DOCKETED	
Docket Number:	25-AB-03
Project Title:	Assembly Bill 3 California Offshore Wind Advancement Act
TN #:	265659
Document Title:	Humboldt Waterkeeper Comments- Assembly Bill 3 Scoping Document
Description:	N/A
Filer:	System
Organization:	Sylvia van Royen
Submitter Role:	Public
Submission Date:	8/18/2025 1:39:11 PM
Docketed Date:	8/18/2025

Comment Received From: Sylvia van Royen
Submitted On: 8/18/2025
Docket Number: 25-AB-03

Humboldt Waterkeeper Comments- Assembly Bill 3 Scoping Document

Additional submitted attachment is included below.

August 18, 2025

California Energy Commission
Docket No. 25-AB-03: Assembly Bill 3 (Offshore Wind Advancement Act)
California Energy Commission
715 P Street
Sacramento, CA 95814

Submitted via electronic commenting system

Re: Comments on Assembly Bill 3 Scoping Document – Docket 25-AB-03

Thank you for the opportunity to engage in the development of the AB 3 Reports. I submit these comments on behalf of Humboldt Waterkeeper, which works to safeguard coastal resources for the health, enjoyment, and economic strength of the Humboldt Bay, and the Environmental Protection Information Center, which advocates for the science-based protection and restoration of Northwest California's forests, rivers, and wildlife.

Literature Assessment

We reviewed the literature assessment with an eye toward studies that are either specific to Humboldt Bay or contain information that is relevant to the proposed Humboldt Bay Heavy Lift Terminal. Many of the studies that are relevant to Humboldt Bay are either outdated or too limited in scope to help determine both port readiness and environmental impacts of development in the Humboldt Bay area. We have compiled a list of additional studies which are relevant to Humboldt Bay (see **Table 1**).

Most of the references in the literature assessment that provide baseline information on marine life (mammals, fish, crustaceans, and algae) are not North Coast specific, and these topics need further research and baseline monitoring to inform planning and permitting (53, 57, 58, 63, 67, 80, 82, 90, 93, 107, 108, 109, 119, 121, 122, 124, 155).

Many of the references that are relevant to Humboldt Bay, especially those establishing site-specific baseline conditions, are outdated, with some dating back 45 years (113, 125, 126). Current, site-specific baseline data relevant to Humboldt Bay is a major data gap, and we strongly support funding research to fill these data gaps.

While impacts and mitigations are well-represented across the references, and many can be applied locally, some Humboldt Bay-specific impacts and mitigations are not covered. For example, reference 112 establishes a baseline of potential effects of dredging on sensitive fish species in San Francisco Bay, but this does not provide an adequate understanding for the impacts on shellfish, harbor seals, and other Humboldt Bay-dwelling species. We have identified existing studies on impacts and mitigations specific to our region in Table 1.

Most of the papers and reports provided by government agencies on critical marine habitat, papers on the impacts of light pollution, and general marine construction impacts on wildlife can be applied to the proposed Humboldt Bay Heavy Lift Terminal. These topics would also be enhanced by our recommended additional studies.

There are no studies addressing marine invasive species and pathogens, which are major concerns for the $10 million[1] aquaculture industry. Humboldt Bay's oyster seed industry in particular is entirely dependent on the absence of pathogens that, if introduced, would prohibit oyster seed export to other regions.

River otters were also not included in any of the references, and although they are typically a freshwater species, in Humboldt Bay they are often spotted in tidal sloughs and beaches, including the Samoa Peninsula.

The West Coast Scientific Collaborative (the formation of which is listed in OPC's draft strategic plan for 2026-2030) would be a useful mechanism to help address key data gaps. There are also numerous marine and estuarine science experts based at Cal Poly Humboldt, the Telonicher Lab, and local consulting firms.

Impacts to Consider

Past reports have not adequately addressed the wide range of impacts from offshore wind energy development, and we encourage the Commission to thoroughly consider impacts from port development to wind turbine deployment. Categories of impactful actions may include: port construction, staging and integration site operations, local infrastructure (social, civic, and utility), local government and community engagement in prolonged consultation processes. Establishing categories of impact that are important to consider would provide government agencies, port authorities, and developers across the state with a standard framework to analyze impacts. For example, we have not seen much discussion of the impacts of wind turbines at staging and integration sites—the temporary wet storage of assembled turbines in Humboldt Bay can impact wildlife, water quality, cultural resources, and visual resources at the staging and integration site. Dredging to create and maintain these wet storage areas may have long-term impacts, including increased turbidity, erosion, and noise.

[1] CENCOOS. 2025. Humboldt Bay. https://www.cencoos.org/data-by-location/humboldt-bay/

Considerations for Rural Infrastructure

A data gap was identified in the scoping report under requirement 1-6: “defining transportation and other infrastructure needed to support port development.” The North Coast Offshore Wind Community Benefits Network and T.H.E. Impact Project identified several useful reports on this topic in their comment letter, which we support including in the literature assessment.

The varying types of infrastructure impacted by and necessary to support the entire lifecycle of offshore wind energy projects through design, construction, operation, and decommission must be accounted for. In our rural coastal communities, the industrialization of our port to support the proposed project would strain existing infrastructure such as transportation, internet, municipal water lines, vessel traffic regulation, and response to spills in the Bay.

We support the following recommendations from the North Coast Offshore Wind Community Benefits Network and T.H.E. Impact Project’s comment letter:

- Offshore wind transmission planning should prioritize serving tribal and rural communities' energy needs while avoiding extractive development models that undermine tribal sovereignty and local self-governance.
- Developers should contribute to a community-governed fund that supports essential infrastructure and services like transportation, healthcare, and childcare to ensure inclusive economic development.
- Housing, childcare, and healthcare must be treated as essential infrastructure with early planning and investment to support workforce development within local communities.
- Community engagement infrastructure should be considered part of seaport readiness, as local governments, community groups, and tribes may struggle to maintain engagement in multi-year port development processes.
- The importance of renewable energy generation and battery storage capacity to serve ports, along with general infrastructure like broadband and emergency response systems, must be recognized in these reports as integral to support both project development and regional wellbeing.

We also support Redwood Coast Energy Authority’s comments regarding the need for safeguards to ensure that host communities and ratepayers aren't disproportionately burdened by projects that primarily benefit the greater grid. A clear analysis of State versus local funding is needed, along with clear expectations of the costs to build port infrastructure.

Conclusion

The AB 3 reports present an opportunity to establish science-based standards for California's offshore wind energy development. To ensure Humboldt’s unique environmental, infrastructure, and community

needs are addressed in such standards, we encourage the Commission to integrate our recommendations and engage with local marine science experts to incorporate relevant studies and fund additional research to fill data gaps. Without adequate baseline data and Humboldt-specific research, we risk proceeding with development that could irreversibly harm our marine ecosystems and the cultural practices, recreation, aquaculture, and fisheries they support. We strongly support funding for baseline research and monitoring programs — particularly Humboldt-specific research on marine wildlife, invasive species and pathogens, and characterizations of existing infrastructure capacity and needs. By investing in this foundational research now, California can ensure that offshore wind development serves as a model for responsible renewable energy that protects, rather than damages, our coastal ecosystems.

Sincerely,

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Table 1. Recommended litearture relevant to Humboldt Bay and the proposed Humboldt Bay Heavy Lift Terminal.

Report Requirement	Topic	Sub Topic	Literature	Related Lit. Asmt. Ref
1-4 information gap on port specific information	Site specific baseline conditions	Eelgrass/Benthic Habitats	Schlosser, S., and A. Eicher. 2012. The Humboldt Bay and Eel River Estuary Benthic Habitat Project. California Sea Grant Publication T-075. https://digitalcommons.humboldt.edu/cgi/viewcontent.cgi?article=1026&context=hsuslri_local	96
	Site specific baseline conditions	Eelgrass	Merkel, K. and W. Gilkerson. 2023. Humboldt Bay and Eel River Eelgrass Monitoring and Pilot Study Project (2020-2023). https://www.coastalecosystemsinstitute.org/wp-content/uploads/2023/12/Enhanced-bay-wide-monitoring-of-Humboldt-Bay-Eelgrass.pdf	96
	Site specific baseline conditions	Fish & Eelgrass	Tushingham, S. et al. 2025. Biodiversity science of ancient fisheries: Archaeological indicators of eelgrass meadow health and indigenous (Wiyot) aquaculture, Humboldt Bay, CA. https://www.sciencedirect.com/science/article/pii/S0305 440325001165	96
	Site specific baseline conditions	Fish	Pinnix, W. et al. 2005. Fish Communities in Eelgrass, Oyster Culture, and Mudflat Habitats of North Humboldt Bay, California Final Report. https://www.researchgate.net/publication/267789170_Fish_Communities_in_Eelgrass_Oyster_Culture_and_Mudflat_Habitats_of_North_Humboldt_Bay_California_Final_Report	
	Site specific baseline conditions	Fish	Pinnix, W. et al. 2013. Residence time and habitat use of coho salmon in Humboldt Bay, California: An acoustic telemetry study. https://link.springer.com/article/10.1007/s10641-012-0038-x	113
	Site specific baseline conditions	Fish	Wallace, M. et al. 2015. Importance of the stream-estuary ecotone to juvenile coho salmon (Oncorhynchus kisutch) in Humboldt Bay, California. https://www.researchgate.net/publication/287686888_Importance_of_the_stream-estuary_ecotone_to_juvenile_coho_salmon_Oncorhynchus_kisutch_in_Humboldt_Bay_California	113
	Site specific baseline conditions	Fish	Fritzsche, R.A & J. W. Cavanagh. 2007. A Guide to the Fishes of Humboldt Bay. https://scholarworks.calstate.edu/downloads/1n79h674x	
	Site specific baseline conditions	Fish	Garwood, R. 2017. Historic and contemporary distribution of Longfin Smelt (*Spirinchus thaleichthys*) along the California coast. https://www.researchgate.net/profile/Rebecca-Garwood/publication/322469279_Historic_and_contemporary_distribution_of_Longfn_Smelt_Spirinchus_thaleichthys_along_the_California_coast/links/60ad2d52299bf13438e80747/Historic-and-contemporary-distribution-of-Longfn-Smelt-Spirinchus-thaleichthys-along-the-California-coast.pdf	53
	Site specific baseline conditions	Fish	Lewis, L.S. et al. 2019. Newly discovered spawning and recruitment of threatened Longfin Smelt in restored and underexplored tidal wetlands. https://pmc.ncbi.nlm.nih.gov/articles/PMC9285352/pdf/ECY-101-e02868.pdf	53
	Site specific baseline conditions	Fish	Gleason, E., T. Mulligan, and R. Studebaker. 2007. Fish Distribution in Humboldt Bay, California: A GIS Perspective By Habitat Type. Current Perspectives on the Physical and Biological Processes of Humboldt Bay. Pages 105-169 In S. C. and R. Rasmussen. Editors. Current Perspectives on the Physical and Biological Process of Humboldt Bay. California Sea Grant. Eureka, California. https://escholarship.org/uc/item/4rt5t49t	
	Site specific baseline conditions	Birds	Colwell, M. et al. 2020. Humboldt Bay, California, USA hosts a globally important shorebird community year-round. https://www.waderstudygroup.org/article/14584/	

1-4 information gap on port specific information	Site specific baseline conditions	Invasives	Boyd, M.J., T. J. Mulligan, and F. J. Shaughnessy. 2002. Non-Indigenous Marine Species of Humboldt Bay, California. Report to the Calif. Dept. of Fish & Game. https://www.krisweb.com/biblio/hum_hsu_boydetal_2002.pdf	
	Site specific baseline conditions	Invasives & Pathogens	Flavia, M.P. et al. 2025. Biological invasions via ballast water: evaluating the distribution and gaps in research effort by geography, taxonomic group, and habitat type. https://www.frontiersin.org/journals/marine-science/articles/10.3389/fmars.2025.1389559/full	
	Site specific baseline conditions	Marine Mammals	Brzeski, K. et al. 2013. Evaluating river otter demography using noninvasive genetic methods. https://doi.org/10.1002/jwmg.610	67
	Site specific baseline conditions	Marine Mammals	Barlow, D.R., Strong, C.S. & Torres, L.G. 2024. Three decades of nearshore surveys reveal long-term patterns in gray whale habitat use, distribution, and abundance in the Northern California Current. Sci Rep 14, 9352 (2024). https://doi.org/10.1038/s41598-024-59552-z	55
	Site specific baseline conditions	Marine Mammals	Eguchi, T. et al. 2023. Abundance of eastern North Pacific gray whales 2022/2023. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-SWFSC-680. https://doi.org/10.25923/n10e-bm23	55
	Site specific baseline conditions	Marine Mammals	Calambokidis, J., et al. 2019. Updated Analysis of abundance and population structure of season gray whales in the Pacific Northwest, 1996-2017. https://cascadiaresearch.org/files/Gray_whale_abundance_2017-Rev.pdf	55
	Site specific baseline conditions	Marine Mammals	Gemmer, A. 2002. Ecology of harbor seals, Phoca vitulina, in northern California. M.A. Thesis, Humboldt State University, CA.	81, 100
	Site specific baseline conditions	Marine Mammals	Allen, S. G. et al. 1984. The effect of disturbance on harbor seal haul out patterns at Bolinas Lagoon, California. Fishery Bull., 82, 493-500. https://spo.nmfs.noaa.gov/sites/default/files/pdf-content/fish-bull/allen_0.pdf	81, 100
	Site specific baseline conditions, Impacts & mitigations	Eelgrass	Gilkerson, W. and K. Merkel. Humboldt Bay Eelgrass Comprehensive Management Plan. 2017. https://humboldtbay.org/eelgrass-management-plan	96
1-4, 1-8	Impacts & mitigations	Seals	Aarts, G. et al. 2018. Behavioural response of grey seals to pile-driving. https://research.wur.nl/en/publications/behavioural-response-of-grey-seals-to-pile-driving	60
	Impacts & mitigations	Birds	Engels, S. et al. 2014. Anthropogenic electromagnetic noise disrupts magnetic compass orientation in a migratory bird. https://www.nature.com/articles/nature13290	
	Impacts & mitigations	Birds	Kelsey EC, Felis JJ, Czapanskiy M, Pereksta DM, Adams J. 2018. Collision and displacement vulnerability to offshore wind energy infrastructure among marine birds of the Pacific Outer Continental Shelf. https://www.sciencedirect.com/science/article/abs/pii/S0301479718309228	102
	Impacts & mitigations	Birds	May, R. et al. 2020. Paint it black: Efficacy of increased wind turbine rotor blade visibility to reduce avian fatalities. https://www.researchgate.net/publication/343220612_Paint_it_black_Efficacy_of_increased_wind_turbine_rotor_blade_visibility_to_reduce_avian_fatalities	102, 75, 76
	Impacts & mitigations	Light Pollution	Dark Sky Internaional. 2025. Port Marine Terminal Lighting guidelines. https://darksky.org/what-we-do/darksky-approved/port-marine-terminal-lighting-program/port-marine-terminal-lighting-guidelines/	

	Impacts & mitigations	Greenhouse Gas Emissions/ Air and Water Pollution	Humboldt Bay Harbor, Recreation, and Conservation District.2024. Resolution No. 2024-01, A Resolution Committing The District To Developing And Adopting A Green Terminal Strategy And Roadmap For The New Heavy Lift Multipurpose Terminal To Support The Offshore Wind Industry. https://humboldtbay.org/sites/humboldtbay.org/files/Resolution%202024-01%20Adopting%20a%20Green%20Terminal%20Strategy.pdf	
1-10 (Sampling and remediation of the terminal site and proposed dredging)	Site assessment	Contamination & Site Remediation	Contamination at HLMT: GeoMatrix. 2007. Scoping Ecological and Off-Site Human Health Risk Assessment, Sierra Pacific Industries, Arcata, CA. https://www.waterboards.ca.gov/northcoast/publications_and_forms/available_documents/sierra_pacific/080409/GMX07_SPI_Ecoand_Off-site_HHRA-Revised.pdf	
	Site assessment	Contamination & Site Remediation	Humboldt Waterkeeper. 2021. Eating Local Fish Safely: Humboldt Bay Mercury Assessment, Phase II. Report to the California Environmental Protection Agency. https://humboldtwaterkeeper.org/mercury-assessment/1472-mercury-study-extended-to-coastal-fish	
	Site assessment	Contamination & Site Remediation	SHN. 2024. Dredge Characterization Sampling and Analysis Plan Considerations, Redwood Marine Multipurpose Terminal Replacement Project. Technical Memorandum to the Humboldt Bay Harbor, Recreation, and Conservation District. https://humboldtbay.org/sites/humboldtbay.org/files/Dredging%20-%20Dredge%20Sampling%20Considerations%20-%2020240423_opt.pdf	