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*Comment Received From: Alison Hahm
Submitted On: 8/18/2025
Docket Number: 25-AB-03*

Assembly Bill 3 California Offshore Wind Advancement Act (CORE Hub and THE Impact Project Comments)

Dear Chair Hochschild and Commissioners,

On behalf of the undersigned partners and representatives of the North Coast Offshore Wind Community Benefits Network (â€œNetworkâ€œ) and Trade, Health, and Environment Impact Project (â€œT.H.E. Impact Projectâ€œ or â€œImpact Projectâ€œ), we are pleased to provide the following comments (attached) on the Assembly Bill 3 report and related literature review for the Offshore Wind Seaport Readiness Plan.

While the signatories, Network and T.H.E. Impact Project, partner with Tribal Nations and organizations, the Network and Impact Project do not represent them individually, and engagement with the Network and Impact Project is not a substitute for formal consultation and meaningful engagement. Additionally, participation as a signatory on this letter is not a substitute for formal consultation and meaningful engagement.

The Network and T.H.E. Impact Project have come together to submit these comments based on aligned interests in realizing fossil fuel-free, just, and equitable energy systems that uplift thriving natural environments and communities today and for future generations. It is our position that offshore wind development must improve life expectancy, community wellbeing, and economic opportunities across the state and must not concentrate or increase burdensâ€œsuch as air pollutionâ€œin any community. Thank you for considering our comments.

Sincerely,

Dan Chandler, Steering Committee Member, 350 Humboldt

Bridget Mulkerin, Senior Manager, Climate Policy, Audubon California

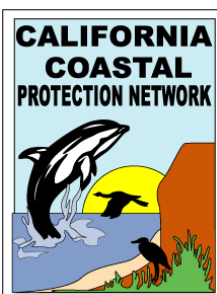
Jason Ramos, Chairperson, Blue Lake Rancheria

Alexis Sutterman, Senior Policy Manager, Brightline Defense

Julia Chunn-Heer, Offshore Wind Lead Analyst, California Coastal Protection Network

Marven Norman, Environmental Policy Analyst, Center for Community Action and Environmental Justice

Kerry Venegas, Executive Director, Changing Tides Family Services



August 18, 2025

California Energy Commission
Docket No. 25-AB-03
715 P Street
Sacramento, CA 95814

Submitted via Docket 25-AB-03

RE: Assembly Bill 3 Scoping and Literature Review for Offshore Wind Seaport Readiness Plan

Dear Chair Hochschild and Commissioners,

On behalf of over 20 undersigned partners and representatives of the North Coast Offshore Wind Community Benefits Network (“Network”)¹ and T.H.E. Impact Project (“Trade, Health, Environment Impact Project” or “Impact Project”)² we are pleased to provide the following comments on the Assembly Bill 3 report and related literature review for the Offshore Wind Seaport Readiness Plan.

While the signatories, Network and Impact Project, partner with Tribal Nations and organizations, the Network and Impact Project do not represent them individually, and engagement with the Network and Impact Project is not a substitute for formal consultation and meaningful engagement. Additionally, participation as a signatory on this letter is not a substitute for formal consultation and meaningful engagement.

The Network and Impact Project have come together to submit these comments based on aligned interests in realizing fossil fuel-free, just, and equitable energy systems that uplift thriving natural environments and communities today and for future generations. It is our position that offshore wind (“OSW”) development must improve life expectancy, community wellbeing, and economic opportunities across the state and must not concentrate or increase burdens—such as air pollution—in any community.

The development of this new large-scale energy industry, if done responsibly and fairly, can avoid bringing disproportionate environmental and cultural impacts on our local communities. As regions at both ends of the state, we are connected in our communities’ potential roles in acting as hubs for the OSW industry, particularly in the development of wind terminals at our respective ports. While our

¹ The North Coast Offshore Wind Community Benefits Network and related working groups is a diverse network of Tribal Nations, local government agencies and educational institutions, labor leaders, local community-based organizations, and community residents. The Network is convened by the Redwood Region Climate and Community Resilience Hub (CORE Hub), based at the Humboldt Area and Wild Rivers Community Foundation.

² Trade, Health, Environment (T.H.E.) Impact Project includes community-based organizations, environmental justice groups, academic institutions, and national environmental NGOs championing community-driven solutions that advance zero-emission freight operations and improve life expectancy in communities disproportionately impacted by pollution. T.H.E. Impact Project represents communities living near ports, highways, railyards, and warehouses that facilitate goods movement in Southern California and beyond.

communities have different experiences, cultures, environments, economies, California Indigenous peoples, Tribal representation, and sovereign nations, we are stronger together. Our communities are a key component of successful OSW power, not only in California, but across the West Coast. As such, **there are key values and principles that we collectively hold and are advancing to achieve in both the Pier Wind Project at the Port of Long Beach and the Wind Terminal at Humboldt Bay. These are the bases for the comments and recommendations outlined in this letter and include:**

- Prioritizing Tribal leadership, partnerships, and co-management;
- Guaranteeing community leadership and decision-making power;
- Centering public health;
- Designing projects with a mutually beneficial development approach that includes project lifecycle analysis of built and social infrastructure, impacts, and benefits the community and environment over multiple generations;
- Ensuring equitable and inclusive workforce practices that advance good paying jobs and living wage careers;
- Implementing policies to combat the Missing and Murdered Indigenous Peoples (“MMIP”) epidemic, sex-trafficking, and sexual harassment;
- Prioritizing zero-emission electric equipment and infrastructure;
- Implementing explicit, actionable plans to phase down fossil fuel infrastructure with clear deadlines;
- Assuring thorough evaluation of projected increases in emissions due to project construction and operations as well as ongoing reporting on air quality;
- Implementing strategies to reduce emissions from all maritime vessels, cargo-handling equipment, and port-related machinery that cannot be electrified, and working with portside communities to develop and implement mitigation plans that include adaptive management strategies;
- Including zero-emission mandates as part of the project descriptions in the DEIRs/DEISs required for NEPA-CEQA review;
- Specifying what public health impacts will be for portside and other affected communities (respiratory diseases, etc.) and how those will be measured, as well as identifying specific sources of pollution and ways to mitigate such sources;
- Creating pathways for those most impacted by development to have access to affordable energy, particularly for low-income community members.

We request that the Commission’s report include community-driven and public health resources in the literature review. Additionally, we collectively advance the imperative that the California Energy Commission (“CEC”) hold in-person and hybrid meetings in our local (and throughout California in affected port communities) to solicit input that informs the AB 3 Seaport Readiness Plan and that there is a collaborative and meaningful approach with our communities to closing gaps in data, understanding, and strategy/approach.

A. Purpose of the Comment Letter

The Final AB 525 Offshore Wind Strategic Plan (“Final Plan”) laid a critical foundation for responsible development of OSW in California. We look forward to the AB 3 Seaport Readiness Plan (“the Report”) providing concrete next steps to help achieve the state’s OSW targets in an equitable way, ensuring communities and environments thrive for generations to come.

If implemented responsibly, OSW has the potential to deliver substantial economic and environmental benefits to host regions. However, the current planning model for the OSW cluster—particularly for transmission—has proceeded with highly technical, agency and industry-driven planning processes that have often lacked meaningful engagement with Tribal Nations, local governments, and frontline communities. This approach has led to avoidable, protracted challenges—including possible litigation³—that threaten to undermine the success of individual projects and the industry as a whole. To effectively depart from such a pattern, the state must play a more active role in coordinating across agencies, leading early and ongoing engagement, and centering equity in decision-making.

We appreciate the CEC’s efforts to convene public workshops and integrate input from interested parties into the Final Plan. While the Final Plan provides important high-level direction, we urge that the Report builds upon its findings by identifying tangible, measurable solutions that reflect the specific needs and priorities of impacted communities. Several findings uplifted in the Final Plan provide a strong foundation, and we encourage the CEC to continue advancing this work in close coordination with relevant state agencies, in partnership with Tribal Nations, and in collaboration with impacted communities.

To support this effort, we offer detailed recommendations for the Seaport Readiness Plan informed by the specific North Coast and Long Beach contexts and by input from local partners in this comment letter.

B. Format of Our Comments

We begin the letter with a summary of our purposes and key recommendations. Guided by the unique context of each region, it then provides detailed, topic-specific recommendations aligned with the areas outlined in the AB 3 Scoping Document. It concludes by identifying additional data sources and relevant resources to strengthen the existing literature review.

- Purpose of the comment letter
- Summary of our recommendations
- Regional context guiding the comment letter
 - Wigi/Humboldt Bay and North Coast: History, challenges, and opportunities
 - Long Beach and Southern California Region: Pollution burdens, health impacts, and port activity context
- Key Topic Comments and Recommendations
 - Seaport readiness & Infrastructure Needs

³ See *Tohono O’Odham Nation v. U.S. Dept. of the Interior*, No. 24-3659 (9th Cir. May 27, 2025); see also *Sierra Club v. U.S. Army Corps of Engineers*, No. 2:20-cv-396-LEW (D. Me. 2025).

- Environmental Cultural Resources Consideration
- Workforce Opportunities
- Tribal Collaboration on Siting
- Interested Party Input on Siting
- Equity and Environmental Justice
- Maritime Consideration
- Port Development cost and Funding Strategies
- Recommendations on Data Gaps and Requirements for the Seaport Readiness Plan
- Recommendations on Literature Review under the Seaport Readiness Plan

C. Regional Context Guiding the Comment Letter

1. Wigi/Humboldt Bay and North Coast

As a region deeply connected to and dependent on the natural world, we are profoundly concerned about the impacts of climate change globally, regionally, within Wigi/Humboldt Bay, and along our local coastlines. We recognize that our region's dependence on fossil fuels for our energy needs comes at great costs to Black, Indigenous, and People of Color ("BIPOC") and low-income communities across the country. We also recognize that our dependency has resulted in energy insecurity and socio-economic vulnerabilities here on the North Coast. As a result, we support urgent and immediate action to decarbonize our economy and act on climate change.

OSW development presents a unique opportunity to simultaneously address climate change and shift the historic approach to energy projects. In the past, state and federal governments frequently partnered with industry to steamroll Tribal sovereignty and local agency consent. The wind terminal project at Humboldt Bay and additional wind-related port development on the North Coast have the potential to alter the status quo of energy development by centering Tribal interests and community needs through a new era of strong policy and enforcement mechanisms. Positive change can be further supported through the creation of high-road localized career opportunities and the implementation of legally bound investments in our communities to help them thrive.

The North Coast region has endured devastating boom-and-bust cycles associated with extractive industries like mining, logging, cannabis, and energy production developments such as dams. These industries exploited communities and natural resources, primarily benefitting those outside our region and resulting in significant environmental damage, violence, legacies of underinvestment, and unfulfilled promises of restoration. Local Tribal Nations experienced land theft and state-sanctioned genocide and continue to face some of the highest rates of MMIP in the nation. Today, our communities face challenges from a lack of capacity, infrastructure, and community services, exacerbated by chronic underinvestment. The region has high rates of suicide, substance use disorder and overdoses, and child poverty, as well as

significant racialized disparities in educational attainment.⁴ Gaps in social and built infrastructure include affordable housing, electricity, healthcare, broadband, roads, public transportation, and childcare.⁵

Central for consideration related to the CEC’s Seaport Readiness Plan is that Humboldt Bay and Crescent City—two areas that will be assessed in the Plan—are home to several Tribal Nations including Bear River Band of the Rohnerville Rancheria, Blue Lake Rancheria, Elk Valley Rancheria, Tolowa Dee-ni’ Nation, and the Wiyot Tribe, and are of utmost cultural and historical significance to these Nations and communities.

Special consideration must be given to the Town of Samoa, a historic “company town” located directly adjacent to the proposed Heavy Lift Marine Terminal. Originally built by the timber industry to house its workers and families, Samoa has faced years of disinvestment and is geographically isolated from Arcata and Eureka and limited access to essential services. As the town’s well-being was once tied to industry, if OSW emerges as a new central industry in Samoa, it must invest in Samoa’s local infrastructure and community to ensure a mutually beneficial relationship. This includes addressing environmental justice concerns, as residents are particularly vulnerable to light and noise pollution, degraded air quality, and health impacts due to the port’s proximity. This could include home retrofits to mitigate sound impacts, discounted electricity for all Samoa residents, coastal infrastructure investments, community revitalization programs, local hiring, job training, and community engagement.

Additionally, the region is home to robust commercial fishing and aquaculture industries, as well as abundant recreational opportunities, providing both economic resources and food security. Further, as the second-largest coastal estuary in California, Humboldt Bay is the largest producer of oysters in the state and has a growing seaweed industry.

This regional history and context have significant impacts across our region. For this reason, it is imperative that OSW is developed in collaboration with Tribal Nations and the greater community throughout the planning and implementation processes to ensure that this new venture serves as a vehicle for regional revitalization, community resilience, and environmental justice.

2. Long Beach and Port Complex Impacted Region

The Pier Wind Terminal is an OSW staging and integration facility proposed in Long Beach, CA, a city home to nearly half a million people.⁶ Long Beach is part of a larger network of communities across the South Coast Air Basin, a designated air quality region that represents over 17 million people—44% of

⁴ “Redwood Region Rise: Regional Plan Part 1,” California Center for Rural Policy at Cal Poly Humboldt, 2025, https://ccrp.humboldt.edu/sites/default/files/rrrise_regional_plan_part_1_revised_may_2025-0.pdf; “Live Well Humboldt,” County of Humboldt, 2025, <https://www.livewellhumboldt.org/>; “Educational Attainment: Humboldt County,” United States Census Bureau, August 5, 2025, <https://data.census.gov/table/ACSST1Y2023.S1501?q=Humboldt%20County,%20California%20Education>; “CalEnviroScreen 4.0 Report”; “HRSA Data Warehouse Shortage Area Designations,” Health Resources and Services Administration, <https://data.hrsa.gov/maps/map-tool/>.

⁵ California Center for Rural Policy, “Redwood Region Rise: Regional Plan Part 1.”

⁶ “Long Beach, CA,” Census Reporter, accessed August 11, 2025, <https://censusreporter.org/profiles/16000US0643000-long-beach-ca/>.

the state's population.⁷ People throughout the South Coast are connected by a shared history, environment, and legacy of development. Known for its sunny weather, diverse cultures, beautiful landscapes, and high population density, the region also experiences some of the worst air quality in the country. The bustling freeways, extensive rail lines, and major port activity all contribute to high levels of ozone and particulate matter that cause respiratory and cardiac diseases, asthma and lung damage, birth defects, cancer, and premature death. The complexity of the region guides our communities' commitment to advancing zero-emission solutions that improve quality of life, increase life expectancy, and respect our connection to the natural environment.

The disproportionate health impacts caused by criteria air pollutants and greenhouse gas emissions from port-generated and port-related operations are severe and well-documented. For example, a recent study found that low-income, Hispanic, and Black communities face substantially greater risks of cancer from air pollution because they live within harbor areas.⁸ California's seaports are magnets for industry and commerce, with significant operations that produce and attract emissions from sources such as drayage trucks, trains, ocean-going vessels, commercial harbor craft, and cargo handling equipment. CalEnviroScreen 4.0 shows that diesel particulate matter emissions from on-road and non-road sources are particularly high not only near the Ports of Los Angeles and Long Beach (San Pedro Bay Ports complex) but also near the ports of Oakland, Pittsburgh, Redwood City, Richmond, San Francisco, and Stockton.⁹ Negative health consequences associated with port operations are present in portside communities living near seaports and dry ports across the state, and not limited to Southern California.

Truck, train, and vessel traffic associated with port operations is a significant problem. Diesel particulate matter, a toxic air contaminant, consists of over 40 known cancer-causing substances and particulate matter (PM).¹⁰ About 70% of known cancer risks from toxic air contaminants in California are from diesel engine emissions.¹¹ Airborne particulate matter from diesel engine exhaust due to truck traffic and idling engines has been shown to increase asthma symptoms and heighten the risk of lung cancer.¹² Diesel truck emissions primarily impact residents living near freight hubs, ports, railyards, and warehouses, disproportionately affecting marginalized communities of color.¹³ Even though nationally medium and heavy duty trucks comprise only 13% of on-the-road vehicles, they are responsible for most of the air pollution in the nation, including:¹⁴

- 30% of climate-warming emissions

⁷ "About South Coast AQMD," South Coast Air Quality Management District, accessed August 11, 2025, <https://www.aqmd.gov/nav/about#:~:text=Salary%20Information,the%20entire%20state%20of%20California>.

⁸ "Appendix G Health Analyses: Proposed Amendments to the Commercial Harbor Craft Regulation," California Air Resources Board, 2021, ww2.arb.ca.gov/sites/default/files/barcu/regact/2021/chc2021/appg.pdf.

⁹ Lauren Zeise & Jared Blumenfeld, *CalEnviroScreen 4.0* (California Office of Environmental Health Hazard Assessment & California Environmental Protection Agency, October 2021), 51, <https://oehha.ca.gov/media/downloads/calenviroscreen/report/calenviroscreen40reportf2021.pdf>.

¹⁰ California Air Resources Board, "Appendix G Health Analyses."

¹¹ Ibid.

¹² "CalEnviroScreen 4.0 Report," 48.

¹³ I. Torres, A. Victoria & D. Klooster, "Warehouses, Pollution, and Social Disparities: An Analytical View of the Logistics Industry's Impacts on Environmental Justice Communities across Southern California," Earthjustice, 2021, https://earthjustice.org/wp-content/uploads/warehouse_research_report_4.15.2021.pdf.

¹⁴ Sam Wilson, "Ready for Work 2: On the Road to Clean Trucks." Cambridge, MA: Union of Concerned Scientists, February 18, 2025, <https://doi.org/10.47923/2025.15779>.

- 52% of PM 2.5 fine particles responsible for causing lung illnesses
- 58% of smog-forming nitrogen oxides (“NOx”).

In California, although only 12% of all medium and heavy-duty trucks are Class 7 or Class 8 tractor-trailer trucks, these heavy-duty trucks alone are responsible for generating 35% of the state’s total NOx emissions and over 70% of statewide NOx emissions from on-road mobile sources.¹⁵ Rail lines connecting the San Pedro Bay Ports complex to the broader national rail network further contribute to the dire conditions of the region. Because locomotive diesel engines are dirtier and lower-tech than truck engines, it is now dirtier and more harmful to move goods by rail than by truck in California.¹⁶ Moreover, studies have demonstrated the severe health impacts of pollution from operations of commercial harbor craft and ocean-going vessels.¹⁷ For example, in 2023, harbor craft at the San Pedro Bay Ports complex contributed more diesel particulate matter than trucks.¹⁸ Alarming, vessels are responsible for substantial respiratory health problems among children in the San Pedro Bay Ports complex region.¹⁹ In Long Beach, 21% of bronchitis episodes among children with asthma can be entirely attributed to pollution from vessels at the port.²⁰ Making matters worse, meteorological patterns can carry this vessel pollution further inland, impacting other non-coastal communities across the region. For example, in Riverside, approximately 60 miles away from the ports, 8% of bronchitis episodes among children can be attributed to pollution from vessels.²¹ The pollution from ships, trains, and trucks moving through the ports, along with the transportation of goods from shipping terminals to inland warehouses, has been poisoning generations of frontline communities.

The Ports of Los Angeles and Long Beach are not just the largest ports in the nation; collectively, the two ports make up the 9th busiest port complex in the world.²² The Port of Long Beach alone handles 90 million metric tons of cargo each year, accounting for one-third of the containers moving through all California ports.²³ The San Pedro Bay Ports complex is the single largest fixed source of air pollution in Southern California, “responsible for more than 100 tons per day of smog and particulate-forming nitrogen oxides—more than the daily emissions from all 6 million cars in the region.”²⁴ Furthermore, research shows that the San Pedro Bay Ports complex had the highest concentrations of diesel particulate matter across the entire air basin, with those living near the ports suffering from the highest cancer risks in the region.²⁵ According to the American Lung Association’s recent State of the Air Report, Los

¹⁵ Connie Leyva, SB-372 Medium- and heavy-duty fleet purchasing assistance program: zero-emission vehicles, Pub. L. No. SB-372, Senate Bill (2021),

https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=20210220SB372.

¹⁶ “Truck vs. Train Emissions Analysis,” California Air Resources Board, September 23, 2020,

<https://ww2.arb.ca.gov/resources/fact-sheets/truck-vs-train-emissions-analysis>.

¹⁷ California Air Resources Board, “Appendix G Health Analyses.”

¹⁸ “2023 Emissions Inventory,” Port of Los Angeles, accessed August 11, 2025,

[https://kentico.portoflosangeles.org/getmedia/3fad9979-f2cb-4b3d-bf82-687434cbd628/2023-Air-Emissions-Inventory, ES-2; Port of Long Beach, 2023 Emissions Inventory](https://kentico.portoflosangeles.org/getmedia/3fad9979-f2cb-4b3d-bf82-687434cbd628/2023-Air-Emissions-Inventory_ES-2;Port_of_Long_Beach_2023_Emissions_Inventory).

¹⁹ California Air Resources Board, “Appendix G Health Analyses.”

²⁰ Ibid.

²¹ Ibid.

²² “Port Facts & FAQs,” Port of Long Beach, accessed August 11, 2025, <https://polb.com/port-info/port-facts-faqs/#facts-at-a-glance>.

²³ Ibid.

²⁴ “Clean Port,” South Coast Air Quality Management District, accessed August 11, 2025,

<https://www.aqmd.gov/nav/about/initiatives/clean-port>.

²⁵ California Air Resources Board, “Appendix G Health Analyses.”

Angeles and Long Beach remain the most ozone-polluted region in the nation—a record held for 25 out of the 26 years of its reporting.²⁶

Considering the significant port operations and their extensive impact on the region, we urge the CEC to consider potential impacts beyond those in port adjacent communities. In particular, the Inland Empire (“IE”), located adjacent to Los Angeles County, plays a significant role in the port’s goods movement. What was once a residential and agricultural region with lively rancho culture and lifestyle is quickly transforming into a deeply industrialized zone with trucks and trains transporting goods to and from the region’s growing warehouse, storage, and distribution facilities. In the past 50 years, the number of industrial warehouses in the IE has increased by more than 26 times (i.e., from 162 to 4,299 warehouses).²⁷ The logistics hub is so large that it is visible from outer space.²⁸ Currently, the IE moves over 40% of goods in the United States and has the largest concentration of warehouses on the West Coast, with over 1 billion square feet of warehousing.²⁹ The IE has become one of the largest logistics hubs in the country due to the cargo coming in through trucking and rail from the San Pedro Bay Ports complex. Cargo activity at the ports is expected to rise by 57% from 2021 to 2032³⁰. The development and deployment of OSW in California will require the construction of new seaport terminals and manufacturing facilities to create turbine components. These projects are slated to increase (1) warehouses to store turbine materials and (2) truck traffic carrying materials to and from warehouses in the IE to Long Beach and Los Angeles seaports. This increase in truck traffic threatens to exacerbate already extreme air pollution burdens throughout the IE. It is well documented that warehouses, diesel-fueled railyards, and rampant truck traffic harms public health, community wellbeing, and culture.

The proposed port expansion project for OSW in Long Beach must not ignore the detrimental realities of the overburdened communities impacted by the port’s operations—especially considering that cargo activity is expected to continue to increase. The 400-acre purpose-built terminal will expand the port’s current land coverage by more than 10%, bringing with it increased pollution associated with the construction, operation, and maintenance of the terminal. OSW development in Long Beach should actively prioritize equity and improve public health by ensuring that investments in entrusted lands do not come at the expense of people’s health. CEC must work to reverse historic injustices that perpetuate harmful trends caused by a legacy of resource extraction and concentrating pollution in communities living on the frontlines of the goods movement industry. Our communities deserve to live free from environmental, health, and safety burdens created by the port.

²⁶ “Key Findings,” American Lung Association State of the Air 2025, accessed August 11, 2025, <https://www.lung.org/research/sota/key-findings>.

²⁷ Amparo Munoz, Susan Phillips, & Mary Ann Ruiz, *A Region in Crisis: The Rationale for a Public Health State of Emergency in the Inland Empire* (Center for Community Action and Environmental Justice, 2023), https://www.ccae.org/files/ugd/2a4f33_535d5a32a3734461b36664ae7756921d.pdf.

²⁸ Susan A. Philips, “Op-Ed: We mapped the warehouse takeover of the Inland Empire. The results are overwhelming,” Los Angeles Times, May 1, 2022, <https://www.latimes.com/opinion/story/2022-05-01/inland-empire-warehouse-growth-map-environment>.

²⁹ Marissa Brookes, Fernando Márquez Duarte & Ellen Reese, “Plug In IE: A Dialogue on Sustainable Logistics,” Inland Empire Labor and Community Center at University of California, Riverside, accessed August 11, 2025, <https://ielcc.ucr.edu/research/plug-ie-dialogue-sustainable-logistics>.

³⁰ Caroline Petrow-Cohen, “Ports of Los Angeles and Long Beach set new cargo records,” Los Angeles Times, November 15, 2024, <https://www.latimes.com/business/story/2024-11-15/ports-of-los-angeles-and-long-beach-set-new-records>.

D. Key Topic Comments and Recommendations

1. Seaport Readiness and Infrastructure Needs

Establish environmental review requirements and Tribal consultation and co-management expectations in the port permitting process. OSW development on the North Coast and in Long Beach must be guided by careful, site-specific planning and environmental review. The Report should affirm that permitting processes will be informed by future CEQA and NEPA analyses, developed in close coordination with permitting agencies and the public, and conducted with best practices in Tribally directed consultation upheld. Effective environmental review requires early and robust Tribal consultation, as well as a co-management approach where that is of interest to the Tribes. Specific Avoidance, Minimization, and Mitigation Measures (“AMMMs”) should be developed based on identified impacts, ensuring that regulatory approvals reflect both environmental protections and community input.

Throughout our comments, we identify the importance of robust NEPA review. Recent legal and executive actions attempt to alter the foundation of federal environmental review and regulation, most notably by repealing the Council on Environmental Quality’s (CEQ) binding NEPA regulations (via Executive Order 14154 in February 2025), revisions to agency NEPA regulations, and the Supreme Court’s May 29, 2025 decision in *Seven County Infrastructure Coalition v. Eagle County* narrowing the scope of NEPA reviews. Coupled with the EPA’s proposed repeal of the 2009 Endangerment Finding, which underpins greenhouse gas regulation, these changes have eroded trust in federal agencies conducting comprehensive environmental justice, climate, and cumulative impact analyses. In this policy context, it is critical for the State to step in and ensure that critical environmental justice, greenhouse gas emissions, foreseeable development scenarios, and cumulative impacts are fully assessed, independently of weakened federal oversight.

Prioritize Zero-Emission Electric Technology for the Projects’ Construction, Operations, and Maintenance. Both ports will require significant upgrades in order to meet state requirements for successful OSW development.³¹ These upgrades will result in substantial emissions and pollution from transportation and construction at each stage of project development. Thus, it is important for projects to comply with local, regional, state, and federal standards through sufficient mitigation, including securing necessary power infrastructure and prioritizing the use of zero-emission electric vehicles, equipment, and technology while terminating the use of fossil-fuel options.

We urge the ports, project developers, and project operation/maintenance partners to prioritize investment in zero-emission electric equipment and refrain from heavily investing in fossil fuel-based hydrogen technology. Overreliance on this hydrogen technology threatens to increase criteria air pollutants and greenhouse gas emissions. Hydrogen combustion emits NOx pollution at substantially higher rates than

³¹ Melissa Jones, Jim Bartridge & Lorelei Walker, “Assembly Bill 525 Offshore Wind Strategic Plan,” California Energy Commission, 2024, Publication Number: CEC-700-2023-009-V1-D.

natural gas combustion.³² In fact, the rate of NO_x emissions from hydrogen can be up to six times higher than that of emissions released by methane combustion.³³ In addition to these health concerns, there is an inherent safety risk in the storage and transportation of hydrogen as well. The handling of hydrogen requires extreme caution. It is highly flammable, combustible even in small concentrations, and may result in explosions—all presenting the possibility of severe casualties and property damage.³⁴ Furthermore, the vast majority of hydrogen currently produced in the United States—more than 99%—is derived from fossil fuels through a process that emits significant amounts of health-harming pollutants.³⁵ The Report must include standards for analyzing all direct and indirect health and safety impacts as well as life cycle analyses associated with the operation of hydrogen-fueled vehicles or equipment at the project sites during construction, operation, and maintenance.

Because Long Beach is in non-attainment for all six of the primary pollutants, with communities breathing some of the most heavily polluted air in the nation,³⁶ the Report must include criteria that advances emission reductions required by the South Coast Air Quality Management Plan (“AQMP”), the Clean Air Action Plan (“CAAP”), and the Community Emissions Reduction Plan (“CERP”). For example, the 2022 AQMP explicitly documented that “the only way to achieve the required [NO_x] reductions [in the region] is through extensive use of zero-emission technologies across all stationary and mobile sources.”³⁷

Considering the regional environment and level of development in the Humboldt Bay Port region, the Report should include clear recommendations to support the Humboldt Bay Harbor District in designing, constructing, and operating a Green Terminal that incorporates the best available emissions-reducing technologies from the beginning. The Humboldt Bay Port can become the model for how port development, including OSW development, can be done by implementing lessons learned from ports across the state and prioritizing zero-emission technology and infrastructure from the outset.

³² Sasan Saadat & Sara Gersen, *Reclaiming Hydrogen for a Renewable Future: Distinguishing Oil & Gas Industry Spin from Zero-Emission Solutions* (Earthjustice, 2021), https://earthjustice.org/wp-content/uploads/hydrogen_earthjustice_2021.pdf.

³³ Cara Fogler, “Hydrogen: Future of Clean Energy or a False Solution?,” Sierra Club, January 4, 2024, <https://www.sierraclub.org/articles/2022/01/hydrogen-future-clean-energy-or-false-solution>.

³⁴ Hao Li, et al., “Safety of hydrogen storage and transportation: An overview on mechanisms, techniques, and challenges,” *Energy Reports* 8 (2022): 6258–69, <https://www.sciencedirect.com/science/article/pii/S2352484722008332>.

³⁵ Sasan Saadat & Sara Gersen, *Reclaiming Hydrogen for a Renewable Future*.

³⁶ Pierce Nahigyan, “Environmental Health Hazards Impacting the City of Long Beach,” Long Beach Business Journal, May 6, 2019, <https://lbbusinessjournal.com/ports/environmental-health-hazards-impacting-the-city-of-long-beach/>.

³⁷ Wayne Natri et al., “2022 Air Quality Management Plan,” South Coast Air Quality Management District, 2022, <https://nam04.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.aqmd.gov%2Fdocs%2Fdefault-source%2Fclean-air-plans%2FAir-quality-management-plans%2F2022-air-quality-management-plan%2Ffinal-2022-aqmp%2Ffinal-2022-aqmp.pdf%3Fsfvrsn%3D16&data=05%7C02%7Cvrvillanueva%40earthjustice.org%7C18ac049ccf964fca013e08dc1b7d1573%7Cadedb458e8e34c4e9bedfa792af66cb6%7C0%7C0%7C638415471260962865%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6IklhaWwiLCJXVCi6Mn0%3D%7C3000%7C%7C%7C&sdata=oDW9AZTV2SofsdKPWzJMosVaVMnOIIV%2BAQrC%2BfzrWvA%3D&reserved=0>.

It is important for the Report to set clear standards for ongoing monitoring and annual emissions reporting requirements, adaptive management strategies that ensure regular evaluation, and timely incorporation of emerging technologies that further reduce emissions as more zero-emission technologies become commercially available. The Report should include firm expectations for the electrification of port and vessel operations, along with long-term commitments to full decarbonization. These requirements should be embedded within infrastructure design, procurement criteria, and operational standards.

Adopt a Holistic Approach to Determining Infrastructure Readiness. The Report should promote a comprehensive approach to infrastructure readiness that spans the entire project lifecycle, including design, construction, and operation/maintenance. Development of OSW terminals should prioritize the protection of environmental, cultural, and recreational resources, including Tribal cultural landscapes, and provide tangible infrastructure benefits to portside communities. These benefits may include, but are not limited to, commitments to traffic safety improvements, electric vehicle charging stations, building electrification, energy efficiency, waste reduction measures, and a dig-once policy to minimize future disruptions. The Port of Long Beach, the Harbor Bay Harbor District, and project developers should work in partnership with existing advisory committees and local Tribal Nations and entities to identify additional design and operational strategies that will ensure the Wind Terminal operates in a manner that is both sustainable and safe.

In addition to preparing physical infrastructure, we encourage the CEC to broaden its definition and scope to include social infrastructure such as housing, childcare, and civic engagement capacity. For example, the North Coast region has limited existing capacities for wraparound services, and the influx of workers and demands stemming from OSW and port development would further strain existing systems.³⁸ Social infrastructure is essential to the long-term success of these projects, serving as a critical complement to physical infrastructure and supporting the resilience and wellbeing of local communities. To this end, we included detailed recommendations under Requirement 1-6: Transportation and Other Infrastructure later in this letter.

CEC must require port authorities to demonstrate lease-based controls to require terminal operators to reduce at-berth emissions and ensure their cargo handling equipment meets EPA's air quality standards. The Report should analyze zero-emission strategies already carried out in port leases with terminal operators and prompt California ports to strengthen and extend these pollution control measures. Leases are a powerful and direct way for the ports to ensure operator activities support significant emission reductions.³⁹ For example, Los Angeles and Long Beach's Green Port Policy and

³⁸ Xodus, *Humboldt Supply Chain and Workforce Assessment: Redwood Region Offshore Wind Roadmap* (County of Humboldt, 2025) pg 21; County Administrative Office, "Humboldt County and Xodus Join Forces to Propel West Coast Offshore Wind Development," Humboldt County, June 6, 2024, <https://humboldt.gov/CivicAlerts.aspx?AID=5569>; Xodus, "Proposal for the Provision of Humboldt Supply Chain and Workforce Assessment," Granicus, December 22, 2023, <https://humboldt.legistar.com/View.ashx?M=F&ID=12868349&GUID=2C2A9C64-DC86-469A-A6C2-6E542EDD1D8F>.

³⁹ San Pedro Bay Ports, "San Pedro Bay Ports Clean Air Action Plan 2017: Clean Air Action Plan Update," Port of Long Beach & Port of Los Angeles, 2017, https://kentico.portoflosangeles.org/getmedia/9d371f7b-9812-4c75-bcfd-23e83a191435/CAAP_2017_Draft_Document-Final ("Terminal operators have made considerable capital investments in clean equipment over the past decade to comply with Port lease requirements...result[ing] in significant emission reductions from Port terminal cargo handling operations.").

CAAP direct the ports to develop, adopt, and enable lease-based controls to support zero-emission activities. The Green Port Policy empowers the Port of Long Beach to use “environmental covenants in new and amended leases” to implement the Green Port Policy principles.”⁴⁰ Similarly, the CAAP directs the ports to utilize lease-based agreements to carry out zero-emission strategies, such as providing more favorable lease terms to harbor craft operators with cleaner fleets.⁴¹ We urge CEC to leverage its position as a major funder to act on this recommendation.

2. Environmental and Cultural Resources Consideration

Existing recommendations in the Final Plan related to environmental and cultural resource protection provide an important foundation. However, AB 3 must build on this foundation by establishing stronger and more actionable strategies that can adapt as impacts, procedures, and best practices evolve. It is essential that these strategies remain responsive to ongoing input from communities and consultation/partnerships with Tribal Nations. Below, we highlight several key measures that should be included in the Report to ensure meaningful and lasting protections for environmental and cultural resources. We provide additional recommendations related to this topic under our response to Requirement 1-4 later in this comment letter.

Ensure Full CEQA and NEPA Compliance. We agree with the statement in the Final Plan that thoughtful planning and specific mitigations should be applied based on the effects identified through future site-specific CEQA and NEPA analyses and coordination with permitting agencies and the public. To further this, the Report should include an explicit recommendation that all developments must achieve full compliance with CEQA and NEPA and follow proper compliance timelines. We are concerned about the direct, indirect, and cumulative impacts from OSW port development and urge the CEC to provide additional guidance to ensure strong NEPA and CEQA processes, safeguarding our communities’ cultural, environmental, and socio-economic landscapes, including the following:

- *Prepare Project-specific Environmental Analyses.* CEC should exercise its planning and coordination authority under AB 525 to work in collaboration with relevant state agencies to ensure that Bureau of Ocean Energy Management’s (“BOEM”) Program Environmental Impact Statement (“PEIS”) does not replace project-specific Environmental Impact Statements (“EIS”) or the Environmental Impact Reports (“EIR”) under CEQA. The future project-specific EISs and EIRs will include site-specific AMMMs, which should also be incorporated into future agency approvals. This step is critical, as wind projects at the ports are necessary and connected actions related to the wind energy areas.
- *Require robust public engagement.* CEC must ensure that each project grants opportunities for public review, input, and engagement. In addition, we urge CEC to develop consistent monitoring, enforcement, and public reporting of all mitigation measures developed and required during the environmental review process.
- *Uphold Procedural Requirements.* CEC should coordinate with other agencies responsible for CEQA to ensure that EIR process and sequencing is appropriate to project development

⁴⁰ Port of Long Beach, “Green Port Policy: 2006 AAPA Comprehensive Environmental Management Awards Competition,” Port of Long Beach, 2006, https://aapa.files.cms-plus.com/PDFs/EnvironmentalAwards/2006/2006_EnviroAward_Long%20Beach.pdf.

⁴¹ San Pedro Bay Ports, *San Pedro Bay Ports Clean Air Action Plan 2017 Update*, 72.

timeframe and sequencing; and that the EIR analyze the “whole of the action,”⁴² which includes any and all actions associated with the Wind Terminal development, beyond the development of the terminal alone.

- *Strengthen Marine Impact Review and Advance Adaptive Resource Management.* The Report should affirm that all marine-related impacts associated with OSW port development are subject to full environmental review.⁴³ Further, port construction, navigation channel alterations, and increased vessel traffic could negatively impact marine and coastal ecosystems in and surrounding the ports. To reduce negative impacts on coastal and marine habitats, wildlife, and surrounding communities, responsible agencies and port developers should implement a mitigation hierarchy (first avoiding, then minimizing, mitigating, and monitoring for adverse impacts) and establish robust environmental monitoring and mitigation protocols. Regardless of current federal uncertainty and ongoing attacks on the National Environmental Policy Act, the implementation of any mitigation or monitoring measures must include the meaningful engagement of Tribal Nations and local communities under AB 52 for all projects subject to NEPA and CEQA. AB 52 establishes a baseline for consultation, and effective practice should go further. We urge CEC, in its role as primary funder, to outline in the Report as best practice that ports demonstrate early and consistent consultation with experts with traditional, scientific, and place-based knowledge to understand the implications of construction and related activities, as well as to identify potential modifications to initial mitigation plans as new data becomes available. In addition, we recommend that the Report includes potential processes for the Pacific Offshore Wind Consortium and the West Coast Offshore Wind Science Entity (when it is established) to identify regional best practices in adaptive resource management, cross-jurisdictional research, and long-term scientific monitoring and mitigation innovations.

Potential impacts that must be considered in CEQA and NEPA analysis include greenhouse gas emissions; impacts to air quality, tribal cultural resources, tribal community safety, transportation, wildlife, wetlands, water quality, population and public health, housing and other local services, utilities and energy availability, and recreation; and impacts from new and ongoing dredging, shoreline erosion, rising sea levels and tsunamis, seismic activity, marine invasive species introduced by the project, noise, and lighting. Importantly, environmental reviews must consider the direct, indirect and cumulative impacts of the project caused by reasonably foreseeable activities of OSW-related port development.

California State Agencies, by funding grants that support environmental monitoring and research, have a unique opportunity to ensure that environmental reviews for these projects are effective. Establishing baseline conditions, for marine life, air, soil, and water quality, as well as measuring those conditions in surrounding communities, is absolutely essential for adequately determining environmental impacts. The CEC’s Offshore Wind Waterfront Facility Improvement Program, Prop 4, and other State programs, can provide funding for environmental monitoring as well as studies and review. These monies should be

⁴² Guidelines for Implementation of the California Environmental Quality Act, 14 CCR §§ 15000–387, [https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=I86C9BC205B4D11EC976B000D3A7C4BC3&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=I86C9BC205B4D11EC976B000D3A7C4BC3&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default)).

⁴³ See *impacts outlined in Redwood Region Climate & Community Resilience Hub* and Partners to Bureau of Ocean Energy Management, February 20, 2024, regarding the Notice of Intent to Prepare a Programmatic Environmental Impact Statement for Future Floating Wind Energy Development Related to 2023 Leased Areas Offshore California, <https://www.regulations.gov/comment/BOEM-2023-0061-0172>.

delivered to the ports of Humboldt and Long Beach as soon as possible so that they can begin necessary environmental monitoring in order to establish a baseline.

Further, these monitoring systems should not be temporarily put in place prior to construction—they should remain in place throughout the life of the projects. This will help determine project impacts long after permitting is finished and will support adaptive management strategies. This includes air and water quality monitoring systems to track environmental conditions and trigger community-informed mitigation measures if elevated pollution levels are detected.

Prioritize Tribally-Led Efforts for Environmental and Cultural Resource Protection. We urge the CEC to include a recommendation that environmental review processes and environmental and cultural resource protection must incorporate Traditional Ecological Knowledge (“TEK”), cultural practices, and co-management structures with Tribal Nations and local Tribal and Indigenous scientists and cultural practitioners. Tribal cultural practices and resources across the state are vulnerable to OSW port development impacts. For example, on the North Coast, the Wiyot Tribe’s decades-long fight has won rematriation of Tuluwat Island in Wigi (Humboldt Bay), which is immediately adjacent to (approximately 0.3 miles away) and in the lines of site, sound and light from the proposed wind terminal project.

OSW projects also have the potential to harm Tongva land in the South Coast and compromise Tongva peoples’ resources and long-standing cultural practices. Since time immemorial, the Tongva have inhabited the greater Los Angeles Basin, known as Tovangar. Natural, ancestral boundaries of Tovangar range from the Santa Susana Mountains to the North, Aliso Creek to the South, the San Bernardino Mountains to the East, and the Pacific Ocean to the West—including four Channel Islands of Santa Catalina, San Clemente, Santa Barbara, and San Nicolas.⁴⁴ Tongva villages were often built along the coast or near rivers, creeks, and other sources of water.⁴⁵ The Tongva sustainably hunted sea lion subadults for centuries, relying on ti’ats (canoes) to obtain food from the ocean and conduct trade along the coast.⁴⁶ As mariners, the salt waters are important to the Tribe. Their ti’ats traveled to Pimu (Catalina Island) frequently. All life is sacred to the Tongva. They hunted fish and kelp for various uses, as well as sea lions and seals for their blubber.⁴⁷ As barrels of toxic waste and DDT were first dumped in deep waters near Pimu, Tribal members have noticed the problematic pattern of deep-water dumping over time.⁴⁸ Following the implementation of deep-ocean permitting to dump toxics, Tribal members have noticed dumping closer to the ports.⁴⁹ Portions of Long Beach and the San Pedro basin are both

⁴⁴ “Gabrielino/Tongva Nation of the Greater Los Angeles Basin,” State of California Native American Heritage Commission, accessed August 11, 2025, <https://nahc.ca.gov/cp/tribal-atlas-pages/gabrielino-tongva-nation/>.

⁴⁵ Jenny Hamel, “LA’s Tongva descendants: ‘We originated here’,” KCRW, July 17, 2018, <https://www.kcrw.com/culture/shows/curious-coast/las-tongva-descendants-we-originated-here#:~:text=Tongva%20villages%20were%20often%20built,near%20the%20Los%20Angeles%20River>.

⁴⁶ Joshua Rapp Learn, “In Coastal California, the Tongva Sustainably Hunted Marine Mammals for Centuries,” Hakai Magazine, September 10, 2021, <https://hakaimagazine.com/news/in-coastal-california-the-tongva-sustainably-hunted-marine-mammals-for-centuries/>; Ileana Wachtel, “Ancient canoe revival highlights Indigenous sustainability practices and ocean conservation,” USC Dornsife, April 4, 2024, <https://dornsife.usc.edu/news/stories/tongva-tiat-finds-permanent-exhibit-at-altasea/>.

⁴⁷ Tina Calderon, personal communication, March 17, 2025. Tina Calderon is the Director of Ocean Protectors Program at Sacred Places Institute for Indigenous People which includes participation with the U.S. Sea Grant research (at USC). She is also a Culture Bearer of Tongva descent and has worked in OSW for a long time.

⁴⁸ Kajol Gupta, email message to Tina Calderon, March 7, 2024.

⁴⁹ Tina Calderon, personal communication, March 17, 2025.

considered within Tongva territory though laws exist today that do not align with cultural practices as it relates to hunting, with proper permitting and permission required to do so.⁵⁰

California's OSW goals are mandated in correlation with the state's 30x30 programming. The West Coast Ocean Alliance has a strong Tribal caucus that unites California Tribes all along the coast to strengthen effort towards collaborative solutions with state and federal government, as well as the entire West Coast community. This is especially critical to Tongva people, who want to ensure that social and environmental harms are not incurred. The scale of Long Beach's Pier Wind Project is still being determined. We urge CEC to ensure that as the project develops, it requires the Port of Long Beach to consistently consult Tribal Nations to inform how the proposed Pier Wind project may interact with sacred sites. We hope CEC will leverage its planning and coordinating authority to eliminate siloes and bridge communication gaps between the NOAA Sea Grant Program and the POLB.⁵¹

Given a history of federal and state agencies conducting limited email consultations rather than following proper public engagement protocol, we urge CEC to slow down and find long-term solutions that don't exacerbate social and environmental harms.⁵² We urge CEC to study and monitor the quality of water around wind terminals and potential impacts on Tongva cultural resources from dredging and disruptions associated with project construction.⁵³

If the Pier Wind Project were to develop on Tongva waters, it would be important to address dumping and potential water quality issues from a history of DDT dumping off the coast of Long Beach.⁵⁴ CEC must acknowledge that there is a history of industry dumping toxic waste and DDT off the coast of Long Beach, with little understanding of the deleterious outcomes associated. We urge CEC to consult with water quality experts including Tongva members to explore the impacts of dumping, with dredging mitigation plans created to address any accidental exposure caused by disrupting dump sites.

The Pier Wind Initial Study mentions that it is anticipated that dredging of approximately 42 million cubic yards of fill and 8 million cubic yards of surcharge (such as sand) will be needed to create the Pier Wind Terminal and transportation corridor.⁵⁵ It also mentions that these dredging activities could bring to the surface contaminated sediments and marine organisms, and that the subsequent decay and/or exposure of these materials to air could emit odors that could affect a substantial number of people.⁵⁶

Most of the water quality and dredging monitoring done is by the Port of Long Beach, with consistent claims of improvement over the last 40 years. Comparative water quality done by a more objective entity is vital to ensure Long Beach water quality continues to improve. Enforcement options should be exercised as needed. The port communities of Long Beach, as well as the Tongva community, must be included in a meaningful public engagement process that makes major project milestones accessible and gives local residents and Tribal Nations a seat at the decision-making table as OSW advances.

We advocate for strengthened recommendations within the Report that offer clear and specific avenues for environmental and cultural resource protection measures to be informed by Tribal and cultural leaders and TEK. We propose the following for inclusion in the Report's recommendations:

⁵⁰ Id.

⁵¹ Kajol Gupta, email message to Tina Calderon, March 7, 2024.

⁵² Ibid.

⁵³ Ibid.

⁵⁴ Tina Calderon, personal communication, March 17, 2025.

⁵⁵ Port of Long Beach, "Initial Study for the Pier Wind Terminal Development Project," November, 2023, 1–9.

⁵⁶ Ibid., 2–10.

- Uphold Tribal Sovereignty by having Tribes in positions of decision-making authority and shared regulatory authority.
- Include other avenues to work in formal partnership with regional Tribes to assess Tribal cultural resource impacts, including identifying areas with highly sensitive cultural resources and requiring developers and those with jurisdictional authority to avoid or minimize impacts to these sites. This includes the incorporation of TEK within environmental and cultural resource protection measures, hiring staff from Tribal Nations in data design, collection and environmental analysis processes, and requiring co-management agreements and Tribal participation in OSW science and adaptive management entities and committees.
- Include a recommendation to establish formal agreements between the future OSW energy area developers, wind terminal developers, transmission developers, regulating agencies, and regional Tribes to ensure critical protection of the environment and Tribal cultural resources. On the North Coast, such agreements are necessary given the cultural significance of lands and waters where OSW industry cluster infrastructure would be built, operated and decommissioned. If the State is to uphold its commitments to sovereignty and ensure it does not interfere with the federal government upholding its trust obligations, the Strategic Plan must include an analysis of and recommendation for these types of agreements.
- There must be inadvertent discovery protocols in place at every instance of ground disturbance. These include direct communication with Tribes in the event of an unanticipated discovery, as well as a post-discovery process for evaluation of a discovery.⁵⁷⁵⁸
- Acknowledge and respect the previously established co-management agreements that Tribes have with state and federal agencies for environmental and cultural resource management.
- Acknowledge and respect Tribal protected area designations.
- Identify and facilitate funding (including but not limited to capacity funds from developers and the State) for gaps that are constricting Tribal leadership, participation, programmatic development, and capacity, including free prior and informed consent.

Findings and recommendations in the Report must form clear pathways forward for better coordination between state agencies to leverage their respective resources and programs to support protection measures for Tribal cultural resources. Specific opportunities may include:

- Build and maintain a meaningful and strong decision-making process and structure to ensure Tribal leadership and co-develop in all aspects of future OSW port facility design, review, construction, operations/maintenance, and decommissioning.
- Tribal liaisons within the Governor's Office and relative state agencies should work in partnerships with Tribal liaisons and officers at federal departments and agencies, such as the Department of the Interior, Department of Energy, BOEM, and the Bureau of Safety and Environmental Enforcement (BSEE), among others. The Tribal liaisons should be based within the region for the duration of the wind terminal and wind energy area leases and

⁵⁷ West Coast Ocean Tribal Caucus, Guidance and Responsibilities for Effective Tribal Consultation, Communication, and Engagement, West Coast Ocean Alliance, 2020, https://static1.squarespace.com/static/5bc79df3a9ab953d587032ca/t/5f0cdc876f40e375a32305af/1594678422449/WestCoastTribalEngagmentGuidance_July2020.pdf.

⁵⁸ California Coastal Commission, "Staff Report: Regular Calendar" (CD-0001-22), Bureau of Ocean Energy Management, 2022, 104, <https://documents.coastal.ca.gov/reports/2022/4/Th8a/Th8a-4-2022%20staffreport.pdf>.

decommissioning to strengthen co-management, coordination processes, and relationships with Tribes.

- All state and local jurisdiction agency staff working to plan, permit, and fund the wind terminal projects in Long Beach and Humboldt should be required to attend training designed by Tribal Nations with cultural and/or historical ties to the lease areas, on their cultures, histories, governance structures, interests and concerns, best practices for relationship building and concepts such as Tribal sovereignty and self-determination, ecological knowledge and land return.
- Incorporate outcomes from other assessments at the state and federal levels such as BOEM's West Coast Tribal Cultural Landscapes assessment and the California Coastal Commission's Consistency Determinations Report for the Humboldt Wind Energy Area into the Report and ensure that state agencies adhere to and incorporate guidance for meaningful engagement, co-design, and co-management with Tribes.

Leverage State Authority to Strengthen Environmental and Cultural Resource

Protections and Community Benefits for Port Projects.⁵⁹ CEC and other state agencies have obligations under the California Public Resources Code, public trust doctrine,⁶⁰ and other laws to protect public health and preserve environmental quality.⁶¹ We therefore urge CEC to include recommendations for how agencies can create strong mitigation programs and monitoring/research requirements for port expansion projects proposed to support OSW assembly and deployment. Through power procurement and consistent review processes, state agencies and utilities have significant opportunities to support environmental protection goals. These opportunities can be realized by integrating funding for environmental research into power purchase agreements and other agreements with developers, incorporating environmental criteria into competitive solicitations, and other innovative strategies. The Report should include an analysis of and recommendation for these types of strategies.

The limited centralized procurement authority established under AB 1373 allows the state to set conditions for competitive solicitations, including requirements that advance environmental research and monitoring. There have been precedents along the Atlantic Coast in states such as New York, New Jersey,

⁵⁹ Natural Resources Defense Council to California Energy Commission, June 2, 2023, regarding California Offshore Renewable Energy (Docket #17-MISC-01), <https://www.google.com/url?q=https://efiling.energy.ca.gov/GetDocument.aspx?tn%3D250472%26DocumentContentId%3D85234&sa=D&source=docs&ust=1754955043710869&usq=AOvVaw3Erql0HXFImxup4--yg8Nq>

⁶⁰ California courts have held that state agencies share a duty to avoid unnecessary harm to trust resources, even when the acting agency is not the primary trustee. “[P]ublic trust is more than an affirmation of state power to use public property for public purposes. It is an affirmation.. of the state to protect the people's common heritage of streams, lakes, marshlands and tidelands, surrendering that right of protection only in rare cases when the abandonment of that right is consistent with the purposes of the trust. *Nat'l Audubon Soc'y v. Superior Ct.*, 33 Cal. 3d 419, 441, 658 P.2d 709, 724 (1983).

⁶¹ “The Legislature hereby finds and declares that electrical energy is essential to the health, safety and welfare of the people of this state and to the state economy, and that it is the responsibility of state government to ensure that a reliable supply of electrical energy is maintained at a level consistent with the need for such energy for protection of public health and safety, for promotion of the general welfare, and for environmental quality protection.” California Public Resources Code § 25001.

and Connecticut that have successfully leveraged centralized procurement to require developer contributions to wildlife and fisheries research, conservation, and mitigation efforts.⁶²

3. Workforce Opportunities

The Final AB 525 Offshore Wind Energy Strategic Plan explicitly calls for broadening the definition of economic development to ensure targeted benefits for historically underserved communities and references using Tribal Community Benefits Agreements as a meaningful mechanism to codify and deliver these benefits. We support these actions as well as the Final Plan recommendations to promote partnerships around workforce development and pathways. These tactics—plus the learnings from the Schatz Energy Research Center 2024 workforce analysis,⁶³ County of Humboldt’s supply chain and workforce assessment,⁶⁴ and the CEC’s forthcoming NREL report outlining workforce needs and associated training requirements—will help advance a strong and inclusive port workforce. To further equitable workforce development, we urge the CEC to include the following additional strategies in the forthcoming report:

Advance Equitable Procurement. Prioritize sourcing goods and services from Tribally owned, minority-owned, and other underrepresented businesses in all contracts and subcontracts associated with OSW development.

Promote Tribal Participation and Ownership. Promote Tribal ownership opportunities and the use of Tribally-owned contractors and businesses. Ensure the creation of career and leadership pathways for local residents, members of Tribal Nations, and underserved communities.

Invest in Equitable Workforce Development and Youth Pathway. There will be the need for many different workers from construction to ecosystem to supporting jobs. It is important to strengthen the pathways for people of color, remote rural, low-income, and those experiencing significant barriers to career entry. This requires building upon and investing in successful existing programs and partnerships, implementing local and diversity hiring goals, and tracking and publicly reporting data on success in meeting workforce goals. Local governments, Tribal governments, and developers should partner with local institutions to design and implement internships and entry-level job opportunities in natural and cultural resource monitoring. Programs for all job classifications should be designed to equip Indigenous students, underserved BIPOC and low income youth, and women with the locally available training, skills, and related certifications needed to pursue long-term careers in these fields. Investments should be made in equitable access through wraparound supports like childcare, transportation, career and education navigation support, mental health services, and financial aid. It is also important to create a pathway directly from training to high-quality employment.

⁶² Mark James et al., “Using Non-Price Criteria in State Offshore Wind Solicitations to Advance Net Positive Biodiversity Goals,” The Institute for Energy and the Environment at Vermont Law and Graduate School, 2023, https://www.vermontlaw.edu/wp-content/uploads/2024/07/iee-tnc_offshore-wind-report_20230606_1644.pdf.

⁶³ Tanner Etherton & Arne Jacobson, “California Floating Offshore Wind: Evaluating Workforce Analyses and Assessing Professional Labor,” Schatz Energy Research Center, 2025, <https://schatzcenter.org/docs/2025-OSW-R1-workforce-SchatzCenter.pdf>.

⁶⁴ Xodus, “Humboldt Supply Chain and Workforce Assessment: Redwood Region Offshore Wind Roadmap.”

Mandate Developer and Contractor Commitments. Outline strategies for requiring developers, contractors, and terminal operators to create and implement workforce plans that include strategies to increase workforce diversity and give quality job opportunities to local underrepresented communities, including women and Tribal members. These workforce plans would include numerical goals and benchmarks of hiring interns and regular, full-time staff from these underrepresented communities. These commitments should apply to career pathways not already covered by Project Labor Agreements (“PLA”) for the Wind Terminals.

4. Tribal Collaboration on Siting

We agree with the recommendations in the Final Report that CEC and state agencies must engage in early, sustained, and meaningful collaboration with Tribal governments to co-develop seaport siting criteria.⁶⁵ These criteria must be culturally appropriate, community-informed, and grounded in respect for Tribal sovereignty. They should also reflect Tribal science, TEK, and community-defined priorities for economic development, environmental protection, and cultural preservation. Our prior comments on consultation, co-management, and traditional ecological knowledge apply to siting as well.

Globally, there is a growing recognition of the need to address the historical legacy of extractive development on Indigenous communities.⁶⁶ The international standard of Free, Prior, and Informed Consent (“FPIC”) is a best practice for infrastructure projects affecting Indigenous lands. The United States has yet to codify or implement FPIC as a legal requirement. California has the opportunity to take the lead in closing this gap. We recommend that the Report incorporate the following directives for state agencies:

Engage in Early, Frequent, and Meaningful Government-to-Government Consultation. The Report can build upon the Final Plan by codifying Tribal Nations’ decision-making authority throughout OSW port project components:

- Review and propose pathways to achieve regulatory authority, co-management and co-ownership for Tribal Nations, including related sets of proposed agreements.
- Propose intergovernmental agreements between regulating California agencies, Tribes, and/or a consortium Tribal body supported by Tribal governments, to defer or share regulatory and management responsibilities.
- Propose flexible and ongoing capacity funding for Tribal Nations for involvement in OSW planning, assessment, and potential implementation processes.
- Review, analyze and propose potential amendments to controlling bodies of law by the California legislature to provide for specific recognition of the interests of Tribal Nations.
- Review, analyze and propose potential controlling regulatory law by California agencies for provisions with broad enough authority to define more specific recognition of Tribal interests.
- Legally binding mechanisms such as enabling agreements, co-management frameworks, and co-ownership models that uphold Tribal jurisdiction and stewardship.

⁶⁵ Jones et al, “Assembly Bill 525 Strategic Plan,” 80.

⁶⁶ See e.g., Tara Ward, “The Right to Free, Prior, and Informed Consent: Indigenous Peoples’ Participation Rights within International Law,” *Northwestern Law Journal of Human Rights* 10, no. 2 (2011): 54, <http://scholarlycommons.law.northwestern.edu/njihr/vol10/iss2/2>.

Address the Missing and Murdered Indigenous Peoples Crisis and Ensuring Community Safety in Humboldt, Long Beach, and Beyond. Given the severity of the MMIP crisis, we urge CEC to include stronger measures and clear implementation protocols in the Report to ensure the safety of Native people and other at-risk individuals across the state, in addition to the foundational principles recommended in the Final Plan.⁶⁷

The North Coast and Southern California have a well-documented history of MMIP, sex trafficking, and sexualized violence associated with waves of extractive development and transitory workforces. Since the Gold Rush—and continuing through the timber, land, water, and cannabis booms—Native women, girls, and two-spirit individuals have been disproportionately targeted by violence in the North Coast. Today, California has the fifth largest MMIP caseload in the United States; Humboldt County alone accounts for one in five of those cases,⁶⁸ and Long Beach faces high rates of human trafficking of Native people.⁶⁹

The AB 3 reports must establish clear and enforceable safety protocols to protect Native women, girls, two-spirit individuals, and other vulnerable community members as OSW port development advances. State and local agencies must take proactive steps to prevent violence and uphold community safety by incorporating MMIP and trafficking prevention and response strategies into OSW seaport planning and development.

These strategies must include actions across multiple domains—prevention, education, policymaking, enforcement, response, and funding—and be implemented in partnership with Tribal Nations and Native communities. Effective engagement requires sustained investment and meaningful consultation to support Tribal participation and leadership. We put forth the following as essential initial MMIP prevention and response strategies, which were developed by the Yurok Tribal Court and outlined in their 2023 report titled *How to Protect Native Women, Girls, and People in Humboldt & Del Norte County as Offshore Wind Enters the Region: MMIP Prevention Planning and Recommendations*⁷⁰:

- Develop safety plans with elements that apply to all workers, including both direct employees and contractors. Plan elements should include, but not be limited to, zero tolerance policies; whistleblower protections; clear protocols for responding to safety issues; worker and management training on applicable issues, history and policies; and other tools to promote workplace and community safety. Plans should be developed and monitored early and often in consultation with regional Tribal Nations and include policies to comport with Tribal ordinances, including use of Tribal judicial systems.
- Organize pre-development meetings with Indigenous leaders, Tribal Nations, and

⁶⁷Jones et al., “Assembly Bill 525 Strategic Plan,” 80.

⁶⁸ Abby Abinanti et al., “To’ Kee Skuy’ Soo Ney-Wo-Chek’ I Will See You Again in a Good Way Progress Report,” Yurok Tribal Court and Sovereign Bodies Institute, 2020, 28, https://www.sovereign-bodies.org/files/ugd/6b33f7_c7031acf738f4f05a0bd46bf96486e58.pdf.

⁶⁹ Samantha Diaz, “Human trafficking along Long Beach Boulevard will be city’s ‘top priority,’ officials say,” Signal Tribune, April 28, 2025, <https://sigtrib.com/human-trafficking-along-long-beach-boulevard-will-be-citys-top-priority-officials-say/>.

⁷⁰ Katherine Katcher & Abby Abinanti, “How to Protect Native Women, Girls, and People in Humboldt & Del Norte County as Offshore Wind Enters the Region: MMIP Prevention Planning and Recommendations,” June 21, 2023. Yurok Tribal Court, https://lostcoastoutpost.com/loco-media/loco-media/blog/post/37499/How%2Bto%2Bprevent%2BMMIP%2Band%2Bprotect%2BNative%2BWomen%2BGirls%2Band%2Bpeople%2Bin%2BHumboldt%2B%2Bdel%2BNorte%2BCounty%2Bas%2Bmajor%2Bdevelopment%2Bprojects%2Bcome%2Binto%2Bthe%2Bregion27%2B%2528002%2529.pdf?utm_source=chatgpt.com.

- Native communities to create an MMIP & trafficking prevention plan.
- Hold ongoing, regular meetings with Native communities to monitor impacts of development.
- Address MMIP and trafficking in corporate/Tribal communications plans.
- Conduct company and worker background checks.
- Monitor and ensure safety in employee housing.
- Establish agreement to ensure that Tribal people and vulnerable populations living on/near port development have access to transportation.
- Ensure lessees, developers and contractors conduct employee training.
- Coordinate with and support stronger law enforcement in the region.
- Support victim services & social services.
- Source employees locally and invest in local workforce development.
- Adopt corporate policies to prevent MMIP and sex trafficking.
- Strengthen employee code of conduct.
- Implement whistleblower protections.
- Host community safety workshops including Tribal communities, other necessary interested parties, and relevant state agencies to define what protocols and enforcements are needed in community safety plans.

Furthermore, we urge the CEC to carefully review and incorporate recommendations submitted by Tribal Nations regarding consultation protocols, collaboration, and the protection of Tribal resources.⁷¹⁷²

5. Interested Party Input on Siting

Commit to a Clear Timeline, Transparency, and Tangible Next Steps. To ensure accessible and equitable engagement, the development of the Report should offer greater transparency in process and a clear commitment to procedural justice—particularly for Tribal Nations and communities facing energy injustice, access barriers, and direct project impacts. Report findings should clearly list responsible state agencies and outline opportunities for continued collaboration, coordination, leadership, and decision-making with state agencies, local governments, Tribal Nations, constituencies of interest, and federal partners.

Ensure Siting Best Practices and Agreed Upon Criteria. Given the extensive construction needed across California’s ports, it is important to establish clear best practices for deciding where to site critical infrastructure. Specifically, the forthcoming report should include a discussion of best practices and criteria that could guide how port development is sited across the state. These strategies are closely aligned with the activities and review needed as part of the CEQA/NEPA process, but will also be important to consider beyond complying with permitting requirements. Some best practices to consider include: (a) avoiding sensitive habitat and important cultural locations, (b) preventing pollution, (c)

⁷¹ Elk Valley to California Energy Commission, April 18, 2025, regarding Assembly Bill 3 California Offshore Wind Advancement Act, <https://efiling.energy.ca.gov/GetDocument.aspx?tn=262714&DocumentContentId=99315>.

⁷² Blue Lake Rancheria to California Energy Commission, July 10, 2025, regarding Assembly Bill 3 California Offshore Wind Advancement Act, <https://efiling.energy.ca.gov/GetDocument.aspx?tn=264628&DocumentContentId=101484>.

minimizing light, noise, and vibrations, (d) assessing environmental impacts on water and air quality, (e) adaptive management based on experiences of portside communities over time.

In addition, the Final Plan proposed establishing a collaborative across all related local, state, and federal agencies involved in permitting.⁷³ As of the drafting of these comments, no public action has been taken on this recommendation. We urge the CEC to elevate the need to improve coordination across state and local agencies to ensure effective and streamlined permitting (beyond CEQA⁷⁴) to support culturally, environmentally, and community-sensitive siting practices.

Expand Venues and Modalities for Gathering Feedback and Information about Peoples’ Experiences. We encourage the CEC to organize additional in-person and hybrid listening sessions in the regions that will be impacted and explore other feedback venues in collaboration with communities to share data and interim findings with impacted communities, Tribal Nations, and other constituencies of interest. Additional methods of gathering information on interests, concerns, and ideas could include surveys, interactive online platforms, or centralized hubs where communities can contribute comments and concerns. It is important that the CEC and partner agencies/firms identify how community contributions are going to be utilized and include mechanisms to report back to the public.

Strengthen Data Transparency and Community Accessibility. The Report should uphold best practices for collaborative and transparent data collection, including regular reporting and publicly accessible data platforms. These efforts are essential to ensure that communities and Tribal Nations remain informed and engaged throughout the siting, development, operation/maintenance, and eventual decommissioning of OSW port infrastructure.

6. Equity and Environmental Justice

It is essential that port and waterfront development, which represent early steps in meeting the State’s OSW energy goal, include strong provisions for community, cultural, and environmental protections, as well as investments and benefits. This is important for both of our regions, considering our histories and experiences with MMIP and human trafficking, industrialization, health disparities, and irreparable harms to culture and our environments. Additionally, projects as planned at the Port of Long Beach and Humboldt Bay will serve as key hubs for the nascent US and West Coast OSW industry. Centering equity and environmental justice is critical, as what we do now will guide the foundation of this new industry for decades to come.

It is important to recognize that the communities surrounding the Port of Long Beach have long been exposed to multiple pollution sources, including port pollution. The community of West Long Beach, adjacent to the Port, is also surrounded by the 710 and 405 freeways and major industrial sectors. The

⁷³ Melissa Jones, et al., “Assembly Bill 525 Offshore Wind Energy Strategic Plan Volume II: Main Report,” California Energy Commission, 2024, 246, <https://efiling.energy.ca.gov/GetDocument.aspx?tn=257700&DocumentContentId=93596>.

⁷⁴ Awbrey Yost & Arne Jacobson, “Permitting for Port Infrastructure to Support Offshore Wind in California,” Schatz Energy Research Center, 2025, <https://schatzcenter.org/pubs/2025-OSW-R4-portpermitting-SchatzCenter.pdf>.

position of West Long Beach—adjacent to many pollution-emitting sources, including the Ports of Long Beach and Los Angeles, numerous oil refineries, and trucks along the 710-corridor—has created significant environmental burdens in this community. One of the greatest issues facing West Long Beach is high levels of air pollution. According to CalEnviroScreen 4.0, port-adjacent communities in Long Beach have pollution burdens in the 85th to 92nd percentiles. In the development of OSW facilities, it is imperative that we lower the pollution burden inflicting these communities—which can be best done through port electrification. Using zero-emissions technologies at the port and working towards electrifying trucks is critical to protecting frontline communities.

We urge the Report to build upon the existing recommendations in the Final Plan and incorporate the following additional priorities:

Community Agreements for Port Development. The Final Plan appropriately noted, “explore community-led convenings and structures to identify and implement community benefits and project labor agreements negotiated with impacted communities.”⁷⁵ Port development projects should align with the State’s commitments to equity, climate action, and community protection. This includes incorporating clear mechanisms for community oversight, information sharing, and community governance, along with dedicated investments to support meaningful participation in these processes.⁷⁶

The Report should go further in encouraging and outlining strategies to support local jurisdictions/agencies and developers to engage underserved communities in the development of community agreements, with funds and operational commitments administered by community governed institutions. These agreements should reflect best practices and include commitments to deliver socioeconomic benefits, establish inclusive governance structures, and include protections that address project impacts on surrounding communities. To ensure accountability, such agreements should be required as a condition for receiving state funding for port development and for the issuance of permits.

Dedicated Funding for Communities and Tribal Nations. In support of the port development and readiness framework recommended in the Final Plan, we recommend targeted engagement with local and underserved impacted communities to understand the unique challenges facing our communities. Additionally, robust consultation and participation by Tribal Nations will be central to ensuring projects move forward with cultural protections, comanagement structures, and other key interests of the Tribes. In particular, we recommend the Report explore additional mechanisms in delivering tangible community benefits, such as requiring a percentage of funding sources allocated to port development and ongoing revenue to be dedicated to addressing Tribal interests and community needs.

Emergency, Safety and Disaster Planning and Resourcing. Emergency and disaster planning for this major, novel, and unplanned infrastructure needs to be developed in concert with community, local authorities, and disaster response agencies. Planning and response resources have not been integrated into local disaster response systems, particularly given the Redwood Region’s remoteness, Long Beach

⁷⁵ Jones et al., “Assembly Bill 525 Strategic Plan,” 94.

⁷⁶ Rob Bonta et al., “Multi-State Guidance Affirming the Importance and Legality of Environmental Justice Initiatives,” California Department of Justice, 2025, <https://oag.ca.gov/system/files/attachments/press-docs/Final%20EJ%20Guidance%20.pdf>.

communities proximity to the Pier Wind site, and hazards such as seismic, maritime, and other natural and human made risks. Additionally, industry oversight on contingency and hazard planning in coordination with local authorities should be an annual requirement. We recommend the Report incorporate disaster preparedness, mitigation, response, and resilience measures, including an industry disaster risk mitigation plan and strategy for funding resources for local governments and agencies for disaster scenario planning, mitigations, response, and recovery.

Coordination with State and Local Agencies on Mitigation Measures for Strains on Local Housing and Social and Built Infrastructure. We commend the Final Plan’s discussion of impacts and its highlighting the need for energy access and equity for underserved communities, although not statutorily required by AB 525. We encourage AB 3 to take a holistic view when evaluating infrastructure readiness and broaden the definition to include considerations for related social and civic infrastructure.

The CEC should outline requirements for the ports that may develop OSW facilities in the Report to assess how ports and state agencies can help turn sites like the Phillips 66 refinery into thoroughly remediated community-serving infrastructure. As currently proposed, projects like Pier Wind run the risk of increasing fossil fuel emissions and community exposure to criteria air pollutants and greenhouse gas emissions, so it is critical that OSW terminal expansion projects are offset by and coupled with an increase in community-driven public parkland, affordable housing, community centers, and community resources to improve public health and quality of life.

Many communities throughout the North Coast are considered ‘disadvantaged,’ ‘underrepresented,’ or ‘environmental justice communities’ due to the high proportion of low income households and high density of Tribal Lands and Allotments.⁷⁷ Our communities’ needs are rooted in (i) a lack of clean, reliable electricity, broadband, transportation, and other infrastructure; (ii) a lack of access to health, childcare and other social services; (iii) a lack of high-quality educational and other career technical opportunities for youth; (iv) a lack of access to healthy food; and (v) a growing housing shortage at all income levels.

An exacerbated housing crisis stemming from OSW development is an outstanding concern to many on the North Coast. Currently, Humboldt and Del Norte County residents spend an average of 39% and 38% of their income on housing, respectively.⁷⁸ Rental vacancy rates in Humboldt County were recently as low as 4.2%, indicating limited availability and housing insecurity. Furthermore, the number of people experiencing homelessness in Humboldt County is nearly five times the national average. This is likely an underestimate given data collection challenges.⁷⁹ While OSW-related jobs have the potential to bring economic benefits to the North Coast, a large workforce influx will strain housing and community services

⁷⁷ California Environmental Protection Agency, “Final Designation of Disadvantaged Communities Pursuant to Senate Bill 535,” California Environmental Protection Agency, 2022, https://calepa.ca.gov/wp-content/uploads/2022/05/Updated-Disadvantaged-Communities-Designation-DAC-May-2022-Eng.a.hp_-1.pdf.

⁷⁸ California Department of Housing and Community Development, “California’s Housing Future: Challenges and Opportunities, Final Statewide Housing Assessment 2025,” California Department of Housing and Community Development, February, 2018, 34, https://www.hcd.ca.gov/policy-research/plans-reports/docs/sha_final_combined.pdf.

⁷⁹ Humboldt County Department of Public Health, *2018 Humboldt County Community Health Assessment* (Humboldt County Department of Health & Human Services, 2018), 27, <https://humboldt.gov/DocumentCenter/View/71701/2018-Community-Health-Assessment-PDF>.

within Humboldt, Del Norte, and surrounding counties. Increased activities related to OSW may also stress community resources such as access to healthcare services, roads, wastewater systems, and other aging public infrastructure.

CEC Must Include a Thorough Analysis of Long Beach Communities and Require Ports to Develop Policies and Plans to Improve Life Expectancy in Regions Disproportionately Harmed by Rampant Freight Operations. Air quality impacts from OSW projects must be considered in combination with other freight-generated emissions, including emissions created by terminal expansion projects that could trigger increased cargo throughput, rail expansion projects that increase diesel-fueled locomotives operating near the ports, and warehouse expansions that attract trucks traveling to and from warehouse sites. A thorough cumulative impact analysis must take into account that numerous communities impacted by freight-generated air pollution are also impacted by other pollution sources such as refinery operations and neighborhood oil drilling. We urge CEC to account for these disproportionately pollution-burdened communities and identify the need to require ports to demonstrate how OSW terminals will catalyze the shift to port electrification to accelerate and phase down fossil-fueled vehicles and equipment.

There are several petroleum refineries in the communities surrounding the Port of Long Beach—Phillips 66⁸⁰ (in the process of retiring/shutting down), Tesoro, and Valero/Ultramar in addition to over 6,000 onshore oil and gas wells in Long Beach’s Wilmington Oil Field.⁸¹ CEC has an opportunity to ensure that refinery phase-outs pave the way for an increase in community-serving spaces, and community-led remediation practices that remove toxic pollution to create sustainable and equitable forms of energy production.

Beyond refineries, the Southeast Resource Recovery Facility—a municipal solid waste incinerator in Long Beach—has regularly emitted a range of harmful toxic pollutants, inflicting detrimental harms on surrounding communities.⁸² CEC should require the ports to account for these sources, and assess proposed terminal expansion projects in the context of this surrounding fossil fuel infrastructure, and the ports’ role in creating zero-emission infrastructure.

The Wilmington, Carson, and West Long Beach communities have also identified the San Pedro Bay Port Complex, neighborhood truck traffic, and air pollution as priority concerns. In the CERP, residents identified drayage trucks, ocean-going vessels, commercial harbor craft, oil tankers, cargo handling equipment, and heavy-duty trucks as sources that emit diesel particulate matter and other air pollutants.

⁸⁰ “Phillips 66 provides notice of its plan to cease operations at Los Angeles-area refinery,” Phillips 66, October 16, 2024, <https://investor.phillips66.com/financial-information/news-releases/news-release-details/2024/Phillips-66-provides-notice-of-its-plan-to-cease-operations-at-Los-Angeles-area-refinery/default.aspx>.

⁸¹ “Historical Oil Operations,” City of Long Beach Energy Resources, accessed August 12, 2025, <https://longbeach.gov/energyresources/about-us/oil/history/>.

⁸² Earthjustice, East Yard Communities for Environmental Justice, & Valley Improvement Projects, “Vestiges of Environmental Racism: Closing California’s Last Two Municipal Waste Incinerators,” Earthjustice, November 9, 2021, <https://earthjustice.org/document/vestiges-of-environmental-racism>; see also Caleigh Wells, “Trash incinerator once considered ‘green’ takes heat for polluting community,” KCRW, February 17, 2022, <https://www.kcrw.com/news/shows/greater-la/burn-trash-hacker-underground-museum/waste-incinerator-long-beach>.

Residents have voiced a desire for reduced emissions through the implementation of zero-emission technologies, and more targeted and enhanced enforcement of existing CARB regulations.

The AB 525 Port Readiness Plan contains a Demographic Index, a proxy for detailed analysis of potential Project effects related to disadvantaged populations.⁸³ The Demographic Index found that staging and integration and manufacturing/fabrication activities at the POLB would likely have the greatest impact on disadvantaged populations (e.g. low-income and/or high minority) compared to these same activities at other potential port sites.⁸⁴ This finding raises concerns and warrants further consideration of the socioeconomic characteristics of the communities surrounding the POLB throughout the Project's development.

The communities of Wilmington, Carson, and West Long Beach contain high-minority, low-income populations with lower rates of educational attainment and high linguistic isolation.⁸⁵ An assessment of the average percentiles for three sensitive populations indicators (asthma, cardiovascular disease, and low birth weight) and five socioeconomic factors indicators (educational attainment, housing-burdened low-income households, linguistic isolation, poverty, and unemployment), shows that many of the census tracts surrounding the POLB are in the upper percentiles of this metric.⁸⁶ Localized racial disparities are also evident; the life expectancy at birth for Black people in Long Beach in 2020 was more than eight years lower than that of other measured racial/ethnic groups.⁸⁷ Regarding housing stability, the POLB, in the IS, predicts that the Project could impact the local housing market by increasing the demand for short-term housing during construction, and inducing long-term population growth due to worker relocation. However, it neglects to mention that many of the tracts surrounding the POLB contain higher-than-average percentages of low-income homeowners with severe housing cost burdens.⁸⁸ Furthermore, two clusters of census tracts surrounding the POLB contain high percentages of limited English-speaking households that are in the top 20 percent of all census tracts for this metric.⁸⁹

This set of socioeconomic challenges creates a burden for community members to meaningfully participate in the shaping of the Project. This necessitates a linguistically-inclusive engagement process that allows residents of these communities to become meaningfully involved. The POLB should prioritize the inclusion of disadvantaged populations as it develops the Project and carefully analyze whether impacts from the proposed Project are concentrated in environmental justice communities.

The Report should include more concrete steps to mitigate OSW development's potential

⁸³ Jennifer Lim, P.E. & Matt Trowbridge, P.E., S.E., PEng, "AB 525 Port Readiness Plan, California State Lands Commission, Final Report," July 7, 2023, 83, https://slcprdwordpressstorage.blob.core.windows.net/wordpressdata/2023/07/AB525-Port-Readiness-Plan_acc.pdf.

⁸⁴ Id. at 89–90 (2023) (see Tables 7.3, 7.5).

⁸⁵ "California Healthy Places Index," Public Health Alliance of Southern California, accessed February 5, 2024, <https://map.healthyplacesindex.org>.

⁸⁶ Zeise & Blumenfield, "CalEnviroScreen 4.0 Report," 198–99.

⁸⁷ City of Long Beach Department of Health and Human Services, "2019 Community Health Assessment," City of Long Beach, 2019, 161, <https://www.longbeach.gov/health/healthy-living/community/community-health-assessment/>.

⁸⁸ "California Healthy Places Index," Public Health Alliance of Southern California.

⁸⁹ Zeise & Blumenfield, "CalEnviroScreen 4.0 Report," 184.

negative economic implications for local underserved communities. We urge CEC to provide leadership in coordinating with Tribal and local planning, housing, and social services agencies through the following actions:

- Ensure that local communities experience the benefits of OSW energy, such as the capacity needed to support electrification and upgrades to our regional electrical grid and receiving affordable energy generated through local OSW development.
- Provide maximum infrastructure benefits, such as transportation, renewably-generated electricity, and broadband for local underserved communities.
- Support the transition of fossil-fuel industrial sites to community realized assets.
- Analyze immediate and future population impacts of the OSW industry and determine the associated social services, housing, childcare, medical, and emergency services that will be needed in the area so those facilities can be planned by regional institutions and funded by a combination of state and federal funding, lessees and developers, philanthropy, and local jurisdictions.
- Develop and implement an anti-displacement strategy to ensure that residents of communities impacted by an influx of employees of the OSW industry are not displaced if housing demand and rents increase.
- Measure impacts and displacement of existing residents and develop programs aimed at early recognition and intervention.
- Require developers and subsequent leaseholders to create or contribute to existing housing funds that either reduce the housing burden for those most vulnerable to homelessness or lead to community or Tribal ownership of housing.
- Zero-Emission Mandates: CEC should incentivize use of zero-emission vehicles, equipment and infrastructure during construction, operation, maintenance, and decommissioning.
- Environmental monitoring: CEC should require the ports to monitor air, soil, and toxic runoff to track pollution levels before and during OSW staging and integration, and manufacturing/fabrication facility operations.
 - Ports should also report quarterly findings on the results of environmental monitoring and adaptation to OSW Community Roundtables (such as the ZEERO Roundtable and Green Port Working Grouping) in addition to the general public.
 - The ports must ensure back-up systems for air quality monitoring and upgrade air quality monitors to the best available equipment every 5–10 years.
 - The ports must partner with Tribal Nations to execute wildlife/marine monitoring systems and provide financial compensation for their expertise in ecosystem-based knowledge.
- Accountability to Community: CEC should work with other state agencies to require ports to monitor progress and compliance of project agreements in partnership with community-based organizations and local impacted residents. The priority should be to ensure communities are included and leading in all phases of the agreement development and execution process and have the power and capacity to enforce all community benefits agreements.
- Solidarity with Tribal Nations: We stand in solidarity with Tribal Nations and urge the ports to create a strong prevention plan for MMIP.
- Community Resilience Centers: Develop community-driven rooftop solar projects, fund the development of parks and open space in partnership with local communities from start to finish,

construct deeply affordable housing to offset risk of housing displacement, and consider other investments as prioritized by surrounding frontline and environmental justice communities.

7. Maritime Consideration

Fisheries and Aquaculture Considerations in Wigi/Humboldt Bay. In addition to the concerns raised under the Environmental and Cultural Resources Consideration section regarding marine ecosystem impacts, we affirm the vital importance of fishing and aquaculture to our communities for commercial, cultural, and subsistence purposes. Locally, Wigi/Humboldt Bay supports a robust commercial fishing and aquaculture industry, as well as prolific recreational opportunities, which together serve as a critical economic engine. More importantly, the Bay provides an affordable, local, and protein-rich food source. Tribal Nations rely on the natural resources of Wigi and the rivers that feed into and surround it for fishing that is deeply tied to cultural and subsistence practices. Additionally, Hmong and Lao fishers depend on sustenance fishing and clamming in the Bay.

We strongly agree with the Final Plan's recognition of the urgent need to protect Tribal, commercial, and recreational fishing, along with aquaculture. We support the implementation of comprehensive AMMM measures to address impacts on fisheries, aquaculture, and subsistence and low-income recreational fishing.

We are encouraged by the Final Plan's acknowledgment of cumulative impacts on maritime and fishing industries, including Tribal fisheries within the Bay and the rivers throughout Indigenous and Tribal lands in the broader region. These cumulative impacts may include increased congestion due to additional shipping and hauling activity in Humboldt Bay's already burdened transportation channel. We urge the CEC to collaborate with relevant federal, state, and local agencies—and directly with affected parties—in the development of the Report to ensure full assessment of such cumulative impacts.

It is also essential to recognize that local fishing and mariculture leaders, practitioners, and businesses are uniquely positioned and have invaluable expertise on specific challenges facing Humboldt Bay's and the North Coast's fishing communities. The Report should explicitly recommend that wind terminal developers and operators prioritize direct engagement with local interested parties. The following recommendations were co-developed with respected leaders in the local commercial fishing community:

- *Economic Displacement Reserve Fund.* Establish a fund to address economic displacement experienced by local fisheries and mariculture operations due to OSW development and port activity.
- *Humboldt Bay Fisheries Communications Plan.* Develop a dedicated communications plan to ensure transparent and continuous engagement with local fishing communities.
- *Co-Developed Humboldt Bay Fisheries Access Plan.* Collaborate with local impacted fisheries and aquaculture to ensure continued access and minimize operational disruptions caused by the Wind Terminal and related activities.
- *Humboldt Bay Water Safety Plan.* Support participation of local users in a water safety plan to improve safety coordination among vessels and users in an increasingly congested Bay environment.
- *Commitments on Equipment Retrieval.* Require terminal operators and support vessel contractors to commit to retrieving all deployed or lost equipment to protect fisheries and aquatic habitat

health.

- *Alleviate Maritime Transportation Congestion.* Complete an assessment, analysis, and recommended strategies to address increased maritime transportation and impacts to maritime, fishing and aquaculture industries, including Tribal fisheries, and other users. This analysis must take into account user safety and access, as well as approaches to minimizing space/use conflicts.

8. Port Development Cost and Funding Strategies

We join Brightline Defense in commending the CEC for its leadership in incentivizing wind projects to robustly engage, collaborate with and consult impacted and interested parties, including proposing that up to 3% of funds from the Offshore Wind Waterfront Facility Program be reserved for capacity building for local communities, and another 3% for capacity building for Tribal Nations.⁹⁰ As Brightline states: “This will play a key role in unlocking equitable and inclusive [OSW] development, and we encourage the state to continue supporting capacity building efforts, including by improving public transparency and comprehensive planning.”

It is estimated in the Final Plan that a total of \$11 to \$12 billion is needed for upgrades to existing port infrastructure in order to meet the 2045 OSW planning goal.⁹¹ Notably, both the Port of Long Beach and the Humboldt Bay Harbor District have committed to implementing green terminal measures—initiatives that offer significant public benefits but require substantial upfront capital.

To that end, we continue to support the appropriation of \$228.2 million from the proposed Proposition 4 Climate Bond to advance OSW-related port projects in the state’s FY 2025–26 Budget. While we recognize the complex and capital-intensive nature of port financing, we remain optimistic given the strong collaboration among public, private, and philanthropic interested parties. We urge the CEC, Governor’s Office, Legislature, and other state agencies involved in decision making and administration of those Prop 4 resources to consider the following measures as part of the fund administration process whenever possible:

- Legally binding commitments to zero-emissions standards in port design, construction, and operations;
- Legally enforceable community agreements that are responsive to the priorities of portside, Tribal, and BIPOC communities;
- Demonstrated Tribal leadership and co-management structures in project planning and implementation;
- Engagement with local community-based organizations in the design, review, and implementation of funding programs, grant criteria, and policy guidelines related to port readiness and OSW infrastructure.

We further emphasize that the State should consider provisions for direct community investments as part of the all funding and financing strategies for the port and other OSW development.

⁹⁰ Brightline Defense regarding Feedback on Assembly Bill (AB) 3 Scoping Document, August 12, 2025, <https://efiling.energy.ca.gov/GetDocument.aspx?tn=265543&DocumentContentId=102394>.

⁹¹ Jones et al, “Assembly Bill 525 Strategic Plan,” 151.

E. Recommendations on Data Gaps and Requirements for the Seaport Readiness Plan

Aspen’s literature assessment provides a solid foundation for meeting its stated requirements. In our 2025 comment letters to the BOEM on the PEIS, we identified a wide range of potential impacts on cultural and environmental resources associated with both port development and the broader OSW cluster. We also recommended corresponding AMMM to address those impacts.⁹²

In particular, we believe the current literature review sections related to Criteria 1-4, 1-6, and 1-8 would benefit from a more holistic definition and the inclusion of additional region-specific information. To support this, we have compiled a list of relevant literature and studies that informed our analysis and may assist the CEC in fulfilling the requirements of the Report. These resources are listed in Table 1.

1. Requirement 1-4: Minimize Impacts to Cultural and Natural Resources

In addition to incorporating the findings and sources outlined in the literature review, we urge the Report to consider a fuller range of potential environmental impacts associated with OSW development. OSW development has the potential to affect diverse marine and terrestrial ecosystems across the state. Similar to ensuring strong mitigation and adaptive management as noted above, it is also critical that the Report account for indirect and cumulative impacts, in our bays, wetlands and coast environments, through alignment with CEQA and NEPA processes, and integrate region-specific information to strengthen the analysis.

The following environmental concerns are particularly significant and warrant closer examination:

- Noise impacts during construction, operations, and maintenance that may affect sensitive wildlife and marine ecosystems
- Habitat disturbance and behavioral disruption of fish, seabirds and shore birds, near and inshore marine mammals, and other species due to cables, anchors, platforms, and associated infrastructure assembly, storage and transport (and construction/decommissioning of facilities)
- Habitat degradation from increased vessel traffic, including ship strikes on marine mammals and sea turtles
- Air pollution from construction equipment and vehicle emissions affecting native plant species, such as rare mosses and lichens on the North Coast
- Water quality degradation from dredging, legacy pollutants, and runoff from impervious surfaces
- Introduction of invasive species and pathogens via vessels and infrastructure construction

We also urge the Report to recommend that port development related permits include Conditions 1 through 7 imposed by the California Coastal Commission in Consistency Determination CD-0001-22 for

⁹² “Comment from Redwood Region Climate and Community Resilience Hub (CORE Hub),” February 12, 2025, BOEM-2023-0061-0317.

BOEM's OSW leases, which appear in the March 17, 2022 staff report. These conditions offer a foundation for stronger environmental protection measures in the context of OSW development.⁹³

In addition, continuous outreach and engagement with communities directly experiencing environmental changes are essential to accurately assess impacts on fisheries, aquaculture, and marine ecosystems. This includes engaging Tribal Nations, commercial and subsistence fishers, recreational users, and cultural practitioners who rely on these environments for their livelihoods and stewardship. By addressing these considerations and expanding its scope to include this critical context, the Report will better meet its mandate to prepare the state for equitable, environmentally responsible OSW development.

2. Requirement 1-6: Transportation and Other Infrastructure Needs

We urge the Report to expand its treatment of infrastructure needs by incorporating a broader and more equitable vision of infrastructure that centers Tribal and community priorities. Specifically, we recommend the following:

First, the CEC, California Public Utilities Commission ("CPUC"), and the California Independent System Operator ("CAISO") should support the formation of a Tribal Nation Transmission Planning Task Force or Technical Committee. This committee would enable Tribal Nations to co-review siting, routing, impacts, and energy benefits from new grid infrastructure serving OSW. It would also ensure that planned upgrades to transmission and distribution infrastructure deliver tangible co-benefits to Tribal Nations, including improved access to and integration of Tribal-led distributed energy resources.

Second, OSW transmission should be planned with the understanding that it must first and foremost serve the renewable energy needs of regional Indigenous communities. Infrastructure planning must avoid perpetuating extractive models of development and instead prioritize tribal energy sovereignty and economic self-determination.

Third, we recommend that developers and terminal operators contribute to a Community Infrastructure and Services Fund. This fund should be community-governed and support investments in essential infrastructure and services such as transportation, health care, recreational access, childcare, and other amenities necessary for inclusive and healthy economic development. Seed funding should be provided to build community capacity, including support for the establishment of a community steering committee to guide future funding decisions. The fund should be held and administered by a neutral third-party entity with experience in managing community-benefit agreements and investment pools.

Fourth, housing and other social infrastructure such as childcare and healthcare must be recognized as essential infrastructure. It is estimated that OSW development will increase demand for both workforce and community housing, and early planning and investment are necessary to prevent displacement and ensure that housing is affordable and accessible to impacted communities. Readily available childcare will also be crucial infrastructure to ensure the persistence and progression of new local apprentices in the building and construction trades.

⁹³ "Winds of Change: Transforming California's Ports to Improve Public Health & Support Equitable Offshore Wind," Natural Resources Defense Council, 2025, <https://www.nrdc.org/resources/winds-change>.

Fifth, the infrastructure for community engagement and civic participation should also be considered when assessing seaport readiness. Development of the Port complexes for S&I, Manufacturing/Fabrication, and O&M will require multi-year and decades-long commitments of funding and staff resources by local government, which cannot be easily sustained without community support. The recently released Humboldt Supply Chain and Workforce Assessment Redwood Region Offshore Wind Roadmap recommends the creation, funding, and support of civic infrastructure elements such as establishing a capacity fund to support tribal and community engagement, and the creation of an Offshore Wind Task Force composed of tribes, community, labor, and education organizations, developers, county staff, and local governments. “The Task Force should include representatives from groups already convening to discuss [OSW] development to ensure that progress can be made with a targeted cohort of members.” Given the uncertainty of federal policy, attention to and investment in consistent and transparent engagement and collaboration among tribal, community and governmental entities will be necessary to ensure the long-term success of OSW development.⁹⁴

Finally, the Report should recognize the importance of new renewable energy generation and battery storage at or near ports. These investments are critical to ensuring that port operations are powered by clean and reliable energy, consistent with California’s broader decarbonization and climate resilience goals. The Report should also consider broader civic infrastructure needs, including broadband, emergency response systems, and transportation networks that support both project development and regional wellbeing. By expanding the definition of infrastructure and advancing inclusive, community-driven approaches, the Report can help ensure that OSW development delivers lasting, equitable benefits across California’s coastal regions.

3. Requirement 1-8: Consult with Interested Parties

We urge the CEC to conduct robust and inclusive outreach through accessible and varied formats that maximize participation from key interested parties. This should include in-person listening sessions and community workshops in areas where port development is planned or anticipated. These forums are essential to ensure that local communities, Tribal Nations, and other impacted groups have meaningful opportunities to engage in the decision-making process and help shape outcomes related to OSW development.

A substantial number of Tribal Nations, government agencies, and local organizations from both of our regions, network and coalition have either signed onto our previous comment letters or submitted their own letters during the state’s AB 525 process and relevant federal OSW proceedings. We strongly encourage the CEC to review those existing recommendations and leverage these entities as a foundation for targeted outreach and engagement under AB 3.

F. Recommendations on Literature Review Under the Seaport Readiness Plan

We appreciate that the literature review includes a number of valuable and relevant studies. However, we note that it also identifies gaps in available information, particularly regarding cultural and natural

⁹⁴ Xodus, *Humboldt Supply Chain and Workforce Assessment: Redwood Region Offshore Wind Roadmap*.

resources, which are essential to fully meeting certain requirements of the Report. To help address these gaps, we provide the following additional resources for the CEC to consider in informing the Seaport Readiness Plan. Many of these resources have been cited in our previous comment letters to relevant federal and state processes and remain directly applicable to this process.

Table 1. Additional Resources to Consider for the Seaport Readiness Plan

Requirements	Additional Resources to Consider
<p>Requirement 1-4: port locations that minimize impacts to cultural and natural resources.</p> <p>More information is also needed to understand impacts and mitigation strategies to cultural and historical resources.</p>	<ul style="list-style-type: none"> ● <u>Prior comment letters submitted to the CEC</u> <ul style="list-style-type: none"> ○ Letters regarding the Notice of Intent to Prepare a Programmatic Environmental Impact Statement for Future Floating Offshore Wind Energy Development Related to 2023 Leased Areas Offshore California <ul style="list-style-type: none"> ● Redwood Region Climate & Community Resilience Hub and Partners to BOEM⁹⁵ ● Natural Resources Defense Council et al. to BOEM⁹⁶ ○ Letters regarding the Draft Programmatic Environmental Impact Statement for Future California Floating Wind Energy Development <ul style="list-style-type: none"> ○ Redwood Region Climate & Community Resilience Hub to BOEM⁹⁷ ○ Natural Resources Defense Council, Audubon, California, California Coastal Protection Network et al. to BOEM⁹⁸ ● <u>Cultural and Historical Resources</u>

⁹⁵ Redwood Region Climate & Community Resilience Hub (CORE Hub) and Partners to Bureau of Ocean Energy Management, February 20, 2024, regarding the Notice of Intent to Prepare a Programmatic Environmental Impact Statement for Future Floating Wind Energy Development Related to 2023 Leased Areas Offshore California, <https://www.regulations.gov/comment/BOEM-2023-0061-0172>

⁹⁶ Natural Resources Defense Council et al. to Bureau of Ocean Energy Management, February 20, 2024, regarding the Notice of Intent to Prepare a Programmatic Environmental Impact Statement for Future Floating Wind Energy Development Related to 2023 Leased Areas Offshore California, <https://www.regulations.gov/comment/BOEM-2023-0061-0161>

⁹⁷ Redwood Region Climate & Community Resilience Hub (CORE Hub) to Bureau of Ocean Energy Management, February 12, 2025, regarding the Draft Programmatic Environmental Impact Statement for Future California Floating Wind Energy Development, <https://www.regulations.gov/comment/BOEM-2023-0061-0317>.

⁹⁸ Natural Resources Defense Council, Audubon California, and California Coastal Protection Network et al. to Bureau of Ocean Energy Management, February 12, 2025, regarding the Draft Programmatic Environmental Impact Statement for Future California Floating Wind Energy Development, <https://www.regulations.gov/comment/BOEM-2023-0061-0314>.

	<ul style="list-style-type: none"> ○ Redwood Region Climate & Community Resilience Hub and Partners comment letters to BOEM on the PEIS⁹⁹¹⁰⁰ ○ California Coastal Commission Consistency Determination¹⁰¹ and staff report addendum¹⁰²: The consistency determination evaluates site characterization (e.g., geophysical and geotechnical surveys), and deployment of meteorological buoys and consistency with the California Coastal Zone Act. ○ Environmental Stewardship and Cultural Preservation on California’s Coast, The Tuluwat Village Site on Indian Island in Humboldt Co., CA¹⁰³: This report examines collaborative efforts in cultural preservation and environmental restoration at the Tuluwat Village archaeological site on Indian Island (formerly Indian Island, Humboldt County). It explores partnerships between the EPA, local Indigenous Tribes, and interested parties to manage erosion, habitat conservation, and preservation of Tribal heritage. Suitable for understanding how infrastructure or coastal development can impact cultural sites and how Tribal engagement can guide stewardship. ○ Wiyot Tribe Tuluwat Project¹⁰⁴ ○ How to Protect Native Women, Girls, and People in Humboldt & Del Norte County as Offshore Wind Enters the Region: MMIP Prevention Planning and Recommendations¹⁰⁵: This memo, issued by the Yurok Tribal Court, offers policy recommendations to mitigate risks of violence, trafficking, and MMIP linked to large-scale development projects involving transient workforces. It outlines measures aimed at protecting Indigenous populations and preventing further exacerbation of the MMIP crisis.
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⁹⁹ Redwood Region Climate & Community Resilience Hub (CORE Hub) and Partners, to the Bureau of Ocean Energy Management, February 20, 2024, Regarding the Notice of Intent to Prepare a Programmatic Environmental Impact Statement (PEIS) for Future Floating Wind Energy Development Related to 2023 Leased Areas Offshore California, <https://www.regulations.gov/comment/BOEM-2023-0061-0172>.

¹⁰⁰ Redwood Region Climate & Community Resilience Hub (CORE Hub) and Partners, to the Bureau of Ocean Energy Management, February 13, 2025, Regarding the Draft Programmatic Environmental Impact Statement (PEIS) for Future Floating Wind Energy Development of Wind Lease Areas Offshore California, <https://www.regulations.gov/comment/BOEM-2023-0061-0317>.

¹⁰¹ “Consistency Determination For Leasing Wind Energy Areas Offshore Humboldt County, California,” Bureau of Ocean Energy Management, 2022, <https://documents.coastal.ca.gov/assets/upcoming-projects/offshore-wind/Humboldt-CD.pdf>.

¹⁰² California Coastal Commission, “Addendum to Staff Report for Consistency Determination No. CD0001-22,” Bureau of Ocean Energy Management, 2022, <https://documents.coastal.ca.gov/reports/2022/4/Th8a/Th8a-2022-addenda.pdf>.

¹⁰³ Environmental Protection Agency, “Environmental Stewardship and Cultural Preservation on California’s Coast: The Tuluwat Village Site on Indian Island in Humboldt County, California,” Environmental Protection Agency, 2018, <https://semspub.epa.gov/work/HQ/100001200.pdf>.

¹⁰⁴ “Tuluwat Project,” Wiyot Tribe, accessed July 25, 2025, <https://www.wiyot.us/186/Tuluwat-Project>.

¹⁰⁵ Katherine Katcher & Abby Abinanti, “How to Protect Native Women, Girls, and People in Humboldt & Del Norte County as Offshore Wind Enters the Region: MMIP Prevention Planning and Recommendations.”

	<ul style="list-style-type: none"> ○ Responsible Resource Development and Prevention of Sex Trafficking: Safeguarding Native Women and Children on the Fort Berthold Reservation¹⁰⁶: This article examines how large-scale resource development projects can correlate with elevated risks of sex trafficking and exploitation in Indigenous communities. Through the example of Fort Berthold Reservation, it offers legal and policy recommendations to ensure that such development is conducted with robust protections for Native women and children, including community oversight, employment protections, and cultural safeguards. ○ Improving Public Safety and Criminal Justice for Native Americans and Addressing the Crisis of Missing or Murdered Indigenous People¹⁰⁷: This report outlines federal initiatives and strategies aimed at enhancing public safety and reforming criminal justice systems for Native American communities. It addresses systemic gaps contributing to the crisis of MMIP offering recommendations across law enforcement coordination, community-based prevention programs, victim support, and Tribal-federal collaboration. ○ “Our Mandate, Our Vision, Our Mission,” National Inquiry into Missing and Murdered Indigenous Women and Girls¹⁰⁸: This report offers comparable lessons learned from Canada’s national inquiry, highlighting a trauma-informed, culturally grounded approach to addressing systemic violence. It underscores the importance of Indigenous-led processes for achieving justice and healing in partnership with affected communities. ○ To' Kee Skuy' Soo Ney-Wo-Chek': I Will See You Again in a Good Way Progress Report¹⁰⁹: This initiative, led by the Yurok Tribal Court and Sovereign Bodies Institute, offers a culturally informed, tribal-led framework to address MMIP in Northern California. Its series of progress reports includes the creation of the region’s first Missing and Murdered Indigenous Women, Girls, and Two-Spirit database, the Tribal Community Response Plan, and
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¹⁰⁶ Kathleen Finn et al., “Responsible Resource Development and Prevention of Sex Trafficking: Safeguarding Native Women and Children on the Fort Berthold Reservation”. *Harvard Journal of Law & Gender* 40, no. 1 (2017): <https://scholar.law.colorado.edu/cgi/viewcontent.cgi?article=1671&context=faculty-articles>.

¹⁰⁷ “Improving Public Safety and Criminal Justice for Native Americans and Addressing the Crisis of Missing or Murdered Indigenous People,” *Federal Register* 86, no. 221 (November 18, 2021): 64,339–46, <https://www.federalregister.gov/documents/2021/11/18/2021-25287/improving-public-safety-and-criminal-justice-for-native-americans-and-addressing-the-crisis-of>

¹⁰⁸ “Our Mandate, Our Vision, Our Mission,” National Inquiry into Missing and Murdered Indigenous Women and Girls, 2016, accessed July 25, 2025, <https://www.mmiwg-ffada.ca/mandate/>.

¹⁰⁹ Abby Abinanti et al., “To’ Kee Skuy’ Soo Ney-Wo-Chek’,” <https://justiceresearch.dspacedirect.org/items/43d76f01-18b6-4ce3-b689-4791dc437b64>.

	<p>actionable protocols for law enforcement, courts, and community support structures.</p> <ul style="list-style-type: none"> ○ Joint Secretarial Order No. 3403: Fulfilling the Trust Responsibility to Indian Tribes in the Stewardship of Federal Lands and Waters¹¹⁰: This joint order establishes federal policy directing agencies to engage in meaningful consultation and formalize co-stewardship arrangements with federally recognized Tribes. It emphasizes recognition of Tribal sovereignty, integration of Indigenous knowledge into federal land and water management, and institutional support for Tribal stewardship and treaty rights. ○ Characterizing Tribal Cultural Landscapes Volume 1: Project Framework¹¹¹: This foundational framework presents a collaborative methodology, developed with Pacific Coast tribes (including Yurok, Makah, and Grand Ronde), to identify and communicate areas of tribal use and significance, known as Tribal Cultural Landscapes (“TCLs”). The guidance outlines pre-consultation protocols, culturally-sensitive data collection tools, and application processes that support meaningful tribal consultation and integration of indigenous perspectives into planning, including under NEPA and NHPA reviews. ○ A Guidance Document for Characterizing Tribal Cultural Landscapes¹¹²: This document outlines a collaborative methodological framework for identifying and documenting TCLs along the Pacific Coast. It offers guidance on culturally respectful data collection, meaningful pre-consultation, and integrating tribal perspectives into environmental assessments and permitting processes. ○ Final Report on Current Land, Water, and Wildlife Authorities That Can Support Tribal Stewardship and Co-Stewardship¹¹³: This report presents a comprehensive compilation of legal authorities and policies enabling federal agencies to support Tribal-led stewardship and formal co-stewardship agreements across land, water, and wildlife management. It also catalogs agency directives
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¹¹⁰ “Joint Secretarial Order No. 3403: Fulfilling the Trust Responsibility to Indian Tribes in the Stewardship of Federal Lands and Waters,” U.S. Department of Interior, 2021, <https://www.doi.gov/media/document/joint-secretarial-order-3403>.

¹¹¹ David Ball et al., “Characterizing Tribal Cultural Landscapes Volume 1: Project Framework,” Bureau of Ocean Energy Management, 2017, https://www.boem.gov/sites/default/files/environmental-stewardship/Environmental-Studies/Pacific-Region/Studies/BOEM-2017-001_Vol1.pdf.

¹¹² David Ball et al., “A Guidance Document for Characterizing Tribal Cultural Landscapes,” Bureau of Ocean Energy Management, 2015, <https://www.boem.gov/sites/default/files/environmental-stewardship/Environmental-Studies/PacificRegion/Studies/BOEM-2015-047.pdf>.

¹¹³ “Final Report on Current Land, Water, and Wildlife Authorities That Can Support Tribal Stewardship and CoStewardship,” Department of the Interior, 2022, <https://www.doi.gov/sites/doi.gov/files/-final-legal-rvw-v-final-pdf508.pdf>.

	<p>and memoranda issued in 2022 to align with co-stewardship objectives.</p> <ul style="list-style-type: none"> ○ Biodiversity science of ancient fisheries: Archaeological indicators of eelgrass meadow health and indigenous (Wiyot) aquaculture, Humboldt Bay, CA¹¹⁴: This article explores the ecological and cultural significance of eelgrass meadows in Humboldt Bay as revealed through archaeological evidence. It analyzes remains of fish and shellfish consumed in ancient Wiyot aquaculture, demonstrating how eelgrass served as a vital habitat and resource for food production. ● <u>Water Quality</u> <ul style="list-style-type: none"> ○ Water Quality in Humboldt Bay and its Impact on local oyster industry¹¹⁵: This article profiles oyster farmers in Humboldt Bay, exploring their innovative methods, environmental stewardship, and community ties. It discusses local efforts to streamline permitting, expand cultivation areas, and support sustainable mariculture development in the region. ○ Dredge Characterization Sampling and Analysis Plan Considerations, Redwood Marine Multipurpose Terminal Replacement Project. Technical Memorandum to the Humboldt Bay Harbor, Recreation, and Conservation District¹¹⁶: This technical memorandum outlines key planning considerations for dredge sampling and analysis in Humboldt Bay. It provides guidance on sediment characterization strategies, regulatory compliance, and sample collection methods essential for environmental review and permitting processes related to port expansion and marine infrastructure projects. ○ Study: Bivalve Business Is Big for Humboldt Bay.¹¹⁷: This article summarizes a comprehensive survey of Humboldt Bay's oyster industry, highlighting its role as the top oyster-producing region in California and its economic contribution for a variety of interested parties. It offers a baseline understanding of mariculture's significance and important context for understanding coastal economy and permitting constraints.
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¹¹⁴ Shannon Tushingham et al., "Biodiversity science of ancient fisheries: Archaeological indicators of eelgrass meadow health and indigenous (Wiyot) aquaculture, Humboldt Bay, CA," *Journal of Archaeological Science* no. 181 (September 2025), <https://www.sciencedirect.com/science/article/pii/S0305440325001165>.

¹¹⁵ Heidi Walters, "The World Is Yours, Oyster Farmer" *North Coast Journal of Politics, People & Art*, April 5, 2022, <https://www.northcoastjournal.com/news/the-world-is-yours-oyster-farmer-2133083>.

¹¹⁶ Erik Nielsen (SHN), to Rob Holmlund (Humboldt Bay Harbor, Recreation, and Conservation District), April 23, 2024, Technical Memorandum regarding the Dredge Characterization Sampling and Analysis Plan Considerations, https://humboldtbay.org/sites/humboldtbay.org/files/Dredging%20-%20Dredge%20Sampling%20Considerations%20-%2020240423_opt.pdf.

¹¹⁷ Katherine Leitzell, "Study: Bivalve Business Is Big for Humboldt Bay," *Sea Grant California*, January 23, 2019, <https://caseagrants.ucsd.edu/news/study-bivalve-business-big-humboldt-bay>.

	<ul style="list-style-type: none"> • <u>Lighting</u> <ul style="list-style-type: none"> ○ Human and Environmental Effects of Light Emitting Diode (LED) Community Lighting¹¹⁸: This report outlines potential public health and ecological concerns related to widespread use of high-intensity LED lighting. It offers medical and environmental guidance on mitigating light pollution through design standards, making it relevant for planning for port communities. ○ Maintaining safety while minimizing visual impacts: Wind turbines and lighting¹¹⁹: This fact sheet summarizes how the wind industry works within FAA requirements to ensure aviation safety while reducing visual disturbance from turbine lighting. It discusses aggregated lighting plans, synchronized red strobes, and sensor-based systems (e.g., Aircraft Detection Lighting Systems) that help lower light pollution without compromising safety. While the focus of AB 3 is on port development, we include this resource as relevant to lighting during turbine assembly and wet storage. ○ Scoping Ecological and Off-Site Human Health Risk Assessment¹²⁰: This scoping assessment outlines the planned methodologies for evaluating ecological and off-site human health risks associated with Seral Pacific Industries operations. It sets the framework for contaminant screening, receptor exposure pathways, and environmental monitoring strategy, serving as a foundational technical reference for regulatory review, sediment management planning, and environmental oversight in Humboldt Bay-related projects. • <u>Noise</u> <ul style="list-style-type: none"> ○ Port sustainability in Spain: This article examines how Spanish ports incorporate noise pollution into their sustainability planning. While not directly comparable to U.S. contexts, it offers useful insights into the effectiveness of institutional strategies for mitigating port-related noise. • <u>Air Quality</u> <ul style="list-style-type: none"> ○ Report Card: California, State of the Air, 2024¹²¹: This state-level report card presents current air quality assessments across
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¹¹⁸ Louis J. Kraus, “Human and Environmental Effects of Light Emitting Diode (LED) Community Lighting,” American Medical Association, 2016, https://darksky.org/app/uploads/bsk-pdfmanager/AMA_Report_2016_60.pdf.

¹¹⁹ “Maintaining safety while minimizing visual impacts: Wind turbines and lighting,” American Clean Power Association, https://cleanpower.org/wp-content/uploads/gateway/2021/01/FinalVersion_Wind-Turbine-Lighting-Fact-Sheet-3.23.22.pdf.

¹²⁰ GeoMatrix, “Scoping Ecological and Off-Site Human Health Risk Assessment,” Sierra Pacific Industries, 2007, https://www.waterboards.ca.gov/northcoast/publications_and_forms/available_documents/sierra_pacific/080409/GMX07_SPI_Ecoand_Off-site_HHRA-Revised.pdf.

¹²¹ “State of the Air, Report Card: California,” American Lung Association, 2025, <https://www.lung.org/research/sota/city-rankings/states/california>.

	<p>California, including rankings by county and metro area for ozone and particle pollution. It serves as a useful starting point for evaluating air quality conditions in locations under consideration for port development.</p> <ul style="list-style-type: none"> • <u>Benthic Resources</u> <ul style="list-style-type: none"> ○ Magnuson-Stevens Fishery Conservation and Management Act¹²²: Information on eelgrass habitat as a critical species designated as Essential Fish Habitat” and “Habitat of Particular Concern” and a crucial keystone resource of Humboldt Bay. • <u>Birds and Bats</u> <ul style="list-style-type: none"> ○ State of the Birds 2025: United States of America¹²³: Shorebirds and seabirds, whose populations are already at risk, will be impacted by port infrastructure development. The 2025 State of the Birds Report found that 55–95% of seabirds are in decline and that no species of shorebirds has an increasing population. Seabirds and shorebirds must be considered as we plan for the future of the OSW sector, and we recommend that they be part of closing data gaps related to requirement 1-4. ○ Audubon’s Important Bird Areas¹²⁴: Audubon California has developed extensive maps of Important Bird Areas (“IBAs”) both on land and in marine ecosystems. They have identified that they are happy to collaborate with the CEC to effectively incorporate an understanding of impacts on seabirds and shorebirds in the Report. ○ Humboldt Bay, California, USA hosts a globally important shorebird community year-round¹²⁵: An IBA that overlaps with planned port development is the Humboldt Bay, which has been recognized as one of the most important areas for shorebirds in the hemisphere. The research states that “given Humboldt Bay’s high diversity and abundance of shorebirds, it is undoubtedly a vital link in the chain of annual events linking shorebird populations spanning the globe. ○ Western Hemisphere Shorebird Reserve Network Map of Sites¹²⁶: The Western Hemisphere Shorebird Reserve Network has
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¹²² “Magnuson-Stevens Fishery Conservation and Management Act,” U.S. Department of Commerce, 2007, <https://www.fisheries.noaa.gov/s3//dam-migration/msa-amended-2007.pdf>.

¹²³ “State of the Birds 2025: United States of America,” North American Bird Conservation Initiative, 2025, <https://www.stateofthebirds.org/2025/>.

¹²⁴ “Important Bird Areas,” Audubon, accessed August 11, 2025, https://gis.audubon.org/portal/apps/sites/?_gl=1*w07axj*_gcl_au*Njk5MDcyNTE3LjE3NTA3MTU0MTM.*_ga*MjIzOTIyODc2LjE3NTA3MTU0MTM.*_ga_X2XNL2MWTT*cZ_E3NTM4MzEzMzEkbzI5JGcxJHJxNzUzODMxMzMzJGo1OCRsMCRoMA.#/nas-hub-site.

¹²⁵ Mark A. Colwell, Chelsea Polevy & Hannah LeWinter, “Humboldt Bay, California, USA hosts a globally important shorebird community year-round,” *Wader Study* 127, no.3 (2020): 228–35, <https://www.waderstudygroup.org/article/14584/>.

¹²⁶ “Map of sites,” Western Hemisphere Shorebird Reserve Network, <https://whsrn.org/whsrn-sites/map-of-sites/>.

	<p>also mapped important shorebird areas along the North Coast. These efforts underscore the critical need to consider shorebirds and seabirds in coastal habitats, including short-term disturbance during construction and long-term cumulative impacts of varying OSW port activities.</p> <ul style="list-style-type: none"> ○ California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California¹²⁷: Information on bird species protected under state regulations, with particular focus on marine birds identified by the California Department of Fish & Wildlife as Species of Special Concern. ○ State and federally listed endangered and threatened animals of California¹²⁸: Documents that shorebird populations are often negatively impacted by human disturbance, making mitigation measures important for any coastal development. Noted the challenges of disturbance to snowy plover habitat and the successes some areas have seen from community outreach and engagement, coupled with fenced off habitat areas. ○ Both real-time and long-term environmental data perform well in predicting shorebird distributions in managed habitat¹²⁹: When planning mitigation, Point Blue Conservation Science’s report details the importance of both long-term and real-time weather data. ○ Nesting of the California least tern and western snowy plover at Oceano Dunes State Vehicular Recreation Area, San Luis Obispo County, California: 2024 season¹³⁰: The California Department of Fish and Wildlife has reported on the importance of sufficiently sized and quality breeding habitat for both of these species.
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¹²⁷ W. David Shuford & Thomas Gardali, “California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California,” *Studies of Western Birds* 1 (Western Field Ornithologists and California Department of Fish and Game, 2008), <https://westernfieldornithologists.org/product/california-bird-species-of-special-concern/>.

¹²⁸ California Natural Diversity Database, “State and federally listed endangered and threatened animals of California,” California Department of Fish and Wildlife, 2021, <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=195583>.

¹²⁹ Erin E. Conlisk, et al., “Both real-time and long-term environmental data perform well in predicting shorebird distributions in managed habitat,” *Ecological Applications* 31, no. 8 (2021): <https://esajournals.onlinelibrary.wiley.com/doi/full/10.1002/eap.2510>.

¹³⁰ Joanna Iwanicha et al., “Nesting of the California least tern and western snowy plover at Oceano Dunes State Vehicular Recreation Area, San Luis Obispo County, California: 2024 season,” California Department of Parks and Recreation—Oceano Dunes District, 2024, <https://www.fws.gov/sites/default/files/documents/2024-12/2024-oceano-dunes-svra-least-tern-snowy-plover-annual-report-with-attachments.pdf>.

	<ul style="list-style-type: none"> ○ “California Least Tern,” U.S. Fish and Wildlife Service¹³¹: A seabird species of concern is the California least tern, which resides along the central and southern coast of the state and is listed as endangered by the U.S. Fish and Wildlife Service. ○ Protecting global and Pacific Flyway shorebirds¹³² ○ We recommend the CEC include additional resources in the literature assessment on the following shorebird and seabird species: Marbled murrelet, Short-tailed albatross, Ridgway's rail, California condor, California gnatcatcher. ○ The Relative Vulnerability of Migratory Bird Species to Offshore Wind Energy Projects on the Atlantic Outer Continental Shelf: An Assessment Method and Database¹³³: References 58 and 59 provide information on the relative vulnerability of migratory birds to OSW development on the Atlantic Outer Continental Shelf, highlighting their heightened susceptibility during the winter season; ○ Anthropogenic Noise Alters Bat Activity Levels and Echolocation Calls¹³⁴: This study demonstrates that human-generated noise disrupts bat behavior, significantly reducing their activity and causing measurable changes in echolocation call structure. It also suggests that noise pollution may interfere with foraging efficiency and spatial orientation in bats, with implications for conservation in noise-impacted habitats. ○ Considerations for Offshore Wind Energy Development Effects on Fish and Fisheries in the United States¹³⁵: This article reviews current knowledge about the potential impacts of OSW infrastructure on fish and fisheries in the United States. It examines how artificial structures, noise, sediment disturbance, electromagnetic fields, and hydrodynamic changes may influence marine habitats and fish behavior. The paper also highlights emerging research opportunities and identifies data gaps, offering
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¹³¹ “California Least Tern,” U.S. Fish and Wildlife Service, accessed August 11, 2025, <https://www.fws.gov/species/california-least-tern-ster-na-antillarum-browni>.

¹³² Hovland Consulting, “Protecting global and Pacific Flyway shorebirds,” April 25, 2024, <https://www.hovlandconsulting.com/post/protecting-global-and-pacific-flyway-shorebirds>.

¹³³ James C. Robinson Willmott, Gregory Forcey & Amy Kent, “The Relative Vulnerability of Migratory Bird Species to Offshore Wind Energy Projects on the Atlantic Outer Continental Shelf: An Assessment Method and Database,” Bureau of Ocean Energy Management, 2013, <https://espis.boem.gov/final%20reports/5319.pdf>.

¹³⁴ Jessie P. Bunkley et al., “Anthropogenic Noise Alters Bat Activity Levels and Echolocation Calls,” *Global Ecology and Conservation* 3 (January 2015): 62–71, <https://www.sciencedirect.com/science/article/pii/S235198941400064X>.

¹³⁵ Rebecca L. Perry & William D. Heyman, “Considerations for Offshore Wind Energy Development Effects on Fish and Fisheries in the United States,” *Oceanography* 33 (2020): 28–37, <https://tos.org/oceanography/article/considerations-for-offshore-wind-energy-development-effects-on-fish-and-fisheries-in-the-united-states-a-review-of-existing-studies-new-efforts-and-opportunities-for-innovation>.

	<p>guidance for future monitoring and regulatory coordination across federal agencies.</p> <ul style="list-style-type: none"> • <u>Marine Mammals</u> <ul style="list-style-type: none"> ○ Winds of Change: Transforming California’s Ports to Improve Public Health & Support Equitable Offshore Wind¹³⁶: This report provides recommendations and best practices for OSW development, including a discussion of mitigation measures that can help prevent destruction to the habitats of marine mammals near a developing facility. Such measures include vessel strike prevention (providing adequate room between vessels and habitats to avoid fatal collisions with marine mammals), employing heat detection mechanisms and expert lookouts to detect and spot oncoming wildlife, and including studies of marine mammals in baseline data collection when planning projects and projecting potential impacts. • <u>Coastal Habitat, Fauna, and Wetlands</u> <ul style="list-style-type: none"> ○ Projected cross-shore changes in upwelling induced by offshore wind farm development along the California coast¹³⁷: This study examines how large-scale OSW development could shift upwelling patterns along the California coast. Results show reduced upwelling nearshore and increased upwelling offshore, with spatial changes that may exceed natural variability. These shifts could influence nutrient transport and marine ecosystems in the California Current. ○ Restoration of Northern California Bull Kelp Forests A partnership approach¹³⁸: This report outlines a collaborative restoration strategy aimed at rejuvenating bull kelp forests along the Northern California coast. It emphasizes partnerships among local communities, landowners, scientists, and state agencies. The report details project design, experimental trials, monitoring protocols, and adaptive management lessons. ○ California North Coast Offshore Wind Studies: Port Infrastructure Assessment Report Appendices¹³⁹: This section provides detailed appendices to the port infrastructure assessment conducted for the California North Coast OSW studies. It includes
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¹³⁶ “Winds of Change: Transforming California’s Ports to Improve Public Health & Support Equitable Offshore Wind,” Natural Resources Defense Council, 2025.

¹³⁷ K. Raghukumar et al., “Projected cross-shore changes in upwelling induced by offshore wind farm development along the California coast.” *Communications Earth & Environment* 4 (2023): <https://doi.org/10.1038/s43247-023-00780-y>.

¹³⁸ M. Ward et al., “Restoration of Northern California Bull Kelp Forests: A Partnership-based Approach,” California Ocean Protection Council, 2023, https://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20220614/Item5_Exhibit_A_Mendocino_County_Kelp_Forest_Restoration_Project_final_report.pdf.

¹³⁹ A. Porter & S. Phillips, “Port Infrastructure Assessment Report Appendices,” in M. Severy et al., *California North Coast Offshore Wind Studies* (Schatz Energy Research Center, 2020), <https://schatzcenter.org/pubs/2020-OSW-R19A.pdf>.

	<p>technical data and analysis on existing port facilities, their capacity limits, berthing and loadout configurations, equipment inventories, and upgrade requirements to support floating OSW operations. This information serves as a critical resource for identifying port readiness and infrastructure investment needs to support OSW development in the region.</p> <ul style="list-style-type: none"> ○ Wildlife-Friendly Plastic-Free Netting in Erosion and Sediment Control Products¹⁴⁰: This factsheet evaluates alternative erosion and sediment control netting products that do not use plastics, aiming to reduce wildlife entanglement risks. It highlights best practices and product examples that enhance shoreline stabilization while minimizing harm to birds, mammals, and marine organisms. ● Fishes, Invertebrates, and Essential Fish Habitat <ul style="list-style-type: none"> ○ Eating Local Fish Safely: Humboldt Bay Mercury Assessment, Phase II¹⁴¹: This report evaluates mercury contamination levels in seafood from Humboldt Bay, exploring associated health risks for fish consumers. It builds on prior community-based assessments and offers guidance on safe fish consumption, serving as a vital resource for managing dietary exposure in areas linked to port and marine development. ○ Karuk Tribe, "Karuk Traditional Ecological Knowledge and the Management of Spring Chinook Salmon"¹⁴²: This report integrates Karuk traditional ecological knowledge with Western science to guide management of spring Chinook salmon. It offers valuable insights into Tribal perspectives on habitat stewardship, seasonal indicators, and restoration practices rooted in deep cultural understanding of river ecosystems. ○ 90-Day Finding on a Petition To List Chinook Salmon in the Upper Klamath-Trinity Rivers Basin as Threatened or Endangered Under the Endangered Species Act¹⁴³: NOAA's determination that a petition to list Upper Klamath-Trinity Rivers
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¹⁴⁰ Vanessa Metz, "Wildlife-Friendly Plastic-Free Netting in Erosion and Sediment Control Products," California Coastal Commission, 2016, <https://documents.coastal.ca.gov/assets/water-quality/permits/Wildlife-Friendly-Netting-in-Erosion-&Sediment-Control-Factsheet-r5-Sept-2016.pdf>; see also <https://www.coastal.ca.gov/water-quality/permits/>.

¹⁴¹ "Eating Local Fish Safely: Humboldt Bay Mercury Assessment, Phase II," Humboldt Waterkeeper, revised October 12, 2024, <https://humboldtwaterkeeper.org/images/PDF/MercuryPhase2FinalReport.pdf>.

¹⁴² Luis Neuner & S. Craig Tucker, "Karuk Traditional Ecological Knowledge and the Management of Spring Chinook Salmon," Karuk Tribe, 2023, <https://www.karuk.us/images/docs/dnr/20230202KarukTraditionalEcologicalKnowledgeAndTheManagementOfSpringChinookSalmonFINAL.pdf>.

¹⁴³ National Oceanic and Atmospheric Administration, "90-Day Finding on a Petition To List Chinook Salmon in the Upper Klamath-Trinity Rivers Basin as Threatened or Endangered Under the Endangered Species Act," 83 Fed. Reg. 8410 (February 27, 2018), <https://www.federalregister.gov/documents/2018/02/27/2018-03906/endangered-and-threatened-wildlife-90-day-finding-on-a-petition-to-list-chinook-salmon-in-the-upper>.

	<p>Chinook salmon under the Endangered Species Act presents substantial scientific information, triggering a formal status review of the population.</p> <ul style="list-style-type: none"> ○ 90-Day Finding on a Petition to List the Tope Shark Under the Endangered Species Act¹⁴⁴ ○ Fish Species of Special Concern¹⁴⁵: This comprehensive edition profiles 62 freshwater and anadromous fish species in California that fall just short of legal listing under state or federal endangered species protections. It provides standardized status evaluations, distribution and habitat data, and analysis of threats including habitat loss, climate change, and invasive species. ● <u>Marine Mammals and Sea Turtles</u> <ul style="list-style-type: none"> ○ Three Decades of Nearshore Surveys Reveal Long-Term Patterns in Gray Whale Habitat Use, Distribution, and Abundance in the Northern California Current¹⁴⁶: This 31-year study documents gray whale abundance and habitat use along the Northern California Current, showing strong links to coastal upwelling patterns and regional oceanographic features. It underscores the importance of long-term monitoring to inform marine management. ○ Ecology of Harbor Seals, <i>Phoca vitulina</i>, in Northern California¹⁴⁷: a comprehensive ecological study of harbor seals along the northern California coast. ○ NOAA and BOEM Minimum Recommendations for Use of Passive Acoustic Listening Systems in Offshore Wind Energy Development Monitoring and Mitigation Programs¹⁴⁸: This framework presents minimum procedural guidelines for deploying passive acoustic listening systems during OSW development in U.S. waters. It provides recommendations for standardizing monitoring
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¹⁴⁴ National Oceanic and Atmospheric Administration, “90-Day Finding on a Petition to List the Tope Shark Under the Endangered Species Act,” 87 Fed. Reg. 25209, (April 28, 2022), <https://www.federalregister.gov/documents/2022/04/28/2022-09032/endangered-and-threatened-wildlife-90-day-finding-on-a-petition-to-list-the-tope-shark-as-threatened>.

¹⁴⁵ Peter B. Moyle et al., “Fish Species of Special Concern in California,” California Department of Fish and Wildlife, 2015, <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=107740&inline>.

¹⁴⁶ Dawn R. Barlow, Craig S. Strong & Leigh G. Torres, “Three Decades of Nearshore Surveys Reveal Long Term Patterns in Gray Whale Habitat Use, Distribution, and Abundance in the Northern California Current,” *Scientific Reports* 14 (April 23, 2024): <https://www.nature.com/articles/s41598-024-59552-z>.

¹⁴⁷ A. Gemmer, “Ecology of Harbor Seals, *Phoca vitulina*, in Northern California” (MA thesis, Humboldt State University, 2002).

¹⁴⁸ Sofie M. Van Parijs et al., “NOAA and BOEM Minimum Recommendations for Use of Passive Acoustic Listening Systems in Offshore Wind Energy Development Monitoring and Mitigation Programs,” *Frontiers in Marine Science* 8 (2021): <https://www.frontiersin.org/journals/marine-science/articles/10.3389/fmars.2021.760840/full>.

	<p>across projects to better detect marine mammal presence, mitigate disturbance, and inform adaptive management.</p> <ul style="list-style-type: none"> ○ The Effect of Disturbance on Harbor Seal Haul Out Patterns at Bolinas Lagoon, California¹⁴⁹: This study examines how human disturbance affects harbor seal haul-out behavior at Bolinas Lagoon, California. It offers insights into how different types and proximities of human activity influence when and where seals come ashore, providing baseline data to inform wildlife management and minimize human impacts on seal populations. ○ DNA Analysis of Scats Reveals Spatial and Temporal Structure in the Diversity of Harbour Seal Diet from Local Haulouts to Oceanographic Bioregions¹⁵⁰: This paper examines the diet of harbor seals along the coast of British Columbia. It reveals that seal diets are highly variable across time and location, reflecting local prey availability and seasonal shifts. The study underscores the ecological importance of understanding fine-scale feeding behavior when evaluating predator impacts on fish populations and managing marine ecosystems. ○ Abundance of Eastern North Pacific Gray Whales 2023/2024¹⁵¹: This technical report offers current population estimates for the Eastern North Pacific gray whale. The analysis, utilizing on shore-based surveys off central California, provides important indicators for assessing ecosystem health, species resilience, and risk factors linked to environmental stressors. ● Scenic and Visuals <ul style="list-style-type: none"> ○ Visual resource stewardship conference proceedings: landscape and seascape management in a time of change¹⁵²: The paper explores federal agency programs, visual impact assessment methodologies and tools, quality evaluation, mitigation strategies, and professional capacity-building in VRM, especially in response to emerging energy infrastructure development such as OSW installations.
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¹⁴⁹ Sarah G. Allen, "The Effect of Disturbance on Harbor Seal Haul Out Patterns at Bolinas Lagoon, California," *Fishery Bulletin* 82 (1984): https://spo.nmfs.noaa.gov/sites/default/files/pdf-content/fish-bull/allen_0.pdf.

¹⁵⁰ M. Kurtis Trzcinski et al., "DNA Analysis of Scats Reveals Spatial and Temporal Structure in the Diversity of Harbour Seal Diet from Local Haulouts to Oceanographic Bioregions," *Marine Ecology Progress Series* (2024): https://www.int-res.com/articles/meps_oa/m743p113.pdf.

¹⁵¹ Tomo Eguchi, Aimée Lang, and David Weller, *Abundance of Eastern North Pacific Gray Whales 2023/2024* (National Oceanic and Atmospheric Administration, March 2024), <https://repository.library.noaa.gov/view/noaa/60583>.

¹⁵² Robert G. Sullivan, et al., "Visual resource stewardship conference proceedings: landscape and seascape management in a time of change," Forest Service, 2018, <https://www.fs.usda.gov/nrs/pubs/gtr/gtr-nrs-p-183papers/02-sullivan-VRS-gtr-p-183.pdf>.

<p>Requirement 1-6: Consider transportation and other infrastructure investments needed to develop the identified seaports and waterfront facilities needed for OSW energy activities.</p>	<ul style="list-style-type: none"> ● Humboldt Bay Offshore Wind Minimum Viable Port Project Description¹⁵³: This report outlines the Humboldt Bay Harbor District’s proposal to transform a decommissioned marine terminal into the West Coast’s first Heavy Lift Multipurpose Terminal to support floating OSW deployment. It details project design, environmental benefits, and economic development potential, including job creation and regional infrastructure readiness. ● The EcoNews Report: Delving Deeper into Port Electrification¹⁵⁴ ● Green Ports Possibilities on the North Coast¹⁵⁵: This report outlines strategies for developing a zero-emission heavy lift terminal in Humboldt Bay to support OSW while minimizing environmental and public health impacts. It emphasizes the importance of clean energy, electrification, and community-centered design, particularly for Tribal and frontline communities. ● Transmission Corridor Evaluation Humboldt Wind Area Vol 1: Report¹⁵⁶: This report identifies and compares seven possible onshore transmission corridors to carry OSW energy from Humboldt to other parts of California. It evaluates environmental, land use, and cultural challenges that could impact permitting and construction; ● Humboldt County 2024: Affordable Housing Needs Report¹⁵⁷: This report offers a data-driven overview of housing affordability challenges in Humboldt County, highlighting critical gaps in rental housing, income alignment, and homelessness services; ● Humboldt Supply Chain and Workforce Assessment Redwood Region Offshore Wind Roadmap¹⁵⁸: This report offers a comprehensive baseline understanding of Humboldt’s existing supply chains and workforce, along with projected growth needed to support the development of the incoming staging and integration port.
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¹⁵³ Humboldt Bay Harbor, Recreation, and Conservation District, “Application to Multimodal Project Discretionary Grant Opportunity (MPDG) Program: Humboldt Bay Offshore Wind MVP (Minimum Viable Port) Project Description,” Humboldt Bay Harbor, Recreation, and Conservation District, 2023, https://humboldtbay.org/sites/humboldtbay.org/files/FY%202023-24%20MPDG%20Humboldt%20Bay%20Offshore%20Wind%20MVP%20Proposal%20Package_reducedfilesize.pdf.

¹⁵⁴ “Delving Deeper into Port Electrification,” Northcoast Environmental Center, Feb. 17, 2024, <https://www.yournec.org/delving-deeper-into-port-electrification/>.

¹⁵⁵ Madison Hunt & Ysabelle Yrad, “Green Ports Possibilities on the North Coast,” Blue Lake Rancheria, 2023, https://humboldtbay.org/sites/humboldtbay.org/files/Green_Ports_Possibilities_on_the_North_Coast_BLR.pdf.

¹⁵⁶ ASPEN Environmental Group, “Transmission Corridor Evaluation Humboldt Wind Area Vol 1,” California Energy Commission, 2024, <https://efiling.energy.ca.gov/GetDocument.aspx?tn=257784>.

¹⁵⁷ “Humboldt County 2024: Affordable Housing Needs Report,” California Housing Partnership, 2024, https://chpc.net/wp-content/uploads/2024/05/Humboldt_Housing_Report.pdf.

¹⁵⁸ Xodus, *Humboldt Supply Chain and Workforce Assessment: Redwood Region Offshore Wind Roadmap*.

<p>Requirement 1-10: Assess the estimated cost and identify potential funding and financing strategies for necessary port development and redevelopment that support OSW energy activities, including the potential to leverage federal funding.</p>	<ul style="list-style-type: none"> ● Economic Profile for Humboldt¹⁵⁹: This profile offers a concise overview of Humboldt County’s economic structure, including key indicators such as GDP, employment by sector, income levels, and regional trade. It provides essential baseline data for understanding local economic conditions and articulating regional workforce and infrastructure needs. ● Jumpstarting Offshore Wind through Centralized Procurement¹⁶⁰: The article provides an overview on California’s centralized procurement approach, led by the Department of Water Resources under AB 1373, and how it could help accelerate OSW deployment. It describes how centralized procurement reduces risk, increases market certainty, and enables cost savings by consolidating demand across utilities and avoiding fragmented procurement processes.
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G. Conclusion

OSW presents California with an opportunity to reverse historical injustices and develop its ports in equitable ways that directly address legacies of unjust environmental and community outcomes. We appreciate the CEC’s efforts to develop a Report that provides actionable steps to making this a reality, through tribal leadership and co-management, community decision-making power, public health and environmental justice, zero-emission infrastructure and phasing out of existing fossil fuel port industries, workforce equity, and community safety.

Sincerely,

Dan Chandler, Steering Committee Member, **350 Humboldt**

Bridget Mulkerin, Senior Manager, Climate Policy, **Audubon California**

Jason Ramos, Chairperson, **Blue Lake Rancheria**

Alexis Sutterman, Senior Policy Manager, **Brightline Defense**

Julia Chunn-Heer, Offshore Wind Lead Analyst, **California Coastal Protection Network**

Marven Norman, Environmental Policy Analyst, **Center for Community Action and Environmental Justice**

Kerry Venegas, Executive Director, **Changing Tides Family Services**

¹⁵⁹ "Economic Profile for Humboldt," U.S. Bureau of Economic Analysis, updated February 20, 2025, Department of Commerce, <https://apps.bea.gov/regional/bearfacts/>.

¹⁶⁰ Lauren Kubiak, “Jumpstarting Offshore Wind through Centralized Procurement,” Natural Resources Defense Council, 2024, <https://www.nrdc.org/bio/lauren-kubiak/jumpstarting-offshore-wind-through-centralizedprocurement-ca>.

Keith Flamer, President/Superintendent, **College of the Redwoods**

Vanessa Rivas Villanueva, Senior Research and Policy Analyst, **Earthjustice**

Paola Vargas, Long Beach Organizer, **East Yard Communities for Environmental Justice**

Bradley Bledsoe Downs, General Counsel, **Elk Valley Rancheria**

Matt Simmons, Climate Attorney, **Environmental Protection Information Center (EPIC)**

Lonyx Landry, Director, **Inter-Tribal Student Services**

Alison Beaulieu, Litigation Intern, **Natural Resources Defense Council**

Alison Hahm, Staff Attorney, **Natural Resources Defense Council**

Tracy Foster-Olstad, Chairperson, **Nor Rel Muk Wintu Nation**

Cristhian Tapia-Delgado, Climate Campaigner, **Southern California, Pacific Environment**

Colleen Clifford, Steering Committee Member, **Peninsula Community Collaborative**

Fernando Marquez Duarte, Policy Researcher, **People's Collective for Environmental Justice**

Katerina Oskarsson, Executive in Residence, **Redwood Region Climate and Community Resilience Hub (CORE Hub)**

Katie Ramsey, Senior Attorney, **Sierra Club**

Theral Golden, Treasurer, **West Long Beach Neighborhood Association**