



CMSF CALIFORNIA MARINE SANCTUARY FOUNDATION



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30x30 Technical Advisory Panel  
California Ocean Protection Council (OPC)  
715 P Street, 20th Floor, Sacramento, CA 95814

## Re: Comments on OPC's 30x30 Draft Decision-Making Framework for Coastal Waters

Dear Deputy Secretary Eckerle, Council Members, 30x30 Program Managers, and Expert Panelists,

On behalf of the undersigned organizations, we thank you for the opportunity to comment on the Ocean Protection Council's (OPC) *30x30 Draft Decision-Making Framework for Coastal Waters* (Draft Framework). The process for durably conserving 30 percent of the state's lands and waters by 2030 is inherently complex, involving multiple disciplines and many voices. We commend OPC, under exacting budget constraints, for the public comment opportunity including engaging communities and sovereign governments whose economic vitality, recreation, residence, subsistence, and cultural well-being are linked to California's coastal waters.

We acknowledge and appreciate that OPC's Draft Framework aligns with several recommendations made in an October 23, 2023, letter submitted by the undersigned and additional organizations ("Comments on Spatial Management Measures (SMMs) Beyond MPAs and Sanctuaries Strategy").<sup>1</sup> We also acknowledge the many contexts within which OPC is doing this work: as a state conservation leader with global influence, against a backdrop of national 30x30 targets, and in concert with multiple connected California policy, management, and funding initiatives. California has an opportunity to set a precedent that other states and nations can follow as they seek to conserve our planet's threatened biodiversity. And within the state, OPC's Draft Framework overlaps with, and will likely influence the implementation of, multiple state agency strategic plans and goals.<sup>2,3,4,5,6,7</sup>

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<sup>1</sup> Public comment to OPC from Audubon California, Azul, California Marine Sanctuary Foundation, Wildcoast, Coastal Quest, Environmental Action Committee of West Marin, Heal the Bay, Natural Resource Defense Council, and The Pew Charitable Trusts, October 25, 2023: [https://www.pewtrusts.org/-/media/assets/2023/11/30x30\\_spatialmanagementmeasurestrategycommentletterfinal.pdf](https://www.pewtrusts.org/-/media/assets/2023/11/30x30_spatialmanagementmeasurestrategycommentletterfinal.pdf)

<sup>2</sup> California Natural Resources Agency, *Draft 2024 California Climate Adaptation Strategy*, May 2024, [https://climateresilience.ca.gov/overview/docs/20240514-Draft\\_CA\\_Climate\\_Adaptation\\_Strategy\\_2024.pdf](https://climateresilience.ca.gov/overview/docs/20240514-Draft_CA_Climate_Adaptation_Strategy_2024.pdf)

<sup>3</sup> California Natural Resources Agency, *California's Nature-Based Solutions Climate Targets*, April 2024, <https://resources.ca.gov/-/media/CNRA-Website/Files/Initiatives/Expanding-Nature-Based-Solutions/Californias-NBS-Climate-Targets-2024.pdf>

<sup>4</sup> California Air Resources Board, *Final 2022 Scoping Plan Update – Achieving Carbon Neutrality by 2045*, December 2022, <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents>

<sup>5</sup> California Sea Level Rise Science Task Force, California Ocean Protection Council, California Ocean Science Trust, *The State of California Sea Level Rise Guidance: 2024 Science and Policy Update*, December 2022, <https://opc.ca.gov/wp-content/uploads/2024/05/California-Sea-Level-Rise-Guidance-2024-508.pdf>

<sup>6</sup> CA Ocean Protection Council, *Strategic Plan to Protect California's Coast and Ocean 2020-2025*, February 2020, [https://opc.ca.gov/webmaster/ftp/pdf/agenda\\_items/20200226/OPC-2020-2025-Strategic-Plan-FINAL-20200228.pdf](https://opc.ca.gov/webmaster/ftp/pdf/agenda_items/20200226/OPC-2020-2025-Strategic-Plan-FINAL-20200228.pdf)

<sup>7</sup> CA Ocean Protection Council, Discussion Item: Council Priorities and Process to Inform OPC's 2026-2023 Strategic Plan, August 2024, <https://opc.ca.gov/wp-content/uploads/2024/08/Item-5-Strategic-Plan-Discussion-508.pdf>

Our comments focus on how the Framework will apply to, and provide adequate conservation of, the state's bays, estuaries, and other coastal wetlands (which we will collectively refer to as "estuaries" in this letter). Estuaries, with their diverse habitats including tidal wetlands and marshes, mudflats and seagrass meadows, are immensely valuable ecosystems.<sup>8</sup> These areas link the state's diverse landscapes, famed forests, and rivers with ocean waters and sustain marine wildlife, including salmon, seabirds, Dungeness crab, oysters, and forage fish. These, in turn, support Tribal Nations and California's economy by providing nurseries and feeding and breeding grounds that are vital to subsistence, recreational and commercial fisheries. Native vegetation and habitats in estuaries also help reduce the effects of climate change by storing greenhouse gases, lessening the effects of ocean acidification, and safeguarding people from more intense and frequent storms and floods. Estuarine health, therefore, has implications for California's coastal waters, including the state's marine protected area network and fisheries, as well as land-based decision-making.

The Baylands and Estuary Science Towards (BEST) 30 x 30 workgroup was convened by our organizations and includes scientists and practitioners with expertise in California estuaries. This group recently identified sea level rise, impaired water quality, and continuing impacts from historically altered hydrology – including dikes, dams and other diversions – as the most significant threats facing estuaries.<sup>9</sup> These experts also note that managing and mitigating each of these threats to estuaries requires both marine and land-based management considerations and interventions, and that these considerations and interventions must be reasonably certain to occur before any area can achieve California "30x30 Conserved Area" status, which the state defines as "*land and coastal water areas that are durably protected and managed to sustain functional ecosystems, both intact and restored, and the diversity of life that they support.*"<sup>10</sup>

Below we provide three high level comments followed by 9 specific recommendations. Recognizing that OPC aims to approve a final Framework before the end of the calendar year, our recommendations are split into two groups: 1) recommendations for updates to the existing Draft Framework, and 2) recommendations for next steps in implementing the Framework to durably conserve California's estuary habitats.

## **Comments**

### **Comment 1: Protection and management tools must address the greatest threats for an area to be considered conserved.**

The Draft Framework's use of the Marine Protected Area (MPA) Guide and IUCN Site Tool provides an excellent starting point to develop criteria for "30x30 Conservation Areas." However, these tools require modification to be successfully applied to California's bays, estuaries, and coastal wetlands to ensure the assessment identifies major threats and the efficacy of existing protections to mitigate them. Without modification, OPC risks accepting a managed area as conserved when existing protections do not mitigate a site's major threats.

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<sup>8</sup> Merrifield, M.S., Hines, E., Liu, X. and Beck, M.W. (2011). Building Regional Threat-Based Networks for Estuaries in the Western United States. PlosOne. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0017407#pone-0017407-g003>

<sup>9</sup> Personal communication (2024) with estuary experts who are members of the Baylands and Estuary Science Towards (BEST) 30x30 Workgroup.

<sup>10</sup> California Natural Resources Agency, Pathways to 30x30: Accelerating conservation of California's nature. April 22, 2022. [https://resources.ca.gov/-/media/CNRA-Website/Files/Initiatives/30-by-30/Final\\_Pathwaysto30x30\\_042022\\_508.pdf](https://resources.ca.gov/-/media/CNRA-Website/Files/Initiatives/30-by-30/Final_Pathwaysto30x30_042022_508.pdf)

In California, many estuaries are “protected” through a range of measures including estuarine MPAs, State Parks, State Ecological Reserves and Wildlife Areas, University of California Natural Reserve System, National Wildlife Refuges, and National Estuarine Research Reserves, but many are not adequately conserved by these existing tools given the absence of scope, authority, or funding to pursue a threats-based lens to management and mitigation. For example, California's 23 marine protected areas in estuaries, known as EMPAs, are designations designed primarily to address the non-Tribal injury, damage, take, or possession of living, geological, or cultural marine resources.<sup>11</sup> While these are important impacts to manage in California’s coastal waters, this protection and management structure is not designed to address the aforementioned estuary threats: sea level rise, impaired water quality, and continuing impacts from historically altered hydrology.

The MPA Guide is technically applicable to any site that meets the IUCN definition of a marine “protected area,”<sup>12</sup> however, the managed activities used in the Guide to assess the level of protection must be localized to California, particularly for estuarine habitats and threats. The IUCN Site Tool goes further in testing whether a site’s biodiversity can be expected to be conserved over the long term (by focusing on expected outcomes, rather than allowed activities). However, it was not designed to be applied to protected areas, and thus screens them out, and it does not include explicit considerations for sea level rise impacts. We support the potential continued use of the IUCN Site Tool, if additional guidance is incorporated for bays, estuaries and coastal wetlands (see recommendations 2, 3 and 8).

**Comment 2: The Draft Framework is missing adequate steps to achieve the biodiversity, access, and climate resilience goals outlined in *Pathways to 30x30* and a clear process for conducting and adopting the results of the Framework’s analysis.**

For reference, the 2022 *Pathways to 30x30* document lists a series of priorities for protecting and restoring biodiversity, including:

1. “Ensure conservation of habitats that represent the full diversity of California’s ecosystems, especially rare or remnant habitat types.
2. Protect areas that are adjacent or linked to existing conserved areas to support large, interconnected watersheds and seascapes.
3. Restore degraded habitats, especially for rare ecosystems and wetlands.”<sup>13</sup>

The Draft Framework lacks a clear identification and decision-making process to ensure a proportional representation of the diversity of habitat types and adequate connectivity across land/seascapes. This will become critical to determine when California has met its 30x30 target. For example, after the state has assessed which existing managed and protected areas count, what is the process for prioritizing which additional areas to focus on to reach the 30x30 goal? Without a way to ensure adequate representation and connectivity, California risks failing to protect broader biodiversity and build long term resilience in

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<sup>11</sup> California Department of Fish and Wildlife. (2016). California Marine Life Protection Act Master Plan for Marine Protected Areas. Adopted by the California Fish and Game Commission on August 24, 2016. Retrieved from [www.wildlife.ca.gov/Conservation/Marine/MPAs/Master-Plan](http://www.wildlife.ca.gov/Conservation/Marine/MPAs/Master-Plan)

<sup>12</sup> International Union for Conservation of Nature (IUCN) definition of Protected Area: “A clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values.” See Dudley, N. (Editor) (2008). Guidelines for Applying Protected Area Management Categories. Gland, Switzerland: IUCN. x + 86pp. WITH Stolton, S., P. Shadie and N. Dudley (2013). IUCN WCPA Best Practice Guidance on Recognising Protected Areas and Assigning Management Categories and Governance Types, Best Practice Protected Area Guidelines Series No. 21, Gland, Switzerland: IUCN. xpp. <https://portals.iucn.org/library/sites/library/files/documents/PAG-021.pdf>

<sup>13</sup> California Natural Resources Agency, Pathways to 30x30 California: Accelerating Conservation of California’s Nature, 2022. [https://resources.ca.gov/-/media/CNRA-Website/Files/Initiatives/30-by-30/Final\\_Pathwaysto30x30\\_042022\\_508.pdf](https://resources.ca.gov/-/media/CNRA-Website/Files/Initiatives/30-by-30/Final_Pathwaysto30x30_042022_508.pdf)

coastal waters at appropriate scales. We recognize that OPC staff may already be thinking in this manner, but the concept and its application should be articulated as part of the Framework's implementation.

**Comment 3: Many policies and management practices designed to protect estuaries, and other coastal waters are not implemented or enforced.**

Without proper implementation and enforcement of protections, conservation outcomes are unlikely to be achieved. California should not adopt areas as "conserved" for places where protective policies are not adequately implemented. A 2018 study, "Improving Water Quality and Ecosystem Health in California's Marine Managed Areas" found that Areas of Special Biological Significance (ASBSs) are an example of a protection that is not adequately enforced and additionally, that exemptions render them ineffective.<sup>14</sup>

Another important consideration is that now and over the coming decades, natural resource managers will have to anticipate, respond to, and comprehensively manage for the conditions that a changing climate will bring to the natural and cultural resources they steward. Many resource management plans currently rely on traditional forecast planning based on static environmental conditions which are unlikely to persist over time. What people and the environment need instead are innovative, collaborative approaches to incorporate effects of changing climate conditions into natural resource management. Doing so will allow for adaptation actions that contribute to resilient ecosystems and communities.

## **Recommendations**

**Recommendation 1: Given the land-sea interface of estuary ecosystems, the California Natural Resources Agency should conduct an assessment of estuarine areas as meeting the definition of a "conserved area" within a single, formal 30x30 process, not split across the two coastal waters and land processes.** Experts recommend that conservation planning in the coastal zone incorporates assessments of land and sea-based threats.<sup>15</sup> Implementation of a single process will help to ensure conservation areas are identified and prioritized to support landscape-scale benefits necessary to meet the challenges of protecting these systems. National Estuarine Research Reserves and the National Estuary Program (NEP) may be a helpful collaborator on this front. NEP areas have been shown to have great efficiencies in collaborative conservation as compared to those outside the program.<sup>16,17</sup>

### ***A. Recommendations for updates to the existing Draft Framework***

**Recommendation 2: Use the IUCN Site Tool for assessing estuary managed areas, including those areas considered as "protected" areas, and modify it to consider sea level rise as a threat to achieving durable outcomes (per recommendation 3).** The MPA Guide is not suitable for estuaries without inserting an additional, estuarine-specific activity screen. After the Framework is finalized, develop additional guidance for the IUCN Site Tool per recommendation 9 below.

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<sup>14</sup> Taylor, E., Talavera, S. and Camacho, A.E., 2018. Improving Water Quality and Ecosystem Health in California's Marine Managed Areas. *Envtl. L. Rep. News & Analysis*, 48, p.10818. <https://www.law.uci.edu/centers/cleanr/news-pdfs/mpa-elr.pdf>

<sup>15</sup> Merrifield, M.S., Hines, E., Liu, X. and Beck, M.W. (2011). Building Regional Threat-Based Networks for Estuaries in the Western United States. *PlosOne*. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0017407#pone-0017407-g003>

<sup>16</sup> Schneider, M., Scholz, J., Lubell, M., Mindruta, D. and Edwardsen, M. (2003), Building Consensual Institutions: Networks and the National Estuary Program. *American Journal of Political Science*, 47: 143-158. <https://doi.org/10.1111/1540-5907.00010>

<sup>17</sup> California has four such NEP sites: San Francisco, Santa Monica Bay, Morro Bay, and San Diego Bay. See Environmental Protection Agency, Individual Estuary Program Websites, accessed 9/20/24: <https://www.epa.gov/nep/individual-estuary-program-websites>

**Recommendation 3: Define and operationalize key concepts like “durable/durably” and “managed” by incorporating best available science, knowledge, and policy around present and future sea level rise when assessing for the broader concept of “conserved”.** Guidance on Criterion 6 of the IUCN Site Tool recommends that the presence of pressures “beyond the control of the governing and managing authority (such as climate change and sea level rise) does not exclude a site from being identified as an OECM.”<sup>18</sup> However, protected nearshore habitat cannot persist without room to migrate (for example, due to existing hard infrastructure or other development), and these areas should not be considered durably conserved and not counted towards 30x30 if upland migration areas are not (yet) secured. Planning should consider sea level rise projections out to at least 2100 to determine whether space is available for the landward migration of coastal habitats.<sup>19</sup> OPC and relevant state agencies can make good use of science and multi-jurisdictional collaboration already occurring with respect to sea level rise to ensure buffer areas that allow migration for nearshore/coastal habitats are included in areas that count towards the state’s 30x30 goal.

**Recommendation 4: Update the Draft Framework to include steps for evaluating enforcement quality.** This could include updating the Framework to include a process for evaluating the suite of other so-called “enabling conditions” described in the MPA Guide as, “prerequisite for durable, effective MPAs.”<sup>20</sup>

**Recommendation 5: The Draft Framework provides for a decision on whether an area counts as conserved to be a yes/no binary. Given the need for prioritization of investments to achieve additional conserved areas, there should be a third option of “candidate conserved area”.** Candidate areas would be places where some level of protection exists, but either existing regulation must be adjusted, or enforcement issues rectified, for an area to count as conserved.

#### *B. Recommendations for next steps in implementing the Framework*

**Recommendation 6: Develop a process for implementing the Framework and open a second public comment period to review this process. Provide additional guidance per the recommendations below prior to presenting this process to the OPC Council for adoption.** This should include:

1. **A transparent and collaborative process for analyzing managed areas that includes analyses for each site (or zones within a site), using the final Framework.** OPC can continue its community engagement by conducting analyses in collaboration with local stakeholders using local data, including scientific and monitoring data for a site, Indigenous knowledge, and experience of local natural resource managers. As included in Recommendation 8 from our October 25 letter, this site-by-site analysis should address whether threats and stressors for the site are addressed by existing area-based management measures and what conservation outcomes can reasonably be expected.
2. **Specific and measurable criteria for determining whether an existing site meets priorities for Biodiversity, Climate, and Access.** The Draft Framework outlines a decision-making framework

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<sup>18</sup> International Union for Conservation of Nature (IUCN) Site-level tool for identifying other effective area-based conservation measures (OECMs), August 2023. <https://portals.iucn.org/library/node/51296>

<sup>19</sup> California Sea Level Rise Science Task Force, California Ocean Protection Council, California Ocean Science Trust, *The State of California Sea Level Rise Guidance: 2024 Science and Policy Update*, December 2022, <https://opc.ca.gov/wp-content/uploads/2024/05/California-Sea-Level-Rise-Guidance-2024-508.pdf>

<sup>20</sup> Grorud-Colvert, K., et al. (2021). The MPA Guide: A framework to achieve global goals for the ocean. Science. <https://doi.org/10.1126/science.abf0861> Expanded Guidance: Level of Protection Version 2 (December 2021).

for evaluating a site's level of protection. However, the Draft Framework does not include details for how biodiversity, climate resilience, and access will be evaluated. While the Draft Framework released on June 4 states, "additional guidance is anticipated to be available for review during the public comment period and regional workshop series," as of September 25 no additional guidance on these important considerations. is available for public review. This guidance should include criteria for protecting 30% of California's estuaries, ensuring proportionate representation of estuary types (e.g., bays, lagoons, intermittently open estuaries, bar-built estuaries, etc.) and across the state's geography (e.g., North, Central, San Francisco Bay and Sacramento Delta, and Southern coast regions).

- 3. A process for identifying, prioritizing and evaluating potential future 30x30 Conservation Areas.** The Draft Framework currently reads, "In addition to identifying existing 30x30 Conservation Areas in coastal waters, moving forward, this proposed decision-making framework and process will support identification of potential new conservation measures..." As currently constructed, the Draft Framework is designed to evaluate sites that are already contributing to the state's goal of conserving 30% of coastal waters (i.e., the places that are already conserved on the landscape). It is not clear how the Draft Framework would apply to future conservation measures (i.e., the policies and programs that would need expansion to deliver additional on-the-ground conservation outcomes).

The State Water Quality Protection Area - Area of Special Biological Significance (SWQPA - ASBS) program, designed to protect water quality in priority coastal habitats, is an intriguing measure which, if reformed, could help solidify a core conservation component that contributes to estuary health and could support the state's 30x30 goal. To increase their effectiveness in delivering conservation outcomes, this program needs upgrades to its standards and enforcement. Taylor et al. (2018)<sup>21</sup> provides a detailed analysis of opportunities for reform that could serve as a starting point. ASBSs need strengthening in terms of how they enforce limits on non-point source pollution, a significant stressor to water quality in California's bays and estuaries. This would likely need to be accomplished in conjunction with other policies that limit the kinds of activities permissible along the California coast, like Coastal Development Permits and Local Coastal Programs. OPC should coordinate with all the state's Trustee Agencies:<sup>22</sup> California Department of Fish and Wildlife, State Lands Commission, State Department of Parks and Recreation, and the University of California Natural Reserves system as these agencies may have ideas on ways to strengthen policies and protections needed to achieve CA's definition of "conserved" and may have ideas on prioritization for future sites.

**Recommendation 7: Identify a strategy to implement a layered approach for meeting the definition of "conserved", which may surface opportunities for new candidate sites (Recommendation 5) and policy changes needed for new 30x30 Conservation Areas.** An individual area-based management measure or protection in isolation may not durably protect an area's biodiversity because it fails to address the biggest threats to that place; for example, when a stressor occurs outside the boundary of the protected area. However, layering or integrating additional protections onto existing protected areas that do not yet meet the definition of "conserved" may provide an efficient and effective method to achieve long term biodiversity conservation of additional acreage along the California coast. This layered

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<sup>21</sup> Taylor, E., Talavera, S. and Camacho, A.E., 2018. Improving Water Quality and Ecosystem Health in California's Marine Managed Areas. *Envtl. L. Rep. News & Analysis*, 48, p.10818. <https://www.law.uci.edu/centers/cleanr/news-pdfs/mpa-elr.pdf>

<sup>22</sup> California Environmental Quality Act - Cal. Code Regs. tit. 14 § 15386 - Regarding "Trustee Agency" - accessed August 23, 2024: <https://casetext.com/regulation/california-code-of-regulations/title-14-natural-resources/division-6-resources-agency/chapter-3-guidelines-for-implementation-of-the-california-environmental-quality-act/article-20-definitions/section-15386-trustee-agency>

approach may also have value for scenarios where California is collaborating, co-governing, or co-managing a discrete area with Tribal Nations.

*A real-world layered-conservation example from Florida:* the state's Department of Environmental Protection applies an anti-degradation designation, Outstanding Florida Waters (OFW), by rule to waters in many federally or state conserved and protected areas including Florida's Aquatic Preserves.<sup>23</sup> By automatically layering additional protections like OFWs to coastal protected areas, it ensures that these areas can adhere to a high level of protection while synchronizing and reinforcing the goals of multiple jurisdictions.

*Potential layered-conservation scenario for California:* an existing estuary MPA may not qualify when held to the standards of the ecosystem functionality due to impacts from water quality impairments not addressed by a conservation tool that primarily limits fishing effort. However, if that estuary MPA or other area-based designation can be paired with a water quality protection, such as, State Water Quality Protection Area - Area of Special Biological Significance (SWQPA – ASBS) designation that is appropriately enforced, that site may qualify.

**Recommendation 8: Seek guidance from estuary experts to augment the IUCN Site Tool with California-specific guidance that includes criteria that assess all major threats.** This could include crafting a Technical Note or additional guidance on criteria. Examples include the Technical Note created for marine Other Effective area-based Conservation Measures (OECMs)<sup>24</sup> and the regional guidance created by The Baltic Marine Environment Protection Commission – also known as the Helsinki Commission (HELCOM) Working Group on Ecosystem-based Sustainable Fisheries.<sup>25</sup> The additional guidance should advise users how to incorporate estuary-specific criteria into the process. To identify criteria and guidance that align with existing policy and practice in the state, we recommend building upon existing efforts such as OPC's Establishing Science-based Indicators for California's Oceans and Coasts,<sup>26</sup> the California Estuary and Wetland Monitoring Workgroups,<sup>27</sup> and NOAA's Integrated Ecosystem Assessment.<sup>28</sup>

**Recommendation 9: Ensure climate-ready management plans are in place for all conserved and candidate areas that are funded and require shared priorities and coordination across agencies with jurisdiction over specific areas.** From a review of scientific literature and state and federal agency documents over the last decade, the Pew Charitable Trusts' U.S. Conservation program has identified useful concepts and planning actions for climate-informed adaptation in natural resource management

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<sup>23</sup> Florida: 62-302.700 – Florida Administrative Code (F.A.C.), December 2006, Special Protection, Outstanding Florida Waters, Outstanding National Resource Waters <https://www.flrules.org/gateway/RuleNo.asp?id=62-302.700>

<sup>24</sup> Woodley, S. 2024. Frequently Asked Questions on Establishing Marine OECMs under the Convention on Biological Diversity. International Union for Conservation of Nature (IUCN) Technical Note: <https://iucn.org/resources/other-brief/iucn-wcpa-technical-note-12-faqs-establishing-marine-oecms-under-cbd>

<sup>25</sup> HELCOM, the Convention on the Protection of the Marine Environment of the Baltic Sea Area, (2023), *Regional common understanding of the CBD criteria for Other Effective Area-based Conservation Measures (OECMs)*: <https://helcom.fi/wp-content/uploads/2023/06/Regional-common-understanding-of-the-OECM-criteria-and-potential-OECM-identification-tree.pdf>

<sup>26</sup> Ocean Protection Council Science Advisory Team, California Ocean Protection Council, California Ocean Science Trust, 2024, *Establishing Science-based Indicators for California's Oceans and Coasts*. <https://opc.ca.gov/wp-content/uploads/2024/02/SAT-Indicators-Recommendations-Report-January-2024-508.pdf>

<sup>27</sup> California Estuary Monitoring Workgroup, accessed 9/23/24: [https://www.mywaterquality.ca.gov/monitoring\\_council/estuary\\_workgroup/](https://www.mywaterquality.ca.gov/monitoring_council/estuary_workgroup/)

<sup>28</sup> NOAA's Integrated Ecosystem Assessment (IEA) - accessed 9-6-2024: <https://www.integratedecosystemassessment.noaa.gov/about-iea/iea-approach>

and integrated those into five interrelated principles.<sup>29</sup> Taken together, these five principles can help resource managers successfully navigate the challenges of a changing environment. The principles are:

1. **Climate Impact Evaluation:** Assess present and future environmental impacts on communities and their natural and cultural resources. Assessment can involve scenario planning, predictive modelling, or vulnerability assessments, as well as braiding together of Traditional Knowledge with western science. Impact evaluations help communities, natural resource managers, and decision-makers prioritize investments and plan solutions for multiple uncertain future outcomes.
2. **Responsive Goals and Strategies:** Set goals and strategies responsive to impact evaluation findings, including clear, tangible outcomes along with specific actions to measure success. Approaches should be designed to resist or adapt to different climate threats and other identified stressors.
3. **Systematic Monitoring:** Set up protocols and methods for what, when, and how to measure change and progress. Systematic monitoring with appropriate scheduling, standardized methods, and dedicated funding and staffing, can help assure the effectiveness of management actions and reveal how changing environments impact resources over time.
4. **Adaptive Management:** Follow a scheduled process for re-evaluating and adjusting actions when new information from systematic monitoring, local knowledge, and other variables show that management is not achieving desired outcomes or that the original goal is no longer feasible.
5. **Collaborative Planning with Indigenous People and Vulnerable Communities:** Engage and potentially share decision-making with sovereign Tribal Nations, Indigenous People, vulnerable communities, and others, and consider Traditional Knowledge as well as lived experience and expertise.

Because of the patchwork of agencies and protective policies that manage estuary systems, management priorities can differ at a single location. We recommend establishing landscape scale plans that align priorities across agencies to improve the efficiency and effectiveness of management. A great example includes The San Francisco Bay Estuary Blueprint.<sup>30</sup>

With respect to co-management between the State of California and area Tribal Nations, we respect the government-to-government negotiations and encourage consideration of this climate-ready frame. The newly designated IMSA may provide an opportunity to pilot a novel approach to climate-ready management with Tribal Nations at the center of determining the future of their ancestral lands and waters.

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<sup>29</sup> The Pew Charitable Trusts - U.S. Conservation project, 2024. Climate Ready Management Plans (CRMP): Principles and Key Elements of Managing Natural Resources in the Face of Climate Change (white paper).

<https://drive.google.com/file/d/1UuD7Kkntone5fuuR8AxcM2EgtXC5ZYHA/view?usp=sharing>

<sup>30</sup> San Francisco Estuary Partnership, 2022: *San Francisco Estuary Blueprint*,

<https://storymaps.arcgis.com/stories/d06990817bde4eb5b185881ad2ab9545> Story map: <https://sfestuary.org/estuary-blueprint-2022-update>



## **Conclusion**

We thank OPC staff for the considerable effort that has gone into the series of place-based workshops and online webinars that provided multiple opportunities for stakeholders to engage in this process. We recognize that such outreach is costly in terms of both time and money, and we applaud you for dedicating resources to these efforts.

As OPC has made clear, estuaries and coastal wetlands are crucial to our state's climate resilience, biodiversity, and cultural heritage. In addition to helping achieve 30x30 goals, conservation of these important habitats will also help OPC achieve its target of protecting, restoring, and creating 10,000 acres of coastal wetlands, as well as implementing goals for wetlands and seagrasses included in California's Nature-Based Solutions Climate Targets.<sup>31</sup>

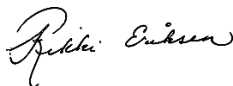
By incorporating our recommendations above into the Framework and associated planning and decision-making, we believe California will lean into its conservation leadership and innovator status and set a high bar for the world that people and their environments need now and into the future. Conversely, the absence of these needed changes and considerations may risk the state taking a path that does not adequately meet the moment on our biodiversity and climate change challenges.

We again recognize the complex nature of this decision-making process and seek to be partners as this process moves forward. We welcome further dialogue and thank you for your time, consideration, and leadership on this crucial work.

Sincerely,



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Meghan Hertel, Deputy Secretary, Biodiversity and Habitat - California Natural Resources Agency  
Jenn Phillips, Assistant Secretary for Climate Change - California Natural Resources Agency

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<sup>31</sup> California Natural Resources Agency, *California's Nature-Based Solutions Climate Targets*, April 22, 2024, <https://resources.ca.gov/-/media/CNRA-Website/Files/Initiatives/Expanding-Nature-Based-Solutions/Californias-NBS-Climate-Targets-2024.pdf>