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Th8a

CD-0001-22
(Bureau of Ocean Energy Management)

April 7, 2022

CORRESPONDENCE

Received between

March 18, 2022 and April 1, 2022

REDWOOD COAST EnergyAuthority

County of Humboldt • Arcata • Blue Lake • Eureka • Ferndale • Fortuna • Rio Dell • Trinidad • Humboldt Bay Municipal Water District

March 31, 2022

California Coastal Commission
455 Market Street Suite 300
San Francisco, CA 94105
Attn: Kate Hucklebridge, Deputy Director of Energy, Ocean Resources, & Federal Consistency
Holly Wyer, Senior Environmental Scientist

Sent by email only to:
OSW@coastal.ca.gov

Re: CD-0001-22
Consistency Determination by the Bureau of Ocean Energy Management (Bureau of Ocean Energy Management, Humboldt Co., BOEM) for leasing activities associated with future offshore wind development in the Humboldt Wind Energy Area, located in federal waters approximately 21 miles offshore of Eureka

To Honorable Chair and Members of the California Coastal Commission,

The Redwood Coast Energy Authority (RCEA) submits this comment in support of the Coastal Commission's conditional concurrence with the Bureau of Ocean Energy Management's (BOEM's) Consistency Determination for leasing activities associated with future offshore wind development in the Humboldt Wind Energy Area.

RCEA is a local public agency formed as a joint powers authority pursuant to Government Code §§ 6500 et seq, with member agencies consisting of the County of Humboldt, the Cities of Arcata, Blue Lake, Eureka, Ferndale, Fortuna, Rio Dell, Trinidad and the Humboldt Bay Municipal Water District. Formed in 2003, RCEA's mission is to develop and implement sustainable energy initiatives that reduce energy demand, increase energy efficiency, and advance the use of clean, efficient and renewable resources available in the region. In 2017, RCEA became a community choice aggregator (CCA) and the default electricity generation service provider for Humboldt County, serving over 60,000 customers with some 700,000 MWh of annual load. The CCA program provides local control over electricity supply, customer rate savings, and increased use of renewable electricity.

Since 2012 when RCEA adopted its primary guiding document, the Humboldt County Comprehensive Action Plan for Energy (CAPE), RCEA has actively supported the development of local renewable energy resources to advance secure, sustainable, clean and affordable energy resources including offshore wind. The CAPE established specific strategic action items relevant to the development of the region's offshore wind energy resources in a manner focused on local involvement and acceptance.

In 2014, RCEA concluded a comprehensive community-wide planning process to identify community values and guiding principles for pursuing the development of local renewable energy projects, and adopted the RePower Humboldt Strategic Plan with a goal of achieving net-zero greenhouse gas emissions county-wide by 2030. Implementation strategies to achieve

this goal include a breadth of strategies, one of which is to pursue development of local offshore wind energy. As specified in the Plan, pursuing any of its energy strategies requires prioritizing community involvement so that potential development is community driven and ultimately responsive to local interests and concerns. RCEA believes that the conditions proposed for the Coastal Commission's concurrence with BOEM's Consistency Determination would protect RCEA's strategic policy of pursuing community developed local offshore wind energy.

In 2018, RCEA issued a request for qualifications to seek project partners with technical and financial resources needed to develop the local offshore wind resource in a manner that would maintain a local stake in planning and potential development off the Humboldt County coastline. RCEA selected a consortium of entities experienced in offshore wind energy development with whom RCEA together with the consortium's project company, Redwood Coast Offshore Wind LLC (ROW), are currently collaborating in pursuing a community-based offshore wind project that prioritizes stakeholder engagement, acceptance and active identification and treatment of issues of local concern; development of an environmentally sound project; maximizing investment in local infrastructure including local jobs creation; and providing a competitively priced renewable energy to the electric ratepayer.

In collaboration with its project partners, RCEA submitted and unsolicited lease request to BOEM in 2018. The area of RCEA's lease request was determined with significant community input and lies fully within the area that BOEM subsequently established as the Humboldt Call Area. Starting with that initial effort to gather local input on a potential wind energy lease area, RCEA and ROW have consulted with a diverse group of local stakeholders, including commercial fishermen, environmental organizations, local Tribes, labor organizations, and elected officials, including having:

- Entered into a Memorandum of Understanding with the Humboldt Bay Harbor and Recreation & Conservation District to collaborate in planning Humboldt Bay port infrastructure improvements necessary to support offshore wind construction, operation, maintenance and decommissioning.
- Entered into a Memorandum of Understanding with the Humboldt Fisheries Marketing Association to collaborate in developing an offshore wind energy project in a way that identifies, avoids, minimizes and mitigates impacts to the commercial fishing industry.
- Received 24 letters of support for RCEA's 2018 unsolicited lease request to BOEM, from entities that included Tribes, local conservation and environmental-protection nonprofits, labor unions, business and economic development groups, and local governments.

The community engagement efforts conducted to date by RCEA and other entities are consistent with and provide a solid foundation for implementing Coastal Commission's proposed Conditions during the initial stages of offshore wind development through offshore wind site characterization and assessment activities and submittal by the lessee to BOEM of a construction and operation plan (COP) for future development and approval of a specific project or projects.

Thank you for your consideration.

Sincerely,

Matthew Marshall
Executive Director
Redwood Coast Energy Authority

OCEANA Protecting the World's Oceans

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Monterey, CA 93940 USA

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March 31, 2022

Ms. Donne Brownsey, Chair
California Coastal Commission
455 Market Street, Suite 300
San Francisco, CA 94105

RE: Humboldt Wind Energy Area Consistency Determination

Dear Chair Brownsey and Commission Members:

Oceana requests that the California Coastal Commission carefully and fully consider the potential effects of offshore wind lease exploration activities, as well as the effects of construction and operations, before concurring with the Bureau of Ocean Energy Management's determination that the proposed activities within the Humboldt Wind Energy Area (WEA) are consistent with California's Coastal Management Program.

Climate change is rapidly altering our ocean ecosystems. The impacts from increasing carbon emissions will only increase the severity and frequency of the changes we are already seeing like intense marine heat waves, drought, species shifts, harmful algal blooms, habitat loss, and mortality events. As part of a comprehensive approach to move from fossil fuels to renewable energy, we support efforts to consider wind energy development using a precautionary approach in specific areas. Leasing activities, construction and operations, however, must avoid and mitigate the impacts to sensitive species, habitats, ecological functions, and minimize conflicts with ocean users.

As described in the California Coastal Commission staff report, the site assessment activities associated with the lease sales, as well as any offshore wind energy construction and operations that may follow, have the potential to adversely affect marine resources, commercial and recreational fishing, environmental justice communities and Tribal and cultural resources.[1] Oceana shares many of these concerns. Any leases, site assessment permits, or construction and operation plans, must have predetermined conditions for 1) plan review and coordination, 2) no bottom contact within hard substrates, rock outcroppings, seamounts, or deep-sea coral and sponge habitats, with buffers around those habitats, 3) minimizing the risk of vessel strikes, 4) safe navigation, 5) engagement with

[1] California Coastal Commission (March 17, 2022). Staff Report RE consistency Determination No..: CD-0001-22. Available: https://documents.coastal.ca.gov/reports/2022/4/Th8a/Th8a-4-2022%20staffreport.pdf

environmental justice and local communities, 6) engagement with California Native American Tribes, and 7) minimizing impacts to fishing and fishing communities.[2]

In our view the draft environmental assessment and consistency determination prepared by BOEM are insufficient in consideration of the full scope and scale of the potential impacts to protected marine life and habitats. Before issuing any offshore wind leases or advancing to the construction and operation phase for the Humboldt Wind Energy Area (WEA), Oceana has requested BOEM prepare a programmatic environmental impact statement (PEIS) that assesses the biological, physical, social, and cultural impacts of all potential offshore wind energy development along the U.S. West Coast. Rather than pressing forward incrementally through a set of narrowly focused decisions on individual call areas and leasing activities, BOEM must take a big picture look that considers the entire offshore wind energy program and its cumulative effects throughout the California Current ecosystem. A PEIS is necessary for careful planning, transparency, and public engagement.

Please consider these comments in your decision making as well as the attached letter Oceana submitted to BOEM on its draft Environmental Assessment for the Humboldt WEA.

Sincerely,

Ben Enticknap
Pacific Campaign Manager and Senior Scientist

Attached: Oceana (February 10, 2022). Letter to Mr. Douglas Boren (BOEM) RE: Humboldt Wind Energy Area Environmental Assessment.

[2] Id. at 10-15.

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February 10, 2022

Mr. Douglas Boren
Pacific Regional Director
Bureau of Ocean Energy Management
760 Paseo Camarillo, Suite 102
Camarillo, CA 93010

RE: Humboldt Wind Energy Area Environmental Assessment

Dear Mr. Boren:

Oceana is an international ocean conservation organization focused on protecting the world's oceans. As part of a comprehensive approach to move from fossil fuels to renewable energy, we support efforts to consider wind energy development using a precautionary approach in specific areas while avoiding and mitigating impacts to sensitive species and habitats and minimizing conflicts with ocean users.

Before the Bureau of Ocean Energy Management (BOEM) finalizes its Environmental Assessment (EA) on the issuance of commercial wind leases and associated site characterization activities, Oceana requests the EA carefully consider the environmental effects, including cumulative effects, on (1) all protected species that use this area, (2) critical habitat overlapping and adjacent to the Wind Energy Area, (3) Essential Fish Habitat (EFH) conservation areas, and (4) Habitat Areas of Particular Concern (HAPCs). The EA should fully assess all potentially authorized activities within the lease area and impacts outside the lease area from acoustic impacts, vessel traffic, and impacts associated with seafloor transmission cables. Importantly, before issuing any offshore wind leases or advancing to the construction and operation phase for the Humboldt Wind Energy Area (WEA) or any other West Coast wind energy areas, Oceana requests BOEM prepare a Programmatic Environmental Impact Statement (EIS) that assesses the biological, physical, social, and cultural impacts of all potential offshore wind energy development along the U.S. West Coast.

1. **The EA fails to adequately consider the impacts to threatened and endangered species populations and their habitats.**

BOEM must consult with the National Marine Fisheries Service Office of Protected Resources and U.S. Fish and Wildlife Service to ensure offshore wind assessment activities, construction and operations do not directly impact Endangered Species Act-listed species and are not likely to destroy or adversely modify critical habitat. The EA largely dismisses impacts to endangered species and critical habitats stating that an accurate impact assessment "will only be possible when project-specific information is available."[1]

The EA notes that the Humboldt WEA overlaps critical habitat for threatened and endangered humpback whale populations.[2] This includes critical habitat for the endangered Central American Distinct Population Segment (DPS) and threatened Mexican DPS of humpback whales (Figure 1). However, without providing details or analysis, the EA assumes that impacts to humpback whale critical habitat by this proposed action would be temporary and are "not anticipated to destroy or adversely modify critical habitat."[3] The EA fails to describe why or how this conclusion was reached.

The EA also fails to consider how the proposed activities might adversely affect critical habitat that is adjacent to but not overlapping the WEA. This includes critical habitat for the endangered Southern Resident killer whale and the threatened Southern distinct population segment of North American Green Sturgeon (Figure 2).

Oceana is concerned that any offshore wind commercial energy leases within the WEA and assessment activities in and through the adjacent area (including subsea transmission cables from the WEA to shore) may ultimately impact state and/or federal ESA-listed species including listed marine mammals, seabirds and fish that use this area, plus the critically endangered Pacific leatherback sea turtle.

While BOEM is compartmentalizing its decision making to leasing and site assessment activities, what is likely to come next is offshore wind development, operations and maintenance activities. These commercial scale projects are likely to take ESA-listed animals like humpback whales by impeding their migration and/or disturbing foraging behavior. For example, of concern are the lines used to anchor offshore wind to the seafloor, physical structures of the wind turbine in the water column, and the noise produced during site surveys, construction, development, operation, maintenance, and decommissioning.[4] Oceana requests these potential impacts be evaluated in the EA now, and that alternatives be considered to minimize adverse impacts as a lease represents an irretrievable

[1] BOEM (January 2022). Humboldt Wind Energy Area Draft Environmental Assessment, at 72.
[2] 86 Fed Reg. 21082 (April 21, 2021).
[3] BOEM (January 2022). Humboldt Wind Energy Area Draft Environmental Assessment, at 36.
[4] e.g. Maxwell et al. 2022. Potential impacts of floating wind turbine technology for marine species and habitats. Journal of Environmental Management (307). https://doi.org/10.1016/j.jenvman.2022.114577

commitment to future development. Oceana requests the EA consider impacts to critical habitats that are located adjacent to the WEA including green sturgeon habitat and Southern Resident killer whale habitat.

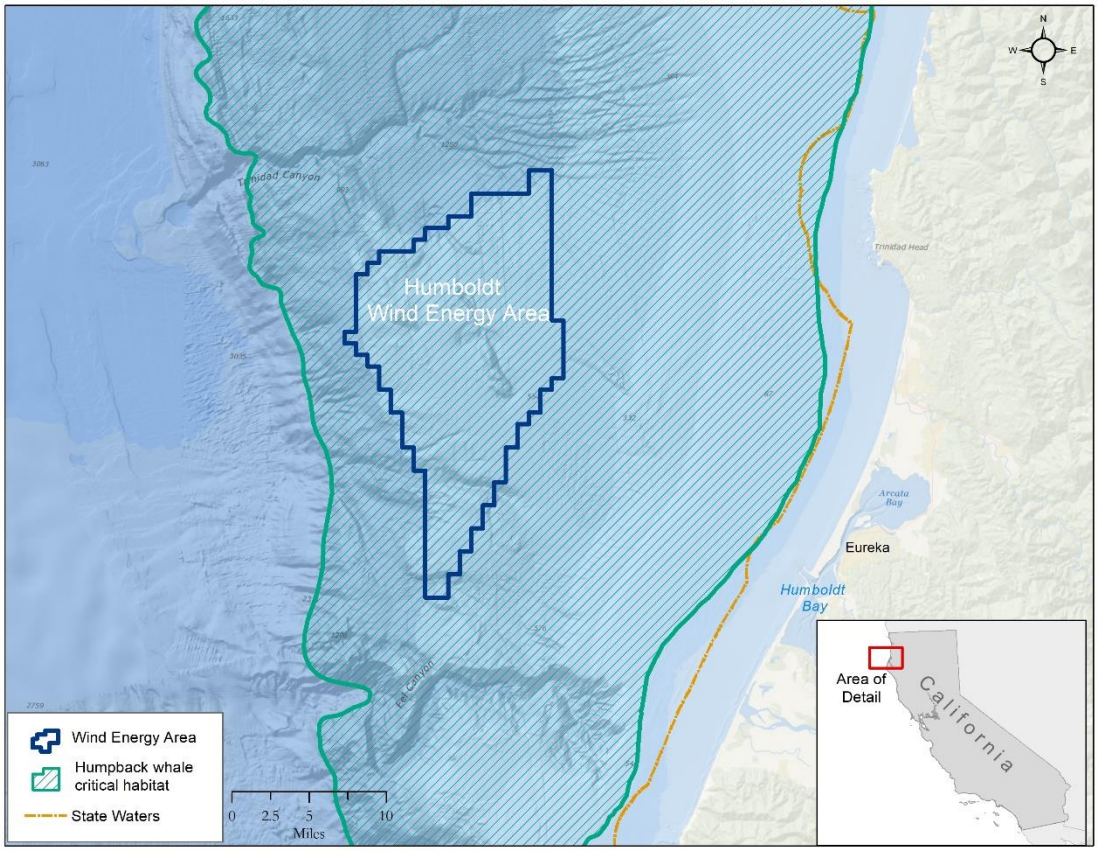

Figure 1. Humboldt WEA showing that the entire area is within critical habitat for humpback whales (Mexico and Central America DPS).

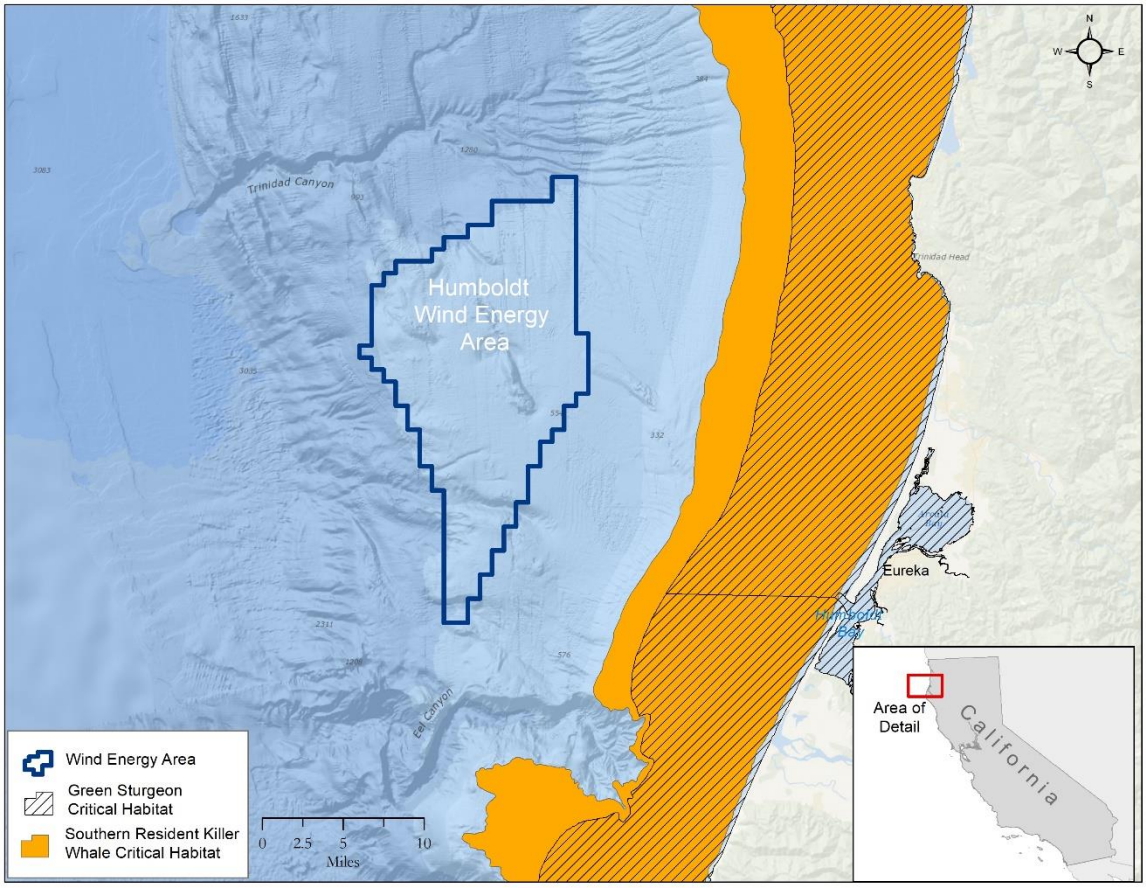

Figure 2. Humboldt WEA showing adjacent critical habitat for Southern Resident killer whales and green sturgeon. Assessment activities and subsea cable corridors and installations may impact critical habitats between the WEA and shore.

2. **The EA fails to adequately consider the impacts to Essential Fish Habitats (EFH) and Habitat Areas of Particular Concern (HAPCs). The EA must consider strategies to avoid HAPCs and EFH conservation areas.**

BOEM must consult with NMFS on all activities, and proposed activities, authorized, funded, or undertaken by the agency that may adversely affect Essential Fish Habitat including offshore wind energy leases, assessments, development and operations. Rocky reef features in the Humboldt WEA are designated as EFH and HAPCs in the U.S. Pacific Coast Groundfish Fishery Management Plan.[5] HAPCs are a subset of EFH, and they are considered high priority areas for conservation because they are important to ecosystem function, sensitive to human activities, stressed by development, or are rare. This includes those waters, substrates and biogenic features associated with the hard substrate (bedrock, boulders, cobble, gravel, etc.). The Pacific coast groundfish FMP describes that, "Hard

[5] Pacific Fishery Management Council. 2020. Pacific Coast Groundfish Fishery Management Plan. Available: https://www.pcouncil.org/documents/2016/08/pacific-coast-groundfish-fishery-management-plan.pdf/

substrates are one of the least abundant benthic habitats, yet they are among the most important habitats for groundfish." Given the importance of HAPCs to the Pacific groundfish fishery resource, *we request an alternative in the EA that would exclude wind energy infrastructure in designated rocky reef/ hard substrate HAPCs.*

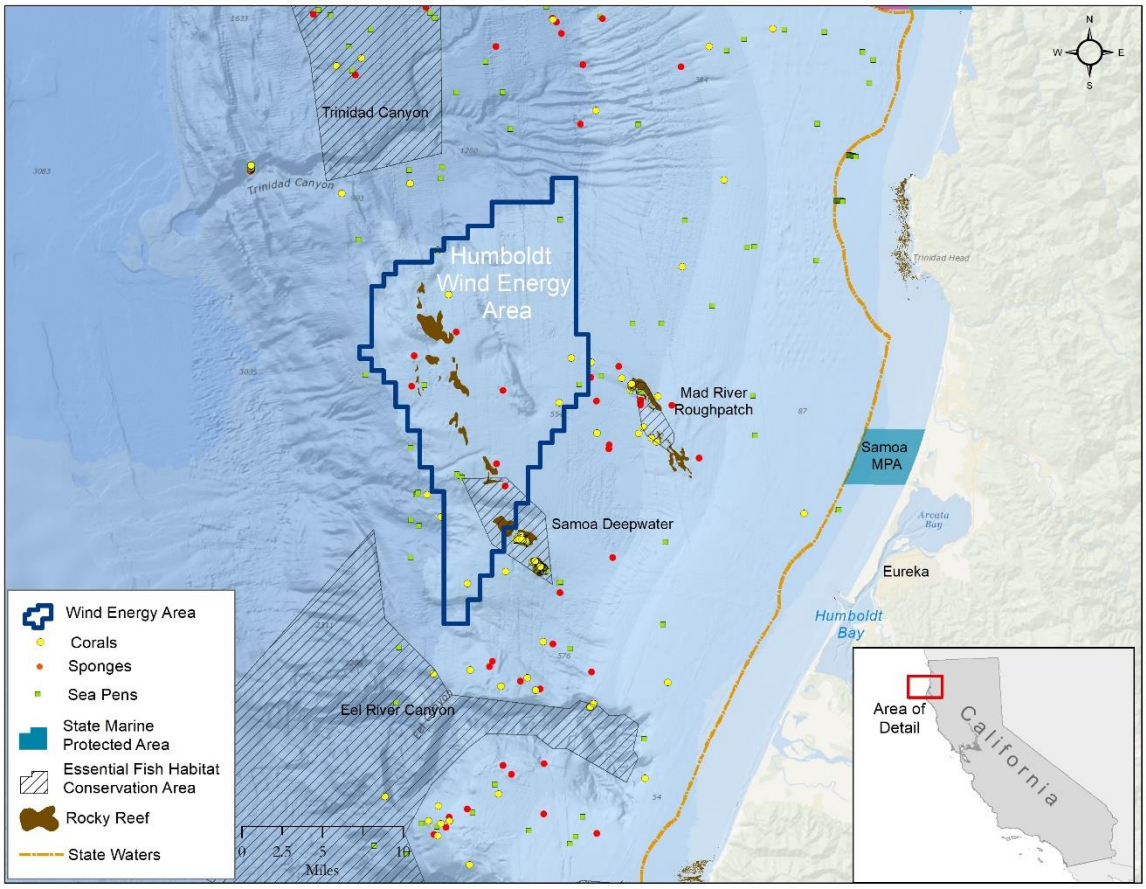

Figure 3. Humboldt WEA, showing the rocky reef HAPC, EFH conservation areas and cold-water corals and sponges. The WEA overlaps rocky reef HAPC and the Samoa Deepwater EFH conservation area.

The EA fails to consider the impacts to EFH from offshore wind energy assessment activities, construction, or operations. The EA should include mitigation strategies that would exclude the EFH conservation area and adjacent conservation areas from leasing and associated easements including subsea cable corridors. NMFS designated these EFH conservation areas based on the important ecological features in this region like rocky reefs, corals and sponges and their sensitivity, rarity and ecological importance. Oceana supports the Pacific Fishery Management Council's position that development of energy infrastructure "may be incompatible" with EFH conservation areas and HAPCs and we support consideration and use of "buffer zones to avoid HAPCs and EFHCAs and to minimize impacts to these areas…"[6]

[6] Pacific Fishery Management Council (September 13, 2021). Letter to Ms. Thurston-Keller, BOEM. Re: Docket No. BOEM-2021-0044.

3. The EA fails to consider the cumulative impacts of the proposed action.

BOEM must assess the cumulative impacts of the proposed action in the EA. The environmental effects of the proposed action are larger than just the proposed lease sales and individual site assessment activities. The combination of the individually minor effects of multiple actions over time from various site assessments, construction, and operation activities may causes significant harm to ocean habitats and marine life. As such, a cumulative impact analysis is essential to understanding and minimizing the consequences of the proposed action.

4. A Programmatic EIS is Warranted

We urge BOEM to prepare a programmatic EIS to ensure sufficient consideration is given to the critical phase of siting and leasing offshore renewable energy facilities. BOEM is embarking on a major new program for offshore wind energy development off California, Oregon and Washington, which independently or collectively may have significant impacts on the California Current Large Marine Ecosystem. But rather than taking a comprehensive look at this new program and how it may cumulatively affect the marine ecosystem, coastal communities and existing human uses, BOEM is analyzing each potential development at the project level as a set of individual actions. Decision making for each wind area is further piecemealed into separate actions surrounding area identification, lease sales, site assessments, and finally construction and operations. The public must be provided a full understanding of the scope and scale of potential development, and the cumulative environmental impacts early in process.

The National Environmental Policy Act (NEPA) requires federal agencies to integrate environmental values into their decision-making processes by considering the environmental impacts of their proposed actions and reasonable alternatives to those actions. In this case BOEM should start with a programmatic EIS that evaluates the environmental impacts of offshore wind energy development activities throughout the U.S. West Coast region. A programmatic EIS is necessary to evaluate the effects of such broad planning-level decisions and proposals. It is reasonable to foresee that wind energy development off the West Coast will (1) include a wide range of individual projects, that are (2) implemented over a long timeframe, and (3) across a large but interconnected geographic area. Each of these are reasons to prepare a programmatic EIS.[7] This is a major new program with potentially

[7] *See* CEQ guidance for Federal departments and agencies on effective use of programmatic NEPA reviews December 18, 2014, p. 14, *available at* https://obamawhitehouse.archives.gov/sites/default/files/docs/effective_use_of_programmatic_nepa_reviews_final_dec2014_searchable.pdf (Programmatic NEPA review is appropriate when there is a "decision to proceed with multiple projects that are temporally or spatially connected and that will have a series of associated concurrent or subsequent decisions."); *id*. at 6-7 ("Programmatic analyses have value by setting out the broad view of environmental impacts and benefits for a proposed decision. . . that should result in clearer and more transparent decision-making, as well as provide a better defined and more expeditious path toward decisions on proposed actions.").

significant environmental impacts throughout the California Current large marine ecosystem. A programmatic EIS is necessary and appropriate.

Typically, a programmatic EIS is followed by subsequent project-level environmental review in the form of an EIS or EA. The project-level environmental review can then "tier" off the broader programmatic EIS. This can be a time-saving exercise that allows for more informed decision making and big-picture issues and analyses that would not have to be repeated in subsequent project level reviews. In the end this would simplify and streamline BOEM's wind energy program and better inform the public and decision makers about the full scope and scale of development off the West Coast.

We urge BOEM to reconsider whether the Humboldt WEA lease sales should proceed prior to the development of a programmatic coastwide EIS and without full consideration of the impacts of an offshore wind infrastructure project including construction, installation, operations and decommissioning. Given the effects of climate change we understand the need and urgency to significantly increase renewable energy production and move toward net zero carbon emissions. But this major new federal program in the California Current ecosystem cries out for comprehensive and careful planning, increased transparency, and better understanding for the full scope and scale of development.

5. Conclusion

Oceana supports a careful planning approach to offshore wind energy development off the U.S. West Coast that avoids and mitigates impacts to ecologically important habitats and protected marine life. It would be irresponsible to advance this program in the diverse and wild California Current ecosystem without such a careful planning process for all steps of the wind authorization process; from siting wind energy areas to leasing, site assessment and surveys, installation, operations, and ultimate end of project decommissioning. We urge a Programmatic EIS that considers BOEM's offshore wind energy program throughout the California Current ecosystem. Until such a comprehensive analysis is conducted, neither the government nor the public will have the information to properly assess the tradeoffs associated with offshore wind development in this area. At a minimum, BOEM must consider the impacts of the full project as a lease is an irretrievable commitment of resources the practical effect of which will result in the installation of a large floating offshore wind facility off California.

Thank you for the opportunity to provide these comments.

Sincerely,

Ben Enticknap
Pacific Campaign Manager and Senior Scientist

April 1, 2022

Chair Donne Brownsey
California Coastal Commission
455 Market Street, Suite 300
San Francisco, CA 94105

Sent via email

Re: Agenda Item Th8a-4-2022, Federal Consistency Determination CD-0001-22, Humboldt Wind Energy Area (Bureau of Ocean Energy Management)

Chair Brownsey,

On behalf of Humboldt Baykeeper, the Environmental Protection Information Center, Defenders of Wildlife, and the Northcoast Environmental Center, we submit these comments regarding the California Coastal Commission's (Commission) review of the Bureau of Ocean Energy Management (BOEM) proposed Consistency Determination (CD) for its proposal to conduct a lease sale for up to 132,369 acres of federal waters approximately 20 miles offshore of Eureka (Humboldt County) for the future development of offshore wind energy facilities. BOEM also proposes to permit lessees to conduct site characterization and assessment activities and submit a construction and operations plan for development of offshore wind energy on their leases. The purpose of the Commission's review is to determine whether the proposal is consistent, to the maximum extent practicable, with the enforceable policies of the California Coastal Management Program (CCMP).

We are writing in support of the staff recommendations for Conditional Concurrence. Offshore wind offers a tremendous opportunity to address climate change by reducing reliance on fossil fuels for energy production. **Conditions 1-7** will help to ensure offshore wind development proceeds responsibly in the Humboldt Wind Energy Area (WEA) by addressing potential direct, indirect, and cumulative impacts associated with site assessment activities as well as leasing and other reasonably foreseeable future actions.

To ensure that offshore wind development is successful, it is essential that Construction and Operations Plans (COPs) that will be proposed and assessed in the future avoid, minimize, mitigate, and monitor for adverse impacts on marine and coastal habitats and the wildlife that rely on them, as well as other ocean uses, and must use the best available scientific and technological data to ensure science-based and stakeholder-informed decision making. To be successful, these COPs must meaningfully engage state and local governments, stakeholders,

and communities of concern from the outset. Robust consultation with Native American Tribes and communities is critical, as are comprehensive efforts to avoid negative impacts to Environmental Justice communities.

As noted in the staff report,[1] key Coastal Act issues raised by BOEM's proposed lease sales in the WEA and reasonably foreseeable future activities connected to these lease sales include the potential for adverse impacts to marine resources, commercial and recreational fishing, environmental justice communities and Tribal and cultural resources. Future lease development has the potential to adversely affect marine resources through seafloor disturbance, turbine strikes, increased entanglement risk, marine species displacement, avoidance or attraction, increased ship strike risk, elevated levels of underwater sound, fish aggregation and the artificial reef effect, invasive species, weakened upwelling, and electromagnetic fields.

Scope of Review

We strongly agree with the staff report's assertion that "it is important to analyze the potential consistency of foreseeable future activities at a broad scale now in order to determine if there are any fundamental issues with moving forward toward lease development or if there is information or mitigation that must be gathered or imposed at this stage."[2] Consistency Determinations must consider both the direct effects of project-related activities as well as the indirect (cumulative and secondary) effects which result from the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.[3] As the CZMA regulations describe: "Indirect effects are effects resulting from the incremental impact of the federal action when added to other past, present, and reasonably foreseeable actions, regardless of what person(s) undertake(s) such actions."[4]

In addition, the analysis of the effects of this proposed leasing activity, and any mitigation proposed to address its impacts, may have precedent-setting value in terms of how future wind leasing and development occur, since the Humboldt WEA is BOEM's first such proposal on the West Coast.

The federal Coastal Zone Management Act (CZMA) is an exercise in cooperative federalism. Among other things, it requires that federal activities likely to affect a state's coastal resources be consistent with that state's coastal policies and programs, and it allows states to object to inconsistent proposals. Under the CZMA, each coastal state may adopt a coastal management plan (CMP) that provides for "the protection of natural resources, including wetlands, floodplains, estuaries, beaches, dunes, barrier islands, coral reefs, and fish and wildlife and their habitat, within the coastal zone." A CMP also guides "management of coastal development to

[1] Staff report at 4-5.

[2] Staff report at 124.

[3] 15 C.F.R. § 930.11(g)

[4] *Id.*

improve, safeguard, and restore the quality of coastal waters, and to protect natural resources and existing uses of those waters," among other objectives. The CZMA guarantees participating states the opportunity to review federal and federally permitted activities for consistency with their CMPs. Any federal activity that may affect coastal resources must be "consistent to the maximum extent practicable with the enforceable policies of management programs."

In California, the standard of review for federal consistency determinations consists primarily of the principal component of the California Coastal Management Plan (CCMP), namely the policies of Chapter 3 of the Coastal Act. With regards to marine resources, Article 4 of the CCMP 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." California's authority under the CZMA has been integral to the state's very identity as one of iconic ocean vistas and unparalleled wildlife and habitat for all to enjoy.

The staff report states, "The leasing of the Humboldt WEA has a high likelihood of impacting marine habitats, species and ocean processes." We agree, and as detailed in this comment letter, we disagree with BOEM's assertion that, "The lease sale is not likely to result in the degradation of marine resources." BOEM's submitted CD is also insufficient because it fails to consider reasonably foreseeable impacts related to future development. The staff report notes that "...it is reasonably foreseeable that the leases will lead to construction and operation of at least some offshore wind facilities. It is also feasible to describe, at least at a high level, the types of impact that such facilities could have on coastal resources." We have previously commented to BOEM that consideration of leasing activities should also include impacts from development, because while a lease is not a promise that a project will be constructed, any eventual development cannot occur without a lease. Having thorough environmental review conducted before leasing will help identify concerns before developers invest in site assessment work and shape development plans. Stakeholder engagement based on thorough review is better informed and would benefit project development.

By not taking a more comprehensive look, BOEM's submitted CD ignores the ultimate goal of leasing –for offshore wind energy development to occur– and the broader possible impacts to wildlife and other resources resulting from development and fails to meet the requirements under the CZMA. The CZMA regulations define effects on coastal resources broadly:

> The term "effect on any coastal use or resource" means any *reasonably foreseeable effect* on any coastal use or resource resulting from a Federal agency activity or federal license or permit activity….Effects include both direct effects which result from the activity and occur at the same time and place as the activity, and *indirect (cumulative and secondary) effects which result from the activity and are later in time or farther removed in distance, but are still reasonably foreseeable*.

15 C.F.R. § 930.11(g) (emphasis added). Similarly, the review of coastal resource effects must be applied broadly:

> Effects are determined by looking at *reasonably foreseeable direct and indirect effects* on any coastal use or resource. An action which has minimal or no environmental effects may still have effects on a coastal use (e.g., effects on public access and recreational opportunities, protection of historic property) or a coastal resource, *if the activity initiates an event or series of events where coastal effects are reasonably foreseeable*.

15 C.F.R. § 930.33(a)(1) (emphasis added).

The Ninth Circuit Court of Appeals confirmed that the 1990 reauthorization of the CZMA requires state reviewing agencies to look beyond direct effects, and consider indirect and reasonably foreseeable future effects, when reviewing a proposed activity. In particular, when addressing oil and gas leasing, the Court held that review of oil and gas lease suspensions (similar to lease sales) must address "all of the far reaching effects and perils that go along with offshore oil production." *State of California v. Norton*, 311 F.3d 1162, 1173-74 (9th Cir. 2002). The Court held that the fact that additional consistency review would be required when the lessees submitted exploration plans and development and production plans did not obviate the need for comprehensive review at the leasing stage.

Following the ruling in *State of California v. Norton*, the Commission reviewed several CDs that were submitted by the Minerals Management Service ("MMS") (predecessor agency to BOEM) regarding the lease suspensions. *See, e.g.,* CD-047-05, CD-048-05, CD-049-05, CD-05-05, CD-051-05. In each of these CDs, MMS failed to include information related to post-suspension activities, including exploration, development, and production activities. The Commission objected to MMS' CDs "based on lack of adequate information to determine the lease suspensions' consistency with the enforceable policies of the CCMP/Coastal Act." *Id*.

We appreciate the Commission's leadership in considering the full context of offshore wind development both for the Humboldt WEA specifically and for offshore wind on the West Coast, and appreciate the discussion of several important topics in the staff report, including cumulative impacts, adaptive management, and the importance of coordinating data collection and sharing. However, we urge the Commission to require additional conditions for this consistency determination. The staff report notes, and we fully agree, that the BOEM CD for the Humboldt WEA is the key opportunity to "examine the impacts of offshore wind development at a programmatic level….Future consistency certifications at the construction and operations phase will examine specific projects and their specific impacts, but they are not well-suited to address larger issues related to the Humboldt WEA…". In other words, the CD for Humboldt at this phase of development is the Commission's *only* opportunity to review the Humboldt WEA for federal consistency at the programmatic level – where it is possible to identify areas for development of relatively lower sensitivity that are more likely to advance smoothly through the permitting process, and identify measures to avoid or reduce cumulative effects.

Therefore, we urge the Commission to include conditions to address the coastal effects identified in the staff report that are reasonably foreseeable to occur during the life of the lease. The staff report already describes the conditions that can be incorporated in the Commission's concurrence.

Although the Commission will review future consistency certifications, and "the Commission expects that BOEM's lessees will provide sufficient information about construction plans, anchoring and other fill to enable a comprehensive analysis,"[5] we believe that several important issues should be addressed at this stage of the process to ensure those expectations are met, as described below.

1. Adaptive Management

The offshore environment within the proposed lease area is poorly studied and understood. When embarking on projects in this area, we are reminded of this truism: There are known knowns, known unknowns, and unknown unknowns. For the offshore environment, there are significant knowledge gaps about the wildlife that utilize this area and even more unknown about how wind energy development might impact them. To ensure that wind energy development does not significantly impact wildlife and other resource values, it is important to approach mitigations through an iterative, adaptive management approach.

First, to guide actions towards less impactful outcomes, it is necessary to have good data to act from. We endorse the recommendations contained in the April 1, 2022 large NGO group letter, which we have cosigned. To summarize briefly: The best available technology needs to be employed to detect for harmful interactions between wildlife and wind infrastructure. Technology should be incorporated into projects from the beginning but also be flexible to allow adjustment to allow for improvements or new developments.

Second, it is important to have data be open, transparent, and accessible to the public and regulatory agencies as soon as possible. Given the "unknown unknowns," there is existing risk that construction and operation might result in unforeseen impacts. Further, it is possible that significant impacts could occur early in the project that would demand immediate resolution given their severity. Quick response to emerging issues is only possible with data shared early and through a transparent process.

Third, adaptive management is most effective when it is triggered through clear and biologically-meaningful "triggers." Triggers should be set at a place before significant impacts have occurred and should serve as a "yellow light" to warn that continued project operations would, absent change, result in significant impacts.

[5] Staff report at 125.

Fourth and lastly, determining appropriate new mitigation strategies is best accomplished through convening of a "science panel" of outside experts in the appropriate field that is facilitated by a neutral third-party.

2. Invasive Species and Pathogens

Increases in shipping between Humboldt Bay and other ports poses a significant risk of introducing species and pathogens that could negatively impact sensitive estuarine and marine habitats. Such introductions could negatively impact sensitive species and habitats, including eelgrass (*Zostera marina*), which is highly susceptible to disease. Introduced pathogens and parasites could also harm the commercial shellfish industry, especially since Humboldt Bay is one of the few estuaries that is certified to export seed and larvae of oysters and clams.[6] Shellfish such as gaper and littleneck clams are important tribal resources, and Humboldt Bay has a long history of Humboldt Bay supporting higher catch rates of clams, both sport and commercial, than elsewhere in California.[7]

According to the staff report, "The Coastal Commission expects that lessees will identify and incorporate invasive species prevention and minimization measures as they develop their COP. Here again, baseline and post-project monitoring will be an important mechanism for quantifying this impact and assessing the success of measures to prevent and minimize adverse effects associated with invasive species."[8]

To achieve outcomes based on these statements and that would ensure development in the Humboldt WEA is consistent with the CCMP, **we recommend an additional condition** that addresses potential introduction of invasives from geotechnical survey vessels and equipment during the site assessment activities, and that ensures that BOEM require Lessees to provide plans for invasive species prevention, minimization measures, and mitigation for project development, as needed, based on monitoring outcomes.

3. Impacts of Transmission Infrastructure Expansion

Although the Humboldt WEA is sufficiently close to existing transmission infrastructure to easily interconnect to the electrical grid,[9] the existing infrastructure was built to serve local load and was not designed to be a large exporter of electricity. Interconnecting an offshore wind farm

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[6] Central and Northern California Ocean Observing System. https://www.cencoos.org/data-by-location/humboldt-bay/

[7] McVeigh, Brooke A. B., John J. Geibel, and Peter E. Kalvass. 2008. Sport Clamming in Humboldt Bay, California During 2008: Comparisons with Historical Survey Data. California Department of Fish and Game, Eureka, CA. https://www.humboldtbaykeeper.org/images/PDF/ClammingHumboldtBay.pdf.

[8] Staff report at 60.

[9] Staff report at 23.

within the Humboldt Planning Area will require major upgrades to the transmission system.[10] The necessary expansion of transmission capacity to enable export to the electrical grid is a reasonably foreseeable future action of the proposed lease sales, and several alternatives have been evaluated in concept, including two terrestrial routes and two subsea cable routes (Figure 1). Subsea cables to transmit electricity long distances appear to have potential, but numerous hazards and constraints will need to be resolved, and proven cable technology has not yet been developed for installation at the depths required.[11]

Construction of new or expanded terrestrial transmission corridors have the potential to impact California condors, which were reintroduced to the North Coast earlier this week after they were extirpated nearly a century ago.[12] Impacts to bald and golden eagles, along with other wildlife and waterways, would need to be addressed as well. The increase in wildfire risk from new transmission lines is of great concern, given the devastating wildfires caused by transmission lines in recent years. New transmission corridors would likely traverse public lands, including National Forests, raising a range of concerns and controversies.

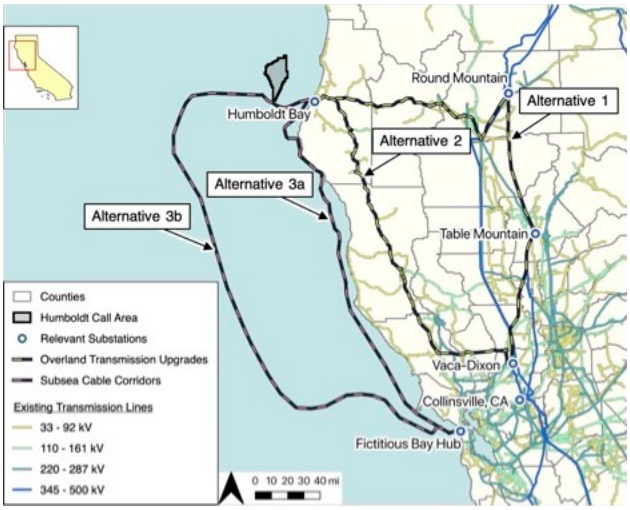

Figure 1. Transmission route alternatives for 1,836 MW wind farm scenario. Source: Schatz Energy Research Center. 2020. California North Coast Offshore Wind Studies Transmission Upgrades Report and Policy Analysis. http://schatzcenter.org/pubs/2020-OSW-R12.pdf.

4. **Seabird impacts**

The staff report should recognize that its discussions on seabirds are not comprehensive when addressing specific bird species or taxonomic groups, with regard to occurrence in the WEA and potential impacts. The report sometimes emphasizes certain species or bird groups but does not mention others in ways that do not fit our current understanding of the available data. We understand that this is unintentional, and stems in part from the limited information

[10] Schatz Energy Research Center. 2020. California North Coast Offshore Wind Studies Transmission Upgrades Report and Policy Analysis. http://schatzcenter.org/pubs/2020-OSW-R12.pdf

[11] Schatz Energy Research Center. 2020. California North Coast Offshore Wind Studies: Subsea Transmission Cable Conceptual Assessment. http://schatzcenter.org/pubs/2020-OSW-R5.pdf

[12] Wear, Kimberly. March 28, 2022. *Return of the Condor: Watch the Birds' Arrival Home on Live Stream.* North Coast Journal, Eureka, CA. https://www.northcoastjournal.com/NewsBlog/archives/2022/03/28/return-of-the-condor-watch-the-birds-arrival-home-on-live-stream

available on seabird distribution in the WEA, and the relative impact risks. We offer the following specific comments:

"Turbine Strikes" section:

- Pg. 49: In the discussion of major factors affecting the likelihood of turbine strikes, we recommend including environmental factors, such as fog or low light conditions, that will likely affect the ability of birds (and bats) to detect and avoid rotating turbine blades.
- Pg. 49: Statements regarding which seabird taxa are most vulnerable to displacement are not cited; are there sufficient data at this time to understand such vulnerabilities for wind turbines, particularly for turbines at such long distances offshore such as proposed in the WEA? For example, are there data to reliably predict the risk level for pelagic taxa such as albatrosses, shearwaters and fulmars? Similarly, at this point, are there sufficient data and analyses to know which migratory bird species may occur in the proposed lease area, and in what numbers or densities? Examples of this include Arctic and Common Terns, and phalaropes and potentially some other shorebird species that may pass through the WEA during their migrations.
- Pg. 50: Discussion of listed species that occur in the WEA should include the federally-endangered Short-tailed Albatross (*Phoebastria albatrus*). While this seabird is very rare (worldwide population of about 4,000-5,000 birds), it does occur off the California coast,[13,14] including records within or very close to the WEA.[15] Given the species' endangered status and despite its apparent relative scarcity in the WEA, it is important to acknowledge its presence and the potential for impacts.
- Pg. 50: Discussion of listed species that occur in the WEA should also include whimbrel (*Numenius phaeopus*), which migrates along the California coast on its southbound migration from Alaska and is known to fly at altitudes within the rotor-swept zone.[16]
- Pg. 51: The statement that the Brown Pelican is not likely to be found in the vicinity of the WEA should be modified to note that while the species nests to the south, it often is common in coastal northern California in the summer and fall.[17,18] While the species occurs mainly close to the coast in northern California, a small number of offshore records exist.[19] The map below illustrates the offshore records in the vicinity of the WEA (Figure 2).
- Pg. 51: This list should include the federally-endangered Short-tailed Albatross, as noted above. This species occurs primarily offshore, and thus is at risk for projects in the WEA.

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[13] Vokhshoori et al. 2019, Broader foraging range of ancient short-tailed albatross populations into California coastal waters based on bulk tissue and amino acid isotope analysis. *Marine Ecology Progress Series* 610:1–13. https://doi.org/10.3354/meps12839.

[14] Records in eBird: https://ebird.org/species/shtalb

[15] Harris, SW. 2006. Northwestern California Birds, 3rd ed. Living Gold Press, Klamath River, CA.

[16] Galtbalt et al. 2021. Far eastern curlew and whimbrel prefer flying low - wind support and good visibility appear only secondary factors in determining migratory flight altitude. Movement Ecology 9:32.

[17] *Id.*

[18] Records in eBird: https://ebird.org/species/brnpel

[19] Harris, SW. 2006.

Note also that the Ashy Storm-petrel or Pink-footed Shearwater are not listed under the federal Endangered Species Act[20] although both are on the IUCN List of Threatened Species.[21] In 2009 and 2013, the US Fish and Wildlife Service evaluated the Ashy Storm-petrel for ESA listing, and determined it did warrant listing.[22]

- Table 2-5 and pp. 51-52: It is important to note that Table 2-5 and the bulleted list of types of birds found in higher densities in the WEA is not comprehensive. For example, it should include shearwaters, Northern Fulmars, and Leach's and Fork-tailed Storm-petrels, among others. Based on various sources, including the one cited by the staff report,[23] the bulleted species list does not necessarily represent the species with the greatest densities or most at-risk.
- Pg. 51: Footnote 7 correctly cautions about limitations in the maps of Exhibit 2-5. We also suggest noting that these maps, based on the work of Leirness et al. (2021), make it difficult to identify the species with the greatest densities in the WEA region. That is because each of their density maps uses a different density scale; thus the same color in one species map may illustrate 10 times the density shown by the same color in another species' map.
- Exhibit 2-5 and discussion thereof: Another limitation of the maps of modeled density is that some species may have transitory high densities, such as during migration, and be at risk during these times, while having lower average densities. High local densities of pelagic seabirds are common, such as due to areas of high prey availability.
- Pg. 52: The species' common English name is simply Glaucous-winged Gull.

"Marine Species Displacement, Avoidance, or Attraction" section is a good discussion.

- Pg. 56: There is a typo in common name for the Lesser Black-backed Gull (not 'black-beaked')
- Pg. 57: In addition to the potential for the project to impact shorebirds using Humboldt Bay, note that the project could impact other bird species using the bay, including waders (herons, egrets), wintering loons and grebes, and many species of waterfowl, including Brant, which winter in the bay in large numbers. Marbled Murrelets also occur in the bay on occasion.

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[20] U.S. Fish & Wildlife Service, Environmental Conservation Online System. FWS-Listed U.S. Species by Taxonomic Group - Birds.https://ecos.fws.gov/ecp/report/species-listings-by-tax-group?statusCategory=Listed&groupName=Birds

[21] International Union for Conservation of Nature. Red List of Threatened Species. https://www.iucnredlist.org/

[22] U.S. Fish and Wildlife Service. 2013. Endangered and threatened wildlife and plants; 12-month finding on a petition to list the Ashy Storm-Petrel as threatened or endangered: Notice of 12–month petition finding. Federal Register 78:62523–62529.

[23] Leirness, JB et. al. 2021. Modeling at-sea density of marine birds to support renewable energy planning on the Pacific Outer Continental Shelf of the contiguous United States. Camarillo (CA): US Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM 2021-014. p. 385. https://espis.boem.gov/final%20reports/BOEM_2021-014.pdf

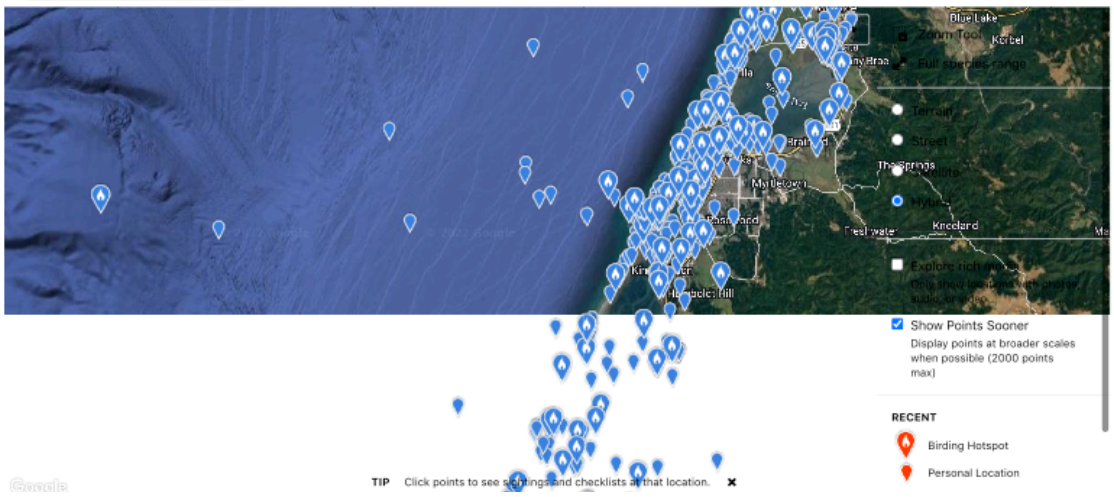

Figure 2. Brown Pelican records in the vicinity of the Humboldt Wind Energy Area. Source: eBird (https://ebird.org/species/brnpel).

5. **Impacts to eelgrass**

Although port development-related projects are not defined at this time, they are likely to include pier construction for offshore wind turbine assembly, more frequent and deeper dredging to ensure vessel access to Humboldt Bay, and construction of additional port facilities to support the offshore wind industry.[24] While it is clear that eelgrass is protected under the Coastal Act because of its biological significance, future port development will need to ensure that eelgrass habitat is maintained, enhanced and where feasible, restored. The staff report recognizes that the proposed development could force other vessels to operate outside of the main channel, which may harm sensitive natural resources in the bay such as eelgrass.[25]

We recommend that the staff report also acknowledge impacts to eelgrass from increased dredging and widening of navigational channels, since these are reasonably foreseeable future actions that will occur as a result of the lease sales. According to a report led by the Schatz Energy Research Center,[26] widening of the Inner Channel would likely be required, while localized widening of the Entrance Channel as well as increased frequency of maintenance dredging may be required in the Federal Navigation Channels (p. 37-38). How will channel widening and increased dredging frequency be addressed if not in this Consistency Determination?

[24] Staff report at 24.

[25] Staff report at 85.

[26] Schatz Energy Research Center. 2020. California North Coast Offshore Wind Studies: Port Infrastructure Assessment Report. http://schatzcenter.org/pubs/2020-OSW-R19.pdf

6. Environmental Justice and Community Benefits

As noted, communities in the Humboldt Bay region - particularly in the vicinity of the proposed port development on the Samoa Peninsula - rank highly for sensitivity to pollution and other possible impacts from large-scale industrial activities such as those proposed as part of the WEA lease sales. The rates of cardiovascular disease, asthma, unemployment rates, and housing burden are in the top ten percentile for the state for some census tracts in the area adjacent to the Humboldt Bay Harbor, Recreation, and Conservation District port facilities.[27]

We strongly support the Commission's expectations for "meaningful engagement to be embedded in the project development process and input from communities of concern"[28] and for "future project proposals for this area contain a co-developed community benefits package to ensure that communities of concern receive benefits from offshore wind, including access to clean energy, job training and employment opportunities, and more."[29] We therefore strongly support Condition 5, which requires engagement with environmental justice communities on all elements of the lessees' project development processes.[30] As noted, meaningful engagement should include people who live, work, and/or recreate near sites of future development considerations, including people who use the bay and coastal areas for boating; surfing; tribal, sport, and subsistence fishing; shellfish harvesting; and commercial shellfish growers and their employees, many of whom are members of EJ communities who are unlikely to be represented by the commercial fishing communities described in Condition 7.

As noted, the dock at the current Redwood Marine Terminal 1 site is used for recreational fishing as well as commercial fish processing and gear storage, and redevelopment of the site may make it unsuitable for these uses. We recommend that future development proposals consider the need for a new public fishing pier to maintain and expand access to recreational and subsistence fishing in Humboldt Bay.[31]

We also recommend that future development consider enhancing public access through developing trails from residential areas to the waterfront, creating a new waterfront park, and ensuring safe bike and pedestrian connections along the Samoa Peninsula. Although much needs to be determined before redevelopment of Redwood Marine Terminal 1 occurs, we support the staff recommendation that "any future Humboldt Harbor District development will need to demonstrate that coastal access continues to be maximized and ensure that water oriented recreational activities will be able to safely continue in Humboldt Bay."[32]

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[27] Staff report, Table 4-1.

[28] Staff report at 115.

[29] Staff report at 119.

[30] Staff report at 13-14.

[31] Staff report at 100.

[32] Staff report at 100.

7. Sea level rise

As the staff report notes, sea levels in the Humboldt Bay region are rising at two to three times the statewide average rate due to significant land subsidence related to tectonic activity.[33] The effects of sea level rise must be taken into account in order to identify, assess, and, to the extent feasible, avoid and mitigate the adverse effects of sea level rise.[34]

In addition to the impacts of flooding and erosion due to rising sea levels, several sites proposed for port development are contaminated by past industrial activities. Contaminated groundwater and/or soil could be mobilized from construction activities, and rising groundwater could mobilize contaminants beyond the source, impacting water quality and habitat in Humboldt Bay as well as human health. Future environmental assessments and monitoring plans from BOEM, lessees and other developers should address future impacts from "flooding from below" as rising sea levels and groundwater may affect Humboldt Bay and communities of concern. Remediation of sites proposed for port development should take rising sea levels and groundwater into consideration into development plans.

We appreciate the opportunity to comment on this precedent-setting proposal, and we look forward to future opportunities to ensure that offshore wind energy is implemented with the least conflicts and impacts to people and the environment as possible.

Respectfully,

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[33] Staff report at 17.

[34] Coastal Act Section 30270, Article 8.

April 1, 2022

Chair Donne Brownsey
California Coastal Commission
455 Market Street, Suite 300
San Francisco, CA 94105

Re: Coastal Commission Hearing - April 7, 2022 - Item 8a
Federal Consistency Review for leasing and lease activities within the Humboldt Wind Energy Area (CD-0001-22)

Dear Chair Brownsey:

Our organizations, Natural Resources Defense Council, National Audubon Society, Whale and Dolphin Conservation, Humboldt Baykeeper, Surfrider Foundation, Environmental Protection Information Center, Defenders of Wildlife, and Center for Biological Diversity, submit these comments regarding the California Coastal Commission's (Commission's) review of the Consistency Determination (CD) submitted by the Bureau of Ocean Energy Management (BOEM) for its proposal to issue up to three commercial wind energy leases and allow site assessment and site characterization activities on leases, grants, and other easements. The purpose of the Commission's review is to determine whether the proposal is consistent, to the maximum extent practicable, with the enforceable policies of the California Coastal Management Program (CCMP).

Offshore wind provides a tremendous opportunity to fight climate change, reduce local and regional air pollution, and grow a new industry that will support thousands of well-paying jobs in both coastal and inland communities. Our organizations are united in support of responsibly developed offshore wind, which: (1) avoids, minimizes, mitigates, and monitors for adverse impacts on wildlife and habitats; (2) minimizes negative impacts on other ocean uses; (3) includes robust consultation with Native American Tribes and communities; (4) meaningfully engages state and local governments and stakeholders from the outset; (5) includes comprehensive efforts to avoid negative impacts to underserved communities; and (6) uses the best available scientific and technological data to ensure science-based and stakeholder-informed decision making.

We strongly support the staff report's overarching approach of looking at offshore wind development holistically and the conditions put forth in the staff report. Further, we appreciate the recommendation that the Commission set expectations for development activities far in advance, as we believe that will help minimize or prevent project delay while fulfilling resource protection legal obligations. However, we urge the Commission to shift from expectation setting to establishing clear conditions in this consistency review for all offshore wind development activities to provide specific and enforceable requirements as BOEM and developers move forward.

The federal Coastal Zone Management Act (CZMA) is an exercise in cooperative federalism. Among other things, it requires that federal activities likely to affect a state's coastal resources be "fully consistent" with that state's coastal policies and programs, and it allows states to object to inconsistent proposals.[1] Under the CZMA, each coastal state may adopt a coastal management plan (CMP) that provides for "the protection of natural resources, including wetlands, floodplains, estuaries, beaches, dunes, barrier islands, coral reefs, and fish and wildlife and their habitat, within the coastal zone."[2] A CMP also guides "management of coastal development to improve, safeguard, and restore the quality of coastal waters, and to protect natural resources and existing uses of those waters," among other objectives.[3] The CZMA guarantees participating states the opportunity to review federal and federally permitted activities for consistency with their CMPs.[4] Any federal activity that may affect coastal resources must be "fully consistent with the enforceable policies of management programs."[5] If a state finds that a federal applicant's activities are not fully consistent with its enforceable policies, it may object to that applicant's plans.[6]

In California, the standard of review for federal consistency determinations consists primarily of the principal component of the California Coastal Management Plan (CCMP), namely the policies of Chapter 3 of the Coastal Act. With regards to marine resources, Article 4 of the CCMP 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." California's authority under the CZMA has been integral to the state's very identity as one of iconic ocean vistas and unparalleled wildlife and habitat for all to enjoy.

The staff report states, "The leasing of the Humboldt WEA has a high likelihood of impacting marine habitats, species and ocean processes."[7] We agree, and as detailed in this comment letter, we disagree with BOEM's assertion that, "The lease sale is not likely to result in the degradation of marine resources."[8] BOEM's submitted CD is also insufficient because it fails to consider reasonably foreseeable impacts related to future development. The staff report notes that "...it is reasonably foreseeable that the leases will lead to construction and operation of at least some offshore wind facilities. It is also feasible to describe, at least at a high level, the types of impact that such facilities could have on coastal resources."[9] We have previously commented to BOEM that consideration of leasing activities should also include impacts from development, because while a lease is not a promise that a project will be constructed, any eventual development cannot occur without a lease. Having thorough environmental review conducted before leasing will help identify concerns before developers invest in site assessment work and shape

[1] 15 C.F.R. § 930.32(a)(1).
[2] 16 U.S.C. § 1452(2)(A).
[3] 16 U.S.C. § 1452(2)(A)-(C).
[4] 15 C.F.R. §§ 930.41, 930.60.
[5] 15 C.F.R. § 930.32(a)(1).
[6] 15 C.F.R. § 930.63.
[7] Staff report at 62.
[8] BOEM CD at 27.
[9] Staff report at 3, 22.

development plans. Stakeholder engagement based on thorough review is better informed and would benefit project development.

By not taking a more comprehensive look, BOEM's submitted CD ignores the ultimate goal of leasing –for offshore wind energy development to occur– and the broader possible impacts to wildlife and other resources resulting from development. We note that the CZMA regulations define effects on coastal resources broadly:

> The term "effect on any coastal use or resource" means any reasonably foreseeable effect on any coastal use or resource resulting from a Federal agency activity or federal license or permit activity….Effects include both direct effects which result from the activity and occur at the same time and place as the activity, and indirect (cumulative and secondary) effects which result from the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.[10]

Similarly, the review of coastal resource effects must be applied broadly:

> Effects are determined by looking at reasonably foreseeable direct and indirect effects on any coastal use or resource. An action which has minimal or no environmental effects may still have effects on a coastal use (e.g., effects on public access and recreational opportunities, protection of historic property) or a coastal resource, if the activity initiates an event or series of events where coastal effects are reasonably foreseeable.[11]

We appreciate the Commission's leadership in considering the full context of offshore wind development both for the Humboldt WEA specifically and for offshore wind on the West Coast, and appreciate the discussion of several important topics in the staff report, including cumulative impacts, adaptive management, and the importance of coordinating data collection and sharing. However, we urge the Commission to require additional conditions for this consistency determination. The staff report notes, and we fully agree, that the BOEM CD for the Humboldt WEA is the key opportunity to "examine the impacts of offshore wind development at a programmatic level….Future consistency certifications at the construction and operations phase will examine specific projects and their specific impacts, but they are not well-suited to address larger issues related to the Humboldt WEA…".[12] In other words, the CD for Humboldt at this phase of development is the Commission's *only* opportunity to review the Humboldt WEA for federal consistency at the programmatic level – where it is possible to identify areas for development of relatively lower sensitivity that are more likely to advance smoothly through the permitting process.

Further, demonstrating holistic offshore wind planning and siting in California would inform future floating offshore wind project development and design. The way offshore wind development advances in California has the potential to set a precedent for environmentally responsible wind leasing and development that advances climate and renewable energy goals while protecting and minimizing impacts to coastal and marine resources. The Humboldt precedent is particularly relevant in California: BOEM plans to offer for leasing both the

[10] 15 C.F.R. 930.11(g).
[11] 15 C.F.R. § 930.33(a)(1).
[12] Staff report at 22.

Humboldt and Morro Bay WEAs in the same auction, clearly demonstrating that the Humboldt process is linked to that of Morro Bay.

We strongly support the conditions for leasing activities recommended in the Commission staff report.[13] However, because offshore wind development is reasonably foreseeable, it is also necessary to include conditions associated with development activities. We therefore recommend the Commission require additional conditions associated with development for its consistency determination. Examining the full range of offshore wind activities –from site assessment and characterization to construction and operations at this stage of the offshore wind development process is California's best opportunity to ensure that all activities associated with offshore wind development are fully consistent with the CCMP. As the staff report notes, "Review of this consistency determination is the state's opportunity to examine the impacts of offshore wind development at a programmatic level."[14] Given that this is California's sole opportunity to evaluate the potential impacts associated with three lease sales in the Humboldt WEA at the programmatic level, we urge the Commission to include conditions associated with development activities as part of its conditional concurrence with the Humboldt CD.

In this letter we comment on the Conditions recommended in the staff report and offer recommended conditions for development activities. As noted above, we urge the Commission to adopt the staff's recommended Conditions for site assessment and characterization activities, and to require conditions associated with development activities.

COMMENTS ON CONDITIONS

Conditions 1.a., 1.b., 1.c., 1.d.: Our organizations support the intent of these four conditions. However, we are concerned that they do not specify the requirements for BOEM and lessees to meet them. Specifically in Condition 1.c., "encouraging lessees to collaborate" does not guarantee that this collaboration will happen, and thus provides no certainty that this measure will accomplish its intended aim to "increase efficiency and minimize impacts of geophysical and other surveys conducted during the site assessment phase."[15] The Commission should additionally require that BOEM's review of survey, sampling, and analysis plans consider the cumulative impacts of all lessees' plans, as well as require that the Commission can access the lessee's survey plans submissions (1.b.) to ensure that oversight of lessees' collaboration and impact minimization will occur.

While we support Condition 1.d. to make FOIA-applicable documents and data available, we recommend clarifying this condition to state that this information will promptly be made publicly available. As currently written, the language appears to allow BOEM to only make this information available upon a FOIA request.

[13] We support adoption of the conditions, but only provide substantive comments on Conditions 1, 2, 3, and 7.
[14] Staff report at 3.
[15] Staff report at 11.

We also recommend the Commission require additional data transparency measures. For instance, environmental information from site assessment and characterization activities shall promptly be made publicly available. Additionally, all incidences of observed marine debris and entanglements and all incidences of collision fatality shall promptly be made publicly available. Public availability of documents and data and transparency conditions should apply to all phases of development.

Condition 1.e.: We recommend requiring, rather than encouraging, consistency with the State Lands Commission's low-energy geophysical survey program to minimize impacts and ensure prompt reporting of publicly available information.

BOEM should also require lessees to demonstrate how underwater noise will be minimized to the fullest extent feasible (as determined by BOEM) during site assessment and characterization activities, including through the use of technically and commercially feasible and effective noise reduction and attenuation measures (e.g., using survey equipment that can be deployed at depth, operating sub-bottom profiling systems at power settings that achieve the lowest practicable source level for the objective). As discussed in the previous section, we recommend requirements for data sharing and transparency so that the fewest number of surveys necessary are conducted to minimize impacts during the site assessment phase.

The Commission should adopt additional conditions related to construction and operational noise. Specifically, we recommend that BOEM require the lessee to submit a plan to BOEM, NMFS, and the Commission detailing the noise generating activities that will occur during construction of floating wind platforms (e.g., vessel noise, dynamic positioning systems (if used), pile driving for anchors at depth), the difference from baseline soundscape noise, and the actions that will be taken to reduce noise levels to the fullest extent feasible. We also recommend that BOEM require the lessee take measures to reduce underwater noise levels generated by turbines during operations (e.g., engineering solutions to acoustically decouple the turbine from the mast and platform, use of direct drive wind turbine generators as opposed to generators that rely on a gear box).

Condition 1.f.i.: We support Conditions 1.f.i.1., 1.f.1.3., and 1.f.i.4.

Regarding Condition 1.f.i.2, we recommend a minimum of four Protected Species Observers (PSO) on each vessel, following a two-on, two-off rotation, each responsible for scanning no more than 180° of the horizon. Monitoring of the visual clearance zone should be undertaken by vessel-based PSOs stationed on the survey vessel to enable monitoring of the entire 500 meter clearance zone for marine mammals. We also recommend that PSOs monitor for and maintain appropriate distance to sea turtles in addition to marine mammal observations, in order to be consistent with the CCMP to maintain healthy populations of marine species. Finally, we recommend that surveys begin during daylight hours, in good visibility (1 nm or greater), and continue into the night if needed (rather than beginning at night)..These conditions should be required for all phases of development.

While we support Condition 1.f.i.5., we recommend this data promptly be made publicly available and include observed marine debris and entanglements and all observed incidences of

collision fatality. Survey activities could be completed over several years, so providing monitoring data only 90 days after completion is not adequately informative when impacts could arise at any point prior to completion. Delaying the release of monitoring data precludes adaptive management and prevents meaningful mitigation. Frequent reporting is necessary to alert agencies, lessees, and the public to impacts in a timely manner and to minimize impacts throughout all phases of development.

For offshore wind development to proceed responsibly, there is a need for additional survey and data collection on a wide array of species the CD discusses. As BOEM progresses with leasing in California, the agency should concurrently work to fill critical gaps in baseline data on wildlife in the Humboldt Bay WEA.[16] We appreciate the discussion in the staff report regarding baseline, construction, and operational noise data. However, it is critical to assess baseline noise prior to project development, including leasing activities. We recommend that BOEM, in coordination with lessees, collect sufficient data (broadband soundscape recordings through all seasons) to assess noise levels prior to project development to assess the extent to which development will increase underwater noise and subsequent risks to marine life, and to promptly make this data publicly available. Broadband baseline soundscape recordings are needed across all four seasons on noise levels within and adjacent to the WEA, vessel traffic routes, and transmission corridors to shore and provide for 'control' sites for future monitoring.

As part of the agency's determination that leasing activities are consistent with marine resource protection under the Coastal Act, BOEM states that "Moorings will be designed to minimize or remove entanglement risk for protected species."[17] However, there are no details provided on these designs, no plans for monitoring moorings beyond projected metocean buoy yearly maintenance trips, and no requirements related to decommissioning. We agree with the staff report that the three buoys could increase risk of entanglement, particularly if marine debris is caught on mooring lines. We recommend monitoring for marine debris and removal of ensnared debris as soon as possible to minimize the risk of secondary entanglements.

We support the staff report's discussion of elements for monitoring, mitigation, and adaptive management plans for the Commission's future review of construction and operating plans. However, the staff report falls short of requiring conditions of offshore wind development activities. Rather than signal expectations, we believe the Commission should clearly set expectations for responsible offshore wind development in California, and urge the Commission to adopt the following additional conditions. We note that these are initial recommendations that may change as new scientific and/or technological advancements occur, and as data on the effectiveness of the measures becomes available informs the adaptive management of this risk. Additional recommendations may also be developed for other marine species.

Management Practices to Reduce Risk of Secondary Entanglement of Marine Mammals, Sea Turtles, Sharks, and Diving Birds

[16] Please see page 6 in attached, Comments in Response to the Bureau of Ocean Energy Management's Draft Environmental Assessment for Commercial Wind Lease and Grant Issuance and Site Assessment Activities on the Pacific Outer Continental Shelf, Humboldt Wind Energy Area; BOEM-2021-0085 (Jan. 11, 2022) Submitted by the Natural Resources Defense Council, National Audubon Society, Whale and Dolphin Conservation, Humboldt Baykeeper, Ocean Conservation Research, Surfrider Foundation.
[17] BOEM CD at 27.

BOEM shall require the lessee to develop and implement management practices to monitor for and avoid and minimize the risk to marine species, including marine mammals, sea turtles, sharks, and diving birds, from secondary entanglement of marine debris (including fishing gear) ensnared on project infrastructure, including platforms, mooring lines, inter-array cables, and anchors. Below we provide initial recommendations for monitoring and minimizing the risk of secondary entanglement:

I. Monitoring
   A. Continuous monitoring for strains on mooring lines and inter-array cables resulting from ensnarement of marine debris or entanglement of an animal (e.g., using load cells or other appropriate sensor-types with proven sufficient sensitivity to detect a marine debris ensnarement or entanglement event).
   B. Daily visual inspection of infrastructure for ensnarement of marine debris or entanglement of an animal[18] at depths where marine debris is most likely to occur[19] (e.g., using cameras or other appropriate techniques).
   C. Monthly inspection of the full length of submerged infrastructure (including platforms, mooring lines, inter-array cables, and anchors) for ensnared marine debris or entanglement of an animal (e.g., using side-scan sonar or other appropriate techniques).[20]

II. Avoidance and Minimization Measures
   A. Design features:
      a. The lessee shall design and maintain mooring lines and inter-array cables in configurations that minimize the potential for entanglement of marine species (e.g., lines and cables should remain under tension).[21]
      b. Infrastructure should be designed to maximize visual or acoustic detection of ensnared marine debris at depths where marine debris is most likely to occur (e.g., by using lighter coloration or textures to contrast with marine debris, and novel lighting techniques). [22]
   B. Protocol when ensnarement and/or entanglements are identified:
      a. If monitoring shows that marine debris has become ensnared on any project structure, but no marine mammals, sea turtles, sharks or diving bird species are caught within it, the lessee will notify the National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USFWS), and the California

[18] Visual inspection at least once during each 24-hour period may provide an alert of an entangled marine mammal or sea turtle at an early enough point in time that rescue efforts can be made and the animal can be released alive.
[19] This information will be based on data from other regions. Initial research and expert consultation indicates that marine debris ensnarement is most likely to occur at depths of 0-5 meters below the sea surface.
[20] Underwater autonomous vehicle (AUV) or remotely operated vehicle (ROV) surveys could potentially supplement periodic inspection and may be an important tool for marine debris removal at depth.
[21] Whales are more likely to become entangled in slack lines – see California Ocean Protection Council Best Management Practices for reducing entanglement risk: http://www.opc.ca.gov/webmaster/_media_library/2016/08/Best_Practices_Guide_Final.pdf.
[22] This information will be based on data from other regions. Initial research and expert consultation indicates that marine debris ensnarement is most likely to occur at depths of 0-5 meters.

Department of Fish and Wildlife (CDFW) within 24 hours of detection and shall remove marine debris as soon as possible in a manner that does not jeopardize human safety, property, or the environment.

b. If monitoring shows that marine mammals or sea turtles have become entangled, injured, or impinged by ensnared marine debris or project structures, the lessee will immediately notify NMFS, USFWS, and CDFW, follow the Reporting Protocol for Injured or Stranded Marine Mammals, and provide those agencies all available information on the incident.[23]

c. If sharks or diving birds are observed entangled or entrapped in marine debris, the lessee will promptly report the incident to NMFS, FWS, and CDFW within 24 hours of detection, and consult with the appropriate agency regarding marine debris removal at the earliest possible time in a manner that avoids jeopardizing human safety, property, or the environment.

C. Return/recycle: The lessee shall report recovered fishing gear to CDFW. The lessee shall consult with CDFW to arrange for disposal of the gear at a suitable location, prioritizing the physical recycling of materials (as opposed to incineration).

III. Data transparency: All incidences of observed marine debris and entanglements shall promptly be made publicly available.

Conditions 1.f.ii., 1.f.iii.: Support

Condition 1.f.iv., Condition 2: We support the requirement for an anchoring plan. However, we recommend increasing the buffer (Condition 1.f.iv.2) to a sufficient distance to ensure that the anchor rode's scour area does not come into contact with biogenic structural habitat. We also support the requirement that lessees avoid intentional contact within hard substrate, rock outcroppings, seamounts, or deep-sea coral/sponge habitat. We are particularly concerned about impacts on benthic habitat that is designated as Habitat Areas of Particular Concern (HAPC), which are subsets of essential fish habitat that have a particularly important ecological role in fish life cycles or are especially sensitive, rare, or vulnerable. HAPC fulfill important ecological functions and are especially vulnerable to degradation.

We recommend the Commission adopt the staff's recommended conditions, as well as the additional conditions below throughout all phases of development to protect benthic habitat.

Protection of Benthic Habitat

I. Site assessment and characterization

A. BOEM, in close coordination with NMFS, shall require that detailed benthic surveys of HAPC be conducted prior to leasing in the Humboldt Wind Energy Area (WEA). We note that in previous letters to BOEM we advocate for detailed mapping of HAPCs to occur *before* leasing of a WEA. This granular mapping should occur as part of site assessment and characterization activities at the very latest.

[23] See National Marine Fisheries Service Large Whale Entanglement Response Program for whale entanglement reporting protocol; Sea Turtle Disentanglement Network for sea turtle reporting protocol.

B. Prior to deployment of anchored meteorological buoys, the lessee shall obtain a box core sample in the expected location of each buoy's anchor to confirm benthic sediment composition. The lessee shall avoid biogenic structural habitat (as confirmed by the core sample) when anchoring meteorological buoys.[24]

II. Construction and operations
   A. The lessee shall conduct detailed benthic habitat surveys of prospective offshore wind development sites, ensuring that designated HAPCs receive particular attention.
   B. As part of BOEM's review of a lessee's construction and operations plan, BOEM will ensure that the lessee avoid intentional 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, including but not limited to anchoring, mooring, and sediment sampling.[25]
   C. Where surveys affirm the presence of biogenic structural habitat, and the lessee determines that impacts to biogenic structural habitat cannot be avoided, the lessee shall submit a mitigation plan to BOEM and the Commission for their approval prior to advancing development.
   C. For developments where impacts to biogenic structural habitat cannot be avoided, BOEM shall require the lessee to select a mooring system with a minimally intensive benthic footprint.

Condition 3: We support this condition. A requirement for vessel speeds of 10 knots, including vessel transit, would be adequately protective. This condition should be required for all phases of development.

Increased vessel traffic associated with all phases of offshore wind energy development poses an increased vessel collision risk for sea turtles and marine mammals, particularly baleen whales.[26] The risk of serious injury and mortality from vessel collisions increases significantly with vessel speeds of 10 knots or greater.[27] Yet BOEM's submitted CD significantly underestimates the impact of vessel strikes on marine life. For leasing activities, the BOEM CD notes that "[v]essel speeds during site characterization surveys within the Proposed Action Area will be limited to less than 5 knots (2.57 m/s), but transit speeds will vary."[28] The CD adds, "the project-related vessel traffic could increase the overall vessel traffic and risk of collision with marine mammals in the Proposed Action Area; however the required vessel strike avoidance measures, as well as reporting requirements, will minimize vessel interactions with protected species to negligible levels."[29] It is difficult to fathom how BOEM reaches the conclusion that impacts from vessel

[24] Biogenic habitat is described in Buhl-Mortensen, 2010 et al. Biological structures as a source of habitat heterogeneity and biodiversity on the deep ocean margins
margins, https://onlinelibrary.wiley.com/doi/full/10.1111/j.1439-0485.2010.00359.x.
[25] This extends the language in Condition 2 to the development phase. Staff report at 13.
[26] Rockwood, R. C., Calambokidis, J., & Jahncke, J. 2017. High mortality of blue, humpback and fin whales from modeling of vessel collisions on the US West Coast suggests population impacts and insufficient protection. PloS one, 12(8), e0183052.
[27] Conn, P. B., & Silber, G. K. 2013. Vessel speed restrictions reduce risk of collision-related mortality for North Atlantic right whales. Ecosphere, 4(4), 1-16.
[28] BOEM CD at 26.
[29] BOEM CD at 26.

traffic associated with site characterization are expected overall to be "negligible," when a vessel strike—even if a rare occurrence—has a high potential to result in the death of the individual that is struck. Further, the submitted CD entirely ignores the impact of potential vessel strikes during future project development because its scope is limited to site assessment and characterization activities. There are potentially hundreds of project-related vessels engaged in all phases of construction and operation, significantly increasing the risk of increased vessel collision and serious injury and mortality.

The staff report states, "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."[30] We support this and recommend that any changes to vessel speed requirements (e.g.., allowing speeds above 10 knots) are limited to circumstances where the best available scientific information demonstrates that whales or sea turtles do not use the habitat or transit the area. We also note that slower speeds may be required in some instances to adequately protect sea turtles. Projects may develop, in consultation with NOAA, an "Adaptive Plan" that modifies these vessel speed restrictions. However, the monitoring methods that inform the Adaptive Plan must follow a scientific study design and be proven effective using vessels traveling at 10 knots or less. If the resulting Adaptive Plan is scientifically proven[31] to be equally or more effective than a 10-knot speed restriction, the Adaptive Plan could be used as an alternative to the 10-knot speed restriction.

One of the mitigation measures BOEM requires in the CD is a minimum separation distance of 500 meters between all whales around the vessel at all times. We support this requirement, and remind the agency that in addition to ESA listed species, all marine mammals are protected under the Marine Mammal Protection Act (MMPA). We recommend adopting an additional condition that BOEM require all project-associated vessels to maintain a separation distance of 100 meters for other marine mammal species, and that both the 500 meter and 100 meter separation distance be required during all activities, including transit. This is necessary for all phases of development to ensure that activities are undertaken in a manner sufficiently protective of all marine mammals, consistent with the CCMP.

We recommend the Commission adopt an additional condition that BOEM require lessees to collect and review information to enable an accurate assessment of existing vessel traffic (routes, size, and number of vessels) prior to development activities to assess additional risk from project associated vessel traffic. We note that the BOEM CD includes Automatic Identification System (AIS) data on vessel traffic from 2017. Nonetheless, it is critical to have a more comprehensive understanding of vessel traffic and how project-associated vessel traffic will increase risk to marine species so that mitigation measures are adequately protective and consistent with the CCMP.

Condition 7: We support this condition and agree with the liaison's proposed duties to coordinate survey work, help manage conflicts, and help prevent secondary entanglement during site assessment and characterization activities. While the fisheries liaison may be helpful in

[30] Staff report at 13.
[31] e.g., *via* an independently conducted and peer-reviewed scientific publication.

mitigating "potential entanglement impacts throughout the course of lease exploration activities," we urge the Commission to adopt the entanglement recommendations provided in this letter as its primary method of minimizing entanglement risk.[32]

Conditions regarding Collision and Lighting for Birds and Bats: While there is significant concern for collision impacts during turbine operation, there is also risk of collision during site assessment and characterization activities (e.g., collision with meteorological buoys and vessels). We recommend the Commission evaluate risks to birds listed under the Federal and California Endangered Species Acts, with special attention paid to Short-tailed Albatross, Scripp's Murrelet, and Marbled Murrelet for the Humboldt WEA. We also agree with the staff report that there is a need for much greater understanding of bird and bat distributions in the lease areas and greater understanding of the risk of turbine strikes and identification of species most at risk.

We recommend the Commission adopt additional conditions during all phases of development to maintain healthy populations of bird and bat species, consistent with the CCMP. The following suggestions are adapted from the New York State Energy Research and Development Authorities Environmental Technical Working Group:

I. To avoid and minimize attraction- and disorientation-related impacts to birds and bats, artificial lighting on offshore wind projects (e.g., flight safety and navigation lighting, work-related lighting) should be reduced to the extent possible while maintaining human safety and compliance with FAA, USCG, and BOEM regulations. This should be implemented during all phases of offshore wind energy development, from pre-construction to decommissioning, and include the following:
   A. Use of 'On demand' transportation safety lighting systems (e.g., Aircraft Detection Lighting Systems).
   B. Use the fewest number of lights on structures possible under regulatory requirements and protection of human safety.
   C. To the extent possible, avoid use of white lights in favor of red or other colors and use flashing lights instead of steady burning lights.
   D. Avoid high intensity lights (e.g., sodium vapor, quartz, halogen).
   E. Lighting should be hooded, down-shielded, and or directional (e.g., down-lit).
   F. Activities that would require extensive lighting should be planned during daylight hours when feasible. This is particularly important for activities requiring flood lighting during periods of high risk to birds and bats.
   G. Where feasible, lighting intensity should be reduced, or lights should be extinguished during periods when birds are most likely to be present and on overcast nights when lights are most likely to attract/disorient birds.

II. Collision Monitoring
   A. Collision Risk Assessment: The Commission should recommend that BOEM require comprehensive and complementary tools to evaluate risks and document impacts to birds and bats vulnerable to population-level impacts from turbine collision, including marine radar, acoustic, and collision detection technologies.

[32] Staff report at 47.

B. Documenting Collision Events: Understanding the population-level cumulative impacts of the offshore wind build out along the Pacific OCS will require a method for accurately estimating the *observed* level of take of birds and bats of all sizes. The Department of Energy (DOE) has recently funded development of collision detection technology from the Albertani Lab[33] at Oregon State University and WT Bird from WEST, Inc.[34] Similar technologies are being tested at Block Island Wind Project and other offshore locations in the European Union and United Kingdom and are making rapid gains in being effective, officially verified, commercially available, and affordable at scale in the near future, possibly at the same time as the projects would be ready for construction and operation.[35] However, these technologies should be fully integrated into turbine design before they can be deployed. DOE is currently evaluating the development status of these integrated systems based on their readiness for offshore wind deployment.[36] BOEM should support the development of these technologies and should require turbine developers to integrate these systems into their turbine designs, and the Commission should ask the agency to do so.
C. Data transparency: All incidences of observed avian and bat collision with turbines, vessels, platforms, buoys or other structures associated with site assessment, construction, and operation activities should be made publicly available and reported to USFWS.

III. Turbine Collision Minimization Strategies. In addition to the lighting recommendations provided above, we urge the Commission to encourage BOEM to adopt the following strategies to minimize collision risk with lease stipulations:
A. Set restrictions on maximum allowable turbine height, as it has done in response to marine use concerns. The newest contracted offshore wind turbines are reaching heights of more than 300 meters. Further increasing this maximum turbine height will increase risk to trans-Pacific migrants. Likewise, BOEM should also set minimum requirements for turbine air-gap (e.g., the distance between the water surface and the rotor swept zone). Decreasing this air gap increases collision risk for lower flying foraging and commuting birds in the marine environment.

[33] Clocker, K., et al. 2021. Autonomous Sensor System for Wind Turbine Blade Collision Detection. Inst. Elec. & Elec. Eng'rs.
[34] Verhoef, J.P., et al. 2004. WT-Bird: A Low Cost Solution for Detecting Bird Collisions. Energy Research Center, Netherlands.
[35] Dirksen, S. 2017. Review of methods and techniques for field validation of collision rates and avoidance amongst birds and bats at offshore wind turbines. Sjoerd Dirksen Ecology.
[36] Brown-Saracino, J. Technologies and Approaches for Monitoring Bird and Bat Collisions Offshore (Presentation to the State of the Science Workshop on Wildlife and Offshore Wind Energy Development), N.Y. ETWG (Nov. 13-14, 2018).

B. Automated, smart, and/or seasonal curtailment strategies.[37] This type of automated curtailment system has resulted in significant decreases in collision mortality events within land-based wind farms where it has been deployed.[38]
C. Bat deterrent systems--deterrent technologies are being developed for land-based turbines, including turbine coatings (to counteract bat attraction to smooth surfaces which might be perceived as water),[39] ultraviolet lighting (which many bat species can see),[40] and ultrasonic noise emitters (to possibly "jam" bats' radars and make wind facilities unappealing to bats).[41] One of the ultrasonic deterrent technologies, NRG Systems, has been commercially deployed at land-based wind facilities.[42] These technologies need to be assessed for use in the offshore environment, especially on turbines with large swept areas.

Conditions for Adaptive Management and Cumulative Impacts: We agree with the staff report that "...comprehensive monitoring plans and adaptive management strategies for offshore wind projects will be key to ensuring that coastal resources are protected and restored," and that "The efforts made to understand, avoid, and minimize impacts now will also help inform future floating wind project design."[43] To achieve outcomes based on these statements and that would ensure development in the Humboldt WEA is consistent with the CCMP, we recommend that BOEM require lessees to provide plans for adaptive mitigation strategies and compensatory mitigation for project development, as needed, based on monitoring outcomes.

Publicly accessible data on impacts of offshore wind developments are the foundation of effective adaptive management. Concerns about the transparency of project data are addressed elsewhere in this letter. Effective adaptive management also requires clear, objective standards or "triggers" that are biologically meaningful. Given that so much is unknown about the impacts of construction and operations of floating offshore wind developments, adaptive management is

[37] We acknowledge that blanket seasonal curtailment strategies may be economically unviable for offshore wind energy development. However, we note that reasonably tailored smart curtailment strategies will be an important mitigation strategy for responsibly operated offshore wind energy facilities in North Carolina. Developments in Next Generation Weather Radar, or "Nexrad", System make it easier to predict migration timing. Ongoing research into the timing and environmental cues driving migration dynamics across the Atlantic makes it possible to predict specific periods when collision risk might be highest. Developments in collision detection technology will also likely provide a mechanism for smart curtailment based on the proximity of individual birds and bats to the turbines.
[38] McClure et. al. 2021. Eagle fatalities are reduced by automated curtailment of wind turbines, J. Applied Ecology.
[39] Victoria J. Bennett & Amanda M. Hale, Texturizing Wind Turbine Towers to Reduce Bat Mortality: DE-EE0007033 (PowerPoint presentation), U.S. Department of Energy (DOE) (last visited Feb. 9, 2022), https://www.energy.gov/sites/prod/files/2019/05/f63/TCU%20-%20M17%20-%20Hale-Bennett.pdf.
[40] National Renewable Energy Lab., Technology Development and Innovation Research Projects (last visited Aug. 30, 2021), https://www.nrel.gov/wind/technology-development-innovation-projects.html.
[41] Kinzie, K., et al., 2011. Ultrasonic bat deterrent technology, U.S. DOE.; Weaver, S.P. et al. 2020. Ultrasonic acoustic deterrents significantly reduce bat fatalities at wind turbines. Glob. Ecology & Conservation; Arnett, E.B., et al. 2013. Evaluating the effectiveness of an ultrasonic acoustic deterrent for reducing bat fatalities at wind turbines. PLoS One.
[42] Duke Energy, Duke Energy Renewables to Use New Technology to Help Protect Bats at its Wind Sites (June 26, 2019), https://news.duke-energy.com/releases/duke-energy-renewables-to-use-new-technology-to-help-protect-bats-at-its-wind-sites.
[43] Staff report at 62,19.

especially important to protect the marine environment off the North Coast. We also recommend that BOEM require lessees to have an adaptive management advisory committee that includes a liaison for environmental non-governmental organizations.

Additionally, we are concerned that BOEM's submitted CD fails to assess cumulative impacts. The analysis of cumulative impacts is crucial to a robust assessment of leasing and development, and as noted in the staff report: "Consistency determinations must consider both the direct effects of project-related activities as well as the "indirect (cumulative and secondary) effects which result from the activity and are later in time or farther removed in distance, but are still reasonably foreseeable."[44] CZMA regulations describe indirect effects as "effects resulting from the incremental impact of the federal action when added to other past, present, and reasonably foreseeable actions, regardless of what person(s) undertake(s) such actions."[45]

We appreciate the discussion of cumulative impacts that is included in the staff report, and agree that comprehensive baseline and post-project monitoring and implementation of an adaptive management framework are critical to understanding cumulative impacts and minimizing them. We urge the Commission to consider cumulative impacts during this consistency review, specifically by adopting conditions that require comprehensive monitoring as recommended in our comments regarding entanglement, noise, and benthic habitat, as well as requirements for adaptive management (as recommended above).

Importantly, the staff report notes that "Because habitat displacement and avoidance could occur on a scale that significantly exceeds a specific lease area, limiting baseline data collection and post-project monitoring activities to an individual lease area is not likely to be sufficient to assess this type of an impact. Regional-scale monitoring and coordinated project-specific monitoring across multiple lease areas will be necessary to understand how future offshore wind development affects pelagic and benthic environments offshore California."[46] We agree that coordinated regional monitoring will be critical for understanding cumulative impacts, particularly to monitor and account for population level effects resulting from all phases of development. In the case of avian species, there are potential population-level impacts of displacing birds from important foraging areas or migratory routes.[47] Underwater noise from increased vessel traffic as well as turbine installation and operation poses a potential threat to diving birds occurring within and around Humboldt WEA.[48] BOEM has already committed resources to a key study designed to characterize avian distribution along the California Current System and inform responsible offshore wind development. The results of the long-awaited Data

[44] 15 C.F.R. § 930.11(g); Staff report at 29.
[45] 15 C.F.R. § 930.11(g).
[46] Staff report at 57.
[47] Mendel B, Schwemmer P, Peschko V, Müller S, Schwemmer H, Mercker M, Garthe S. 2019. Operational offshore wind farms and associated ship traffic cause profound changes in distribution patterns of Loons (Gavia spp.). Journal of Environmental Management 231:429–438; Peschko V, Mendel B, Müller S, Markones N, Mercker M, Garthe S. 2020. Effects of offshore windfarms on seabird abundance: Strong effects in spring and in the breeding season. Marine Environmental Research:105157.
[48] Anderson Hansen K, Hernandez A, Mooney TA, Rasmussen MH, Sørensen K, Wahlberg M. 2020. The common murre (Uria aalge), an auk seabird, reacts to underwater sound. The Journal of the Acoustical Society of America 147:4069–4074.

Synthesis and High-resolution Predictive Modeling of Marine Bird Spatial Distributions on the Pacific OCS[49] will be critical to consider in adaptive management and monitoring.

Lastly, as noted in the staff report, installation of electrical export cables to bring power from the Humboldt WEA to shore is expected to result in additional disturbance to the seafloor, potential future Humboldt Harbor District development, and increased Army Corps of Engineers widening of the Federal Navigation Channels[50] has the potential to result in disturbance to habitat within Humboldt Bay. These activities would contribute to cumulative impacts on migratory shorebirds and other species that depend on eelgrass and other biologically significant nearshore and coastal habitats. Humboldt Bay has over 30 percent of the eelgrass meadows remaining in California and the terrestrial areas on both the north and south spit contain sensitive habitats including snowy plover nesting sites on the south spit. [51] It is critical to protect the state's remaining eelgrass and to avoid impacts to other sensitive habitats.

We appreciate the statement in the staff report that, "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."[52] and recommend that the Commission include these impacts when considering cumulative impacts of offshore wind development. The Commission should also consider onshore impacts of transmission construction, as there are potential landfall options in addition to subsea transmission cables,[53] and how this will further contribute to cumulative impacts on avian species; a full picture of migratory pathways for land birds and seabirds must be evaluated.

In closing, we urge the Commission to expand this consistency review and build upon its leadership in advancing offshore wind development by adopting our recommendations for additional conditions. We thank Coastal Commission staff and the Commission for their work to ensure that offshore wind development off California's coast is fully consistent with the CCMP, and we appreciate the Commission's engagement with stakeholders and consideration of our comments. California is a leader in its efforts to tackle the climate crisis and in its history of protecting invaluable ocean and coastal resources - this is a critical opportunity to move forward responsibly and to further demonstrate the state's leadership on both priorities.

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[49] https://opendata.boem.gov/BOEM-ESP-Ongoing-Study-Profiles-2021-FYQ2/BOEM-ESP-PC-15-01.pdf.
[50] Severy, M., Guerrero, I., Alstone, P. & Jacobson, A. 2021. Transmission Upgrades Report and Policy Analysis. In M. Severy, Z. Alva, G. Chapman, M. Cheli, T. Garcia, C. Ortega, N. Salas, A. Younes, J. Zoellick, & A. Jacobson (Eds.) California North Coast Offshore Wind Studies. Humboldt, CA: Schatz Energy Research Center. schatzcenter.org/pubs/2020-OSW-R12.pdf.
[51] Whelan A. Gilkerson and Keith W. Merkel, "Humboldt Bay Eelgrass Comprehensive Management Plan. Prepared for Humboldt Bay Harbor, Recreation and Conservation District", 2014, accessed, August 4, 2021.
https://humboldtbay.org/sites/humboldtbay2.org/files/documents/Humboldt%20Bay%20Eelgrass%20Management%20Plan_1 0-10-17.pdf.
[52] Staff report at 49.
[53] Severy, M., Guerrero, I., Alstone, P. & Jacobson, A. 2021. Transmission Upgrades Report and Policy Analysis. In M. Severy, Z. Alva, G. Chapman, M. Cheli, T. Garcia, C. Ortega, N. Salas, A. Younes, J. Zoellick, & A. Jacobson (Eds.) California North Coast Offshore Wind Studies. Humboldt, CA: Schatz Energy Research Center. schatzcenter.org/pubs/2020-OSW-R12.pdf.

Sincerely,

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April 1, 2022

California Coastal Commission
455 Market Street, Suite 300
San Francisco, CA 94105

Re: Comment on Consistency Determination for Bureau of Ocean Energy Management's Lease Activities in the Humboldt Wind Energy Area

Dear Esteemed Commissioners:

The Redwood Coast Climate and Community Resilience Hub ("CORE Hub") appreciates the opportunity to comment on the Consistency Determination report for the Bureau of Ocean Energy Management (BOEM) leasing activities associated with future offshore wind development in the Humboldt Wind Energy Area (HWEA).

The CORE Hub was established by regional leaders in climate resilience, mitigation, and adaptation and is based at Humboldt Area and Wild Rivers Community Foundation, serving California Counties of Humboldt, Del Norte, and Trinity, as well as Curry County in Oregon. Our service area also includes 22 Tribal Nations and Indigenous Territories. Our goal is to become the first proven carbon sequestering rural and Tribal region in the United States. We act toward this goal through planning and policy guidance; facilitating healthy civic dialogue; taking action for equity; promoting accurate, accessible public information; providing research, analysis and technical assistance; project acceleration; promoting traditional knowledge and multi-generational values; and conducting rigorous tracking to document progress and ensure accountability. For more information on the CORE Hub, please visit https://redwoodcorehub.org/

We recommend a few modifications to conditions outlined in the staff report and addition of two new conditions and five report modifications prior to the Commission's moving forward with an affirmative conditional concurrence vote on the Consistency Determination.

Recommended Modifications to Condition 1 - Plan Review and Coordination:

A. Condition 1fi1: Add: Included in awareness training will be information about marine wildlife of cultural and economic importance to regional Tribal Nations and Indigenous peoples.

B. Condition 1fi5: Add: Reporting of: (iv) sitings, behavioral changes or other impacts to marine wildlife of cultural and economic importance to regional Tribal Nations and Indigenous peoples.
C. Condition 1fiv: Add: Condition to prohibit dropping anchors when sensitive marine wildlife are present in immediately surrounding waters.

Recommended Modifications to Condition 5 - Engagement with Environmental Justice and Local Communities:

A. Change “encourage” to “require” lessees to engage with environmental justice and local communities. The report highlights heightened burdens of air pollution and oil spills on near port communities. However, there is no condition that an engagement framework must be implemented for environmental justice communities “Encouraging” engagement of environmental justice and local communities contrasts with clearly stated requirements of BOEM outlined in other conditions, such as those related to engagement of commercial fisheries.
B. Add a sub-condition to promote community leadership in the offshore wind development process beyond a consultative position, to overcome capacity asymmetry between developers and relatively under-resourced regions. Conditions currently included in the report support coordination with communities without requiring specific frameworks for community leadership to guide processes around workforce development and specific community benefits. The establishment of developer-funded independent community-centered and -governed working groups or steering committees that center Black, Indigenous and Communities of Color, frontline, and disadvantaged communities is important to ensure community decision-making at all stages of the project beyond just a consultative position. This could support deeper community investment and engagement in not only the early development process but in a healthy and thriving industry for years into the future, as well as deepening developer investment in communities where this new industry is being established, and where it will potentially scale up from megawatt to gigawatt levels. In many onland wind projects, the negotiation of benefits and community engagement have been led by developers, leading to great information asymmetries in the decision making process. It is important to learn from those experiences and not repeat processes that disempower communities through mere practices of informing and light consulting, but actually support community decision making power.
C. Add a sub-condition that lessees and environmental justice and local communities may choose to develop a signed/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 and local communities.

D. Add a sub-condition that requires lessees to submit reports to BOEM on process, outreach and outcomes of engagement with environmental justice and local communities and that BOEM will provide copies of these reports to the Coastal Commission.
E. Add a sub-condition to require development and implementation of a framework for continued transparent and equitable community engagement in the region to conduct monitoring of lessee activities and other lessee accountability efforts, to sustain community relationship(s) with lessee(s) over time, and mitigate for cumulative, unanticipated, or greater than anticipated impacts. The monitoring and accountability framework should be administered by third parties, and include structures such as a regional community steering committee with leadership of Black, Indigenous, and Communities of Color, frontline communities, vulnerable populations, and historically marginalized voices.

Recommended Modifications to Condition 6 - Engagement with California Native American Tribes:

A. Change "encourage" to "require" lessees to demonstrate engagement with federally recognized and non-federally recognized California Native American Tribal Nations. The report highlights several areas of potential impact on Tribal Nations and Tribal resources. However, there is no condition that an engagement framework must be implemented for Tribal Nations. "Encouraging" engagement of Tribal Nations contrasts with clearly stated requirements of BOEM outlined in other conditions, such as those related to engagement of commercial fisheries. Recommend lessees be directed to the West Coast Ocean Tribal Caucus report titled *Guidance and Responsibilities for Effective Tribal Consultation, Communication, and Engagement* (https://static1.squarespace.com/static/5bc79df3a9ab953d587032ca/t/5f0cdc876f40e375a32305af/1594678422449/WestCoastTribalEngagmentGuidance_July2020.pdf) for briefing on engaging with Tribal Nations. Add the need to engage Tribal nations on potential to strengthen energy infrastructure on Tribal lands as well as development of Tribal economic enterprise related to offshore wind.
B. Add a sub-condition that requires lessees to employ Tribal liaisons who possess knowledge of tribal law, local indigenous cultures, and tribal ecological science and other traditional knowledges.
C. Add a sub-condition that requires lessees to submit reports to BOEM on process, outreach and outcomes of engagement with Tribal Nations (as appropriate and with the free, prior and informed consent of those Tribal Nations as outlined in the United Nations Declaration on the Rights of Indigenous People) and that BOEM will provide copies of these reports to the Commission.

Recommended Additional Condition Categories:

A. **Include a condition regarding Missing and Murdered Indingeous People (MMIP)**
The CCC should include conditions that directly address issues related to Missing and Murdered Indigenous People (MMIP). The report recognizes that the issue of harassment and sexual violence is connected to worker camps and energy development. However, the CCC report does not provide conditions specific to minimizing potential exacerbation of rates of MMIP in the Humboldt region. It is important to include specific requirements, such as background checks, whistleblower policies, no tolerance policies, training, other measures, and consultation with Tribal Nations and Indigenous leaders.

B. **Include a condition of no more than two lessees in the HWEA**
As BOEM determines the number of leases/lessees in the Humboldt WEA (i.e., 1-3 leases), it is important to consider the complexities and onshore operational scale of multiple lessees/developers, including but not limited to community burdens regarding monitoring, compliance, and enforcement activities (and how those activities are funded and staffed) within the region and across federal and state agencies in various jurisdictional roles. This region has past experience shouldering negative impacts of large industry and the related administrative and jurisdictional burdens of environmental monitoring, compliance, and enforcement activities without the proper capacity or funding to do so. Other complexities include but are not limited to site setbacks between multiple leased areas in the Humboldt WEA, which could reduce generation from the entire Humboldt WEA by up to ~10%, availability of port space for multiple lessees' infrastructure and operations, multiple site-to-shore cables, and rights of way. While we understand the benefits of multiple leases, for these reasons we recommend no more than two leases/lessees in the Humboldt WEA.

General Report Recommendations:

A. **Increase impact analysis on Tribal and recreational fishing communities**
The Consistency Determination report includes a recognition of the value of Tribal and recreational fisheries, especially fisheries for subsistence, but does not contain significant analysis of the potential negative and/or positive impacts to those fisheries by offshore wind. There is also a lack of specificity on how the Tribal and recreational fisheries may be impacted. The CCC report should expand upon the recognition of the value of Tribal and recreational fisheries to include specific considerations of Tribal Nations as well as Hmong and Lao communities. Further impacts on critical species, such as salmon, and water resources, such as the Eel River, Elk River, Mad River and Klamath River, should also be expanded upon, including but not limited to the roles of drought and dams in placing salmon, steelhead and lamprey eel populations at risk.

B. Strengthen lessee non-compliance and enforcement considerations to include community commitments

The CCC staff report discusses lessee noncompliance for natural resource management in the case of oil spills and other disastrous impacts. While transparency and community engagement in Conditions 5 and 6 support public transparency and confidence, the Consistency Determination report does not discuss specific protections for communities during monitoring activities and applicable enforcement and penalty frameworks. Specificity and clarity will provide communities clearer guidance for engagement. A discussion of protection of commitments for engagement with Tribal Nations, environmental justice communities and frontline communities should also be included in the Consistency Determination report.

C. Provide assessment of potential impacts to eelgrass and oyster farming in Humboldt Bay

Humboldt Bay is one of the oyster capitals of the U.S. It is important that the report include analysis of potential impacts harbor and port expansion could have on the oyster industry.

Additionally, eelgrass is critical to the ecology of the Bay and has great cultural value. Mitigations are significant for any eelgrass displacements particularly for onshore and in-bay activities. Recommendations around opportunities to proactively move forward with eelgrass mitigations could help get such efforts underway and help lessen the timeline to clean energy production overall.

D. Note potential impacts of transmission infrastructure

While the Consistency Determination report specifically addresses the offshore WEA, it is important to include reference to and initial high level analysis of potential impacts of coastally located transmission infrastructure for scenic and visual resources, public access and recreation, environmental justice, Tribal and cultural resources, and climate crisis / greenhouse gas reductions.

E. Recognize impacts to local road, safety, and traffic conditions and make recommendations on mitigation opportunities

Development of the offshore wind industry will likely increase large vehicle traffic on routes surrounding Humboldt Bay and the Peninsula. It is important to provide analysis of how this will impact the health and safety of life around the Bay and the port in particular, and make recommendations for improvements to roadways, water-based transportation, and multi-modal transit paths to ensure safety for all users and surrounding communities and ecosystems. Robust consultation with, disruption

mitigation, emissions and greenhouse gas profiles, and safety assessment efforts should be provided for residents on the Samoa Peninsula with very limited egress.

Thank you again for your work and the opportunity to comment on the report. Please do not hesitate to contact us if you have any questions about comments provided here.

Sincerely,

Jana Ganion, CORE Hub Senior Advisor

Bryna Lipper, CORE Hub Advisory Council Member & Chief Executive Officer, Humboldt Area and Wild Rivers Community Foundation

CC: (*listed in alphabetical order*)

The Honorable Virginia Bass, District 4 Supervisor, Humboldt County Board of Supervisors

Scott Binder, Board Member, McKinleyville Community Services District

The Honorable Rex Bohn, District 1 Supervisor, Humboldt County Board of Supervisors

The Honorable Michelle Bushnell, District 2 Supervisor, Humboldt County Board of Supervisors

Joellen Clark-Peterson, Board Member, McKinleyville Community Services District

David Couch, Board Member, McKinleyville Community Services District

The Honorable Diane Feinstein, U.S. Senator for California

Aaron Hakenen, Planning Commissioner, City of Trinidad

Tom Hopkins, Planning Commissioner, City of Trinidad

Kate Hucklebridge, Deputy Director of Energy, Ocean Resources, & Federal Consistency, California Coastal Commission

The Honorable Jared Huffman, 2nd Congressional District, U.S. House of Representatives

Arne Jacobson, Director, Schatz Energy Research Center

Richard Johnson, Planning Commissioner, City of Trinidad

Cheryl Kelly, Planning Commissioner, City of Trinidad

Kathleen Kelly Janus, Senior Advisor on Social Innovation to Governor Gavin Newsom

The Honorable Steve Madrone, District 5 Supervisor, Humboldt County Board of Supervisors

Matthew Marshall, Executive Director, Redwood Coast Energy Authority (RCEA)

Dennis Mayo, Board Member, McKinleyville Community Services District

The Honorable Mike McGuire, 2nd Senate District, California State Senate

The Honorable Gavin Newsom, Governor of California

Gregory Orsini, Board Member, McKinleyville Community Services District

The Honorable Alex Padilla, U.S. Senator for California

Christina Snider, Tribal Advisor to Governor Gavin Newsom

Shannon Souza, Executive Director, Oregon Coast Energy Alliance Network (OCEAN)

Diane Stockness, Planning Commissioner, City of Trinidad

The Honorable Garth Sundberg, Sr., Chair, North Coast Tribal Chairperson’s Association

The Honorable Mike Wilson, District 3 Supervisor, Humboldt County Board of Supervisors

The Honorable Jim Wood, 2nd Assembly District, California State Assembly

BOEM California Intergovernmental Renewable Energy Task Force

Alliance of Communities for Sustainable Fisheries
256 Figueroa Street #1, Monterey, CA 93940
(831) 239-1219
www.alliancefisheries.org

Donne Brownsey, Chair

March 31, 2022

California Coastal Commission

Sent electronically

RE April 7 agenda item #7, CD-0001-22 (BOEM-Humboldt County)

Dear Chair Brownsey and Commissioners,

The Alliance of Communities for Sustainable Fisheries (ACSF) is a 20-year-old 501(c)(3) not-for-profit educational organization, founded for the purposes of connecting fishermen with their communities, and to represent fishing interests in state and federal processes. The ACSF is a regional organization, with commercial fishing leader representatives from Monterey, Moss Landing, Santa Cruz, Morro Bay, and Pillar Point harbors, and Port San Luis, on our Board of Directors. Port communities, the California Wetfish Producers Association, and several recreational fishing organizations also have representatives on our Board. Thus, the ACSF represents a large cross-section of fishing and community interests for the Central Coast of California.

The ACSF Board has reviewed the Coastal Commission's staff report for potential federal consistency determination, with recommended conditions, for the Humboldt Wind Energy Area (WEA). While much of the report is specific to the Humboldt area, it also contains conditions and policy recommendations that are likely to apply to other California WEA's and to BOEM's and the State's ambitions for further offshore wind (OSW) development. The ACSF appreciates the opportunity to comment on these broader recommendations.

The ACSF commends Commission staff in preparing a report that is very thorough. With a few comments, below, we support the recommended conditions #'s 1-7. We especially appreciate the Commission's broad view of BOEM's OSW leasing process by recognizing that many impacts beyond site assessment activities are "readily foreseeable" and must be considered, now. One such set of impacts will

be from the cumulative impacts of both multiple leases in a given WEA, as well as impacts from multiple lease sales and OSW development elsewhere in California and the west coast on our coastwide fisheries.

Also noteworthy in the staff report is the discussion and deep understanding that fisheries are habitat-based and can't "just go someplace else" to fish when displaced by large areas dedicated to OSW.

RE conditions 1-7:

- The ACSF supports the creation of a fishing industry liaison with the OSW industry. Our request is for fishing industry leaders to have meaningful input into the selection process.
- The "Industry letter", signed by nearly all of the State's port-based commercial fishing organizations, and the Fishing Community Benefit Agreement (FCBA), are referenced in the staff report. We request that the proposed Working Group (condition #7) utilize the principles found in the FCBA, with its emphasis on compensation-mitigation to create enduring industry resilience.
- Impacts to fisheries are anticipated during site assessment activities and are addressed in the recommendation for a liaison position and in several other conditions. The ACSF believes that despite the recommended conditions, economic losses will inevitably occur to fisheries due to lost fishing time and displacement. We request that this be acknowledged in the staff report.
- The report's section on social and environmental justice does not specifically mention commercial fishing men and women as comprising a disadvantaged community, though they surely do. It may be that the proposed Working Group structure will give voice to their needs. Still, it bears recognition that the commercial fishing supply chain is heavily represented by people of color and small, family run businesses. Further, the fishing industry is not on a level playing field in an OSW decision-making process dominated by powerful political figures, a federal agency with a frustrating public process, and multi-billion-dollar OSW companies. Nearly every meeting or zoom call in which fishing men and women participate represents a loss of fishing opportunity and income.

- Environmental concerns are addressed in a number of mitigation measures, including extensive monitoring. However, once these projects are built, there will be limited ability to move or modify them. The ACSF suggests that serious consideration be given to establishing a properly sited and designed demonstration project prior to the build-out of hundreds of wind turbines. Awarding only one lease in a portion of the Humboldt and Morro Bay WEAs to serve as demonstration projects prior to any additional west coast OSW leasing would be a way of producing performance and environmental information. Please note that the two small OSW projects proposed for State waters near Vandenberg Space Force Base are not located in deep offshore waters so they will not provide the information needed.

The Commission and staff should be aware that the hearing day and time for the Commission's discussion and public comment on OSW conflicts with the first day of the Pacific Fishery Management Council's advisory committee meetings, so verbal testimony from fishery participants may be limited.

Thank you for considering comments from the Alliance of Communities for Sustainable Fisheries.

Alan Alward

Co-Chair

Frank Emerson

Co-Chair

California Coastal Commission February 9, 2022

State Lands Commission

California Energy Commission

Sent electronically

RE Creating a template and managing Entity to address unwanted, adverse impacts on California's fisheries from Offshore Wind Development

Dear Commissioners,

We the undersigned commercial fishing organizations (CFO's) support the concepts found in the attached Fishing Community Benefit Agreement (FCBA) template. While we do not claim to represent the interests of *every* commercial fishing (CF) man and woman in the state, we do feel that our collective view represents the great majority of the State's CFO's which will be impacted by offshore wind (OSW) development. The term "fisherman" is used herein to be inclusive of our fishing men and women.

Fishermen have (and will continue to) press BOEM to effectively AVOID, MINIMIZE, and MITIGATE the impacts of offshore wind (OSW) development to commercial fisheries and seafood supply from the size and location of Wind Energy Areas (WEA's). These efforts have been frustrating and largely unproductive. The two California WEA's portend BOEM lease awards, soon, with the high likelihood that more California Call Areas will be identified in the months to years to come.

This letter and attached draft template discuss compensation-mitigation for the effects of losing fishing grounds. Please know that we would rather be allowed to continue to have access to our traditional fishing grounds than to have monetary compensation. This effort could be likened to taking out an insurance policy: no one wants losses from OSW, but if/when there is a loss, there should be a mechanism to make a claim.

Efforts have already begun to form the "Entities", legally organized under California and federal law, referenced in the template, to help manage impacts to

fisheries from OSW development. These new Entities will be founded on principles of inclusion and represented democracy for our fishing interests aimed at creating fleet and community resilience. The Entity will be the CF negotiator with OSW companies for financial compensation, as well as other types of mitigation and communications, and will distribute both initial one-time funding that may be provided as well as funding that continues through the term of the lease. The main purpose of the Entity and funding is to preserve and enhance fleet resilience in the face of lost fishing opportunity. We seek to keep people fishing and keep seafood products being delivered to our communities and the state, despite obstacles.

There may be more than one Entity in California to address regional needs and differences. However, it is envisioned that the purpose and governance structure of each of these will be similar. Varying levels of benefits will be available to those who fish in the region. It is also hoped that this template may also be useful for future offshore aquaculture projects that, if permitted for development, disrupt and displace fisheries.

Included in the FCBA template is a list of impacts to commercial fishermen and our communities from OSW development. This list represents known impacts, but there may be other impacts that become known when the OSW developers submit Construction and Operations Plans, as well as once operations begin; therefore, any FCBA's that are negotiated in advance must have the ability to be amended.

We ask that the California Coastal Commission, the State Lands Commission, and the California Energy Commission, use all available authorities to support the state's commercial fishing men and women by requiring OSW developers to negotiate FCBA's in good faith with the Entities. The principles set forth in the FCBA template should guide the negotiation. Such state authorities could include those found under the Coastal Zone Management Act's consistency determinations and certifications, as well as direct project permit conditions, and/or State Lands leases. We believe such support is consistent with the language of California's Coastal Act.

We hope that it is helpful to the Coastal, State Lands, and Energy Commissions to hear the consensus voice of California's commercial fishing men and women on

how compensation and other mitigation should occur if OSW takes over large sections of our traditional fishing grounds. Please note that the State's Association of Harbormasters is also supporting our effort, benefits to our small craft harbors being clear.

On behalf of:

Supporting organizations

Alliance of Communities for Sustainable Fisheries

Alan Alward, Co-Chair

Crescent City Commercial Fishermen's Association

Rick Shepard, President

Trinidad Bay Fishermen's Association

John Provolt, President

Humboldt Fishermen's Marketing Association

Harrison Ibach, President

Shelter Cove Fishing Preservation Association, Inc

Jake Mitchell, President

Salmon Trollers Marketing Association of Noyo

Tony Cannia, President

Bodega Bay Fishermen's Marketing Association

Lorne Edwards, President

San Francisco Crab Boat Owners Association

John Barnett, President

Santa Cruz Commercial Fishermen's Marketing Association

Mike Hubbell, President

Moss Landing Commercial Fishermen's Association

Tom Hart, President

Monterey Commercial Fishermen's Association

Mike Ricketts, President

Morro Bay Commercial Fishermen's Organization

Tom Hafer, President

Port San Luis Commercial Fishermen's Association

Chris Pavone, President

Commercial Fishermen of Santa Barbara

Christopher Voss, President

San Diego Fishermen's Working Group

Pete Halmay, President

California Association of Harbormasters and Port Captains

Andrea Lueker, President

CC

BOEM

CA Department of Fish and Wildlife

Fisheries Community Benefit Agreements

What is a Fisheries Community Benefit Agreement (FCBA)?

A FCBA is a legally binding agreement made between an OSW company which is bidding on a BOEM-advertised lease (or which has been awarded a lease) for the opportunity to build a wind farm, and one or more commercial fishing organizations (CFO's) whose members regularly fish the waters of the project area, including electrical cable routes to shore and security/safety zones which may surround these projects. If the OSW company is not awarded a lease, the FCBA with that company is void. The term of the FCBA shall be equal to the term of the OSW lease and any extensions or transference thereto.

FCBA and the resulting management "Entity" are proposed to be structured similar to the best features of other successful industry-to-industry models such as the Central Coast and South Bay Joint Cable/Fisheries Liaison Committees and the Joint Oil/Fisheries Committee of Southern/Central California. The Entity must have legal stature as a 501-c-3, c-6, or similar organization.

Summary Principles for a FCBA

- FCBA's apply to regions of one or more CFO's, within an identified distance to the cable landing location or other geographic points

- OSW to fund contributions to create continuing economic and community resilience in fisheries to compensate for losses due to OSW development; funding could come from a percentage of the annual OSW operator lease fee, or through a similar formula.

- FCBA's are inclusive of all fisheries and participants who operate in waters used by OSW, whether they home-port or land products in the region, or not

- FCBA's should address both initial impacts and long-term resilience funding

- Legal "Entities" (ie a 501-c-3 or c-6 type organization) with a board of directors founded on democratic representation of fishing interests to be formed to negotiate with OSW the terms of a FCBA. This Entity will also be the managing body to receive and distribute both one-time impact and annual funds. The Entity may include CFO's outside the immediate project area but which have members who have a history of fishing in the OSW project area; however, the CFO's most impacted by the OSW development shall form the majority of voting directors of the board. The Entity will be created prior to any FCBA negotiation.

- FCBA's are Fishing industry-to-OSW industry agreements, with the managing Entity led by fishing representatives.

- Compensation-mitigation shall be negotiated between the industries in good faith. While various data sets and other sources of fishing history and economic information should be used to determine levels of compensation, it is recognized that impacts to commercial fisheries and related communities are highly complex, with a deep reach.

- The FCBA will include communication protocols between industries to ensure a constructive long-term relationship.

- FCBA's may address the phases of OSW development and must allow for amendments to take into account new impacts as they become known.

- OSW developers may need to negotiate more than one benefit agreement to cover *various* impacts that will occur to other types of stakeholders and communities.

When is a FCBA Needed?

The principals of impact avoidance, minimization, and non-monetary mitigations should be considered for all aspects of an OSW project prior to compensation-mitigation discussions. Make no mistake: fishermen would rather have their areas of opportunity preserved than have financial compensation for the loss. However, with the siting, size, and scope of proposed OSW developments there will be unavoidable impacts to the commercial fishing industry. **Thus, a FCBA should be required as part of a Coastal Zone Management Act consistency determination or certification, and/or state or federal development permits, or state leases**. FCBA discussions are most fully informed when an OSW project's Construction and Operating Plan is known. This said, many impacts will be known prior to that phase, allowing for the basic outline of an agreement to be set earlier, subject to amendment as more is known. A FCBA should be in place prior to a lease being executed as impacts to commercial fishing will occur immediately during the Site Assessment. Fish Surveys required by the FCBA should begin before and during the Site Assessment.

The types of impacts to fisheries from OSW are found below.

Economic modeling to determine impact fees should consider the following known impacts, risks, and uncertainties:

1. Direct/indirect loss of historically important fishing grounds and predicted important future fishing grounds including projections related to changing ocean conditions
2) Induced risk to safety at sea, including turbines creating distorted radar contacts and the great distance for USCG or other rescue help to arrive considering aircraft may not be able to operate near turbines.
3) Direct/indirect loss of harbor space and infrastructure serving the fishing industry

4. Potential for interactions with fishing gear and/or loss of gear in the find farms and service vessel traffic lanes during survey work and both construction and operational phases.

5. Increased costs and time at sea to avoid wind farms, including impacts to boats drifting at night which will have to run 1-2 hours upwind from wind farms not to drift into them. Additionally, west coast WEAs located northwest of ports will force fishing to the south which will make returning to Port more difficult when facing prevailing headwinds. Increased time at sea is always a safety concern.

6) Direct/indirect losses to dependent businesses/communities (such as marine supply stores, processors, restaurants, and tourism generally).

7) Loss of community identity as fishing culture is replaced by a large industrial presence.

8) Impacts to long-running scientific datasets which inform stock assessments or other aspects of the fisheries management process(es). This impact will create scientific uncertainty about the status of stocks which can only lead to reduced harvest quotas.

9) Impacts on special management areas such as habitat closures, spawning closures, and other restricted areas, including Essential Fish Habitat.

10) Adverse impacts to fish stocks, fish stock migratory patterns, and fish distribution, including concerns around any diminishment of ocean upwelling due to reduced wind speeds caused by wind farms, and from impacts from the potential for noise pollution.

11) Adverse impacts to migratory patterns and critical habitat of Endangered Species Act (ESA) and Marine Mammal Protection Act (MMPA) protected species that interact with fisheries.

12) Negative economic, social, and environmental effects of fishery displacement and compaction into remaining open habitats.

13) Loss of fishable area to certain gears due to submarine cable routes to shore, impacts from the process of burying cables, with the uncertainty of EMF disturbance to sea life.

14) Impacts to fishermen from-time consuming public and private processes required to avoid, minimize and mitigate harmful OSW developments which cause a loss of fishing time and production.

15) Costs incurred from the necessity of hiring legal counsel and consultants to represent fishermen's interests.

16) Uncertainty exists around insurance coverage for commercial fishing vessels which transit or attempt to fish inside a wind farm

17. Loss of fishable area due to shipping and barge traffic patterns changing in response to wind farms

18. Loss of fishable area which may incur due to safety/security zones being imposed around wind farms by the USCG

19. There will be distinct impacts from site surveys on fishing activity

20. Reduced value of fishing permits as opportunity is lost or quotas are reduced

21. Unforeseen impacts due to the experimental nature of very deep water floating turbines

22. Cumulative impacts of individual impacts will likely exceed the simple sum of the parts. This is especially so when considering that many fisheries are coast-wide. Thus, closing other areas of the west coast for large wind farms can affect other regions through fishery displacement, and/or depression of the industry as a whole. Likewise, cumulative impacts must be measured from the combination of leases that may occur in a single WEA.

23. OSW ambitions for coastal waters creates enormous uncertainty within fisheries, creating difficulty in business planning and in attracting future generations of fishermen

Other impacts will likely be identified. There may also be a few benefits which stem from OSW development, such as improvements to harbor facilities and reduced fuel costs (from higher volumes of fuel used) which fishermen may appreciate.

Addressing these impacts will involve a complex negotiation and may be more an art-form than science in achieving a fair deal for both industries.

It is also important to understand the lop-sided nature of this issue. The OSW industry, Federal and State government, and many ENGO's trumpet the benefits of OSW while fishermen have virtually no resources and are uniquely unsuited to defending themselves in the political arena.

Purpose of a Fisheries Community Benefit Agreement

Potential purposes of a FCBA are many, and likely to be more fully informed when potential impacts are better understood. At minimum, the FCBA would:

1) Provide *one-time* compensatory-mitigation to all regional fishermen as well as additional compensation for all fishermen directly impacted by the Wind Energy Area and cable route(s); and,

2) Provide an *annual* community fund based on a percentage of the OSW lease (or another formula to be determined) that will enable local-level projects and programs providing resilience and sustainability to the region's fisheries and related businesses; and,

3) The community fund will also support larger State-wide industry-led organizations which work to benefit and sustain in-State wild-capture fishing communities and seafood. This work is essential to the State's food security, thereby benefitting all California fishermen and related businesses.

Funding to be adjusted for inflation annually.

Examples of uses of annual funding may include: lower costs of mooring, fuel, and ice for active fishermen; assist local cities or port/harbor districts in acquiring and maintaining fisheries-related infrastructure (ie, ice machines, hoists, dock repairs, etc); provide training programs to develop new entrants to the fisheries; local promotion of seafood via seafood markets and festivals; provide vessel safety equipment; support for

participation in fisheries management; provide cold storage facilities; retain consultants and legal services as needed; create strong communication tools among the fishing community for information-sharing; provide community outreach on the sustainability of California fisheries; commission science products, economic impact reports, public opinion polls; and, support development of innovative gears and/or experimental fishing permits.

The FCBA should also define key relationships between the developer and fishermen. This can include: Industry to industry communication protocols; a consultation requirement; agreed upon traffic corridors; first right of refusal for certain job opportunities; coordinated safety/emergency response; job training; 24 hour problem/emergency hotline; gear replacement if conflicts with OSW hardware or operations occur; collaborative fish stock surveys; biological assessments; and a bond held for unforeseen impacts.

All of these programs are meant to create **resilience** in the fleet by lowering fishing costs, increasing profitability, and in other ways to keep people fishing despite a loss of fishing opportunity caused by OSW development. Should both the MB376 and Humboldt areas be fully developed, nearly 600 square miles of productive ocean will be removed from seafood supply. We are aware of other areas of interest to BOEM being considered north of San Francisco. Should these areas result in OSW leases, California will suffer a further loss of fishing opportunity.

When FCBA yearly fund contributions sustain seafood production, other elements of the seafood supply chain (deckhands, processors, retailers, restaurants, etc) will benefit. These programs will help keep up seafood deliveries to the communities; however, make no mistake, removing 600 square miles from production will lessen seafood production.

Hypothetical FCBA Implementation-Governance Structure of Administering Entity

California's commercial fishing industry can look to existing successful FCBA-like agreements to inform the governance structure of an entity (Entity) formed to administer the terms of a FCBA. **These industry-to-industry agreements should be negotiated**

between the local port fishing associations as represented by the Entity, and the OSW company, **not by any State Agency**; **however, both BOEM and State agencies can be helpful by requiring that OSW lessees enter into FCBA's following the principles listed above.**

Such an Entity could have the following features:

- The Entity is guided by a Board of Directors (Board). The composition of the Board and its responsibilities are to be determined. For discussion purposes, the board of directors would be founded on democratic representation of fishing organizations formed to negotiate with OSW the terms of a FCBA. This Entity will also be the managing body to receive and distribute both one-time impact and annual funds. The Entity may include CFO's outside the immediate project area but which have members who have a history of fishing in the OSW project area; however, the CFO's most impacted by the OSW development shall form the majority of voting directors of the board. The OSW company(s) funding the FCBA could have one or more non-voting representatives on the board, as well as one non-voting representative of each harbor/port administration(s).

- The FCBA would provide for funding in phases as negotiated between the parties, for the duration of the lease. As described, above, there shall be an initial one-time mitigation-compensation fund, as well as an annual fund. Impacts are expected to be felt by fishermen beginning with the initiation of the Site Assessment and Surveys. Initial mitigation-compensation will be for anticipated future losses due to OSW displacement for active fishermen.

- The Entity to hire a manager or executive director to manage its day-to-day affairs, under the direction of the Board.

- The Entity will be the communication liaison between the OSW and commercial fishing industries. Good relations are desired.

- The Entity and OSW lessee shall provide a first right-of refusal for well-defined employment or contracting opportunities for fishermen to use their mariner skills and vessels in support of OSW construction, research, and operations.
- The FCBA shall describe a process to provide for initial, one-time direct payments to fishery participants via the local port CFO's operating through the Entity's Board of Directors. Any such payments will be negotiated between the Entity Board and OSW company representatives. Fishermen who do not home-port in the directly affected ports shall be able to make claims provided they show income losses to the Board due to displacement by the OSW development.
- The past window of time to show fishing activity inside the WEA and cable route(s) shall begin ten (10) years prior to the signing of the FCBA, and take into account interference in fishing activity due to the pandemic.
- A percentage, to be determined, of an annual FCBA fund shall be directed in support of local, State, regional, and/or national commercial fishing and/or seafood promotion, conducted by recognized non-profit industry organizations, supplied on a grant-request basis. Priority shall be given to local/State organizations.
- The Board shall manage the fund by creating programs such as described above, and through considering grant requests initiated by fishery participants and/or community requests for additional, worthy programs or projects that have a supportable connection to commercial fishing.
- Since FCBA's may be negotiated prior to the completion of a construction and operations plan (COP), the FCBA should provide a mechanism for amendment when new information and/or impacts to commercial fishing is made available which have impacts to commercial fishermen that need to be accounted for.
- In the event that there is more than one OSW lease and FCBA in the region, the Entity can either administer all FCBA's concurrently, or by separate processes.

- The Entity shall provide an annual informational report on its programs and expenditures to OSW company(s) funding the FCBA(s) and to the California Coastal Commission.

The California Coastal Commission's Role

The Coastal Commission should prioritize *avoidance* of conflicts between OSW and the State's seafood harvesters. Only those conflicts which are unavoidable should be allowed, and those *minimized* to the extent practicable. *Mitigation* measures should then be required. One mitigation measure which should be required are fish stock surveys done as part of the Site Assessment using the BACI (Before After Control Impact) research format, conducted by an independent academic institution but funded by the OSW developer.

For the conflicts which remain, which are likely to be significant for fishermen, the Coastal Commission should require compensatory-mitigation agreements with commercial fishermen's port associations as a condition for its approval of BOEM's consistency determination/certification under the Coastal Zone Management Act (CZMA). As such, it would be appropriate for BOEM to indicate in the proposed sale notice that such an agreement will be *required*. The Coastal Commission has broad authority under the California Coastal Act and the CZMA to protect economic as well as environmental and biological interests in the ocean, and has a responsibility to express this expectation clearly to developers and the industry as a whole.

The Coastal Commission will have a second opportunity to require FCBA's when Coastal Development Permit approval is sought by individual developers.

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California Coastal Commission
455 Market Street, Suite 300
San Francisco, CA 94105

April 1, 2022

Re: April 2022 CD-0001-22 (Bureau of Ocean Energy Management, Humboldt Co.)

Submitted via email

Dear Commissioners,

The West Coast Pelagic Conservation Group represents commercial fishermen, and processors on the West Coast. We submit the following comments on the Consistency Determination (CD) by the Bureau of Ocean Energy Management (BOEM) for leasing activities associated with future offshore wind development in the Humboldt Wind Energy Area, located in federal waters approximately 21 miles offshore of Eureka.

First, we offer our full concurrence and support for the actionable items and recommendations listed by Mr. Mike Conroy on behalf of multiple fishing organizations. His comments are well laid out and largely focus on endorsement of the California Coastal Commission (CCC) Staff Report.[1] We quote some of the salient language in the CCC Report.

- *"The Commission agrees that a primary focus for this CD is to analyze effects of lease exploration activities—such as site characterization and assessment—and that it is not possible at this time to analyze the precise effects that future construction and operation of offshore wind projects will have on coastal resources. However, it is reasonably foreseeable that the leases will lead to construction and operation of at least some offshore wind facilities. It is also feasible to describe, at least at a high level, the types of impacts that such facilities could have on coastal resources."*
- *"A December 2021[2] study requested by the California Ocean Protection Council that evaluates potential upwelling effects resulting from the installation of wind turbines offshore of Morro Bay, Diablo Canyon and Humboldt Call Areas. The model shows about a 5 percent reduction in wind speeds found in the lee of wind farms, which in this model, leads to an approximately 10 – 15 percent decrease in upwelled volume transport and resulting nutrient supply to the coastal zone in the vicinity of the Morro Bay and Diablo Canyon Call Areas…"*
- *"A February 2022 study which analyzes the potential impact of offshore wind farms through decreasing sea surface wind speed on the shear forcing and its consequences for the ocean dynamics are investigated[3]. News story on the study - Offshore wind farms reshape the North Sea (hereon.de). This could inform potential impacts to upwelling, ocean stratification, and prevailing currents in the California Current."*

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[1] California Coastal Commission Comments - Notice of April 7, 2022 Coastal Commission hearing on BOEM's CD for the Humboldt Wind Energy Area

[2] See *An Assessment of the Cumulative Impacts of Floating Offshore Wind Farms*. Available at https://www.opc.ca.gov/webmaster/_media_library/2022/02/C0210404_FinalReport_12312021.pdf, last accessed March 29, 2022

[3] Frontiers | Emergence of Large-Scale Hydrodynamic Structures Due to Atmospheric Offshore Wind Farm Wakes | Marine Science (frontiersin.org)

Mr. Conroy's comments are succinct but effectively encompass WCP's position. He outlines many of the reasons commercial fishermen and processors are apprehensive about the present plans for Offshore Wind (OSW) development. We do not need to further expand this.

However, we would like to point out that the present BOEM environmental review process is insufficient and flawed. It is organized in reverse to do a final "deep dive" NEPA review and analysis as a last step just prior to construction. At that point prospective developers will have invested millions, if not billions of dollars, leasing, surveying, and securing a position in an overwhelmed supply chain to purchase the machinery they need.to start construction. To administer a NEPA analysis in this manner defeats the purpose and may lead to catastrophic long term environmental impacts to our oceans as well as our fishing communities.

Rejecting a project could produce a host of legal conflicts, especially when many voices are currently raised to construct wind farms at any cost, as quickly as possible. What would the legal ramifications be of granting a lease, and then rejecting it due to a last minute NEPA review, after the lessee was granted a green light to position themselves over multiple years to do the project? The original pre-lease Environmental Assessment that was conducted issued a go-ahead to proceed, regardless of a lack of thorough research and analysis. This is not only a concern of the fishing industry. Similar concerns have been previously expressed by the NGO community.

NGO excerpts of Comments to BOEM on their EA for the Humboldt Wind Energy Area:

Joint letter from the Natural Resources Defense Council, National Audubon Society, Whale and Dolphin Conservation, Humboldt Baykeeper, Ocean Conservation Research, and the Surfrider Foundation:[4]

- *"However, of particular concern is the Draft EA's failure to directly assess cumulative impacts; the analysis of cumulative impacts is crucial to a robust assessment of the impacts of leasing of offshore wind project.*
- *'The cumulative impact analysis must provide a "useful analysis of the cumulative impacts of past, present, and future projects." '*
- "Courts, looking to the text and purpose of the NEPA itself, recognized the requirement to examine the cumulative impacts of a project well before regulations requiring a cumulative impacts analysis were promulgated in 1978. As such, there is ample authority to consider cumulative impacts even without an express requirement to do so in regulations.[5]"

[4] Regulations.gov

[5] For instance, in 1972, the U.S. Court of Appeals for the Second Circuit found that when determining whether or not an action is subject to NEPA, agencies should consider, inter alia, "the absolute quantitative adverse environmental effects of the action itself, including the cumulative harm that results from its contribution to existing adverse conditions or uses in the affected area." Hanly v. Kleindienst, 471 F.2d 823, 830-31 (2d Cir. 1972). The Court went on to highlight that "it must be recognized that even a slight increase in adverse conditions that form an existing environmental milieu may sometimes threaten harm that is significant. One more factory polluting air and water in an area zoned for industrial use may represent the straw that breaks the back of the environmental camel. Hence the absolute, as well as comparative, effects of a major federal action must be considered." Id. at 831. Likewise, in 1975, the U.S. Court of Appeals for the Seventh Circuit stated that, "NEPA is clearly intended to focus concern on the 'big picture' relative to environmental problems. It recognizes that each 'limited' federal project is part of a large mosaic of thousands of similar projects and that cumulative effects can and must be considered on an ongoing basis." Swain v. Brinegar, 517 F.2d 766, 775 (7th Cir. 1975) (recognizing that an Environmental Impact Statement (EIS) (cont. prev. pg) should consider comprehensive, cumulative impacts, but resolving the case on the grounds that the federal agency had impermissibly delegated the EIS to Illinois state Cont

Oceana:
"Before the Bureau of Ocean Energy Management (BOEM) finalizes its Environmental Assessment (EA) on the issuance of commercial wind leases and associated site characterization activities, Oceana requests the EA carefully consider the environmental effects, including cumulative effects, on (1) all protected species that use this area, (2) critical habitat overlapping and adjacent to the Wind Energy Area, (3) Essential Fish Habitat (EFH) conservation areas, and (4) Habitat Areas of Particular Concern (HAPCs). The EA should fully assess all potentially authorized activities within the lease area and impacts outside the lease area from acoustic impacts, vessel traffic, and impacts associated with seafloor transmission cables. Importantly, before issuing any offshore wind leases or advancing to the construction and operation phase for the Humboldt Wind Energy Area (WEA) or any other West Coast wind energy areas, Oceana requests BOEM prepare a Programmatic Environmental Impact Statement (EIS) that assesses the biological, physical, social, and cultural impacts of all potential offshore wind energy development along the U.S. West Coast".

American Bird Conservancy:

- *"Trans-Pacific migration is a poorly studied phenomenon – this must be rectified and turbine collision risks assessed to fully evaluate the impacts of OSW development. This is particularly important given the location of the WEA near Humboldt Bay, which supports large numbers of shorebirds and other species during migration and winter."*
- *"Multi-year field studies must be conducted to inform planning for the Humboldt WEA and provide baseline data for post-construction impact assessment. Effective planning cannot occur without sufficient data. Data must be sufficiently robust to evaluate inter- and intra-annual variability in bird abundance and behavior, and associated risks for collisions and displacement. This is a new industry to the U.S., and one that studies from Europe show can have negative impacts on birds."*
- *"The EA provides an inadequate analysis of reasonable alternatives to the proposed action that would advance the transition to renewable energy in this region."*

Lastly, we include some information from the March 2022 Pacific Fishery Management Council's (Council) Coastal Pelagic Species Sub Panel (CPSAS) report to the Council on offshore wind energy.

Ex. CPSAS Report to PFMC[6]:

"Emergence of Large-Scale Hydrodynamic Structures Due to Atmospheric Offshore Wind Farm Wakes[7]:
'The simulations show the emergence of large-scale attenuation in the wind forcing and associated alterations in the local hydro- and thermodynamics. The wake effects lead to unanticipated spatial variability in the mean horizontal currents and to the formation of large-scale dipoles in the sea surface elevation. Induced changes in the vertical and lateral flow are sufficiently strong to influence the residual currents and entail alterations of the temperature and salinity distribution in areas of wind

(cont. from previous page) authorities). Similarly, in 1976, the U.S. Supreme Court acknowledged the importance of examining cumulative effects under NEPA, concluding that, "Cumulative environmental impacts are, indeed, what require a comprehensive impact statement." Kleppe v. Sierra Club, 427 U.S. 390, 413 (1976).
[6] AB-ME Report (pcouncil.org) March 2022 Agenda Item C.2.a Supplemental CPSAS Report 1
[7] Frontiers | Emergence of Large-Scale Hydrodynamic Structures Due to Atmospheric Offshore Wind Farm Wakes | Marine Science (frontiersin.org)

farm operation. Ultimately, the dipole- related processes affect the stratification development in the southern North Sea and indicate potential impact on marine ecosystem processes'[8]

Wind farms are altering the North Sea[9]

- *'The analysis shows a connection between wake vortices and changes in the momentum-driven exchange between the atmosphere and the water. This in turn could affect the horizontal currents and stratification of the water'.*
- *'The effects of wake vortices are strong enough to redirect the existing currents, which results in a shift in the mean temperature and salinity distribution in the areas of the wind farms'*
- *'It is thus important to consider these consequences when developing marine protection concepts," says Hereon Institute Director Prof. Corinna Schrum. A modification in this exchange potentially affects regional atmospheric conditions and ecosystem dynamics…'*

Transport Patterns of Pacific sardine Sardinops sagax eggs and larvae in the California Current System: *"Transport patterns of eggs and larvae have large effects on subsequent recruitment of pelagic fishes because eggs must be released into appropriate habitat and then retained or drift toward appropsriate nursery habitat to survive. (Bakun), 1996"*[10]

CPSAS report: *This research suggests that OSW could impact successful recruitment and healthy population levels of both sardines, anchovies, and possibly other larval fish and varieties of plankton. Sardine and anchovies are the mainstays of West Coast forage fish for many species including Humpback whales, sea birds, and salmon. The research in Europe is the first major study we have seen that delineates some of the hydrological and meteorological changes that occur.*

"Sardines move offshore up to 60+ miles to spawn, and the larvae use ocean currents and wind to aid their journey to their nursery zones inshore. We could not find delineated data on anchovy spawning, but anchovy adults also move offshore, and inshore and young anchovy move inshore to favorable nursery zones. Temperature, salinity, upwelling nutrients, food, and other environmental drivers all influence the locations for sardines and anchovies. This results in movement between inshore and offshore waters. It now appears there may be a concern that applies to these primary forage fish stocks that might impact CPS and many other fisheries, as well as a large array of aquatic and avian animals, some of which are endangered or protected species.

For this reason and reasons outlined by the MPC, EWG, and HC, the CPSAS strongly recommends that the Bureau of Ocean Energy Management (BOEM) and the OSW developers need to go through a programmatic Environmental Impact Statement (EIS) process prior to leasing. This EIS needs to also account for cumulative impacts. We now have a solid study on effects of wind turbines on the hydrological dynamics of the ocean. But this is only the first step that needs to be taken. Delaying a robust programmatic and independent EIS until there is a pre-commissioned project ready to start construction allows a high probability for inadequate review. By that point, there could be billions invested. Many ecological harms could occur due to lack of comprehensive knowledge of ecosystem and

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[8] Frontiers | Emergence of Large-Scale Hydrodynamic Structures Due to Atmospheric Offshore Wind Farm Wakes | Marine Science (frontiersin.org)

[9] https://notrickszone.com/2022/02/26/messing-with-the-environment-to-fight-climate-change-wind-farms-are-altering-the-north-sea/

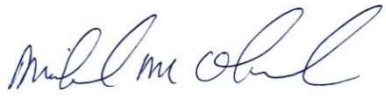
[10] Transport patterns of Pacific sardine Sardinops sagax eggs and larvae in the California Current System - ScienceDirect

environmental impacts. The EIS process is weak at best if it does not consider cumulative impacts. It is implicit that this should utilize the total number of farms and turbines along with their location. Anything less is supposition and a recipe for environmental meltdown.

For the above reasons we recommend that the MPC committee Report 2 under Agenda Item C.2.a, MPC Report 2 March 2022, "MARINE PLANNING COMMITTEE REPORT ON PROPOSED POLICY GUIDANCE FOR OFFSHORE DEVELOPMENT ACTIVITIES" include an explicit Council endorsement, that a full Programmatic EIS should be completed prior to leasing any WEA sites. Additionally, that this EIS should analyze total cumulative impacts, based on the number and size of the wind farms, location, and density."

West Coast Pelagic Conservation Group thanks the Bureau of Ocean Energy and the California Coastal Commission for the opportunity to comment on this important topic. As time elapses and the Offshore Wind energy push goes forward it is apparent that there are many critical issues that are not being addressed in this process. In the same time frame, more information is coming forward from the science community that wind extraction at the least is altering currents and normal environmental function of ocean dynamics. For many years the fishing industry has heard that disruption of this function could cause cataclysmic change. Fishing is a minute incursion compared to the present plans for industrialization of our oceans. The fact that we are not studying and analyzing these potential impacts until we are ready to put steel in the water is contrary to every principle that NEPA is founded on. The environmental community has woken up to this fact and the Commission seems empathetic for the need to analyze and do research before we take the plunge. Hopefully, others will begin to understand that this process needs to slow down, progress cautiously, and follow the same rules that all other users of the ocean must. Otherwise this may well be a case of the cure being worse than the targeted disease.

Thank you.
Sincerely,



Mike Okoniewski; Secretary:
West Coast Pelagic Conservation Group, Westport WA
Mokoniewski.consultant@PacificSeafood.com;
Ph: 360-619-2019

California Coastal Commission
455 Market Street, Suite 300
San Francisco, CA 94105

April 1, 2022

Re: April 2022 CD-0001-22 (Bureau of Ocean Energy Management, Humboldt Co.)

Submitted via email

Dear Commissioners,

The undersigned organizations, representing commercial fishermen, buyers, and processors across the U.S. West Coast, submit the following comments on the Consistency Determination (CD) by the Bureau of Ocean Energy Management (BOEM) for leasing activities associated with future offshore wind development in the Humboldt Wind Energy Area, located in federal waters approximately 21 miles offshore of Eureka. Because some of our organizations have filed separate comments commenting on specific language within the Staff Report, this letter is primarily focused on the approach taken in the Staff Report and why we believe that approach is the one you should adopt. We wish to applaud your staff for the thoroughness of their report.

The CD submitted by BOEM defines the Proposed Action as the issuance of commercial wind energy leases within the Humboldt Wind Energy Area (HWEA). BOEM indicates the Proposed Action "could result in site assessment activities on leases and site characterization activities on the leases, grants, and potential easements.[1]" We are unaware of any offshore wind energy leases in U.S. federal waters under the current permitting regime (Smart from the Start) that has resulted in the rejection of a Constructions and Operations Plan – the final stage before development occurs. Given this fact, we fully endorse the approach contained on page 3 of the Staff Report:

> The Commission agrees that a primary focus for this CD is to analyze effects of lease exploration activities—such as site characterization and assessment—and that it is not possible at this time to analyze the precise effects that future construction and operation of offshore wind projects will have on coastal resources. However, it is reasonably foreseeable that the leases will lead to construction and operation of at least some offshore wind facilities. It is also feasible to describe, at least at a high level, the types of impacts that such facilities could have on coastal resources. Review of this consistency determination is the state's opportunity to examine the impacts of offshore wind development at a programmatic level and to assess whether the Humboldt WEA is an appropriate place to site offshore wind in California. This review also presents the opportunity to identify data and information needs for future federal consistency reviews of specific projects and to communicate the Commission's expectations on the anticipated scope of those future reviews. Therefore, throughout this report, lease exploration activities are analyzed for consistency with the CCMP, and future lease

[1] See Page 14 of Consistency Determination For Leasing Wind Energy Areas Offshore Humboldt County, California submitted by BOEM, dated January 24, 2022.

development activities are separately described and, to the extent that potential effects are reasonably foreseeable, also analyzed for consistency."

In terms of identifying data and information needs, we offer the following suggestions for your consideration. The inventory of available science is rapidly growing, especially from locations where offshore wind is not a novelty. Much of this science is being developed by looking at impacts of fixed offshore wind infrastructure. Some recent studies are pointing to potentially severe and significant coastal effects.

- A December 2021[2] study requested by the California Ocean Protection Council that evaluates potential upwelling effects resulting from the installation of wind turbines offshore of Morro Bay, Diablo Canyon and Humboldt Call Areas. The model shows about a 5 percent reduction in wind speeds found in the lee of wind farms, which in this model, leads to an approximately 10 – 15 percent decrease in upwelled volume transport and resulting nutrient supply to the coastal zone in the vicinity of the Morro Bay and Diablo Canyon Call Areas. Changes are smaller in the Humboldt WEA due to its smaller size.

- A February 2022 study which analyzes the potential impact of offshore wind farms through decreasing sea surface wind speed on the shear forcing and its consequences for the ocean dynamics are investigated[3]. News story on the study - Offshore wind farms reshape the North Sea (hereon.de). This could inform potential impacts to upwelling, ocean stratification, and prevailing currents in the California Current.

- A March 2022[4] study which shows sea turtles can experience temporary hearing loss from an excess of underwater noise. Construction activities and increased vessel use could generate such underwater noise.

- A January 2022 study[5] which "considers the potential impacts on marine mammals, seabirds, fishes and benthic ecosystems." The focus is "on the unique risks floating turbines may pose with respect to: primary and secondary entanglement of marine life in debris ensnared on mooring lines used to stabilize floating turbines or dynamic inter-array cables; behavioral modification and displacement, such as seabird attraction to perching opportunities; turbine and vessel collision; and benthic habitat degradation from turbine infrastructure, for example from scour from anchors and inter-array cables."

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[2] See *An Assessment of the Cumulative Impacts of Floating Offshore Wind Farms*. Available at https://www.opc.ca.gov/webmaster/_media_library/2022/02/C0210404_FinalReport_12312021.pdf, last accessed March 29, 2022

[3] Frontiers | Emergence of Large-Scale Hydrodynamic Structures Due to Atmospheric Offshore Wind Farm Wakes | Marine Science (frontiersin.org)

[4] Effects of noise on marine life: Study finds that turtles are among animals vulnerable to hearing loss -- ScienceDaily

[5] Can be downloaded at Potential impacts of floating wind turbine technology for marine species and habitats - ScienceDirect

- A February 2022[6] study which highlights environmental risks to the seabed and biodiversity from offshore wind farms in the Mediterranean Sea. Two of the study's "highlights" are: (1) Offshore wind farms (OWF) pose serious environmental risks to the Mediterranean Sea; and (2) OWF should be excluded from areas of high biodiversity and/or high valuable seascape.

As the Staff Report highlights, "Globally, there have only been 18 floating offshore wind turbines, one of which was in Maine. Of these 18 turbines, only 11 are currently active.[7]" Identifying research needs, particularly related to floating offshore wind infrastructure, should be prioritized when identifying data and information needs. This is further supported by the language on page 19 of the Staff Report, "it is critical that this transition (to 100% renewable energy) be done in a way that protects California's invaluable coastal and marine resources. As California considers how to approach offshore wind development, careful planning and comprehensive examination of potential impacts, and a commitment to adaptive management are central to ensuring coastal resource protection. The efforts made to understand, avoid, and minimize impacts now will also help inform future floating wind project design."

We very much appreciate the Staff Report acknowledging that our members and the communities which are dependent on our operations will be adversely affected. We fully agree with the language on page 22 of the Staff Report, "issuance of leases will have immediate effects on fishing communities even before any lease development activities occur, as the leases and overall BOEM process injects uncertainty into an occupation that is already heavily regulated and uncertain. Based on past BOEM leases and authorizations for wind development on the east coast, it is also reasonably foreseeable that the leases will lead to construction and operation of at least some offshore wind facilities, and it is feasible to describe, at least at a high level, the types of impacts that such facilities could have on coastal resources." Our industry provides full-time, year-round, employment in Crescent City, Eureka and Fort Bragg which is dependent upon our abilities to access fishing grounds to provide you a healthy source of protein with a lower carbon footprint vis-à-vis other domestic sources of protein[8]; and certainly over imported seafood. We are supportive of the Conditions outlined in the Staff Report, in particular Conditions 4 (safe navigation lanes), 5 (engagement with environmental justice communities) and 7 (independent fisheries liaison) and look forward to working with your staff and lessees in ensuring these Conditions are properly addressed.

We are also appreciative of the Staff Report's inclusion of the section entitled *Cumulative Effects on Fishing*. The BOEM document you are discussing today is dated January 24, 2022. We note that BOEM has published proposed Call Areas off the Oregon Coast subsequent to that date. The publication of those Call Areas has changed the conversation and very much put a priority on cumulative impacts. A 206 sq mile windfarm looks much

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[6] Unravelling the ecological impacts of large-scale offshore wind farms in the Mediterranean Sea (wind-watch.org)

[7] Staff Report, page 20.

[8] See - Wild seafood has a lower carbon footprint than red meat, cheese, and chicken, according to latest data - Oceana and New paper explains the role of seafood in sustainable diets - Sustainable Fisheries UW (sustainablefisheries-uw.org)

different when you add on another 2,181 sq miles in Call Areas beginning 51 miles above the northern most border of the Humboldt WEA.

We thank you for your consideration of these comments. We appreciate the thoughtful approach outlined by your staff and hope you will concur with their recommendations. Please feel free to reach out to Mike Conroy (mike@wecofm.com) if we can provide additional clarifications or information.

Responsible Offshore Development Alliance
Annie Hawkins

American Albacore Fishing Association
Tim Thomas

Crescent City Commercial Fishermen's Assn
Rick Shepherd

Fishermen's Marketing Assn
Travis Hunter

West Coast Pelagic Conservation Group
Mike Okoniewski

Midwater Trawlers Cooperative
Heather Mann

Alliance of Communities for Sustainable Fisheries
Alan Alward, Co-Chair

Ocean Companies
Brian Blake/Greg Shaughnessy

West Coast Fisheries Consultants
Mike Conroy

Oregon Trawl Commission
Yelena Nowak

Pacific Coast Federation of Fishermen's Assns
George Bradshaw

Western Fishboat Owner's Association
Wayne Heikkila

Humboldt Fishermen's Marketing Assn
Harrison Ibach

Morro Bay Commercial Fishermen's Org
Tom Hafer

West Coast Seafood Processors Assn
Lori Steele

Oregon Dungeness Crab Commission
Tim Novotny

F/V Jeanette Marrie
Jon Silva

Pacific Seafood
Mike Okoniewski

California Wetfish Producer's Assn
Diane Pleschner-Steele

Responsible Offshore Development Alliance

April 1, 2022

California Coastal Commission
455 Market Street, Suite 300
San Francisco, CA 94105

Re: CD-0001-22 (Bureau of Ocean Energy Management, Humboldt Co.)

Dear California Coastal Commissioners,

The Responsible Offshore Development Alliance (RODA) supports the comments submitted by Mike Conroy on behalf of multiple commercial fishing associations, including several RODA members, for leasing activities associated with future offshore wind development in the Humboldt Wind Energy Area.

RODA is a coalition of fishery-dependent companies, associations, and community members committed to improving the compatibility of new offshore development with their businesses. Members of our coalition operate in federal and state waters of the Pacific, New England, and Mid-Atlantic coasts. Our Pacific coast members include the following:

Alliance of Communities for Sustainable Fisheries
American Albacore Fishing Association
Cablefish Accords
California Wetfish Producers Association
F/V Barbara Marie
F/V Jeanette Marie
F/V Last Straw
F/V Verna Jean
Midwater Trawlers Cooperative
Oregon Dungeness Crab Commission
Oregon Trawl Commission
Pacific Coast Federation of Fishermen's Associations
Pacific Whiting Conservation Cooperative
Purse Seine Vessels Owners Association
Shrimp Producers Marketing Cooperative
Sun Coast Calamari
United Catcher Boats
West Coast Fisheries Consultants
West Coast Pelagic Conservation Group
West Coast Processors Association

As a national organization, RODA has diligently worked with fishing communities across the country to identify key areas important for consideration during permitting and mitigation for offshore wind development. In particular, our members have identified research questions

important to better understand the impact of offshore wind development on fisheries (Appendix I), which we hope the Coastal Commission will consider prioritizing as offshore wind development leasing and permitting moves forward in the Golden State.

Mitigation frameworks, particularly for compensatory mitigation, is an important aspect that has to date been inconsistently addressed - by the federal government, states, individual developers, and local communities. RODA worked with our fishing industry membership to outline principles necessary to follow to achieve fair and consistent compensatory mitigation. The report (Appendix II) also outlines preliminary recommendations for authorization, administration, determination and qualifying expenditures for this type of mitigation. If mitigation is an aspect of any consistency determination, the Coastal Commission should consider the principles identified by the fishing industry outlined in the report. RODA is willing to work with the Commission to further refine these principles and recommendations with our members operating in the region.

Thank you for considering these comments. Please do not hesitate to reach out if we can provide additional information or clarification.

Sincerely,

Lane Johnston, Programs Manager
Responsible Offshore Development Alliance

THE

RESPONSIBLE OFFSHORE DEVELOPMENT ALLIANCE

Research Priorities 2022

INTRODUCTION

Responsible Offshore Development Alliance (RODA) is a broad membership-based coalition of fishing industry associations and fishing companies—across the United States—committed to improving the compatibility of new offshore development with their businesses. The alliance works to directly collaborate with relevant regulatory agencies (e.g., National Marine Fisheries Service, Bureau of Ocean Energy management, U.S. Coast Guard, fishery management councils, and state agencies), offshore developers, scientists, and others to coordinate science and policy approaches to managing development of the Outer Continental Shelf in a way that minimizes conflicts with existing traditional and historical fishing. The Responsible Offshore Development Alliance (RODA) has repeatedly asserted that too little is known about the impacts offshore wind energy (OSW) development will have on the marine ecosystem and the existing industries reliant on it. RODA has compiled a list of research priorities identified by the fishing industry.

PURPOSE

Fishermen have long been considered trusted research partners in fisheries management activities, and enormous advances in scientific knowledge have been achieved through their valuable roles in hypothesis development and testing. Research activities in OSW planning have lagged behind those of established marine ecosystem science with regard to the inclusion of fishermen's knowledge. Therefore, a comprehensive list of research priorities developed by the fishing industry is essential for predicting and evaluating socioeconomic and environmental impacts and interactions among fisheries, fish stocks, and OSW. RODA encourages all agencies and academic institutions to use these research priorities as a resource, especially for cooperative research opportunities. RODA will consider this to be an action plan for its staff, other industry groups, scientists, and government agencies, to use to identify and propose essential cooperative research projects.

METHODS

RODA staff developed a survey for the fishing industry to identify perceived gaps in knowledge related to OSW and fisheries. The survey was not restricted in scope; answers could focus on any topic related to OSW and the marine environment/fisheries. RODA circulated the survey to its members, published it on the RODA website, provided it to regional fishery management councils for distribution, and requested the fishing industry circulate the survey throughout their networks to maximize the number and diversity of responses. The responses were compiled and synthesized into draft summary tables then circulated to fishing industry reviewers to verify completeness and accuracy.

CAVEAT

Except where specifically noted, research needs should be considered for both fixed and floating offshore wind infrastructure. Obviously, some impacts may differ depending on the type of facility. Given the lack of operational floating offshore wind facilities world-wide, there may be fewer available "lessons learned" regarding this technology.

SUMMARY

A total of 88 survey responses were received from the fishing industry participants from across the United States. The research priorities were not ranked. In addition to the specific research topics listed herein, a number of respondents suggested general considerations relevant to the role of research in OSW planning.

The research recommendations evidenced a clear perception that meaningful interaction has not occurred with the fishing industry during OSW siting processes. The fishing industry has appealed to regulatory authorities to create regional environmental monitoring plans to address a large number of outstanding questions, but observe that research approaches remain piecemeal. Monitoring alone is also considered insufficient to constitute a mitigation practice. Once necessary datasets are gathered, and the scale of potential environmental and socio-economic impacts identified and better understood, adequate strategies must be identified, established, and implemented that would effectively reduce impacts. These mitigation actions should be designed in consultation with the fishing industry and OSW developers to maximize their chances of adoption and success. The fishing industry suggested enhancing opportunities to learn from established OSW projects abroad and recommended analyzing fisheries data from operational projects. Lessons can be learned on a large scale of topics including sedimentation and scour. Respondents recommended that alternative siting strategies be developed that avoid key fishing grounds while benefiting OSW programs, reflecting the general preference to reduce significant negative impacts to both industries. There were also several suggestions to develop and clarify science-based decommissioning strategies from the earliest OSW planning stages.

CUMULATIVE IMPACTS

The fishing industry expressed clear concern over the lack of cumulative impacts analysis identifying fishery and ecosystem-level impacts from compounding impact factors and across multiple projects. The introduction of human made structures to the ocean will affect every aspect of the ecosystem, as seen in the numerous research priorities identified below. At present, limited or no cumulative impact analyses exist at regional levels. A detailed analysis should address all scales as well the effects of project distance to the cumulative impact intensity.

Photo provided by Long Island Commercial Fishing Association.

ONGOING RESEARCH

Fishing industry respondents indicated support for several existing studies and identified a partial list of cooperative research projects they considered beneficial. They strongly suggested the need to build this list into a comprehensive, living, database of ongoing or completed relevant research to better track existing efforts, and to highlight research gaps for prioritization. This should be a collaborative effort amongst all public and private research entities.

NOTE

A number of the responses to the survey were interrelated between topics - e.g., it is difficult to isolate the socio-economic impacts from the environmental impacts for an industry that relies on a healthy and sustainable ecosystem and access thereto.

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The following list describes specific research recommendations gathered from the surveys, categorized by broad topic area.

Photo provided by Mike Conroy.

BUSINESS, COMMUNITIES, AND SOCIOECONOMICS

ECONOMICS

- Compensation for lost fishing grounds
- Direct and cumulative impacts to seafood supply, cost, and markets
- Net economic impacts from loss of fishing-related revenues compared to OSW
- Economic analysis of impacts of OSW accounting for regulatory restrictions on switching to other target fisheries or locations
- Economic viability of legally harvesting an "alternative" stock by season if a vessel loses access to its primary species
- Cost to fleet and public of losing access to more fishing grounds to closures or other factors such as interarray cable connections for floating OSW turbines limiting access to those areas to surface gear types
- Financial impact to future generations of family-owned fishing businesses, from OSW and in combination with other challenges to fishing communities
- Expected economic losses to each potentially impacted coastal community, statewide, and regionally

BUSINESS IMPACTS

- Seafood industry shoreside infrastructure losses
- Increased OSW vessel maintenance activities crowding or usurping existing harbor infrastructure, thus impacting fisheries operations, transit and offloading activities
- Higher fuel costs and resulting effects to fishermen, gear suppliers, fish markets, dock workers, and ice suppliers
- Changes in fishing industry's fuel consumption and vessel maintenance due to transit and fishing impacts
- Changes in insurance costs, including resulting shoreside economic and market effects

SEAFOOD PRODUCTION

- Direct and cumulative impacts to domestic seafood production and supply
- Importance of seafood in sustaining domestic food security through climate-related anticipated disruptions, such as water shortages and drought, in other food production sectors
- Increased reliance on imported seafood
- Societal costs of OSW and displacement of protein provision in light of recent food security experiences associated with the COVID-19 pandemic
- Changes in greenhouse gas emissions and net carbon footprint resulting from increased imported seafood, and increased transit times compared with domestic production

Photo provided by Mike Conroy.

BUSINESS, COMMUNITIES, AND SOCIOECONOMICS

DISPLACEMENT EFFECTS

- Impacts of loss of access and higher levels of localized overfishing
- Impacts of increased competition from loss of fishing grounds
- Creation of additional fishing closures
- Impacts of exclusion in cases where an individual fishing permit only allows access to an area slated for development
- Economic and societal impacts of relocating fishing effort due to closure of historic fishing grounds by OSW siting and no-fishing zones established around the lease sites
- Ecological and socioeconomic impacts of shifting fishing effort due to increased fishing pressure on alternative/remaining fishing grounds
- Socioeconomic impacts resulting from stock assessment survey impacts

**Specific examples raised on this topic: Atlantic surfclam fishery out of Atlantic City, NJ, Northwest pink shrimp fishery*

CULTURE AND HERITAGE

- Analysis of equity and the effects of displacing fishermen from public fishing grounds for private entities
- Impacts to traditions and fishermen's displacement from historic grounds they have fished for over a century
- Role of fishing in coastal tourism economy
- Diversity and environmental justice in fishing communities
- Environmental and social justice for the vast majority of Americans whose only access to the living marine resources off the US coast is through the products the fishing industry provides

EMPLOYMENT

- Potential benefits to traditional fishermen, including alternative occupations for fishermen approaching retirement or new entrants to the industry
- Loss of experienced crew to OSW operations
- Net job losses to the seafood industry and dependent businesses, by community, state, and in total

Photo provided by Mike Conroy.

ENVIRONMENTAL IMPACTS

BIOLOGICAL RESOURCES: PROTECTED RESOURCES

- Impacts of strikes, sound, and EMF on protected resource migration patterns and mortality or serious injury
- Impacts of cables tethering floating wind turbines on protected resource migration patterns and mortality or serious injury
- Interactions between seabird life, offshore wind, and fisheries
- Effects of climate/ecosystem change to species that constrain fisheries
- Effect of mooring lines to whale migration, feeding, behavior, entanglement
- Impacts to migratory patterns of protected resources such that those species may be more likely to co-occur with other gear types
- Socioeconomic impacts from potential mitigation measures, directed at the fishing industry, to reduce further mortality or serious injury, due to move immobility of turbines

**Specific examples raised on this topic: salmon in the whiting fishery, whale entanglements in sablefish and Dungeness crab pot fisheries, Pacific flyway, species protection of short tailed albatross, humpback whales, blue whales, and grey whales*

BIOLOGICAL RESOURCES: FISH STOCKS AND ECOSYSTEMS

- Presence of structures on local environment, especially where overlapping with EFH and HAPCs
- Impacts to plankton, krill, and lower trophic level marine life
- Effects to bait fish
- Effect of turbine size on magnitude or extent of impacts sizes
- Recolonization timelines after benthic disturbance
- Impacts to benthic feeding, other fish behaviors, and full life history cycles
- Ability to assess stocks using impacted state and federal surveys

**Specific examples raised on this topic: scallops, whelk, squid, squid larvae, eggs, clams, lobster, spawning fish, salmon, crab, whiting, black sea bass*

SPAWNING AND MIGRATION

- Interactions with fish that use benthos for various life stages
- Effects of climate change/changing ocean ecosystems to movements of target stocks
- Mortality due to turbine installation, armoring, and operations
- Impacts from turbines and installation and maintenance vessels to marine life and seafood
- Impacts on fishing ground composition and productivity
- Effects on shellfish and fish recruitment and population
- Predator/prey relationship changes (including from hardening of sea floor and introduction of armoring or scour) and increase in prey species

**Specific examples raised on this topic: crabs, sole, groundfish, sea stars, octopus, scallops, whelk, squid, squid larvae, eggs, clams, lobster, spawning fish, salmon, whiting*

ENVIRONMENTAL IMPACTS

PHYSICAL OCEANOGRAPHY

- Effect on vertical motion of the ocean (upwelling/downwelling) and water column stratification
- Impacts to sea surface and water column temperatures
- Atmospheric impacts associated with energy removal
- Impacts to currents due to energy removal
- Turbine-induced microclimatic effects, including localized warming or cooling
- Interactions with hypoxic areas and/or ocean acidification

**Specific examples raised on this topic: Mid-Atlantic Cold Pool, West Coast upwelling, wind speeds, coastal and inland weather patterns, extent and impacts of wake disturbances, reduction in surface winds off Northwest coast*

HABITAT

- Changes and conversion of bottom type due to flow and current changes and introduction of structure in the form of foundations and cable routes
- Effects of bottom attachments and foundations
- Loss of benthic habitat of sand shoaling species, associated effects to species distribution, and resultant impacts to commercial landings in different states based on fishing grounds and top landed catch
- Siting considerations based on effects to specific habitats from structure in the water
- Effects of anchors (may attract species that constrain fisheries or displace target species at various life stages)
- Identify and avoid hard substrates and other sensitive habitats
- Impacts when co-located in protected areas
- Impacts of the use of cooling stations on local water temperatures, larval populations, and local food webs

**Specific examples raised on this topic: eelgrass, Shuster sanctuary for horseshoe crabs, anchoring, rock piles, mattressing, black sea bass*

Photo provided by Long Island Commercial Fishing Association.

ENVIRONMENTAL IMPACTS

STUDIES BY IMPACT FACTOR

EMF

- Fish and shellfish behavior, spawning, and migratory patterns
- Effects at individual, population, and ecosystem levels

**Specific examples raised on this topic: Pacific coast salmon , finfish, shellfish, squid, whelk, HMS stocks, crabs*

LIGHT

- Impacts to photosensitive demersal and infaunal species, including those that bury to varying depth in soft substrate
- Impacts to photosensitive pelagic species, including water column movement

**Specific examples raised on this topic: whelk, squid*

NOISE, VIBRATION, PRESSURE

- Impacts of pile driving on marine species
- Pressure to shellfish
- Effects of operational sound on marine species
- Noise and other impacts impacts derived from geophysical and technical surveys on invertebrates, fish, and marine mammals
- Effect of the operational noise from OSW facilities on marine species
- Impacts of above water and sub-surface noise from turbine operations on fish stocks – behaviorally and otherwise

**Specific examples raised on this topic: squid, scallops, whelk, fish, lobsters, marine mammals*

SEDIMENTATION AND SCOUR

- Sediment plume and settlement effects on mollusc, invertebrate, and finfish populations, including filter feeding and recruitment
- Impacts of silt migration from structures on the seafloor
- Effects on scouring on sediment around turbines

**Specific examples raised on this topic: clam, scallop*

- Effect to harmful algal blooms that result in domoic acid and other health toxins
- Role of OSW structure as fish aggregating devices (FADs) resulting in the potential to inhibit access to fishery stocks, effects to migration patterns, stop-over points, etc. for fished species
- Effect of mussel buildup on structures and cleaning strategies

Photo provided by Hooked Up Seafood.

FISHING REGULATIONS AND MANAGEMENT IMPACTS

- Ability to achieve optimum yieldImpacts to sea surface and water column temperatures
  - » Catch allocation among fisheries including commercial, recreational, state by state, etc.
  - » Inshore and offshore commercial and recreational regulations and allocations
  - » Availability of commercial and recreational fish in harvestable areas
  - » Magnitude of unnecessary (from a fisheries management perspective) reduction of fishing grounds
- Cumulative impacts of changing fisheries regulations and OSW to fisheries, both retrospectively and projections of future states estimate landings and revenue projections, using historical data as baseline
- External changes to fisheries management processes to accelerate wind leasing, such as NMFS or Councils changing fishing regulations to reduce fishing in potential lease areas
- Impacts to, and resulting from, regulations relevant to fisheries and marine mammal interactions
- Impacts to existing longstanding federal and state fishery surveys informing stock assessments
- Impacts to quotas resulting from inability to conduct existing surveys increasing uncertainty in stock assessments
- Impacts to rebuilding programs
- Explore mechanisms to lease ocean grounds to fishermen equitably with OSW
- Fisheries management actions to protect fishermen and fishing communities from OSW impacts

**Specific examples raised on this topic: west coast, northeast multispecies, international stock assessments which include US harvest as a model input, coastal pelagic species*

Photo provided by RODA.

MONITORING AND REVIEW RECOMMENDATIONS

SITING-RELATED ANALYSES

- Highest available resolution effort, catch, landings, and geographical data from all fisheries operating in areas under consideration for OSW development before siting occurs
- Highest available resolution abundance and distribution data of all marine species in areas under consideration for OSW development before siting occurs

PRE-CONSTRUCTION MONITORING TO ESTABLISH BASELINE

Conduct comprehensive surveys in lease areas prior to construction covering:

- State and federally managed commercial and recreational fish species
- Habitat characterization of project sites, including cable routes
- Acoustic characterization and acoustic modeling to anticipate construction noise levels and determine appropriate mitigation measures
- Presence of protected species, with maps of seasonal abundance, migration routes, and known breeding and feeding areas
- Baseline study of ocean circulation patterns/current speed, along with hydrodynamic modeling to predict how circulation and currents may change
- Water quality conditions
- Monitoring programs designed to adequately sample all species with appropriate gear and timing to detect spawning or migrating activities
- Develop and initiate monitoring programs utilizing the recreational fishing industry to evaluate baseline conditions

BEFORE AND AFTER-RELATED ANALYSES

- Detect any changes in presence/absence of adult, juveniles, and eggs after construction
- Detect any changes in species composition after construction
- Evaluate CPUE pre/post construction

**Specific examples raised on this topic: ventless lobster/Jonah crab trap abundance survey, squid*

Photo provided by Hooked Up Seafood.

MONITORING AND REVIEW RECOMMENDATIONS

CONSTRUCTION

- Detect any changes to pelagic and demersal species migration and/or behaviour during cable deployment and turbine construction using acoustic tagging
- Determine any acoustic impacts, marine mammal noise response, oceanographic processes, entanglement, invasive species, bird and bat collisions, fish and fishery impacts occurring during construction phase

OPERATIONAL

- Determine any acoustic impacts, marine mammal noise response, oceanographic processes, entanglement, invasive species, bird and bat collisions, fish and fishery impacts occurring during operational phase
- Monitor larvae and juvenile abundances and distribution
- Analyze recreational CPUE data within and around lease areas to identify emerging issues

DECOMMISSIONING

- Impacts associated with decommissioning activities
- Long-term impacts of abandoned infrastructure on fishing grounds and fish populations

Photo provided by Long Island Commercial Fishing Association.

Photo provided by Oregon Dungeness Crab Commission.

SAFETY

RADAR

- Aspects of radar that cannot be replaced by AIS
- Clutter or interference, particularly in poor weather
- False targets
- Impacts to HF Codar OOS radar used for SAR in case of person overboard
- Impacts to NEXRAD and weather condition forecasting
- Impacts of noise, above water and sub-surface, on radar, sonar, fathometers or other electronics integral to fishing safety

PHYSICAL LOSS OR ABANDONMENT OF TURBINES OR OTHER MATERIALS

SPATIAL OPERATIONAL NEEDS OF MOBILE AND FIXED GEAR FISHERIES

- Extent to which planned turbine configurations will limit mobile gear fisheries in normal operating conditions

RADIO

- Interference of current safe channels entering and leaving port
- USCG ability to communicate on radio channels

SAR

- Ability of fishing vessels to assist each other in times of difficulty
- USCG ability to provide assistance to fishing vessels in distress in or around arrays

TRANSIT LANES

- Systemic approach to design and safety
- Allision risk correlation with number and position of turbine, and appropriate transit lane scenarios

TRAFFIC

- Impacts from project maintenance traffic
- Effects of changes in vessel traffic to surrounding fishing areas

Photo provided by Long Island Commercial Fishing Association.

SUPPLY CHAIN

COSTS AND BENEFITS

- Cost and economic impact of energy production overall and to the consumer, including government subsidies
- Cost of long-term maintenance
- Cost-benefit of OSW vis-a-vis other energy sources, including climate and environmental impacts
- Net energy production considering energy costs of supply chain
- Net climate benefits and carbon footprint of OSW given environmental costs of production, operation and decommissioning
- Economic and environmental impacts of downstream project challenges such as insolvency, unforeseen maintenance, pollution, or excessive removal cost

TECHNOLOGY

- Effect of seismic activity on turbines and infrastructure harbors
- Lifespan and maintenance plans
- Impact of local contamination resulting from routine maintenance or mechanical failure
- Feasibility and associated risks of floating and fixed turbine technology in specific, occasionally extreme, weather and ocean conditions of areas under consideration
- Potential responses to equipment failure
- Operational effects of changes in wind
- Maximum depth of floating OSW deployment, specifically feasibility of siting deeper than 1300 meters
- Differing impacts of floating substations compared to fixed substations

**Specific examples raised on this topic: tsunamis, Crescent City Harbor, specific conditions of California coast from Cape Mendocino northward*

Photo provided by Massachusetts Lobsterman's Association.

TRANSMISSION

ENVIRONMENTAL IMPACTS OF CABLES ALONG THEIR ROUTES

- Fish and protected resource movement (localized and migration patterns) over transmission and inter array cables
- Impacts of cable burial techniques, including jet plowing, on benthic and demersal species
- Impacts to the marine environment of turbine failure or cable breach
- Ecological and socioeconomic impacts associated with transmission
- Effects of cable placement in sensitive habitats
- Impacts to nearshore benthic habitat

**Specific examples raised on this topic: shellfish and fish species, conch, Vineyard bay scallops and clams, sole, flounder, halibut, whelk, estuaries, squid spawning habitat*

OPERATIONAL INTERACTIONS BETWEEN FISHING ACTIVITIES AND CABLES

- Ability to anchor amongst turbines, including considerations for floating cables and mooring lines
- Mobile bottom tending gear
- Probability of cables becoming unburied
- Monitoring options for cable burial based on local and regional conditions including currents and sediment types.
- Minimum safe cable burial depth, including analyses of exposed cables off Block Island and Europe

CABLE TECHNOLOGY

- Differing impacts of AC and DC transmission cables
- Impacts of transmission cables running long distances to land

**Specific examples raised on this topic: shellfish and fish species, conch, Vineyard bay scallops and clams, sole, flounder, halibut, whelk, estuaries, squid spawning habitat, very large potential west coast cable routes*

Photo provided by Massachusetts Lobsterman's Association.

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THE RESPONSIBLE OFFSHORE DEVELOPMENT ALLIANCE

IMPACT FEES FOR COMMERCIAL FISHING FROM OFFSHORE WIND DEVELOPMENT: CONSIDERATIONS FOR A NATIONAL FRAMEWORK

DECEMBER 2021

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Photo provided by Long Island Commercial Fishing Association.

INTRODUCTION

BACKGROUND

United States fishermen, and those in industries dependent on fishing, strongly value continuity of their businesses and ability to produce sustainable, low-carbon protein. There is deep concern that the seafood industry and fishing communities will be enormously disrupted by the myriad of unknown impacts, and unknown scales of impacts, from offshore wind energy (OSW) development. In defining mitigation and compensation strategies to protect against and offset those impacts, the communities' sentiment can best be summed up by the following quote from a RODA member: "impact fees will never make the industry whole as much as continued fishing would."

RODA worked with a large cross section of fishing industry members to develop the following guidelines, best practices and factors for consideration regarding impact fees for the seafood industry from OSW. The methodology and process are described below.

These guiding principles may be informative if short term solutions are developed. However, long term remedies are required. Effective strategies to assess and distribute impact fees require a commitment to conduct full scientific and economic analyses and further develop these recommendations into a framework with the direct, substantial, and ongoing participation of fishermen and processors over the coming years.

Per the National Environmental Policy Act (NEPA), OSW projects must follow a stepwise path to reducing fisheries impacts, in this order:[1]

1. Avoid the impact altogether by not taking a certain action or parts of an action
2. Minimize impacts by limiting the degree or magnitude of the action and its implementation
3. Rectify the impact by repairing, rehabilitating, or restoring the affected environment
4. Reduce or eliminate the impact over time by preservation and maintenance operations during the life of the action
5. Compensate for the impact by replacing or providing substitute resources or environments

This report will primarily focus on **impact fees** assessed on the OSW industry to compensate for losses to the fishing industry and communities from OSW development—i.e., the final "step" of impact reduction--after providing definitions associated with the preceding "steps."

PURPOSE OF REPORT

Providing guiding principles and a framework for impact fees is time-sensitive. As of fall 2021:

- Twenty-six OSW projects are already in various levels of pre-construction planning on the east coast;
- Two of these projects - Vineyard Wind and South Fork - already have compensation agreements in place in certain states;
- Additional Call Areas and leases are imminently planned for the New York Bight and Mid-Atlantic;
- The West Coast, Gulf of Maine, Gulf of Mexico, South Carolina, and Hawaii all have "Study" or Call Areas slated for commercial OSW development;
- States and BOEM have indicated that they will move forward quickly with the development of a framework for addressing impact fees; and
- The fishing industry, and fishing communities, maintain that they have been excluded from meaningful participation in these activities.[2]

1 40 CFR § 1508.20

2 RODA and other fishing industry groups have submitted dozens of comment letters, available upon request, to federal and state agencies repeatedly asking for reasonable mitigation measures to protect the fishing industry.

INTRODUCTION

Currently there is no consistent agreed upon roadmap as to how impact fees will be authorized, valuated, or allocated for OSW projects. A process must be implemented to ensure equality and predictability to both those who will be impacted (fishing industries) and those who are investing in new development (OSW developers).

It is paramount that fishermen, processors, fishing businesses, and fishing organizations[3] be actively involved, from the beginning and throughout, in all efforts to design impact fee frameworks. This will improve buy-in from the seafood industry, ensure fair valuation and allocation of impact fees, and empower fishermen and processors in a process that has to date marginalized the great majority of those who will be impacted.

This report is intended to inform these efforts and establish an equitable process to alleviate losses. Identifying consensus positions among fishing community members is extremely time-consuming and requires their close involvement over the duration of a project. Due to anticipated federal and state timelines that do not accommodate the ability to do this effectively, RODA members have proactively offered principles upon which to adaptively build as OSW develops in U.S. regions.

METHODS

As a national organization of fishermen, processors, fishing businesses and fishing associations reliant on the sustainable harvest of seafood, RODA reached out to fishing industry leaders and their networks to solicit their feedback and knowledge on what is needed for impact fees for commercial fishing from OSW development.

RODA distributed a survey (Appendix A) and background information (Appendices B & C) to members and invited responses from any person affiliated with the commercial fishing industry. Following the collection of responses, RODA held seven webinars to gather additional feedback and clarification from survey results. Input provided through survey responses and webinars comprised:

- 65 individual survey responses submitted on behalf of thousands of associations, businesses, employees, family and community members, plus additional attendance on the webinars
- Industry members from California, Connecticut, Massachusetts, Maine, New Hampshire, New Jersey, New York, Oregon, Pennsylvania, Rhode Island, Virginia and Washington participated
- Federal and state fisheries including Atlantic sea scallop, Atlantic surfclam, butterfish, black sea bass, Dungeness crab, fluke, hagfish, herring, horseshoe crab, Jonah crab, American lobster, mackerel, menhaden, monkfish, Pacific albacore, Northeast multispecies, ocean quahog, Pacific bait (anchovy), Pacific groundfish, sablefish, salmon, sardine, skate, spot prawn, squid (spp.), shrimp (spp.), whelk, whiting, and more are represented
- Survey participants operate both fixed and mobile gear, and work in the shoreside processing sector. Some recreational fishermen also submitted responses.

This report is intended to inform these efforts and establish an equitable process to alleviate losses. Identifying consensus positions among fishing community members is extremely time-consuming and requires their close involvement over the duration of a project. Due to anticipated federal and state timelines that do not accommodate the ability to do this effectively, RODA members have proactively offered principles upon which to adaptively build as OSW develops in U.S. regions.

Photo provided by Mike Conroy.

3 For the purposes of this report, the terms "fishermen," "seafood industry," and "fishing industry" are used interchangeably and include all sectors dependent on the commercial harvest of seafood.

DEFINING THE STEPWISE APPROACH FOR REDUCING IMPACTS

With OSW rapidly developing in the U.S., strategies to address impacts to fisheries and associated industries have been absent or fragmented to date.[4] Comprehensive plans are needed for non-monetary mitigation and sufficient financial compensation.

To define the components of impact reduction that should ideally occur before a standard assessment of impact fees, seafood industry members provided the following principles to define the actions: avoidance, minimization, and mitigation.[5]

AVOIDANCE

Avoidance is siting OSW development in areas that are not fishing grounds. In general, this is defined as areas that are widely agreed will have no effect on commercial fishing operations or opportunities. For some regions, fishermen indicated this would mean no installations within 30 miles from shore or other boundaries associated with distance or water depth. In other regions, where fisheries range widely across multiple states and from nearshore to beyond the continental slope, identifying suitable OSW development areas will be complex and require careful consultation with affected fishery participants. Respondents also identified prioritizing the use of renewable energy sources other than OSW to achieve emissions and climate goals as an appropriate action to avoid impacts on long-standing, sustainable fisheries that provide significant benefits to the nation as a renewable source of healthy food, irreplaceable cultural heritage, and economic productivity.

MINIMIZATION

Minimization includes limiting the amount of OSW development, siting areas on grounds least fished and imposing as few restrictions (legal or de facto) to fisheries operations as possible. This also includes minimizing changes that happen from development, such as consolidating the amount of cables, incorporating transit lanes, working with fisheries participants, managers and scientists to minimize economic and environmental impacts, and prioritizing and leveraging technological advancements. For some industry members, small areas of tightly packed turbines with large (e.g. 10 miles) wide spacing between areas would be considered minimization. For others larger spacing (greater than 2 miles between turbines) would minimize impacts to operations. There is no "one-size-fits-all" when evaluating impacts to existing fisheries and associated industries, which emphasizes the critical need for meaningful engagement with fishery participants at all stages.

Decision makers should evaluate the following during site selection to minimize impacts:

- Direct/indirect loss of historically important fishing grounds
- Direct/indirect loss of predicted important future fishing grounds including projections related to changing ocean conditions
- Induced risk to safety at sea
- Direct/indirect loss of harbor space and infrastructure serving the seafood industry
- Potential for interactions with fishing gear
- Direct/indirect loss of dependent businesses/communities (such as processors, restaurants, and tourism)
- Impacts to long-running datasets which inform stock assessments or other aspects of the fisheries management process(es)
- Impacts to special management areas such as habitat closures, spawning closures, and other restricted areas
- Adverse impacts to Essential Fish Habitat (EFH)
- Adverse impacts to fish stocks, fish stock migratory patterns, and fish distribution
- Adverse impacts to migratory patterns and critical habitat of Endangered Species Act (ESA) and Marine Mammal Protection Act (MMPA) protected species that interact with fisheries

This list is not exhaustive.

4 See Appendix B for summary of existing and potential fisheries compensatory mitigation frameworks for OSW development.
5 This report focuses primarily on impact fees but presents here preliminary principles for consideration for all phases of mitigation as received through survey responses. These should be further developed collaboratively with the fishing industry through supplemental efforts.

MITIGATION

Mitigation refers to siting and project design principles specifically adopted to reduce impacts to fishing. It is not satisfied through compliance with standard mandatory health and safety regulations, although these are important. Monitoring is not mitigation unless it leads to actionable changes to maintain fishing effort and supporting industries. While the fishing industry strongly supported additional measures to ensure at sea safety, mitigation must also fully consider and account for the potential displacement and/or disruption of fisheries. Mitigation is furthermore not synonymous with compensation. These are actions that could be taken by OSW developers or federal or state decision makers.

Mitigation may include:

- Authentic consultation during the development of design, environmental review, and safety plans in all project phases
- Safety management system including transit corridors to, around, and through projects
- Technological improvements such as radar upgrades and cellular boosters
- Standardized, neutrally arbitrated processes for gear loss claims that fully replace lost gear and fishing time
- Project layouts, including turbine and cable placement, reflecting existing fishing practices unique to local or regional ecosystems based on early, thorough consultation
- Adaptive project design based on results of fish stock surveys and biological assessments, which must collect sufficient baseline data, persist throughout project life, and comply with recommendations of NMFS and other relevant fisheries managers
- Substantial bonds that would fully cover unforeseen impacts
- Co-development of plans with regional fishermen for materials relocation and removal during all project phases
- Improvements to port infrastructure that demonstrably benefit the seafood industry
- Fishery-specific actions that could offset effects of access loss, such as stock enhancement programs, management adaptations, or experimental fishing permits
- Right of first offer and reasonable acquisition of certifications or training for supply of available personnel and equipment to provide offshore services, when possible

This list is not exhaustive.

IMPACT FEES

Impact fees are financial reparations for losses and risk of loss to fishing businesses and fishing-supported communities from OSW development. They should be used to make fishery participants and associated industries economically whole for impacts, that despite best efforts, truly cannot be avoided or mitigated over the course of the project (+/- 30 years). Processors dependent on those fishermen will likewise be affected. 'Impacts' include both direct and indirect impacts, as well as those associated with increased risk to fishing and the environment induced by OSW development. Financial reparations for fishing business losses should not be classified as "mitigation," but rather supplement efforts to fully reduce impacts as described above.

Photo provided by Hooked Up Seafood.

RECOMMENDATIONS FOR IMPACT FEES TO ADDRESS OSW DEVELOPMENT

PRINCIPLES

Survey responses demonstrated broad agreement on the following guiding principles for development of an impact fees framework.

- **Compensation frameworks and determination policies must be transparent, holistic, and well-structured.**[6] Because much of the seafood industry is regional in nature, impact fees must be coordinated and consistent amongst projects, include cumulative impacts, and be equitable across impacted fisheries and through the supply chain.

- **Regional approaches are necessary.** Offshore wind leases are in federal waters affecting federally (and state) permitted fisheries. Projects off a specific state or county likely affect fishermen and businesses across a region – including multiple states and the federal exclusive economic zone.

- **Cumulative impacts must be included in analysis.** Impacts are likely to happen beyond the footprint of a single wind energy project and with a multitude of projects in a region, cumulative impacts must be taken into account. Cumulative impact analysis must be programmatic and not simply additive. Impacts to biological resources such as migration and larval dispersal, at-sea safety, increased competition from displacement, and other effects are integrally linked to socioeconomics and must be accounted for in cumulative impacts analyses.

- **Impact fee frameworks must be based on science and economics.** Evaluation of OSW impacts to fisheries requires expanded, complex, and possibly novel methodologies that must incorporate multiple disciplines and data sets, including fishermen's ecological knowledge. Expert fisheries scientists, independent economists, and social scientists must co-lead these efforts in full partnership with the seafood industry.

- **Design of a standard impact fee framework must not be rushed.** As data collection and analyses will take time, it is necessary to determine appropriate impact fee frameworks with affected fishermen and relevant regulatory authorities prior to lease issuance.[7]

- **Impact fee frameworks must allow for flexibility** as new data is collected, information learned and commercial scale OSW operations commence.

- **The principle of self-determination must be incorporated** in any framework for impact fees. Strategies should be designed to empower community-driven, implementable solutions that come from those directly impacted. Leadership must come from within the seafood community; top-down approaches will be ineffective.

- **Additional community fisheries benefit agreements (CFBAs) should be considered** under certain conditions specific to a project, fishery, or community. These should augment and supplement the framework approach. CFBAs should be encouraged and supported when appropriate.

- **Impact fee agreements should never limit the ability to participate in public and private processes**, such as requirements to enter into non-disclosure and non-disparagement agreements. Recipients of impact fee payments must not be required to endorse projects, nor be prevented from taking part in planning related to impacts avoidance, minimization, or mitigation. Additionally, there must be no developer ownership or control over activities or equipment funded by impact fees once allocated.

6 A framework should not replicate the existing Vineyard Wind 1 or South Fork Wind compensation plans as those are considered insufficient by the majority of the commercial sector.

7 Modified, possibly retroactive, approaches may be necessary to address leases already issued, and should follow the principles herein to the maximum extent possible.

AUTHORIZATION

The most effective approach would be for the federal government to require impact fees. OSW development in federal waters requires federal permits and will affect federally and non-federally permitted fisheries. Cumulative effects of multiple OSW projects need to be accounted for and mitigated.[8] States have limited mechanisms to require impact fees and a state-by-state process will not be equitable for regional fisheries. However, input from the states should be included in the process.

Currently, the only regulatory mechanisms that may require impact fees are through states' federal consistency review authorities (Coastal Zone Management Act) or as part of BOEM's Record of Decision from the NEPA process. Each state that has conducted such a process has its own policies and procedures, which has resulted in widely differing outcomes. The variability in these processes itself is problematic, and regardless of the thoroughness of any state's effort, the same issues remain: impacted fishermen may not be sufficiently accounted for if they are homeported elsewhere, unrepresented on these working groups.

It should be noted that some fishing members recommended using a state-based process to streamline allocation if a federal process would be cumbersome. Several individuals also suggested utilizing state-based processes, where they exist, until a federal process is enacted as project permitting continues to advance.

Many in the fishing industry expressed opposition to negotiations with each developer on each project in each region. Such a process (as one that is currently taking place) was seen as ineffective, unpredictable, costly, and leading to unfair outcomes. An independent mediator to negotiate on behalf of fisheries or a fishery was suggested as a possible strategy to alleviate bad outcomes from one-by-one negotiations with each state or each developer. However, some fishing industry members did believe there were circumstances in which individual agreements should be negotiated directly with developers. This response was far more prevalent in regions where OSW is in earlier permitting stages, or where individual OSW projects are more geographically isolated from others. This could likely become a commonly accepted practice, if seen as a necessary, supplemental benefit to unusually impacted communities that would add to, rather than supplant, a national or regional level framework.

An additional recommendation is that a portion of government subsidies for OSW development should be used to protect the longevity of the seafood industry. The public expenditures toward OSW development are enormous compared to what will be necessary for impact fees.

Photo provided by Massachusetts Lobsterman's Association.

8 The mitigation report to the Secretary of Interior (see additional resources Clement et al. 2014) found that a "landscape approach to mitigation" is necessary to more efficiently, effectively, and responsibly manage natural and cultural assets stewarded by the Department.

ADMINISTRATION

Administration of funds must be by a trusted source. OSW developers should not be the administrator of funds, only the suppliers of such funds. Unfortunately, there is distrust that BOEM can adequately administer funds because the agency has limited fisheries expertise and respondents perceived such a role to conflict with BOEM's stated mission to develop the Outer Continental Shelf. If a federal agency must administer funds, National Marine Fisheries Service (NMFS) would be preferred by many, but not all, in the fishing industry.

Most respondents suggested a third-party trusted by the fishing industry should administer funds. Some suggested that regional fishing or fishery-specific associations could play this role.[9] For smaller sectors that may not have associations, an external administrator may be preferred. There are examples of compensation funds administered by third parties that may be informative.[10] However impact fees are administered, it is vital that funds provide direct payments to businesses that will experience financial loss and risk of loss.

Administration of funds are likely to be dependent on where the funding is from. Funds could be part of a lease sale or power purchase agreements, as a percentage of the power generation through the life of the project, or deposited into a separate fund by the owner of the lease through permit approval. Several respondents noted if funds were sufficient and administered correctly, they did not support one process over another. The role of the administrator is to process and disperse funds but determination should follow the transparent processes outlined below.

DETERMINATION PROCESS

Determination of lost fishing industry revenue from OSW interaction is a complex process. Methods to assess fisheries losses have not been universally agreed upon and have been contentious for both the seafood industry and OSW developers. Determination should use the best available data and methodology, allow for inclusion of the knowledge held by participants in each fishery, and allow for flexibility and adaptability as more information is learned about the interactions between fisheries and OSW. Because fisheries valuation can be immensely complicated, it is absolutely necessary to include fishery-recommended economists and social scientists.

Regardless of who administers funds, they should be calculated using a common framework. **A working group should rapidly convene to co-develop effective frameworks based on the participatory governance structures of the fishery management councils and NMFS advisory panels.**[11] The working group must be co-led by the fishing industry and its membership should include NMFS, fishery management councils, marine fisheries commissions, and independent or academic fisheries scientists. These are the leading experts and a group of this composition can provide coordination with existing practices in fisheries management and business operations.

In particular, data-poor fisheries are extremely vulnerable to insufficient calculations being used for determination of impact fees because fundamental data is sparse or lacking. Conservative estimates and calculations should be used to evaluate and protect the longevity of data poor fisheries.

Different fisheries, processors, and business types are likely going to require different frameworks. There will probably not be a one-size fits all solution. For example, vertically integrated fisheries (such as surf clam and ocean quahog on the east coast and Pacific whiting on the west coast) will require different approaches from ones with larger numbers of independent operators (such as the lobster, squid, and groundfish fisheries on the east coast and crab and pink shrimp fisheries on the west coast). In both cases, onshore, fishery-dependent infrastructure must also be considered.

9 Some suggested RODA although this concept has not been specifically discussed amongst our membership.
10 Examples provided by respondents included the September 11th Victim Compensation Fund or Deepwater Horizon Oil Spill Trust.
11 Depending on Terms of Reference, a working group could be national or region-specific in scope.

Flexibility in impact fee frameworks and determination must allow for adjustments based on new information, unforeseen impacts, and adaptations to impacts. Evaluation of impact fees should be required pre- and post-construction, and every 2-5 years for the lifespan of the projects in the region, including decommissioning. Revisiting impact fee calculations will likely be fishery specific as more is learned about impacts to various species, efficiency changes to seafood operations, and other effects. This process may be similar to the way fishery management plans and stock assessments are updated by fishery management councils. Furthermore, impact fees must provide sufficient coverage from the onset for the life of the project (+/- 30 years). Transfer of ownership amongst energy companies must adhere to the policies and rules in place for the previous owners.

CALCULATION AND VALUATION METHODOLOGIES

Compensation must include 100% of revenue lost from direct displacement and other losses as described below. Within the footprint of a project, the amount of lost grounds will depend on many factors, including gear type and OSW technology selection for turbines and cables. Various safety considerations may also preclude vessels from being able to operate within a project area or may lead to changes in insurance coverage due to outright restrictions or cost prohibition. All of these legal and de facto exclusions, and associated with risk, should be considered in the valuation of economic loss from OSW development and payments should be upfront accounting for inflation. In addition, stranded capital, and efficiency metrics for lower catch levels, or less seafood for a plant to process will increase cost on a per unit basis. Loss of harvested seafood reduces direct income but also raises costs in proportion to total catch. Stranded capital of assets that are not fully depreciated is a direct loss to the owner of those assets.

Economic modeling to determine impact fees should consider the following:

- Revenue loss from direct displacement
- Induced costs associated with business, environmental and community risk
- Revenue loss from cumulative (not solely additive) impacts of multiple OSW projects
- Revenue loss from temporary or permanent fishing restrictions including gear removal and construction
- Revenue loss from impacts from OSW surveys including closures and changes in species behavior
- Increased competition on spatially consolidated fishing grounds that absorb displaced effort, including bycatch effects
- Changes in catch per unit effort (CPUE) resulting from fishing ground relocation
- Changes in target and nontarget species abundance, including consideration of life history traits such as larval dispersal, settlement, spawning, migration, and aggregation
- Gear and vessel loss, repair, or replacement
- Incurred costs of longer transit time
- Increased fuel use
- Loss of dock space
- Increased insurance costs
- Effects to dealers and processors incorporating economic multipliers[12]
- Losses to landings taxes or assessments used for fisheries management when applicable
- Welfare and "well-being" impacts to communities[13]
- Devaluation of businesses and diminished investment opportunities
- Losses from stranded capital, dead assets and payments owed on outstanding loans
- Losses from the historic investment in rebuilding of stocks, elective closures, buy-back programs and other sacrifices already made by the industry
- Funds or bonds in sufficient amounts that will cover fishery disasters induced by OSW if they occur

12 Reports from the Science Center for Marine Fisheries (SCEMFIS) have been conducted on US longfin squid and the combined surfclam and ocean quahog fisheries. The study found from 2013-2017, the average economic multiplier of US longfin squid was 7.64. Reports available at https://scemfis.org/wp-content/uploads/2020/03/LFS_EI_Report.pdf and https://scemfis.org/wp-content/uploads/2020/02/Ec_Impact-tjm_rm2.pdf

13 For example, if a loss of ~21% of the surfclam industry in Atlantic City causes that supply chain to become economically unviable, strategies must exist to compensate at an entire community level.

Valuation estimates should occur at the vessel, company, and fishery levels. Inputs may include:

- Industry economic data for annual production (landing receipts from previous 5 years, previous 10 years, or other[14]) for all currently licensed commercial fishermen, including consideration of inflation
- Industry economic data from processors and dealers of production values
- Industry documentation of capital assets, equipment, gear, and other fishery-related investments
- Assessment of "fair market value" through economic multiplier analyses
- Future lost revenue for the duration of the project, including decommissioning
- Costs from increased transit time, fuel, insurance, vessel equipment and provisions, and safety incidents, and other operational impacts

QUALIFYING EXPENDITURES

As the use of impact fees may be restricted to certain activities, respondents suggested the following funding priorities:

- Direct payments to vessels and businesses from revenue lost
- Loans for investments in boats and other capital assets
- Safety equipment
- Gear replacement
- Vessel repairs
- Business costs such as insurance, fuel, berthing, and electronics
- Infrastructure improvements such as unloading docks/hoisting, ice machines, cold storage, and gear storage
- Community outreach programs such as apprenticeships, scholarships, and fishing organizations
- Cooperative research with fishermen's direct involvement

Some, not all, industry members supported the following qualifying expenditures:

- Seafood marketing programs
- Gear innovation
- Training programs
- Buy-back programs
- Permit banks

ELIGIBILITY

For harvesters, including vessels that catch and process at sea, compensation should be based on permits and historic use. Permit holders with historic fishing experience will be eligible for impact fees. Survey responses varied with regard to recommendations of eligibility, ranging from anyone with a permit, to fishermen with five, ten, or more than ten years of historic fishing in an area.

It must be noted that basing impact fees on historic use will most severely impact young or recent entrants to a fishery. Additionally, OSW development is likely to dissuade new entrants to fisheries particularly if they are not able to be supported by impact fees based upon historic landings data. These challenges will need to be addressed through additional funding streams, but should not diminish the compensation to current participants to offset their own impacts.

For processors (including vessels that process at sea), shoreside infrastructure and support services, compensation should be issued to those dependent on seafood landed or delivered to processors in project areas and fisheries impacted by OSW development. Qualification may be determined by economic multipliers and receipts or market valuation of manufactured products.

14 Sectors undergoing stock rebuilding may need to utilize different time series, particularly if OSW development will reverse or impair these ongoing efforts.

CONSIDERATIONS FOR BEST PRACTICES

BEST PRACTICES

- A truly effective standardized approach will require legislation and considerable time.
- An inclusive, collaborative working group co-led by the fishing industry should be immediately convened to initiate development of impact fee frameworks. It must be afforded sufficient time to establish credible scientific and economic methodologies.
- Impact fees should be developed utilizing the precautionary principle and adjusted as more is learned. A starting assumption should be that OSW project areas constitute full closures to fishing.
- Port Access Route Studies (PARS) and other navigation studies should be standardized (while taking regional differences into account), thorough, cumulative, and unprejudiced. These should provide accurate calculations for increased fuel costs, necessary safety improvements, crew welfare, and other considerations that will inevitably lead to increased costs for the fishing industry.
- Calculations should be based upon years of highest annual revenue (for at-sea and shoreside operations).
- Community fishery benefit agreements (CFBAs) may be appropriate in certain regions. These would provide additional layers to a national framework when appropriate for impacted sectors and should be required by a state as part of its CZMA review.[15]
- Impact fees must never be conflated with the critical steps of avoiding, minimizing, and mitigating impacts to fishing.

PRACTICES TO AVOID

- Fishing industry members from the same sector or region should not be subjected to having to do multiple negotiations. Reliance on a state-by-state process leaves out fishermen with permits from other states and creates barriers to cumulative impacts approaches. Current processes incentivize states to only consider their own fishermen, if anyone at all. These parties are already competing with subsidized energy companies who may be operating within the same state, limiting the state's ability to serve as a neutral arbiter. Federal fisheries are, generally, regional in nature, requiring multi-state, regional and federal processes. It is noted that not all fisheries that are conducted in federal waters are managed by NMFS. This needs to be addressed in future conversations and working groups.
- Impact fees must be based in the best possible scientific and economic data and independent from external political pressure from OSW proponents.
- Effort and funding required to conduct valuation, monitoring, or other related analyses should not come out of available funding for impact fees.
- Impact fees should not be put into a "slush fund" for a small collection of potentially impacted users; rather, they should be accessible to all impacted fishing businesses.
- Unfortunately, many fisheries are expecting reductions in the size of the fleet due to OSW development. Fleet reduction should not be a goal of any impact fee strategy.

Photo provided by Mike Conroy.

15 Several fishing associations in California have begun to develop a framework for CFBAs. This process should be supported as it follows the principle of self-determination for those regions.

SUPPLEMENTAL INFORMATION

ADDITIONAL RESOURCES

Clement, J.P. et al. 2014. A strategy for improving the mitigation policies and practices of the Department of the Interior. A report to the Secretary of the Interior from the Energy and Climate Change Task Force, Washington, D.C., 25 p.

Industrial Economics, Inc. and The Massachusetts Ocean Partnership (2009) Developing a Framework for Compensatory Mitigation Associated with Ocean Use Impact on Commercial Fisheries

Lane, D.E. and Stephenson R.L. (1998) A framework for risk analysis in fisheries decision-making ICES *Journal of Marine Science*, 55(1), 1-13.

APPENDIX A

OPEN-ENDED SURVEY QUESTIONS POSED TO MEMBERS OF THE FISHING INDUSTRY

1. If NEPA requires the following step-wise path: 1) avoid, 2) minimize, 3) mitigate, 4) compensate; what type of actions should be considered "avoidance"?
2. If NEPA requires the following step-wise path: 1) avoid, 2) minimize, 3) mitigate, 4) compensate; what type of actions should be considered "minimization"?
3. What measures, if any, should an agency or developer take to "mitigate" project impacts BEFORE considering impact fees?
4. How would you define "compensation"/impact fees?
5. How should impact fees/compensatory mitigation be authorized? (ex. lease sales, federal regulation, state regulation, individual opt-in, other)
6. Who should administer impact fees?
7. What activities should impact fees support? (examples: payments for direct displacement, revenue loss, private research funding, gear or vessel improvements, protected dock space, safety measures, gear innovation, seafood marketing, permit banks, other)
8. What activities should impact fees NOT support? (examples: payments for direct displacement, revenue loss, private research funding, gear or vessel improvements, protected dock space, safety measures, gear innovation, seafood marketing, permit banks, other)
9. How should impact fees be calculated?
10. What factors should determine eligibility for receiving impact fees?
11. Are there other principles, guidelines or recommendations you would like to make?
12. Are current practices for impact fees working? Why or why not?

APPENDIX B

Supplemental background information distributed with surveys.

POTENTIAL APPROACHES FOR IMPACT FEES TO FISHING INDUSTRY FROM OFFSHORE WIND

Per the National Environmental Policy Act (NEPA), offshore wind projects must follow a stepwise path to reducing fisheries impacts, in this order (40 CFR § 1508.20):

1. Avoid the impact altogether by not taking a certain action or parts of an action
2. Minimize impacts by limiting the degree or magnitude of the action and its implementation
3. Rectify the impact by repairing, rehabilitating, or restoring the affected environment
4. Reduce or eliminate the impact over time by preservation and maintenance operations during the life of the action
5. Compensate for the impact by replacing or providing substitute resources or environments

Mitigation refers to siting and project design principles specifically adopted to reduce impacts to fishing. It is not satisfied through compliance with standard mandatory health and safety regulations, although these are important. Mitigation is also not synonymous with compensation. Financial reparations for fishing business losses are termed **impact fees**, not "mitigation."

Compensation frameworks and determination policies must be **transparent, holistic,** and **well-structured**. Because much of the fishing industry is regional in nature, impact fees must be coordinated and consistent amongst projects, include cumulative impacts, and be equitable across impacted fisheries and through the supply chain.

As data collection and analyses will take time, it is necessary to determine appropriate impact fee frameworks with affected fishermen and relevant regulatory authorities prior to lease issuance. It may be appropriate to supplement baseline regional impact fees with Community Fisheries Agreements depending on specific circumstances.

Impacts Fees must cover residual losses from:

- Direct displacement from fishing grounds (exclusion zones or de facto closures)
- Increased cost (or catch per unit effort) due to navigating to/from other fishing grounds, including increased competition in non-developed marine space
- Increased insurance or waterfront use costs
- Losses to dealers and shoreside processing facilities

Overarching Principles:

1. *Impact fees to be assessed and required only after reasonable efforts to mitigate through project siting/design.*
2. *Mitigation not to be defined as meeting health and safety or monitoring requirements.*
3. *Preferred terminology of "impact fee" over "compensatory mitigation" in order to distinguish from environmental and operational mitigation measures and to comport with standard approaches in other industries.*
4. *Any framework for impact fees must strictly incorporate the principle of self-determination–i.e., fishermen must be empowered to determine how funds are appropriately allocated.*

FISHING INDUSTRY RECOMMENDATIONS

To be completed pending industry survey results and included in final report.

CURRENT AND POTENTIAL METHODS

There are no explicit federal requirements to compensate for impacts from OSW development to fishing businesses. To date, impact fees have only been considered or implemented through: (1) Coastal Zone Management Act review processes; and (2) ad hoc agreements. They could also be required by: (3) power procurements; (4) OSW lease sales; (5) BOEM's NEPA process; or (6) creation of a new federal contingency fund.

CURRENT AND POTENTIAL METHODS

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1. Coastal Zone Management Act (CZMA)

What: If a state has such review authority, and it has laws or policies for compensation of impacts to the fishing industry, developers will work with the state to determine impact fees. States review a project under coastal zone management policies in two circumstances:

- The state has identified Geographic Location Descriptions (GLDs) in federal waters that include OSW areas, and NOAA has approved those GLDs; or
- A developer voluntarily submits to a state's CZM review.

The only state that expressly requires compensation for fishing industry impacts is Rhode Island. There is no specific framework for determining how the impact fees will be calculated. NOAA's National Ocean Service, which oversees the federal CZM program, has asserted that states' requirements of such fees are not legally enforceable policies. This interpretation, if upheld, means that compliance with state measures is voluntary on the part of the developer.

When: during the state's preparation of its consistency determination, usually during the Final EIS review.
Example: Rhode Island Ocean SAMP

Pros:

- A state is incentivized to look after its fishing industry
- The fishing industry has some legal recourse to collect impact fees
- Developers appear motivated to work with states to provide fees if policies are in place

Cons:

- Most states do not have the appropriate mechanisms in place: need review authority for a project and impact fee policies
- NOAA has indicated that CZMA does not provide states the authority to require if and how much impact fees should be
- A state, at most, only has authority to look after itself and its own fishing businesses. Fishermen from any state may operate in federal waters; this can lead to inconsistent impact fees coastwide
- How impact fees should be calculated has not been agreed and requires significant effort to adopt policies in each state

2. Ad Hoc Agreements (Community Fisheries Agreements)

What: Developers and fishing industry members may elect to enter into private agreements where developers compensate for future lost revenue. Negotiations for these types of agreements are often between mediators or attorneys and may not follow transparent or inclusive processes.

When: Typically before lease or power contract is obtained. ***Example:*** Castle Wind (see page 31 summary), City of Morro Bay & Morro Bay Commercial Fisherman's Organization, Port San Luis Commercial Fishermen Association ("Fishermen's Agreement" portion is confidential)

Pros:

- Can provide direct payments to impacted local fishermen
- Execution outside of regulatory bounds can promote flexibility of terms
- Could be additive to regional baseline approaches
- Can be readily specialized to local priorities
- Fishermen likely to have a more direct role in agreement terms than if brokered through a state or federal agency
- Can provide future certainty if executed early in lease process

Cons:

- Not typically transparent process
- Difficult or impossible to encompass every impacted fisherman, may disrupt community
- May limit an individual's ability to pariticipate in public process through non-disclosure stipulations
- Does not address cumulative impacts
- Likely to be specific to one developer or project without transferability
- Not many examples; poorly incentivized under regulatory and leasing processes
- Opt-in model (not required)

3. Power procurements

What: When a power purchase agreement (PPA) is reached, the purchaser (usually a state) could require the developer to include fisheries impacts payments as a condition of the contract. Again, this is a state-by-state process and a framework for impact fees has not been determined.

When: During the PPA negotiations. ***Example***: NYSERDA Fisheries Mitigation Plan (note "Fisheries Compensation Plan" portion is optional)

Pros:

- Provides more flexibility for developers to fund impact fees as cost may be incorporated in bid for power price
- Could provide certainty for fishermen earlier in the process than if addressed much later through CZMA or NEPA

Cons:

- Generally (not always) PPAs are highly competitive among developers and states based on price; adequate compensation plans may thus be disincentivized unless consistent throughout a region
- The impact fees for fishermen may be directly passed on to the ratepayer
- State power regulatory bodies are typically not well suited to understand fishery needs
- No state has required this approach to date
- Does not address cumulative impacts

4. Payments Deriving from Lease Sales

What: Certain parties have expressed interest in allocating a portion of a lease area's auction price to fisheries impact fees. Past efforts have focused on mechanisms to distribute this funding to states, which would determine priorities of which fisheries impact fees are only one possibility.

When: At new lease auction. ***Example:*** RISEE Act (for coastal restoration; not impact fees)

Pros:

- Could constitute significant resources given extremely high lease prices
- Cost not passed to ratepayer through power contract
- Provides certainty of funds relatively early in lease process

Cons:

- Requires legislation
- Competes with other coastal interests of states, such as the revenue sharing program for coastal restoration under the Gulf of Mexico Energy Security Act
- Funding amount dependent on additional future leases occurring
- Likely difficult to require of existing leases
- Allocation mechanisms could be complex and uneven across states

5. BOEM's NEPA Process and Record of Decision

What: NEPA allows a federal agency to require impact fees as part of a Record of Decision to mitigate the environmental (including socioeconomic) impacts of an action. BOEM could incorporate procedures for assessing and paying impact fees into its guidance or Best Management Practices.

When: During last step of permitting process. ***Example:*** BOEM's requirement of $3 million for impact fees to states other than MA & RI in Vineyard Wind I Record of Decision.

Pros:

- Would not require new legislation or regulations
- Would be equitable and predictable
- Potentially longer timeline to calculate appropriate amounts once project details are known
- Could incentivize impact reduction through project design rather than upfront impact fee assessment on lease

Cons:

- BOEM has provided no justification or framework for using this mechanism
- Timing late in process could result in uncertainty throughout project development
- BOEM has limited fishing expertise on staff, would need to work directly with fishing industry (or through NMFS) to better understand impacts and need

6. Federal Fishermen's Contingency Fund (currently used for oil & gas)

What: Every year, BOEM Secretary charge royalties on oil and gas leases to create a de facto insurance fund for fishery loss claims

- Administered by NMFS, payment amounts set annually by BOEM/DOI Secretary
- Compensation based on 50% of gross income lost, not profits
- Requires commercial fishermen to file report within 15 days of returning to port after discovering the damage or loss, and can only file one claim in an area
- Amount in fund can never exceed $2,000,000 and no developer can be charged more than $5,000 per year per permit

Pros:

- Unbiased claims review with no developer participation
- Administered by fishery experts, not energy experts
- Predictable process and uniform across projects

Cons:

- Requires legislation
- Only applicable to oil and gas
- Differing spatial scales of OSW from oil and gas, different number of developers may not make this directly translate
- Only covers impacts associated with gear loss

COMPONENTS OF VALUATION

Types of losses for consideration:

- Direct vs. indirect impacts
- Lost fishing revenue: gear removal, temporary closures, increased pressure on other fishing grounds due to displacement, changes in target species abundance
- Gear or vessel loss/repair
- Incurred costs of longer transit time, loss of dock space, increased insurance costs

Duration of funding:

- Construction: fishing closures during installation
- Lifetime of project: permanent (operational or abundance reduction/loss) or semi-permanent (i.e. conditions reduce number of fishable days) displacement
- Decommissioning: closures during decommissioning

Basis of Valuation:

- Receipts from dealers of landings value (based on spatial analysis)
- Receipts from equipment vendors, for lost gear, etc.
- Methodology to assess and establish "fair market value": landings, dealers, shoreside & value-added processing

MECHANISMS FOR ADMINISTERING

When:

- Upfront
- Yearly/periodically over course of project (ex. 30 years)

Who (administrator)

- 3rd party trust
- Fishing industry controlled trust (new or existing associations or other structure)
- Developer controlled
- Developer (direct payments)
- State (or federal) controlled trust
- Set-aside programs

How (payouts)

- Claims-based
- Direct payments

SUPPLEMENTAL INFORMATION: APPENDIX B

HOW FEES MAY BE USED

Stipulations in final agreements will likely define what compensatory mitigation funds can be used for based on approval by the administrator. Impact fees and grants may support the following:

- **Direct Impacts:** Gear loss, business losses, access restrictions;
- **Redesign:** Design, construction and modification of commercial fishing vessels
  - » Including but not limited to increased fuel efficiency, reduced carbon emissions, improved stability and capability of supporting sustainable fishing practices, such as harvesting and on-board storage and processing methods;
- **Innovation**: research, development, acquisition and deployment of advanced technologies:
  - » Including but not limited to sonar, radar, radio communications, satellite and global position and other locating and tracking devices;
- **Marketing:** Seafood marketing and seafood promotion programs;
- **Cooperative research**: Industry-driven science related to offshore wind or other fisheries topics;
- **Buyouts** to reduce capacity or retire fishing vessels/permits; or
- **Permit banks** or other new entrant set-asides.

ELIGIBILITY

Most impact fees to date are proposed to be claims-based; once an individual or business submits a claim, evaluation will occur to determine if the claim meets the eligibility requirements.

Eligibility requirements are variable and could include:[1]

- Valid state/federal commercial fishing permit;
- Valid vessel registration and applicable registrations;
- Residence or business registration in a certain state;
- Membership in a third-party organization that may administer impact fees;
- Documentation of state/federal tax status;
- Documented landings history;
- Gear replacement or dealer receipts; and
- Acceptance of terms and conditions, legal rights, liability waivers, or other agreements.

1 List adopted from NYSERDA "Draft Fisheries Compensation Overview" document.

APPENDIX C

Supplemental background information distributed with surveys.

OVERVIEW OF EXISTING IMPACT FEE ARRANGEMENTS

Vineyard Wind I project (to RI):

- Compensation Fund: $4.2 million
  - » Initial payment of $1 million within 60 days following financial close
  - » Annual payments over 29 years total $3.2 million
  - » Administered by a 3rd party selected by Vineyard Wind. Administration costs will be paid directly by Vineyard Wind.
  - » Fishermen and companies can submit claims of direct impacts or losses during any phase of the project
  - » Claims review and decision process established by Vineyard Wind. VW will seek input from FAB on the claims review and approval process.
  - » Paid claims will be accompanied by a release of liability for future claims.
  - » Excess funds (determined by claims administrator) may be rolled over to RI Fishermen's Future Viability Trust
- Rhode Island Fisherman's Future Viability Trust: $12.5 million
  - » For improvements in fishing vessels, fishing methods and gear
  - » Deployment of navigational equipment, financial support for individual fishermen, investments in updated safety equipment and payments for increased insurance costs
  - » Annual payments of 5 equal installments of $2.5 million per year.

Vineyard Wind I project (to MA):

- Compensation Fund: $19.2 million
  - » A $19.2 million direct, downstream and cumulative (upstream) compensation fund to be held in escrow to compensate for any claims of direct or indirect impacts on Massachusetts vessels or Massachusetts fisheries interests in the Project area
- Fisheries Innovation Funds: $1.75 million
  - » Studies on the potential impacts of OSW on fisheries resources, improvements in vessels and gear, development of new technology to improve navigation, development of alternative gear and fishing methods, optimization of vessel systems and technology upgrades

Vineyard Wind I project (to other states):

- Compensation Fund: $3.3 million
  - » According to BOEM, "direct compensation fund to be held in escrow to compensate for any claims of direct, downstream, and cumulative (upstream) impacts from other affected states including Connecticut, New Jersey, and New York vessels or fisheries interests in the Project area for the 30-year life of the Project
  - » First seen in BOEM's Record of Decision, no other details have ever been shared

South Fork Wind (RI)

- Commercial Fisheries Compensation Fund: $4.25 million
  - » Intended for claims of direct impact to compensate Rhode Island fishermen for loss of access of reduction of harvest
  - » $3.5 million compensation to commercial and for-hire charter fishing operations for mitigative impacts arising from direct impacts/losses from the construction and operation of SFW
  - » $750,000 fund direct impacts/losses from decommissioning
- Coastal Community Fund: $950,000
  - » To provide grants for initiatives supporting the general betterment of coastal communities in RI

SUPPLEMENTAL INFORMATION: APPENDIX C

Individual (Ad Hoc) Agreements

- Publicly announced: Castle Wind - City of Morro Bay & Morro Bay Commercial Fishermen's Organization, Port San Luis Commercial Fishermen Association
  - » Percentage of power to Morro Bay, funding for fishermen's group, etc. (Community benefit agreement has been agreed upon prior to lease auction.)
  - » Exact terms confidential
- Others may exist but unknown/undisclosed if so

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CALIFORNIA FISHERMEN'S RESILIENCY ASSOCIATION

1118 6th St.
Eureka, CA 95501

California Coastal Commission
March 29, 2022

Re: Staff Report Th8-a-4-2022

Commissioners:

The California Fishermens Resiliency Association (CFRA) is writing to comment on Coastal Commission Staff Report Th8-a-4-2022, concerning the Federal Consistency Determination for offshore wind power projects in California waters. The CFRA is a California nonprofit Mutual Benefit Corporation serving as "point of contact" and negotiator with non-fishing project developers to produce industry-to-industry contractual agreements known as Fishing Community Benefit Agreements (FCBA's) to minimize and mitigate negative impacts to fishermen and fishing communities from various types of offshore developments.

Our comments are as follows:

1. The CFRA Board of Directors would like to congratulate Coastal Commission staff for the beautifully researched and detailed report concerning proposed offshore wind power projects and the impacts and interactions with and to fishermen and California's coastal fishing communities. Coastal Commission staff reports have been and continue to be the "gold standard" for informing both the general public and all special interest groups seeking balanced and informative, data and narrative. This report is no exception to the high standards historically associated with the commission and its staff.

2. **Impacts to Fishing and Fishing Communities** (page 14- CD-0001-22) Permit Condition 7A — Fisheries Liaison Officer (FLO) Permit Condition #7 requires the employment of a Fisheries Liaison Officer to interact between fishermen, the fishing community and offshore non-fishing developers.
   We would request the following language: "**Fisheries Liaison Officer" — the Developer(s) will be required to fund the position of Fisheries Liaison Officer as per permit condition 7A, while local port fishermen's association will be responsible for the screening, interview and hiring of the Fisheries Liaison Officer. Port fishermen's association and the developer will work collectively to develop protocols for the position of FLO.**
   Justification— the position of Fisheries Liaison Officer (FLO) needs to be filled by the

local fishermen's association impacted by the proposed development, not by the developer. On both the West and East Coasts, the independence and level of community trust in "developer hired" FLO's has been highly problematic. On the U.S. East Coast, fishermen have had poor results in communicating their concerns and impacts to wind power developers through the FLO, when the FLO has been chosen and hired by the Developers (K. Wark, personal communication, 2021). In California, fishermen have directly experienced similarly poor results trying to communicate with FLO's hired by subsea cable installers in Northern California. These poor results included disruption and loss of legally set fixed fishing gear, refusal on the part of survey vessels to terminate survey work during legal fishing seasons and exceedingly bad outreach skills and community connections in notifying fishermen as to schedule and operational changes by developers. **In short, when FLO's are hired by the developer these individuals work for the developer to advance the developers needs at the expense of the impacted fishing community.**

3. **Initial Impacts on Community Fishing Grounds by Lease Exploration Activities** (Abandonment of BOEM permitted anchoring systems.) In the staff report, Section: "Lease Exploration Activities (page 24), it states that BOEM may permit the installation of scientific buoys within or adjacent to the Humboldt WEA. These buoys are held "on station" by an 11,000 pound anchor, anchor chain and rode (mooring line between the anchor on the seabed and the surface of the ocean). The report details buoy deployment, and maintenance. "Buoy decommissioning is expected to take one day". What this sentence is describing is the abandonment of the entire 11,000 pound anchor, chain and a portion of the rode onto the Humboldt Community Fishing Grounds. On September 11, 2020, Northwest National Laboratories working under a BOEM permit, announced their intentions to deploy a Lidar research buoy on the Humboldt Fishing Grounds in 347 fathoms slightly northwest and outside of the Humboldt WEA. On September 29, 2020, Humboldt Fishermen's Marketing Association contacted Dr. Alicia Gorton and requested that the anchoring system be removed from the fishing grounds in its entirety. Dr. Gorton responded by stating that the BOEM permit allowed the Northwest National Laboratories and their subcontractors to "decommission in place", i.e. abandon the entire anchor system at the termination of her project. Later that year when the Lidar buoy was deployed, it experienced instrument failure and was removed from the site by parting the anchor rode, leaving the remnant rode, an unknown amount of chain and the 11,000 pound anchor on the fishing grounds. This scientific junk weighing in cumulative excess of 11,000 pounds is far beyond the capacity of even the largest trawl or longline vessels working on the North Coast. Any of our trawl vessels could easily entangle and lose a $25,000 trawl net, $8000 trawl doors and associated steel trawl cable while at the same time expose the vessel and crew to downflooding or capsizing, resulting in vessel loss. **Nothing** should be left on the seabed for the entire duration of the wind power experiment to be conducted on the Humboldt Community Fishing Grounds. Both the federal government (BOEM, NOAA) and the installers of scientific buoys and OSW Developers should be legally liable for abandoned gear of any kind.

4. **Cumulative Impacts** (page 29). — "Potential effects of leasing and future lease development should be understood within the larger context, as some impacts that may not be particularly significant by themselves, may be more significant when viewed as one of a myriad impacts and stressors that are affecting the marine environment, the fishing industry or other resources or communities".
   Comments: In August, 2021, Humboldt Fishermen's Marketing Association submitted to the California State Lands Commission a sixty page public comment document concerning the plan to install up to four fiber optic subsea cables (Permit #CDP9-21-0165/CC-0004-21) across the Eureka Dungeness Crab Fishing Grounds. This public document expressed North Coast fishermen's concerns over fishing gear loss by survey and installation ships, drilling mud blowouts, seabed scouring and cable exposure, lack of state permit condition enforcement and the cumulative impacts of four cables (installation, maintenance and removal), combined with the planned Humboldt WEA Project also scheduled to cross the same Eureka Fishing Grounds with yet more non-fishing infrastructure. Fishermen's concerns were dismissed by State Lands Commission. As of this date (March 25, 2022), cable installations that were supposed to be completed by September 2021 are still incomplete with less than two miles of one cable buoyed off in shallow water on the fishing grounds in front of Eureka. The cable ship setting cable from Asia is nowhere to be seen. Protracted impact to fishing from these four planned cables will in all likelihood continue for years to come. There is no reason to believe that wind power survey and installation activities will not be even worse. Additionally, the massive WEA proposed for Southern Oregon will impact California Fishermen by the loss of Oregon fishing grounds and displacement of the Oregon fishing fleet south to California. Lastly, OSW projects will restrict future fishermen's abilities to adjust to species range shifts caused by a warming ocean coupled with the de facto closure of WEA fishing grounds by ocean industrialization

5. **Impact to Fishing and Fishing Communities** (page 14) — 7C - "BOEM will work with the Commission and other state and federal agencies to develop and facilitate a working group consisting of fishing organizations and representatives from different regions, / ports of the State.....
   a. Comment - the members of the working group should consist of representatives from **Commercial Fishing California Port Fishermen's Associations**. both within and outside of the potential WEA's.
   b. Comment - Any "Fishing Agreement" template should be directly based on the February 9, 2022 industry letter sent to California State Agencies concerning the specifics for "creating a template and managing entity to address unwanted, adverse impacts on California's Fisheries from offshore wind development". (Note: the CFRA was formed via these fishing industry "templates" and embraces the concepts contained therein.)
   c. The Humboldt Bay Harbor District (developers) has received a 10.5 million dollar grant from the California Energy Commission for the conversion of Redwood Terminal 1 from present use by commercial fishermen (illegally evicted from

Woodley Island Marina) to a wind power facility. Under what process will state agencies ensure that these commercial fishing businesses are relocated to a fisherman approved, properly zoned and built site in Humboldt Bay before any construction by the developer begins? (See attachment: letter from Owens and Ross, Attorneys, October 23, 2019)

We wish to again express our gratitude for this thoroughly researched staff report and the opportunity to submit public comment.

Sincerely,

Ken Bates, President
On behalf of the California Fishermens Resiliency Association (CFRA)

Dustin E. Owens, Esq.
Laurence S. Ross, Esq.
Liana Rogers, Law Clerk
JulieAnne Shull-Pruyn, Paralegal
Emily Johnstone, Legal Secretary

OWENS AND ROSS
ATTORNEYS AT LAW

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Web: www.owensandross.com

April 1, 2022

RE: Notice of Intent, Formation of California Fishermen's Resiliency Association

Dear Mr. Bates:

The commercial fishermen's port associations north of Point San Pedro, CA, have formed a California non-profit mutual benefit corporation the California Fishermen's Resiliency Association (CFRA) to serve as the "point of contact," and negotiator with non-fishing project developers (wind power, cables, as sea aquaculture, etc.). The purpose of CFRA is to produce industry-to-industry contractual agreements known as "Fishing Community Benefit Agreements" (FCBA). While all California fishermen's associations continue to oppose non-fishing developments on California's community fishing grounds, the reality is that non-fishing developments at a substantial scale are in the works. The CFRA, through the use of FCBA, will attempt to minimize and mitigate the negative impacts from developments that we cannot stop.

FCBAs are designed to be fair, democratic and inclusive of all fisheries and fishermen in the impacted region of non-fishing developments. These agreements are intended to promote long term resiliency for your fishing community, your business and the related businesses that rely on your harvest of California's seafood resource.

The CFRA will be structured in such a manner as to encourage statewide cooperative policies and protocols with both State agencies and California's port fishermen's associations to protect fishermen. The CFRA structure will provide for regional (local) management of FCBAs in areas impacted by non-fishing development to ensure that each region's individual needs are met, while providing the additional negotiating power and support of a statewide organization. The CFRA founders will continue to work in tandem with Central Coast fishermen's organizations to accomplish these goals.

The initial membership of the CFRA will include port associations from San Francisco, north to the California/Oregon border. However, CFRA membership is open to and will hopefully grow to include California commercial fishermen's port associations throughout the state whose members deem participation beneficial. Thank you for your time.

Sincerely,

Dustin E. Owens

DEO

March 31st, 2022
Subject: The effects of proposed Wind Energy Project to national and global food security.

My name is Ashley Vellis, I am the owner/ operator of Ashley's Seafood in Humboldt County and co-owner of our fishing vessel Sandy B, Port of Humboldt Bay. My husband and I work together to bring our local caught seafood to our community, servicing Humboldt from Garberville to McKinleyville and as far in as Willow Creek. Our businesses mission is to help incorporate seafood into our food security systems, and to help consumers better understand how the commercial seafood is harvested, documented, distributed, and sustainable.

Our concerns of the proposed Ocean Wind Farm are how it will impact our sustainably harvested seafood, not just in our community, but as our nation's food system/ supply chain and environmental impact. According to the California Department of Fish and Wildlife Table 9 - Monthly Landings in Pounds in the EUREKA Area During 2019 (see link below) our Eureka region between Shelter Cove and Crescent City harvested 20,061,257 lbs. of sustainable caught commercial seafood. According to a statement by the DFW we are the largest ground fishery harvesting area in the state. This data collected does not reflect any landings commercially harvested in our area that were landed in neighboring ports nor does if reflect any recreational landings data.

To understand the volume of how many people 20,061,257 lbs. of seafood impacts on average per year we broke it down and based this off an average yield of 40% finished product. Fish vary in yield from 23-70+% and that depends on how the catch is marketed to the consumer.

20,061,257lbs x .40 yield percentage = 8,024,502.8lbs of processed seafood from our region

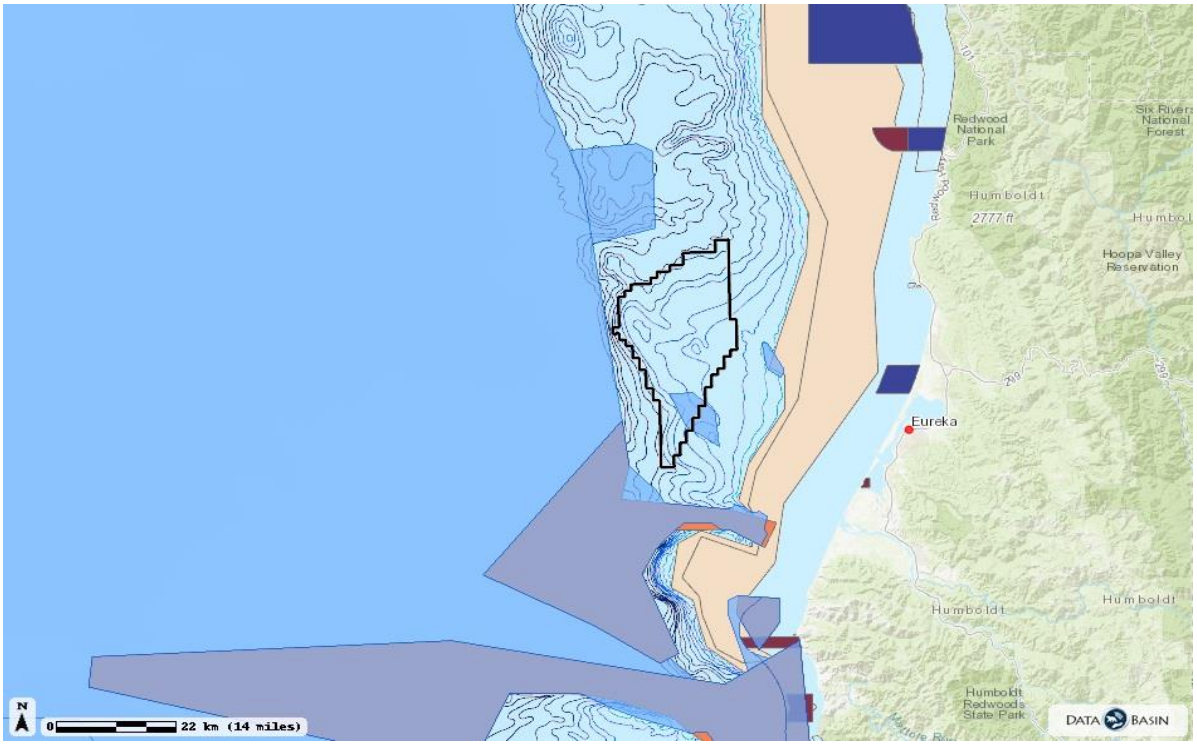
If we averaged that per serving consumers had 6oz (.38lbs) of seafood.

8,024,502.8lbs of fillet / .38 lbs per serving = 21,117,112.6 servings /year on average

With approximately 200 sq miles less area to harvest seafood in there will be concentrated effort into the remaining open areas. Our worry is this will lead to overfishing these areas, which would lead to reduced fishing allowances and ultimately impact the consumers with less available seafood at higher costs. We would lose a portion of our fishermen because there will not be opportunities to fish or enter in the industry. Every commercial vessel supports 1-4 households with crew. They offload to a Processor

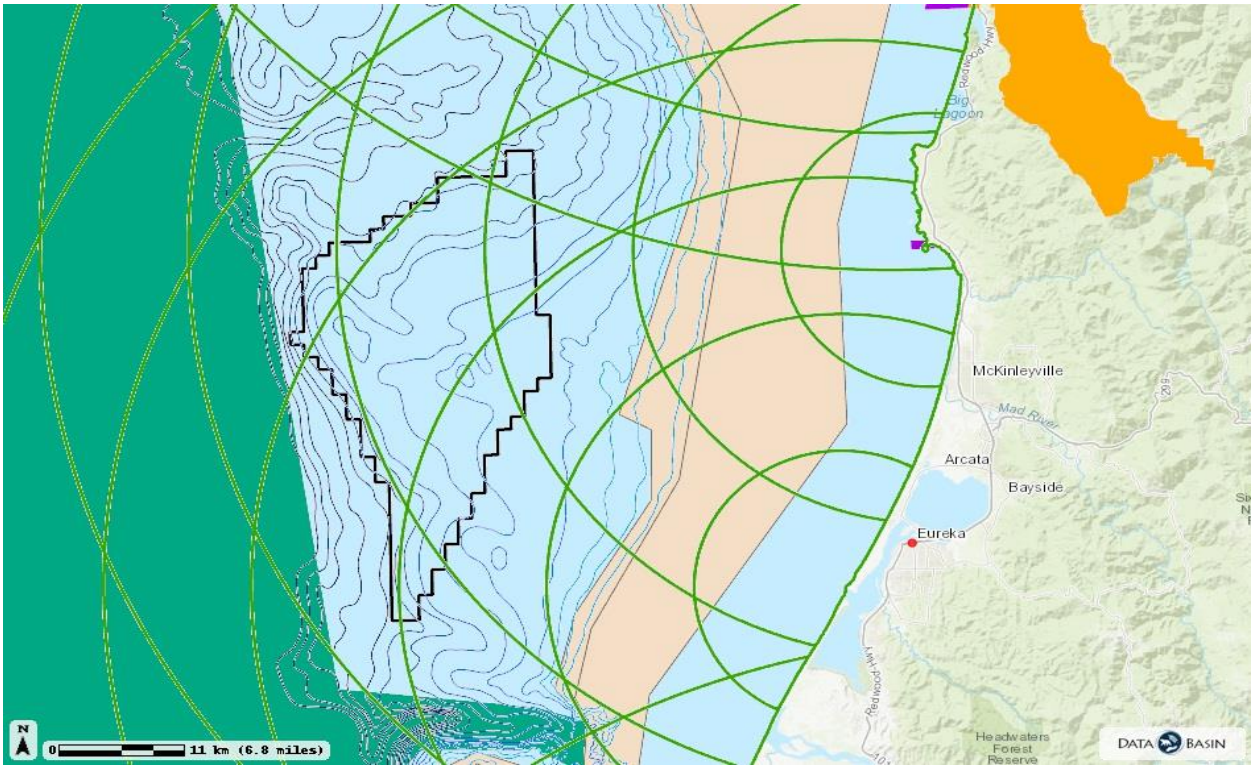
that employs 2 or more employees that then distributes to local markets feeding thousands of people. This will lead to more seafood imports into our country, a higher need for fish farms and create a higher carbon footprint. According to an article by University of Washington, Commercial fishing has less of environmental impact than factory farming Ag and fish farms. (See link below)

As a direct-to-consumer processor, it has become very apparent that consumers have little to no understanding of commercial fishing restriction of allowed fishing zones. You would wonder why it is such a big deal to fishermen to lose this area to WEA when we have the whole ocean to work with. On the contrary with as much management involved to fish sustainably from state, federal and conservation agencies working with the fishing industry restricted/closed zones have been put in place to prevent overfishing. These closed zones have significantly reduced areas of fishing opportunity and equally help us to maintain healthy stock.



(Map 1 displays Location of Proposed Wind Farm over the 100m contour lines with closure restriction areas that fishermen work around dependent on gear and fishery.)

EFHs EFHs Rockfish Conservation Area



(Map 2 displays Fishermen's travel time by boat, the 200sq mile area of the Wind Farm Proposed location, the 100m contour lines, Seaward 700 fathom EFH closure, and Rockfish Conservation Areas)

The Wind Farm is supposed to help combat global warming. Our concern is if we lose a valuable and sustainable food source, we will be indirectly creating a larger carbon footprint. I understand the race our planet is in for renewable energy, however restricting our nations natural food systems should not be compromised. My hope is that a better location is found for the proposed ocean Wind Energy Area for the sake our food security and our environment.

Sincerely

Ashley Vellis

Links:
California Department of Fish and Wildlife Table 9 - Monthly Landings in Pounds in the EUREKA Area During 2019:
https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=178011&inline
University of Washingtons data on Commercial Fishing Environmental Impact:
https://www.washington.edu/news/2018/06/11/choice-matters-the-environmental-costs-of-producing-meat-seafood/#:~:text=But%20in%20general%2C%20industrial%20beef,according%20to%20a%20new%20analysis.

CALIFORNIA COASTAL COMMISSION
ENERGY, OCEAN RESOURCES AND FEDERAL CONSISTENCY
455 MARKET STREET, SUITE 300
SAN FRANCISCO, CA 94105-2421
VOICE (415) 904-5200
FAX (415) 904-5400

Th8a

CD-0001-22
(Bureau of Ocean Energy Management)

April 7, 2022

CORRESPONDENCE

Received between

April 2, 2022 and April 9, 2022

From: Jacqueline Moore <jmmoore@pmsaship.com>
Sent: Friday, April 8, 2022 11:50:12 AM
To: Huckelbridge, Kate@Coastal <Kate.Huckelbridge@coastal.ca.gov>
Subject: FW: Consistency Determination for Humboldt WEA, comment letter from PMSA

Good Morning Dr. Huckelbridge,

My name is Jacqueline Moore, and I am from the Pacific Merchant Shipping Association. I spoke yesterday on item 8a, the Consistency Determination for the Humboldt WEA. Please see the attached comment letter outing our fell concerns and recommendations. I share it with you with respect, as I realize staff put much effort into the report. We would especially appreciate an industry working group. As I shared at the meeting, BOEM has not engaged with us at all; we desire to be recognized as a real stakeholder, to be heard and considered. If you have any questions, do let me know.

Best,

Jacqueline

Jacqueline M. Moore

Vice President
Pacific Merchant Shipping Association (PMSA)

PACIFIC MERCHANT SHIPPING ASSOCIATION
1 World Trade Center, 1700
Long Beach, CA 90831

Mobile: 562 515.3845

From: Jacqueline Moore <jmmoore@pmsaship.com>
Sent: Friday, April 8, 2022 11:29 AM
To: executivestaff@coastal.ca.gov; Donne.Brownsey@coastal.ca.gov
Subject: Consistency Determination for Humboldt WEA, comment letter from PMSA

Good morning Chair Brownsey and Commissioners,

My name is Jacqueline Moore, and I am from the Pacific Merchant Shipping Association. Thank you for allowing me the time to speak on item 8a, the Consistency Determination for the Humboldt wind energy area during this month's Commission meeting. Please find attached our formal letter on this topic, which is submitted with much respect for the Commission's role in projects within federal waters.

If you have any questions, I am available at your convenience.

Respectfully,

Jacqueline M. Moore

Vice President
Pacific Merchant Shipping Association (PMSA)

PACIFIC MERCHANT SHIPPING ASSOCIATION
1 World Trade Center, 1700
Long Beach, CA 90831

Mobile: 562 515.3845

PMSA
PACIFIC MERCHANT SHIPPING ASSOCIATION

April 7, 2022

Chair Donne Brownsey
California Coastal Commission
455 Market Street, Suite 300
San Francisco, CA 94105
Submitted electronically to executivestaff@coastal.ca.gov

Re: Coastal Commission's Federal Consistency Designation for Humboldt WEA

Dear Chair Brownsey and Commissioners,

On behalf of the members of the Pacific Merchant Shipping Association (PMSA), we appreciate the opportunity to comment on the Humboldt Wind Energy Area (WEA) Federal Consistency Determination. PMSA represents owners and operators of ocean-going vessels operating at U.S. West Coast ports. As such, our comments focus on potential impacts to maritime navigation and vessel traffic from the Humboldt WEA.

While fostering investment in renewable wind energy is indeed a laudable goal, it is imperative that the Commission only select the most feasible locations for deploying WEAs and act in a manner which acknowledges and prioritizes the many shared uses of the sea, including spatial planning for safe and continuous navigation and vessel routing.

While the Coastal Commission Staff Report indicates that BOEM investigated many uses of the WEA area, including vessel traffic, this determination was made prematurely, as the many concerns by the commercial shipping industry were not accounted for at all during the process. The siting process by BOEM should be complete and comprehensive prior to moving on with any subsequent steps, including actions by state agencies. Without such an evaluation, the conclusion of BOEM that no factors compelled the alteration of the size, shape and location of the proposed placement is necessarily deficient.

PMSA wholly agrees with the Staff Report statement of "efforts made to understand, avoid, and minimize impacts now will also help inform future floating wind project design." It is imperative that, especially on this initial WEA, the Commission precedent on these siting decisions emphasizes and values designations that are made correctly over designations that are made quickly. As a first-of-its-kind project on the West Coast, this designation certainly deserves the utmost careful planning and a comprehensive examination.

Given these outstanding issues, it would be appropriate to defer final action on concurrence at this time. However, if the Coastal Commission does choose to move forward at this time to conditionally concur with the Federal Consistency Determination, PMSA respectfully requests

the Coastal Commission consider revisions to the staff recommended Conditions for BOEM to account for all of the following:

Condition 1(F)2: Site-specific Spill Prevention and Response Plan
Any release should immediately be reported to CDFW's Office of Spill Prevention and Response. The lessee should submit a final report, similar to the other Conditions, summarizing any release events to BOEM, with a copy also sent to the Coastal Commission's Executive Director.

Condition 1(F)iv: Anchoring Plan
The lessee should submit the Anchoring Plan to the USCG, as well as to BOEM. The USCG is the federal agency tasked with maritime safety and, as such, should be aware of federal projects within waters of their jurisdiction, especially as the Humboldt WEA will include vessel activity of its own and is directly in the path of commercial vessel lanes (reference Figure 1).

The lessee should concentrate anchorages as far east as feasible, and all anchorage decisions should be made in consultation with the USCG, so as to not interfere with ocean-going vessels.

Condition 3: Minimizing the risk of vessel strikes
This Condition is commendable for WEA site vessels, but is incomplete with respect to other ocean-going vessels. It is critical that this Condition reference the USCG Pacific Coast Port Access Route Study (PAC-PARS), currently underway and partly initiated due to BOEM activities. This is a vital study that will survey potential hazards to, or due to, the maritime community. Yet any alterations or additions to shipping lanes will not be formalized for approximately two years, much time after the WEA activities have commenced. PMSA has previously requested of BOEM to suspend the Humboldt WEA process until the vital study is complete to minimize risk as much as possible. PMSA makes the same request to the Commission here, and alternatively asks the Commission to further condition the consistency determination of a future evaluation of risks by BOEM and the lessee in the context of the completion of the PAC-PARS study and its findings.

This risk is not just with marine mammals, but with the wind turbines and other associated infrastructure. There was recently an incident with a bulk carrier *Julietta D* that, due to unfortunate circumstances including foul weather and collision with another vessel, collided with an offshore wind farm platform and turbine foundation. Collision within an offshore WEA is a situation that must be evaluated, planned for, and mitigated against in order to minimize the likelihood of its occurrence. This requires a level of spatial planning and situational scrutiny that BOEM has not yet provided with respect to this WEA.

Moreover, while European researchers are in the development stages for potential 'crash barriers,' it is likely that these solutions will not be ready for full deployment by the time the Humboldt WEA is in operation. It is recommended that the Coastal Commission enact a

condition, at the appropriate time, that *BOEM must require the lessee to deploy these Best Management Practices technologies*, once commercially available.

It is noted that potential alterations to traditional commercial shipping lanes for this project have the potential to impact marine mammals, positively or negatively, however since this has not yet been determined or adequately studied, this is yet another justification for BOEM to complete a more comprehensive analysis.

Condition 4. Safe Navigation:

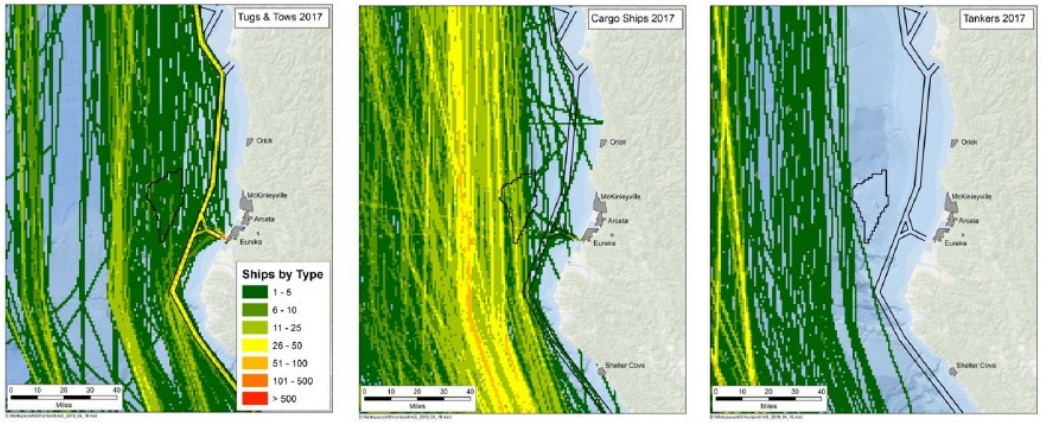
We concur with the requirement for BOEM to coordinate with the USCG for WEA project vessel navigation and we further recommended that the appropriate Marine Exchanges are also included in this coordination. At the very least, this should include the Marine Exchange of the San Francisco Bay Region, as they are an important resource to share information and safety alerts to the greater maritime community.

Conditions 5, 6 and 7:

These Conditions discuss coordination with various stakeholders, including the fishing communities and harbors, which is commendable. However, the shipping industry is omitted. We respectfully request specific inclusion in these coordination requirements. Ocean-going vessels are an obvious major waterway stakeholder with interests in projects such as these and must also be included in these engagement activities. The working group described in 7(c) is a perfect platform to also engage the shipping industry, there is no justification as to why not all relevant stakeholders are engaged in a similar fashion. PMSA would be pleased to represent our members and the industry as a whole in this working group.

The omission of the shipping industry is consistent with the unfortunate fact that during the current WEA process *BOEM has not attempted to meaningfully engage with the maritime commercial shipping industry.* BOEM hosted a series of outreach events with many stakeholders and fishing communities, but ocean-going vessel stakeholders, including tankers and harbor craft that regularly transverse the WEA, have not been engaged. In BOEM's Outreach Summary Report Addendum the industry is completely ignored; Vessel Traffic Conflicts are only discussed in the context of fishing vessels. PMSA has engaged in BOEM's public meetings and commented on the appropriate federal dockets, but *none* of the concerns and recommendations submitted by the industry were included in the Commentary Summary within the Humboldt WEA Environmental Assessment. It is clear that not all stakeholders concerns have been faithfully recorded or appropriately shared with the many state agencies that rely on BOEM staff to make appropriate designations, approvals or issue permits. These actions to date further confirm for us that BOEM *must be obligated* to engage with the industry as a condition of Commission action.

To graphically represent how the ocean-going vessel industry intersects with the proposed WEA, and confirming why all stakeholders should be included in these conditions, see the maps below (Figure 1).



Vessel Traffic from 2017 in and near the Humboldt Wind Energy Area

Figure 1

This graphic is sourced from BOEM's draft EA, which has the intent to consider potential environmental and socioeconomic impacts. We are concerned that *no determination of impacts to maritime navigation* are provided in the draft EA, and therefore not all effects were considered, as required of BOEM. Moreover, we would note that since 2017 it is likely that vessel traffic has only increased.

Additional Considerations for the Commission

In addition to the preceding comments on the staff recommendations, we would ask the Commission to consider the following comments during its evaluation of the WEA.

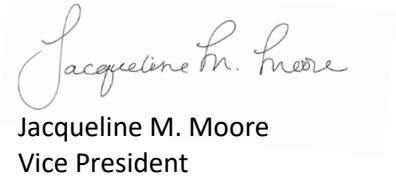
- The Humboldt WEA is proposed to be located on the continental slope. According to The Outer Continental Shelf Lands Act (OCSLA), any leases or easements should be carried out in a way that doesn't interfere with mixed uses of the sea, including sea lanes and navigation. The Humboldt WEA will, very likely, cause great interference. This must be fully justified prior to any formal contracts or permitting, otherwise it is out of compliance with federal law.

- The California Coastal Management Program speaks to the great national interest in the California coastal zone. Further, the Coastal Zone Management Act requires that the state program 'provides for adequate consideration of the national interest involved in planning for and in the siting of facilities' and do not 'exclude uses of regional benefit.' One can easily justify that commercial shipping is of great state, regional, national and

international interest and must be properly considered during the entire WEA process. Almost half of the cargo entering the U.S. arrives through California via vessels and nearly 30 percent of the nation's exports flow back out, stimulating the economy.

PMSA sincerely appreciates the opportunity to provide commentary on this Federal Consistency Determination. We look forward to working together to ensure feasible and least impactful offshore wind energy areas in the future, and please do not hesitate to contact us at your convenience if there are any questions.

Respectfully,



Jacqueline M. Moore
Vice President

cc:

Kate Huckelbridge PhD., Deputy Director, North Coast District, California Coastal Commission
Jean Thurston-Keller, Task Force Coordinator, BOEM
Tyrone Conner, Deputy Chief, Waterways Management, United States Coast Guard

Wyer, Holly@Coastal

From: Cousart, Amanda@Coastal
Sent: Tuesday, April 12, 2022 11:04 AM
To: OffshoreWind
Subject: FW: Comments at the Humbolt WEA Consistency Determination meeting from Tom Hafer
Attachments: Comments on Coastal Commission Consistancey.pdf

From: Tom and Sheri Hafer <somethingsfishy@charter.net>
Sent: Saturday, April 9, 2022 8:40 AM
To: Cousart, Amanda@Coastal <amanda.cousart@coastal.ca.gov>
Cc: Huckelbridge, Kate@Coastal <Kate.Huckelbridge@coastal.ca.gov>
Subject: Comments at the Humbolt WEA Consistency Determination meeting from Tom Hafer

Hi Kate and Amanda,

I wanted to submit my comments to you for the record. I wasn't able to finish my last few sentences that are important regarding Condition 7's working group. We think it is important that the Statewide working group recognize the work of the Regional Mutual Benefit Agreements as long as they include the guidelines of the Fishing Community Benefit Agreements sent to you by the Alliance for improving the resiliency of the fishing community. We have been working hard the last 7 years with legal counsel and our local fishing community to develop an agreement that works and do not want that work thrown out by a "state-wide" group. Mitigation for commercial fishermen is a very complicated task and any work already accomplished on this matter needs to be recognized.

Thank you for all your efforts to address our concerns,

Tom and Sheri Hafer

> On Apr 7, 2022, at 10:43 AM, Tom and Sheri Hafer <somethingsfishy@charter.net> wrote:
>
> Do we need a zoom link to speak? Tom Hafer
>
> > On Apr 6, 2022, at 3:47 PM, Cousart, Amanda@Coastal <amanda.cousart@coastal.ca.gov> wrote:
> >
> > Hi Tom-
> > Just saw your signup to speak tomorrow (it was under a different agenda item) and wanted to let you know that I've added your name to the list of industry folks. Thank you!
> > -Amanda

<image001.png>**Amanda Cousart**
California Coastal Commission
Environmental Scientist, Energy, Ocean Resources and Federal Consistency
455 Market Street, Suite 300
San Francisco, California 94105
amanda.cousart@coastal.ca.gov

Upcoming OOO: April 18-22, 2022

Comments on California Coastal Zone Management Act Consistency Determination for the Humbolt WEA

If the California Coastal Commission wants to be true to it's charter to protect commercial and recreational fishing, they will not allow offshore wind energy development in the Northern California area where 26% of our seafood is produced! Your report states, the North Coast landings averages over $43 million per year! Why are we jeopardizing such a significant area for seafood production? It could cause devastating socioeconomic impacts to the fishing communities as well as negatively impact our nations food security. Highly valuable fishing grounds like this area should be off limits to offshore wind energy development! How valuable does an area have to be to require protection from developers? There needs to be a red line!

The needed funds to have an entirely new port built and bring the necessary infrastructure into Humbolt will be in the billions! Once all these monies are spent on infrastructure, more wind turbines will be requested to pay for it. The Pandoras Box will be open. Northern California will soon look like Europe - their oceans are blanketed with thousands of wind turbines and their fishing industries have declined in these areas by 90%!. They probably started with plans for a few and now they can never have enough. Their energy costs are 5 times higher than they were just a few years ago. Also, they are MORE reliant on coal and gas to ensure a steady flow of energy when the wind doesn't blow. Do we want to follow them like a herd of sheep directly into the path of soaring energy costs and destruction of valuable fishing grounds? The cost is not worth the benefit.

That all being said, I have general comments on the staff report that should apply to any conditions for site assessment, including the proposed Morro Bay WEA.

1. There needs to be at least a 14 day notification of survey plans to allow fishermen to move their gear. Any surveys done outside the scheduled time, should be adjudicated by the State for breach of contract.
2. Local fishermen should have First Rights of Offer for observation or guard duty.
3. Efforts should be required to avoid fishing gear, not only mammals.
4. The proposed statewide working group set up to mitigate impacts to fishing should recognize the guidelines set forth in the Fishing Community Benefit Agreement that has already been endorsed by many in the fishing community. They should also recognize the regionally established Mutual Benefit Agreements that include all the guidelines in the Fishing Community Benefit Agreement and is endorsed by the local fishing community.