



December 2, 2021

Mr. Wade Crowfoot, Secretary
California Natural Resources Agency
715 P Street, 20th Floor
Sacramento, CA 95814

Re: Item 5 – Annual Coast and Ocean Report: A Summary of Strategic Plan Implementation and Critical Issues in 2021

Dear Chair Crowfoot and Ocean Protection Council members:

We write to you today regarding the eelgrass conservation goals included in the Ocean Protection Council's (OPC) Strategic Plan for 2020-2025. Specifically, we offer the following comments on actions taken to date and provide recommendations for future actions the OPC can pursue to achieve its eelgrass conservation goals.

The Strategic Plan's objectives for eelgrass include:

- Objective 1.1: Fund and promote innovative and transferable nature-based infrastructure adaptation measures and projects of variable size and scale, including living shorelines, **eelgrass** and oyster beds, wetland and beach restoration, and other adaptation strategies such as managed retreat, where feasible.
- Target 3.1.4: Work with partners to preserve the existing, **known 15,000 acres of seagrass beds and create an additional 1,000 acres by 2025.**
 - Actions: Support projects that protect existing and potential eelgrass habitats as identified in habitat suitability mapping, consistent with the National Marine Fisheries Service's **California Eelgrass Mitigation Policy** as key policy and technical guidance for protecting and restoring eelgrass.

Since the release of the Strategic Plan, new and emerging science further supports the benefits of eelgrass ecosystems to biodiversity and ecosystem function, as well as more recently discovered significant benefits to mitigating climate impacts. Eelgrass sequesters carbon, attenuates storm surge, and can locally buffer ocean waters against ocean acidification.^{1,2} Existing and yet-to-be-

¹ Ricart et al. 2021. Coast-wide evidence of low pH amelioration by seagrass ecosystems. *Global Change Biology*. <https://doi.org/10.1111/gcb.15594>

² Beheshti, K. and Ward, M. 2021. Eelgrass Restoration on the U.S. West Coast: A Comprehensive Assessment of Restoration Techniques and Their Outcomes. Prepared for the Pacific Marine and Estuarine Fish Habitat Partnership.

restored eelgrass meadows are key allies in allowing California to reach its carbon emission reduction, climate adaptation, and biodiversity goals.

Further, the recent release of the draft Natural and Working Lands Climate Smart Strategy³ highlights seagrasses and marine algae as one of eight focal landscapes to advance nature-based climate solutions to help the state achieve its carbon neutrality and climate resilience goals. These habitats - just 0.1% of California's land cover - are elevated to their own category in this blueprint due to their outsized ability to store carbon, prevent future greenhouse gas releases, and support resilient communities and economies. We were also heartened to see that the OPC's metrics for seagrass conservation in Target 3.1.4 are incorporated into the state's California Climate Adaptation Strategy⁴ released last month.

Actions to Date

The approach of the halfway point of the OPC's Strategic Plan marks an opportune time for OPC to report on their progress to date and provide updates on next steps to fully achieve the Strategic Plan's goals for eelgrass. Notable action to date has been accomplished, providing a strong start in achieving these goals.

- Five on-the-ground projects since 2018 through Proposition 1 and Proposition 68 costing about \$4.4 million. These projects protect about 283 acres of eelgrass, and restore approximately 225 acres of intertidal marsh that can be future sites for eelgrass expansion.^{5,6}
- The Eelgrass Habitat Suitability Model updates a predictive approach to identify the best locations for eelgrass in San Francisco Bay. The updated model will help to identify those protection, restoration, and mitigation strategies and locations most likely to have the greatest lasting benefits in San Francisco Bay and the rest of California.
- The Richardson's Bay Eelgrass Protection and Management Plan puts in place substantial protections for one of the largest contiguous eelgrass beds in California and a critical spawning habitat for Pacific herring.⁷
- The OPC Resolution in support of updates to the National Marine Fisheries Service's California Eelgrass Mitigation Policy (CEMP) notes that "California regulators have identified key areas in the CEMP...that would benefit from a substantive update," and lists specific areas of focus for the update.⁸

³https://resources.ca.gov/-/media/CNRA-Website/Files/Initiatives/Expanding-Nature-Based-Solutions/FINAL_DesignDraft_NWL_100821_508.pdf

⁴<https://resources.ca.gov/Initiatives/Building-Climate-Resilience/2021-State-Adaptation-Strategy-Update>

⁵https://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20210216/Item_5_Prop_68_Coastal_Resilience_Projects_StaffRec_FINAL.pdf

⁶https://www.opc.ca.gov/webmaster/_media_library/2021/02/OPC-Prop-1-Grant-Guidelines_2021_Adopted.pdf; [Elkhorn Slough Tidal Marsh Restoration](#); [Living Shorelines: Opportunities to Combine Shore Protection with Amelioration of Ocean Acidification](#); [Elkhorn Slough Tidal Marsh Restoration](#); and Eel River Estuary and Centerville Slough Enhancement Project, in [Staff recommendation from OPC for Prop 1 projects](#)

⁷https://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20210216/Item_5_Prop_68_Coastal_Resilience_Projects_StaffRec_FINAL.pdf

⁸https://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20200917/Item6_CEMP-Resolution-Staff-Rec.pdf

- Ocean Science Trust’s “Carbon Accounting Methods and Sequestration Benefits of California Wetlands” provides numerical estimates for blue carbon services provided by seagrass meadows, tidal salt marsh, and kelp forests. These estimates bolster state efforts to include these habitats in carbon accounting and carbon neutrality goals.⁹

Future Actions for Consideration

There are additional opportunities available to OPC to help it reach its eelgrass conservation and expansion goals by 2025. These would have the support of a diverse group of partners including non-governmental organizations, academic researchers, Tribes, and community groups.

Recommendations related to project permitting review and decisions regarding eelgrass include:

- **Produce a CEMP Implementation Guide for agency staff and project applicants.** The Guide would enhance the ability of agencies to ensure the CEMP is robustly implemented when reviewing permit applications and in communications with applicants as they develop their environmental documents required under CEQA and federal consultation requirements. Specific focus areas for the Guide should include better defining buffers and areal extent; clarifying standards for pre-and post-project eelgrass surveys; and integrating historic and future areas for eelgrass colonization. A centerpiece of the Guide would be a common checklist agency staff will use when reviewing permit applications and preliminary project plans. The Guide can be developed in partnership with National Marine Fisheries Service (NMFS) Santa Rosa staff, who have recently completed a review of the level of compliance and success of the ~14 eelgrass mitigation projects in the state since 2014.
- **Develop a checklist, as a companion piece to the Guide described above, for permit applicants** proposing new or continued mariculture, dredging or dock-building, and other projects. The checklist would help ensure clarity and consistent application of CEMP guidelines and state requirements for consultants as well as individual project applicants.
- **Provide support to NMFS to update the CEMP itself.** The update should incorporate key findings from Beheshti et al. 2021 in regard to successful eelgrass restoration/mitigation, as well as putting in place better proxies and reference points for eelgrass ecosystem function than areal extent and shoot density alone. This may include specific inclusion of the eelgrass/mudflat complex as part of eelgrass habitat. Eelgrass beds within National Estuarine Research Reserves can help to serve as reference sites for eelgrass function.
- **Ensure consistent application of OPC’s eelgrass protection and restoration goals in the statewide Aquaculture Plan (currently in development).** The Plan could include the checklist for applicants to ensure new or expanded aquaculture avoids harm to eelgrass and allows for the movement and/or migration of eelgrass habitats with sea level rise. The checklist should also require correct calculations¹⁰ of buffer zones between aquaculture gear and eelgrass; ensure areas available for eelgrass re-colonization are left

⁹ https://www.oceansciencetrust.org/wp-content/uploads/2021/02/Carbon-Accounting-_State-of-the-Science_-report_External_Draft_Feb2021.pdf

¹⁰ See NOAA Fisheries, West Coast Region. 2014. California Eelgrass Mitigation Policy and Implementing Guidelines. October 2014.

intact; and ensure vessel movement and anchoring and maintenance activities do not harm eelgrass.

- **Review the success of the City of Newport Bay's eelgrass protection and management plan**, designed to address cumulative impacts of dock building and other activities, and consider recommendations to apply this model elsewhere.¹¹

Recommendations unrelated to permitting or permit review include:

- Develop a standardized approach for prioritizing funding to projects that optimize coastal wetland climate resilience, carbon sequestration, flood control, and biodiversity benefits by 2022 (per the Action associated with Targets 1.1.6 and 1.1.7 in the Strategic Plan).
- Create an RFP for on-the-ground restoration and tidal wetland acquisition projects that directly benefit eelgrass.

We request that the OPC direct staff to produce a progress report with next steps on these and any other promising opportunities to protect and restore eelgrass to meet Goal 3.1.4. We believe the Natural Resources Agency would welcome this update as it would also help the state achieve its Climate Smart Strategy for seagrasses and seaweeds. We suggest the June 2022 meeting for this report and discussion, and possible OPC motion to support.

Thank you for your consideration, and for your work to ensure healthy marine and coastal ecosystems for California.

Sincerely,



Anna Weinstein
Director, Marine Conservation
National Audubon



Gilly Lyons
Officer, Conserving Marine Life in the U.S., Pacific
The Pew Charitable Trusts

¹¹<http://www.newportbeachca.gov/home/showdocument?id=15234#:~:text=The%20Plan%20provides%20an%20incentive,allow%20for%20greater%20temporary%20impacts.>