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.

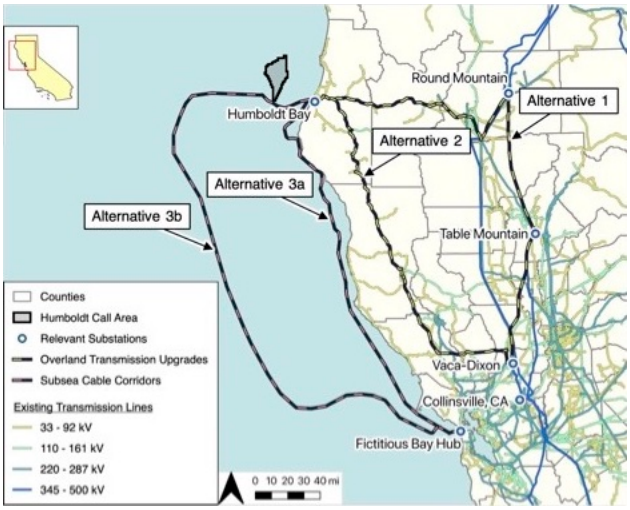

Figure 1. Transmission route alternatives for 1,836 MW wind farm scenario. Source: Schatz Energy Research Center. 2020. California North Coast Offshore Wind Studies Transmission Upgrades Report and Policy Analysis. http://schatzcenter.org/pubs/2020-OSW-R12.pdf.

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

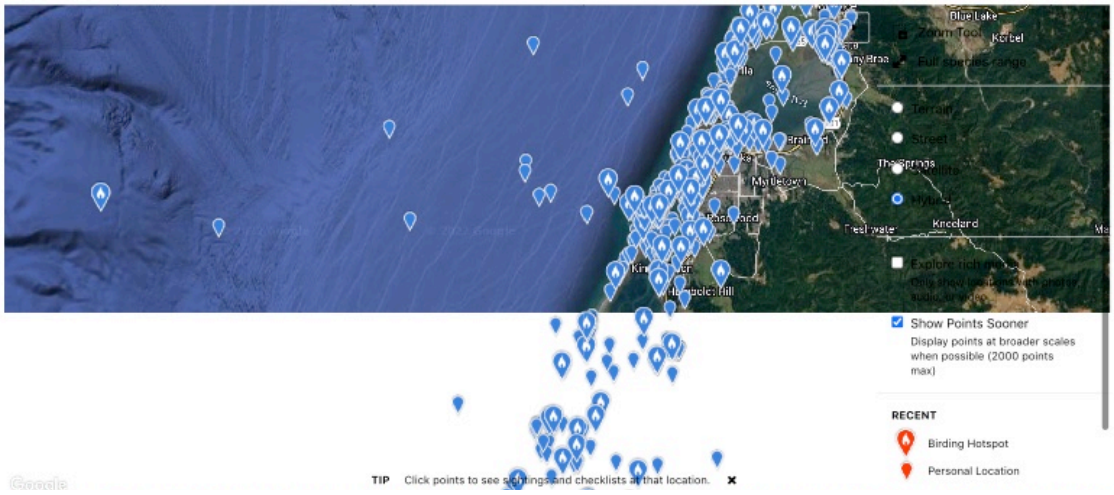

Figure 2. Brown Pelican records in the vicinity of the Humboldt Wind Energy Area. Source: eBird (https://ebird.org/species/brnpel).

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,

Jennifer Kalt, Executive Director
Humboldt Baykeeper
jkalt@humboldtbaykeeper.org

Tom Wheeler, Executive Director
Environmental Protection Information Center
tom@wildcalifornia.org

Pamela Flick, California Program Director
Defenders of Wildlife
PFlick@defenders.org

Caroline Griffith, Executive Director
Northcoast Environmental Center
carolinenecmail@gmail.com

[33] Staff report at 17.

[34] Coastal Act Section 30270, Article 8.