



July 7, 2023

Fish and Game Commission Marine Resources Committee  
California Fish and Game Commission  
P.O. Box 944209  
Sacramento, CA 94244-2090  
*Via Email: fgc@fgc.ca.gov*

Re: Agenda Item 4: Aquaculture leasing in California – public interest determination

Dear President Sklar and Commissioner Murray,

We, the undersigned organizations, have extensive experience in marine and aquaculture policy in the state of California. We have been supportive of the development of public interest aquaculture criteria before accepting any new leases including submitting extensive public comments including redline language, participating in all of the public meetings, and meeting with both Department of Fish and Wildlife (“Department”) and Fish and Game Commission (“Commission”) staff on this topic. Thank you for this opportunity to submit comments on Agenda Item 4: *Aquaculture leasing in California – public interest determination*.

We respectfully submit these preliminary comments regarding the Commission and specifically Marine Resources Committee (“MRC”) efforts to adopt criteria for public interest determination for new state water bottom leases (aka “aquaculture public interest criteria”, or simply “criteria”). We also look forward to reviewing the staff report and Draft 3 of the criteria, as well as participating in the July 20th MRC meeting.

Our organizations understand the significant, adverse effects inappropriate aquaculture development can have on the environment, including the sensitive species that many of our organizations work to protect. Therefore, our main point is as follows:

- Given that California Fish and Game Code Section 15400 requires the Commission to determine that a lease is in the public interest prior to issuing an

aquaculture state water bottom lease, **we would like to see the criteria finalized and adopted without delay**. The criteria should be finalized before any new leases are accepted.

Additionally:

- These **criteria should serve as a tool to increase transparency in the new leasing process, coupled with a review of new lease information at MRC meetings. The lease review process should also include tribal consultation including through the Tribal Committee.**
- While we understand that all of the information and analysis may not be available before the California Environmental Quality Act (CEQA) review takes place, **the Department and Commission should use these criteria in a public forum, like the MRC, as they review new applications in a preliminary way early on in the application process** to ensure that any new projects are appropriately sited to protect environmentally sensitive resources.
- We would prefer that **avoidance of eelgrass<sup>1</sup> is added as a constraint** or requirement based on existing state policies to protect eelgrass including the California Eelgrass Mitigation Policy and the Ocean Protection Council's Strategic Plan goals. At a minimum, this should be included as a Consideration.
- **Eelgrass is a high priority to our organizations**, and it can be harmed by aquaculture operations through shading and propeller cuts.<sup>2</sup> Artificial physical structures in eelgrass can also prevent certain species from utilizing such habitat. It is also very challenging to restore this sensitive habitat type.
- As a whole, eelgrass meadows are one of the most productive and diverse marine ecosystems in the world.<sup>3</sup> They are recognized globally as nursery areas for many taxa and are considered one of the most important juvenile habitats for numerous fish species, including several commercially important species.<sup>4</sup> Eelgrass beds are an especially crucial nursery habitat for juvenile salmon,

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<sup>1</sup> Tallis, H.M., Ruesink, J.L., Dumbauld, B., Hacker, S., and Wisheart, L.M. (2009). Oysters and Aquaculture Practices Affect Eelgrass Density and Productivity in a Pacific Northwest Estuary. *Journal of Shellfish Research* 28(2), 251–261. <https://doi.org/10.2983/035.028.0207>; see also Everett, R., Ruiz, G., and Carlton, J.T. (1995). Effect of oyster mariculture on submerged aquatic vegetation: an experimental test in a Pacific Northwest estuary. *Mar. Ecol. Prog. Ser.* 125:205–217. <https://doi.org/10.2983/035.028.0207>.

<sup>2</sup> We do acknowledge that in a very limited set of circumstances, such as in shallow water where eelgrass is subject to being burned, the shade from growing bags may be beneficial. However, under the precautionary principle and considering the significant loss of eelgrass habitat, eelgrass habitat should be avoided for the siting of new aquaculture operations.

<sup>3</sup> Murphy, G. E. P. et al. (2021). From coast to coast to coast: ecology and management of seagrass ecosystems across Canada. *FACETS*. 6: 139–179. <https://doi.org/10.1139/facets-2020-0020>.

<sup>4</sup> Heck Jr, K. L., Hays, G., and Orth, R. J. (2003). Critical evaluation of the nursery role hypothesis for seagrass meadows. *Marine Ecology Progress Series*, 253, 123–136. <https://www.int-res.com/articles/meps2003/253/m253p123.pdf>.

where they must mature and grow before migrating to the ocean as adults.<sup>5</sup> Eelgrass meadows provide essential ecosystem structure, functions, and services.<sup>6</sup> For example, eelgrass beds slow the movement of water currents and waves, protecting shorelines from erosion and promoting the settlement of suspended sediments.<sup>7</sup> For this reason, they might serve as a nature-based climate adaptation solution. Eelgrass also plays a significant role in carbon sequestration. Along with other seagrasses, eelgrass beds can capture carbon from the atmosphere up to 35 times faster than tropical rainforests.<sup>8</sup> While seagrasses, such as eelgrass, only make up about 0.2% of the total seafloor, they account for almost 10% of the global ocean carbon storage annually.<sup>9</sup>

- We recommend that the criteria include a consideration that aquaculture projects should be consistent with **the forthcoming Ocean Protection Council Aquaculture Action Plan**.
- While new constraints could be added to the third draft, we **support the existing constraints** outlined in Draft 2 and recommend retaining them in future drafts. We do not want the criteria to be weakened in any way from prior drafts. Specifically, it is **important to include language that addresses negative impacts “to adjacent native wildlife” in the Constraints**. This should reference existing laws including the California and federal Endangered Species Act and the California’s Species of Special Concern list.
- **The avoidance of habitat loss and disturbance for shorebirds should be a priority addressed in the criteria.**<sup>10</sup>
- **These criteria in no way replace the full CEQA process** that must be completed for new leases. The process should be clarified to state the Commission will not find an aquaculture project is in the public interest until the criteria and considerations are evaluated using the CEQA analysis.
- We also support the exclusion of finfish aquaculture and recreational clamming areas as Constraints.

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<sup>5</sup> Kennedy, L. A., Juanes, F., & El-Sabaawi, R. (2018). Eelgrass as Valuable Nearshore Foraging Habitat for Juvenile Pacific Salmon in the Early Marine Period. *Marine and Coastal Fisheries: Dynamics, Management, and Ecosystem Science*, 10(2), 190–203. doi:10.1002/mcf2.10018

<sup>6</sup> Stephens, T. (2021) Seagrass restoration study shows rapid recovery of ecosystem functions. <https://news.ucsc.edu/2021/10/eelgrass-restoration.html>.

<sup>7</sup> Ondiviela, B. et al. (2014) The role of seagrasses in coastal protection in a changing climate. *Coast Eng.* 87: 158–168 <https://www.sciencedirect.com/science/article/abs/pii/S0378383913001889?via%3Dihub>.

<sup>8</sup> Mcleod, E., et al. (2011). A blueprint for blue carbon: toward an improved understanding of the role of vegetated coastal habitats in sequestering CO<sub>2</sub>. *Frontiers in Ecology and the Environment*, 9(10), 552–560. <https://esajournals.onlinelibrary.wiley.com/doi/full/10.1890/110004>.

<sup>9</sup> Fourqurean, J., Duarte, C., Kennedy, H. et al. Seagrass ecosystems as a globally significant carbon stock. *Nature Geosci* 5, 505–509 (2012). <https://doi.org/10.1038/ngeo1477>.

<sup>10</sup> The California Coastal Commission has prioritized the protection of shorebirds and issued special conditions for proposed aquaculture leases to “protect shorebirds from an unacceptable level of potential habitat loss and disturbance and maintain and enhance marine resources.” See Adopted Findings, Coast Seafoods Company, California Coastal Commission, 2017.

- We support the new language, “avoid and/or minimize the risk of marine life entanglements” added to Draft 3 as a Consideration, as has been discussed at prior meetings.

Many of our organizations share goals to restore and conserve natural ecosystems, focusing on birds, marine mammals, sea turtles, fish, other wildlife, and their habitats for the benefit of humanity and the earth's biological diversity. In alignment with those goals, we want to ensure that the criteria are protective of natural resources and wildlife when considering the siting of new aquaculture development.

The work our organizations do depends on healthy, well-protected marine ecosystems. For this reason, we care deeply about the work the Commission is doing to manage emerging aquaculture activities in our state.

Thank you for the opportunity to comment and please do not hesitate to reach out to any of our organizations if you have any questions. We also want to thank the Department and Commission and their staff for all of their hard work on these criteria to date.

Respectfully,

Ashley Eagle-Gibbs, Legal and Policy Director  
Environmental Action Committee of West Marin

Liliana Griego, Sr. Coastal Program Manager  
Audubon California

Geoff Shester, Ph.D. California Campaign Director & Senior Scientist  
Oceana

Scott Webb, Advocacy Director  
Turtle Island Restoration Network

Rebecca Schwartz Lesberg, President  
Coastal Policy Solutions

Barak Kamelgard, Senior Attorney  
LA Waterkeeper

cc: Susan Ashcraft, Senior Environmental Scientist and Marine Advisor, California Fish and Game Commission  
Sara Briley, Environmental Scientist, California Department of Fish and Wildlife  
Randy Lovell, State Aquaculture Coordinator, California Department of Fish and Wildlife  
Kinsey Matthews, California Sea Grant State Fellow, California Fish and Game Commission  
Melissa A. Miller-Henson, Executive Director, California Fish and Game Commission  
Kirsten Ramey, Senior Environmental Scientist Supervisor, California Department of Fish and Wildlife  
Craig Shuman, Marine Region Manager, California Department of Fish and Wildlife