Blueprint for Building a West Coast Science Collaborative for Offshore Wind

June 2026

Introduction

California is committed to carbon neutrality by 2045 as part of its broader efforts to address climate change. As the state moves toward this target, offshore wind is advancing as an important component of that future portfolio. In June of 2023, the Bureau of Ocean Energy Management executed five offshore wind leases in federal waters 20 miles offshore from the California coast, two off the coast of Humboldt Bay in northern California and three off the coast of Morro Bay, in central California (Figure 1). Since that time one leaseholder has voluntarily ended their lease off Morro Bay.

Figure 1. Location of five lease areas offshore California.

Although floating offshore wind technology has demonstrated its viability through several international installations, commercial developments at the scale proposed offshore of California do not yet exist. Successfully building this industry will require a balanced strategy that addresses existing knowledge gaps and creates solutions to avoid, minimize, and mitigate impacts on ocean ecosystems, tribal cultural resources, and fisheries.

The comprehensive **Assembly Bill 525 Offshore Wind Energy Strategic Plan**[1], developed by the California Energy Commission in coordination with other state agencies, identifies potential strategies to achieve the state's offshore wind goals and address environmental and ocean use considerations through avoidance, minimization, monitoring, mitigation, and adaptive management. Recommendations include promoting coordination and collaboration among lessees on surveys, comprehensive monitoring plans, and project implementation to minimize environmental impacts; and promoting comprehensive environmental research and monitoring using best available science and Traditional Knowledges. Currently, there is no mechanism to

1 https://www.energy.ca.gov/data-reports/reports/ab-525-reports-offshore-renewable-energy

coordinate or standardize marine environmental monitoring and research needed to identify potential impacts from offshore wind development across individual projects or at a regional scale.

Creation of a West Coast Science Collaborative for Offshore Wind (WCSC) could address this gap and provide needed independent and objective scientific expertise that can inform coordinated environmental research, monitoring and analysis, and adaptive management at both individual project and cumulative scales**. A coordinated and transparent body, informed by subject-matter experts, can help gather, generate, review, and share the best available science-based data and information to guide environmentally responsible offshore wind planning and development along the California Coast. Critically, the WCSC will provide a forum for cross-sector collaboration and a venue for transparent information sharing with the public, building trust and accountability as this new industry develops.**

Given that California is currently the only state on the West Coast with federal offshore wind leases, the WCSC will prioritize its efforts on California, expanding to Oregon and Washington if/when lease areas are awarded there, and capacity and funding allows. Focusing on California will support near-term needs for existing leases while establishing frameworks that can be adapted for future lease areas across the West Coast. Recognizing the immediate and near-term information needs for the State of California, as well as the importance of regional coordination and information sharing, representatives from the States of Washington and Oregon are currently included as ex-officio members of the WCSC. This *Blueprint for Building a West Coast Science Collaborative for Offshore Wind* outlines the purpose, goals, organizational structure, and foundational activities of the WCSC. It was developed by the California Ocean Protection Council (OPC) and shaped through consultation with California Native American tribes and extensive outreach and engagement with state and federal agencies, environmental non-profit organizations, the fishing community, scientists, community members, and the general public. It is expected that the content and processes laid out below will be refined and formalized during future long-term viability planning for the WCSC.

Purpose and Goals

Responsible offshore wind development on the West Coast will require comprehensive, innovative, and coordinated environmental monitoring and research to understand and minimize potential impacts to wildlife, tribal cultural resources, and marine ecosystems. The WCSC will address those needs through the following goals:

WCSC Goals

1. Synthesize and communicate monitoring data, analysis, and research findings through transparent public reporting across all project phases that summarize results from ongoing monitoring and research efforts.
2. Provide scientific expertise, including tribal science and Traditional Knowledges, to understand potential environmental, tribal cultural resources, and fisheries impacts from

offshore wind development; identify effective mitigation measures to offset unavoidable impacts and develop adaptive management strategies.

3. Identify opportunities and constraints to prioritize coordinated monitoring to increase cost efficiencies, leverage resources and support assessment of project level and cumulative impacts. Promote regional coordination of monitoring and research agendas, including use of existing and emerging technology.
4. Establish standards for data collection and management to ensure data quality and interoperability and maximize efficiencies in data collection and analysis across monitoring efforts.

Organizational Structure

The WCSC will be composed of a Steering Committee, Coordination Committee, and topical Subcommittees working together to ensure effective implementation of WCSC goals (Figure 2).

Figure 2. WCSC Organizational Structure.

The **Steering Committee** is the decision-making body of the WCSC and will provide direction on near-term objectives and guidance on cross-cutting issues, activities and products, of the WCSC. The Steering Committee will review and approve products and recommendations from the Subcommittees and decide on highest priority needs for addressing scientific gaps. The voting members of the Steering Committee will include representation from federal agencies, California state agencies, California Native American tribal governments, and offshore wind leaseholders. Serving in an advisory capacity, the ex-officio members of the Steering Committee will include state agency representation from Oregon and Washington, environmental non-profit organizations, fishing community members, and the chairs of the Subcommittees.

The **Coordination Committee** will provide support for implementation of all WCSC activities. The Coordination Committee is comprised of staff-level representatives designated by voting Steering Committee members (no limit on number), and representatives from ex-officio members as requested by the Steering Committee based on topical expertise. The Coordination Committee is empowered to make administrative decisions to move processes forward, aligned with the decisions and guidance of the Steering Committee. The Coordination Committee strives for consensus in all matters, however OPC can move administrative decisions forward if consensus cannot be reached. Examples of administrative decisions include developing agendas, setting meeting dates, and developing slides/materials for various needs.

Subcommittees will provide topic-area scientific and technical expertise. Subcommittees may be responsible for developing products, providing targeted advice, or recommendations to the Steering Committee, or other activities as identified by the Steering Committee. Subcommittee meetings will be open to the public to maximize transparency and provide a venue for all interested partners to provide input. Subcommittees may be created, rearranged, combined, and/or reconstituted as directed by the Steering Committee.

Subcommittees will be established around several focal areas: habitat and ecosystems, birds and bats, marine mammals and sea turtles, fish and invertebrates, data and technology, tribal cultural resources, and fisheries. The Tribal Cultural Resources Subcommittee will be tribally led; meetings will not be open to the public to maintain confidentiality of sensitive tribal information. Each Subcommittee will have up to two co-chairs. Co-chairs will be selected through a public nomination process and approved by the Steering Committee. The process for determining tribal co-chairs has not been determined at this time. The co-chairs of the Subcommittees will be included as ex-officio members of the Steering Committee and could be eligible for financial support as funding allows and as appropriate.

Subcommittee members, and, where feasible, co-chairs, will include tribal scientists and Traditional Knowledge holders. OPC recognizes that tribal knowledge, perspectives, and science are often place-based, holistic, and reflect the interconnectedness of all life, which may be challenging to fit into the topical structure of the Subcommittees. OPC is committed to ensuring that tribal science and Traditional Knowledges are meaningfully included in the work of the Subcommittees.

WCSC members must be willing to engage in collaborative, cross-sector deliberations and have the time and commitment to participate meaningfully to achieve the goals of the WCSC. Although government agencies will participate in the WCSC, the work and products of the WCSC will not be included in government regulations. The WCSC will not be established or utilized by a federal agency for the purpose of obtaining advice or recommendations on issues or policies. The WCSC functions independently of the regulatory processes of the participating government agencies. OPC will serve as the convener and facilitator of the WCSC until another entity is identified and approved by the

Steering Committee. This includes convening the WCSC Committees as appropriate and making administrative decisions to advance foundational activities and outcomes.

Steering Committee Membership

Each member organization may designate a primary and an alternate representative for their seat. Member groups may choose to self-organize a caucus, expanding participation to additional members and representatives.

Federal Agencies

Federal agencies with regulatory authority or policy oversight related to coast and ocean ecosystems and offshore wind development can provide a single representative from each of the following seven agencies:

- Bureau of Ocean Energy Management
- Bureau of Safety and Environmental Enforcement
- Environmental Protection Agency
- Marine Mammal Commission
- National Oceanic and Atmospheric Administration
- United States Army Corps of Engineers
- United States Coast Guard
- U.S. Fish and Wildlife Service
- United States Geological Survey
- United States Navy

California State Agencies

California state agencies with regulatory authority or policy oversight related to coast and ocean ecosystems and offshore wind development can provide a single representative from each of the following five agencies:

- California Coastal Commission
- California State Lands Commission
- California Department of Fish and Wildlife
- California Energy Commission
- California Ocean Protection Council

California Native American Tribes

Federally recognized and non-federally recognized California Native American tribes may each provide a single representative authorized to serve on behalf of the tribal government. There is no

limit to the number of tribes that can participate. Tribal Steering Committee members, Coordination Committee members, and Subcommittee co-chairs may be eligible for financial support, as funding allows and as appropriate.

Offshore Wind Leaseholders

The four current California leaseholders can each provide a single representative.

- California North Floating, LLC (Vineyard)
- RWE Offshore Wind Holdings, LLC
- Equinor Wind US, LLC
- Invenergy California Offshore, LLC

Ex-Officio

Oregon and Washington State Governments

Oregon and Washington state agencies can each provide a single representative from the following agencies, or designate another agency of their choice:

- Oregon Department of Land Conservation and Development
- Washington State Department of Ecology

Fishing Community

Two representatives from California Native American tribal fisheries, commercial and recreational fishermen, or seafood processors that work in California waters and are interested in addressing potential impacts and informing adaptive management of offshore wind development. The members will be selected through a public nomination process and approved by the Steering Committee.

Environmental Non-Profit Organizations

Two representatives from environmental non-profit organizations that have subject matter expertise in relevant topics and are interested in addressing potential impacts and informing adaptive management of offshore wind development. The members will be selected through a public nomination process and approved by the Steering Committee.

Decision Making

When advancing decisions, the Steering Committee will always strive for full consensus. When that is not possible, it will aim for general consensus, where all members either support the decision or accept that it was arrived at through an open and fair process, even if they do not prefer the decision. When disagreeing with a proposal, members shall explain their concerns and actively work with others to find a solution. If, after repeated efforts, members still cannot agree, the Steering Committee can move forward with a decision through voting.

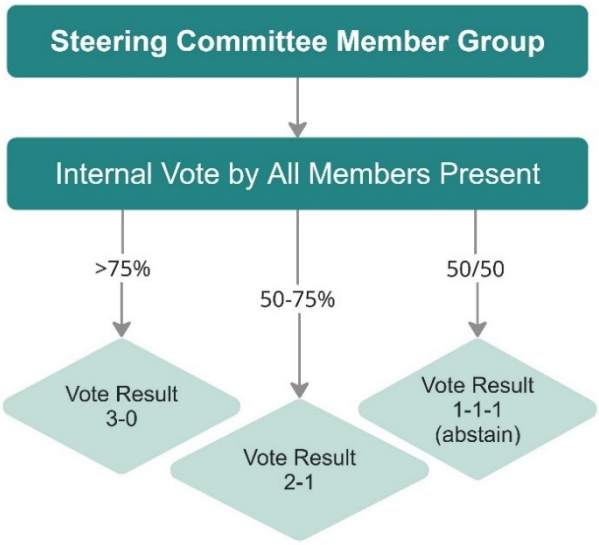

Figure 3. WCSC Proportional Voting

Steering Committee "member groups" (federal, state, tribes, offshore wind leaseholders) will each have three votes, for a total of 12 votes. Decisions will be made with a majority vote (i.e. 7 out of 12 votes). Voting will occur with those present at the meeting or can be submitted via email ahead of the meeting. If unanimous agreement within a member group is reached, there is full consensus and all three votes are the same. If unanimous agreement within a member group is not reached, the votes will be split proportionally, as shown in Figure 3.

Foundational Activities

Science Questions, Priorities and Needs Assessment

For the WCSC to successfully direct its work, it must first identify and build a shared understanding of the key scientific questions and priorities within its purview. The Science Questions, Priorities and Needs Assessment (Assessment) will bring together information from previous and ongoing efforts, including but not limited to the Offshore Wind Environmental Monitoring Framework[2]; a tribally led working group process, which will collect tribal monitoring priorities and recommendations; and state and federal regulatory requirements.

[2] An independent, science-based Environmental Monitoring Framework, led by the California Marine Sanctuary Foundation, provides the science foundation for monitoring offshore wind impacts on marine species and habitats. See Appendix [Complementary Collaborative Efforts] for a full description.

The Assessment will also offer an early view of how current monitoring, protocols, and best practices guidance efforts align with key questions and will highlight strengths, gaps and recommendations. This analysis will be of value to the broader scientific and management community and will also serve to guide the Steering Committee and Subcommittees.

A second focus of the Assessment is data standards and management. Standardized approaches to collecting, managing, and sharing data are essential for ensuring information can be used effectively across organizations and research areas. Without shared standards and interoperable systems, data generated by individual projects or studies can become fragmented or incompatible, limiting its value for broader analyses.

The Assessment will ensure a comprehensive, science-informed foundation as the WCSC advances toward a coordinated offshore wind monitoring strategy. It will be led by OPC staff and will result in a draft report that can be further refined by the Steering Committee.

Tribal Culture Resources Monitoring Priorities and Recommendations

Tribal cultural resources exist in many forms and may be subject to impacts arising from ground-disturbing actions, environmental change, or other activities that modify the settings and conditions that support them. Ongoing monitoring is essential to understand how offshore wind activities may influence these resources and to develop clear, culturally informed guidance that ensures consistent monitoring practices.

This effort will gather tribal monitoring priorities and recommendations, including culturally appropriate approaches and indicators for monitoring place-based cultural resources and the environmental conditions affecting tribal lands and resources. This work must be led by California Native American tribes to ensure that monitoring efforts reflect tribal priorities, enable tribal scientists and knowledge holders to steward cultural resources within their ancestral territories, and protect sensitive data and information. Because monitoring efforts often support many uses and needs, this effort will be focused on potential impacts from OSW but will consider broader monitoring needs and recommendations as well.

This effort will also begin preliminary work on tribal data sovereignty, including early discussions on data governance, access, storage, and the protection of sensitive cultural information.

Appendix

Complementary Collaborative Efforts

The coordination of regional scientific research, development of monitoring guidelines, and efforts to standardize data is underway through several organizations across the country. Several of these organizations conduct complementary activities to the WCSC, and collaborative partnerships will be explored where relevant.

On the East Coast, offshore wind projects are in all phases of development from planning to construction. The development of this industry has led to two regional science collaboratives that facilitate the coordination of scientific monitoring and research and can provide guidance and lessons learned from early offshore wind development in the United States:

The **Regional Wildlife Science Collaborative for Offshore Wind**[3] (RWSC) is a voluntary forum for federal agencies, states, industry, and environmental non-profit organizations to work together with the research community to conduct coordinated marine life and habitat research in U.S. Atlantic waters. RWSC serves as a hub to increase collaboration, limit redundancy, suggest common data standards, and increase data sharing.

The **Responsible Offshore Science Alliance**[4] (ROSA) advances regional scientific research, monitoring and understanding of fisheries and the interactions with blue economy activities in state and federal waters of the U.S. through collaboration and cooperation. ROSA includes a community of fishermen, ocean leaseholders, academics, government representatives, and others united behind a common goal of objective, collaborative science that supports effective decision-making and policy.

On the West Coast there are several existing efforts to coordinate regional priorities and research including:

The **California Ocean Science Trust** (OST) was created by the California Ocean Resources Stewardship Act (CORSA, 2000) to mobilize resources and capacity toward policy-relevant and solution-oriented science. Since 2007, OST has served as the Science Advisor to OPC, providing practical, actionable scientific guidance to inform policy and management decisions that protect California's coast and ocean resources. OST has partnered closely with OPC to serve as Secretariat of the OPC Science Advisory Team (SAT), including convening, oversight, and management of the SAT. The OPC and OST partnership through the SAT has been proven as a model for strengthening the

3 https://rwsc.org

4 https://www.rosascience.org

application of cutting-edge science to inform recommendations and solutions in state decisionmaking.

The **Pacific Offshore Wind Consortium** (POWC)[5] supports universities, host communities, and Tribal nations to share resources, co-develop best practices, and design relevant and timely research programs on topics related to offshore wind. Efforts are geared to reflect the dynamic nature of the coastal and marine environment as well as the diversity of community perspectives. POWC activities advance research and innovation, community and Tribal engagement and knowledge exchange, and university-level workforce education and professional development.

The **West Coast Ocean Alliance** (WCOA)[6] is an intergovernmental forum between West Coast states (California, Oregon, and Washington), tribes, and the federal government that supports open, transparent and equitable dialogue based on a common vision for the West Coast.

In the South there is currently one lease for offshore wind in the Gulf of America, although there are other potential areas that could be developed in the future. The **Gulf of America Alliance**[7] is creating a new group within the Alliance tentatively named the Gulf Science Collaborative. The goal is to develop a collaborative providing credible monitoring and research data on wildlife and marine ecosystems supporting environmentally responsible energy development in the Gulf.

To understand baseline and long-term impacts, the State of California has also funded the **California Marine Sanctuary Foundation**[8] to lead development of an independent, transparent, and science-based environmental monitoring framework for California's emerging offshore wind industry, in collaboration with over 200 scientists. This guidance will serve as a scientific reference and provide a structured framework that explores environmental monitoring options and considerations informed by expert insights, supporting responsible offshore wind development in California.

5 http://powc.us

6 https://www.westcoastoceanalliance.org

7 https://gulfofamericaalliance.org/about-us

8 https://www.californiamsf.org/offshorewind