:818501. <https://doi.org/10.3389/fmars.2022.818501>

United States Fish and Wildlife Service. (2020, June). *Short-tailed Albatross 5-year review: Summary and Evaluation*. USFWS, Anchorage Fish and Wildlife Conservation Office.
https://ecos.fws.gov/docs/tess/species_nonpublish/3003.pdf

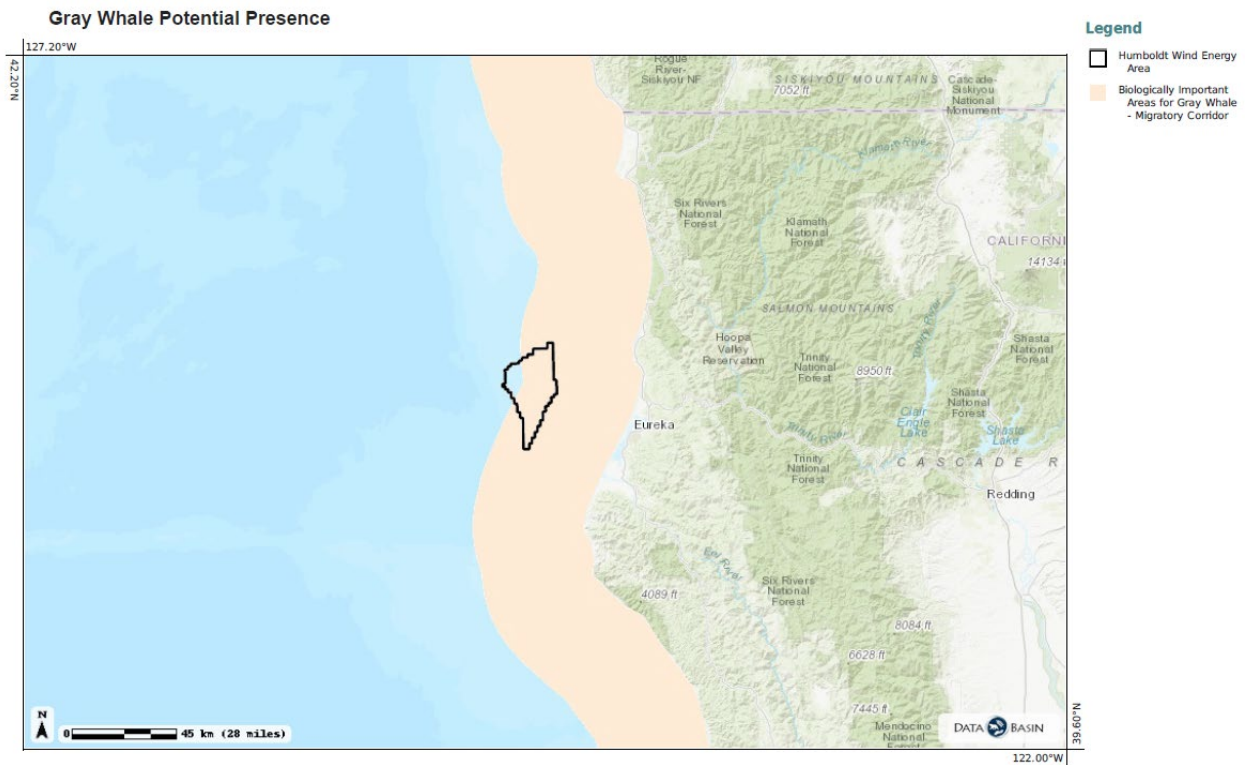
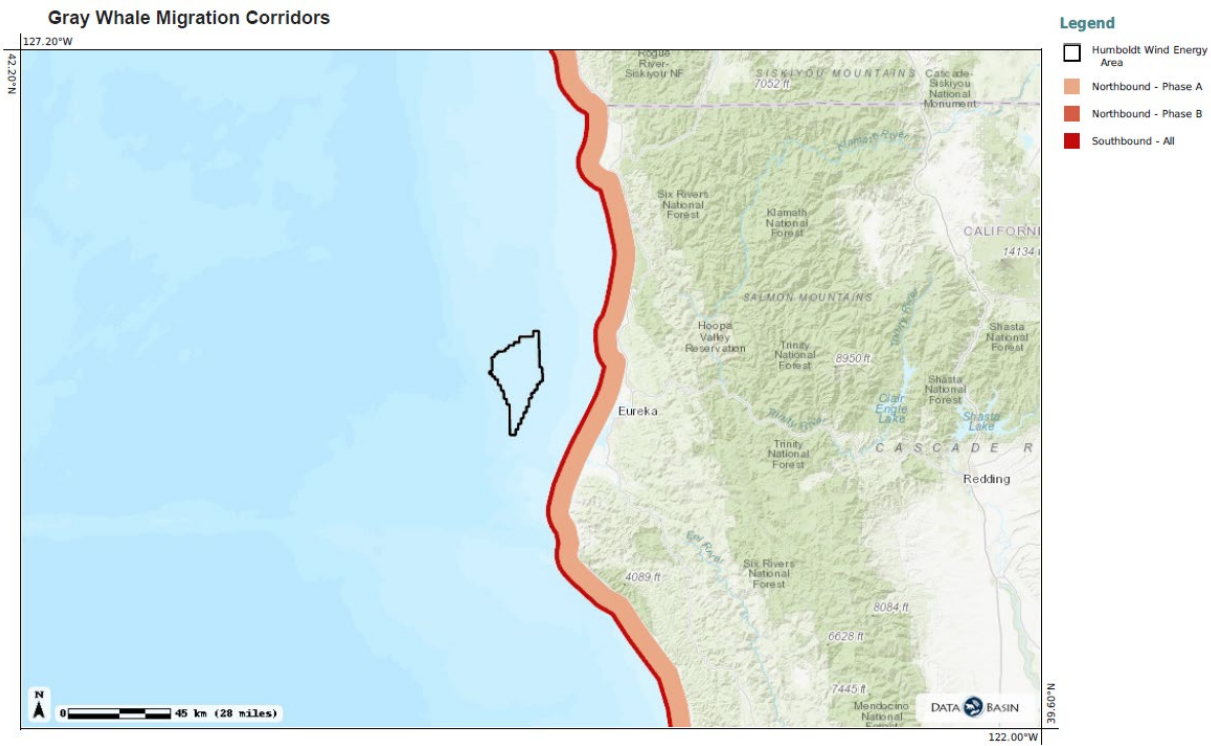
Vineyard Wind. (2020). *Draft Construction and Operations Plan: Volume I, Vineyard Wind Project*. BOEM.
https://www.boem.gov/sites/default/files/documents/renewable-energy/Vineyard%20Wind%20COP%20Volume%20I_Section%203.pdf

Woods Hole Oceanographic Institution. "Effects of noise on marine life: Study finds that turtles are among animals vulnerable to hearing loss." ScienceDaily. ScienceDaily, 2 March 2022.
www.sciencedaily.com/releases/2022/03/220302190004.htm.

II. ADDITIONAL ITEMS ADDED TO EXHIBITS

Exhibit 2-3





III. RESPONSE TO CORRESPONDENCE

The Commission received correspondence from commenters, some of which requested modifications to the text of the staff report. The main points of these requests, and the responses to them, are as follows:

1. Request: A commenter requested revisions to multiple conditions to include the mechanisms by which BOEM would ensure lessee compliance.

Response: Conditions for this concurrence do not call out the specific mechanism (i.e., lease stipulations) BOEM will use to ensure compliance with each condition by design. This allows BOEM the flexibility to use multiple tools at different points in its process to ensure compliance by lessees. Staff anticipates continuing to work with BOEM during the development of leasing documents and during review of site characterization plans and specific offshore wind projects to ensure conditions included in this CD are implemented appropriately.

2. Request: Multiple commenters requested inclusion of new conditions that protect coastal resources during construction and operations of offshore wind development.

Response: The Commission believes it is necessary at this stage to analyze potential impacts of foreseeable construction and operation activities at a programmatic level and to set expectations and provide a framework for more precisely analyzing and addressing those impacts as specific projects are developed. However, the Commission believes it is premature to develop specific conditions for construction and operation activities at this time. Many of the concepts raised by stakeholders for these types of conditions are valuable and will serve as a starting point for project-specific discussions.

3. Request: Multiple commenters requested condition language revisions to ensure information transparency.

Response: BOEM has committed to developing webpages for each of its leases: these webpages include site assessment plans, reports on the results of surveys, and other information. An example of what BOEM has done on the east coast can be found here: <https://www.boem.gov/vineyard-wind>. The condition references the Freedom of Information Act (FOIA) to indicate that only publicly available information will be released online; it is not the intent that a FOIA request will be needed if interested parties would like to access this information. The Commission does not have the authority to require release of documents that are exempt from public release pursuant to federal law (FOIA).

4. Request: A commenter requested a new condition to require invasive species prevention plans for all survey vessels.

Response: Vessels of all sizes that are equipped with ballast water tanks must maintain a ballast water management plan that has been developed for that vessel, as required by the United States Environmental Protection Agency under the Vessel General Permit for Discharges Incidental to the Normal Operation of Vessels. These vessels are also subject to antifouling hull coating regulations under the same permit. With these requirements, the risk of introduction of invasive species from the research vessels arriving in Humboldt Bay are minimized, and no additional condition is needed.

5. Request: A commenter requested a new condition to address public safety, specifically Missing and Murdered Indigenous People.

Response: This topic, including recommendations for the measures recommended

by the commenter, was included in the Commission's findings due to its importance. At this time, lessees are not expected to be hiring the large numbers of workers needed for construction and operations. The Commission intends to work with lessees and BOEM to understand whether appropriate workforce policies will be in place before construction and operations begins.

6. Request: Several commenters inquired as to why commercial fishing was not considered in the section on environmental justice.

Response: The Coastal Act (sections 30230, 30234 and 30234.5) requires the protection of commercial fishing as well its associated resources, and infrastructure and impacts to the industry were therefore considered in totality under these provisions. However, members of the fishing community are not precluded from participation in future community-based outreach discussions described in the Environmental Justice section of the report (Condition 5).

7. Request: A commenter requested specific line edits to Condition 7 to describe the fishing liaison position and its funding/administration.

Response: Trust between members of the industry and future developers is a critical component to ensuring successful dialogue between the two entities. However, BOEM regulations prohibit the agency from directing funds of lessees and the agency is further unable to require that a liaison have a specific affiliation to organizations, fishing or otherwise. Condition 7 requires an independent fisheries liaison work with the industry and harbor district regarding site assessment and survey activities. As such, it is implied that this individual will maintain a positive, trusted relationship between the two parties without bias in either direction. BOEM does maintain oversight of the fisheries communications plans and results of engagement in order to ensure that effective outreach is achieved from the work of the fisheries liaison.