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Wildlife Aquaculture Program
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Fish and Game Commission Marine Resources Committee
 California Fish and Game Commission
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Dear Mr. Lovell, Department staff, and Commissioners,

Re. MRC Agenda Item 3: Aquaculture leasing in California – public interest determination

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. We want to make clear at the outset that while our organizations are opposed to marine finfish aquaculture, we are not *generally* opposed to low-trophic commercial or restorative aquaculture (including marine algae and shellfish) where appropriately sited and where impacts are addressed. Our opposition to marine finfish is consistent with the *Guiding Principles for Sustainable Marine Aquaculture in California*¹ and the Ocean Protection Council’s Strategic Plan, Objective 4.2². We are hopeful that the development of strong criteria will aid in appropriate siting and avoidance of harmful impacts, which can be associated with

¹ Guiding Principles for Sustainable Marine Aquaculture in California, 2021, https://www.opc.ca.gov/webmaster/_media_library/2021/06/Aquaculture-Principles-Public-20210604.pdf.
² Ocean Protection Council, 2020-2025 Strategic Plan, http://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20200226/OPC-2020-2025-Strategic-Plan-FINAL-20200228.pdf.

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aquaculture. Clear criteria and a thorough review, including through the California Environmental Quality Act (CEQA), are needed to exclude harmful proposals.

Our organizations have submitted oral and written comments, attended the previous public workshops in July and September and the July Fish and Game Commission (Commission) Marine Resources Committee (MRC) meeting, and have reviewed the latest September 2022 revisions to the draft aquaculture public interest criteria. We offer the following comments beginning with overarching comments and continuing with more specific comments on the constraints, considerations, and benefits.

Overarching Comments

While we appreciate that some of our comments were included in the revisions, the September 2022 revisions do not adequately respond to or reflect the comments put forward by conservation organizations. Rather, we view the revisions as weakening the criteria. We do not believe the current draft is ready for adoption and urge a significant rewrite that addresses conservation concerns before being finalized by the MRC. As currently written, we are opposed to the draft criteria unless they are amended. However, we are hopeful that we can work with stakeholders to resolve these concerns before the criteria are finalized. These criteria will serve an important purpose of avoiding improper leasing and a costly CEQA process where it is unwarranted; it is critical that they are comprehensive. We understand that the Ocean Protection Council's Aquaculture Action Plan has been delayed, but it would also be good if the development of the criteria is coordinated with the development of the plan for statewide consistency.

As an additional overarching comment, which was also raised during the September 30th workshop, the relevance of the public trust doctrine in determining whether to issue a lease should be listed more explicitly in the criteria. While this is alluded to in some of the enumerated points, the doctrine should be clearly called out.

Several considerations imply that proposed leases can include measures that will adequately address concerns. For many potential aquaculture impacts, there are no proven mitigation measures. The criteria should be strengthened to read that the type/technology of aquaculture being proposed does not have a history of causing such problems, or that it includes proven solutions that guarantee that such impacts will not occur. The overarching goal should be that there is no net loss to habitat from the issuance of a new lease.

As the criteria are written now, the constraints only refer to language written in statute, however, the Commission has authority to, and should, include additional constraints and requirements beyond those specified in statute – several considerations should move to constraints. The criteria should explicitly state and include as a constraint that marine finfish aquaculture is not in the public interest, rather than stating this in the background or initial statement.

Better Recognizing Potential Adverse Aquaculture Impacts

Several key potential aquaculture impacts are either missing or inadequately described in the criteria. Additional key marine aquaculture impacts must be added to the document, and any proposal that does *not* provide

evidence that these impacts will be avoided should not be found in the public interest. The responsibility should be on the applicant to demonstrate that the proposal will have a net benefit and avoid significant negative impacts to our already degraded bays and oceans. Below is a list of impacts which should be included as considerations at a minimum:

- Entanglements of wildlife – the proposal will not pose risks of entanglement.
- Entrainment of eggs and larvae – the proposal will not entrain egg or larval fish or invertebrates through saltwater intakes.
- Predator controls shall not include harmful measures to control, deter, or harass wildlife such as birds, sharks, or mammals.
- Disturbance of feeding, migration, or reproduction due to manmade structures, noise, construction, maintenance, vessel traffic, or other human activity.
- The cumulative impacts of existing and proposed aquaculture must be considered when considering new leases, so issues of scale are considered and addressed. If the cumulative impacts of proposed and existing aquaculture leases are excessive, the proposed leases shall not be in the public interest.
- Environmental impacts of any feeds used and any discharges.
- Escapes of cultured animals: non-native animals becoming established, or genetic impacts through interbreeding.
- Incubation and spread of diseases, parasites, and/or pathogens to wild populations.
- Displacement of commercial or recreational fishing activities.
- Impacts of non-filter feeders, e.g., abalone, requires large inputs of kelp as feed, creating demand for wild kelp harvesting in the vicinity, which directly removes habitat for wild fish, invertebrates, and wildlife.

We have listed additional specific substantive comments below:

Overall & Comments Related to the Background

- Identification of a single significant harmful impact **could** be enough to warrant a finding that a proposal is not in the public interest.
- In the background, the document now says, “Lease proposals will not be considered in the public interest where Requirements are not met and where in-depth study, evaluation and consultation would not likely resolve significant environmental, cultural, and socio-economic impacts.” However, it does not make clear how the Commission would know this at the outset. This conflicts with the statement that “The Commission’s decision to issue a lease should consider potential environmental, cultural, and socio-economic impacts and benefits. However, the degree of impact and/or benefit may, in many cases, only be ascertained after in-depth study, evaluation, and consultation.” We request the latter statement be removed, as the purpose of the public interest criteria is to serve as an initial screening to avoid unnecessary CEQA analyses for projects unlikely to be in the public interest.
- Using the heading “Requirements or Constraints” is confusing considering the Commission renamed the section “Requirements” in the introductory paragraph and defined it to **include** constraints.

Requirements or Constraints

- As stated above, there should be a constraint stating that no marine finfish aquaculture will be considered in the public interest.
- Constraint #3 should be broadened or another constraint should be added: Aquaculture operations shall not be sited in areas containing eelgrass or other federally designated habitat areas of particular concern (HAPC), as well as including the existing language around state marine protected areas (MPAs). Constraint #3 should include congressionally designated Marine Wilderness areas. In addition, not only should these important ecological areas be avoided, but negative impacts to adjacent areas should also be listed under Considerations.
- Regarding Constraint #5, the language should quote Fish and Game Code Section 15102: "...the culturing of any species at any location where it is determined it would be detrimental to adjacent native wildlife." While we tend to support the use of best available science, we are concerned that adding in "based on the best available science" to the language of Section 15102 might lead to ambiguity in this case, because such language does not appear in the statute. In addition, replacing the word "detrimental" with "harmful" would be more protective of wildlife.
- In what is now Requirement #4, "previously identified" has been added before "Native American cultural resources" but that is redundant. The Commission should have just added "previously" before "identified by the Native American Heritage Commission." The Commission's proposed change could potentially lead to confusion as to whether there are two standards. The language could also be broadened to include any "similar entity that provides oversight or guidance regarding cultural resources."
- A constraint should be added that discharges from lease activities do not exceed total maximum daily loads of impaired waters per Clean Water Act (CWA sections 303(d) and 305(b)).
- A constraint should be added related to no conflict with existing mooring areas or public health concerns.

Considerations

- Consideration #1 should be a constraint.
- Re. Consideration #3, take a more precautionary approach to chemical use: no antibiotics or chemicals may be used in aquaculture operations, regardless of whether they show harm.
 - Some non-exhaustive list of methods, materials, and chemicals that are known to cause environmental degradation should be reinserted as in the first draft.
- Consideration (Potential Impact or Concern) #4 regarding public access to state waters should be a requirement, not a consideration.
 - Broaden language to say, should not impede access to "state waters or shorelines."
- Upon reflection, regarding Considerations #4-5, it would be stronger to remove the word "unreasonably" and just say "would not impede" and "would not interfere with."
- Regarding Consideration #5, we appreciate the addition of this consideration. It could be strengthened by also addressing other potential climate change effects. For example, with changes in

currents and sea water temperatures, would refugia be important to preserve for species such as kelp?

- Re. Consideration #6 impacts to special status species should include without limitation all mammals, finfish, sea turtles, and birds, as it did in the first draft, as well as any Endangered Species Act listed species. It should also specify species protected under both state and federal listings. This should also be a requirement, not a consideration.
- Related to best management practices (BMPs) or Consideration (Potential Impact or Concern) #7, this should be a minimum list and there should be a reference to similar coastal development permit conditions, since the Commission's BMP rulemaking process is on hold. Also, this should be a constraint rather than a consideration.
 - Clean-ups should be quarterly at a minimum.
 - The measures should also address any concerns related to waste, discharge and/or water quality.
 - Leases should be clearly marked.
 - Also related to minimum criteria, each proposal should address in some way, how clean up costs will be addressed. While this might be outside the scope of the criteria comments, it is worth noting that before a lease is issued, there must be appropriate funds available for a potential clean up through an escrow account, financial surety, or other binding process.
- There should be considerations that lease activities do not unreasonably interfere with educational or tourism activities and opportunities.
- There should be a consideration that lease activities would not unfairly expose low-income or marginalized communities to harms associated with the lease activities.
- There should be a consideration whether evidence can be provided to show that the lessee is a good actor and will uphold the grounds of their lease agreement.

Comments on Considerations of Aquaculture Benefits

While the idea of splitting considerations into concerns and benefits makes sense, there is substantial overlap between those categories. In other words, benefits and impacts should not be separate, because there are instances where benefits are discussed without reference to impacts or concerns. For example, there is now a reference to potential benefits to surrounding communities in terms of employment and economic activity, but no reference to the potential impacts or concerns for them. Also, there is no reference of benefits or impacts to other communities (especially environmental justice communities that may not be surrounding the project but are affected). Also, regardless of community, there are no references to impacts aside from employment and economic activity, such as pollution or water quality.

The benefits read as a yes/no checklist, whereas it is critical to understand the likely extent or magnitude of such benefits in order to make a public interest determination. Consideration of each benefit should include the scale of such benefit, not just a presence/absence. For each benefit considered, the criteria should ask "the extent to which" each potential benefit is expected to occur.

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There should be a consideration that lease activities would contribute to overall resiliency of the surrounding ecosystems through restorative practices. However, it is unclear whether the focus of these criteria are purely for commercial leases or whether they will also include restoration or conservation projects. “Conservation, regenerative, or restorative aquaculture” should be defined as limited to activities with the sole purpose of seeking to replenish endangered or depleted species. This definition explicitly excludes hatcheries with the purpose of augmenting capture fisheries. There should be a distinction made between conservation and commercial aquaculture in the public interest criteria, as these two types of aquaculture have different purposes. We are concerned that some of the benefits may be exaggerated and appear to be unsubstantiated in the scientific literature, while potentially underestimating the costs and impacts. For example, Benefit #2 “benefiting local food security” is a false benefit, or at best a subjective one, as it may be difficult to document that the specific product will be lower cost than other similar food sources and made widely available to underprivileged consumers or communities in close proximity to the project.

Regarding Benefit #4, the “blue carbon” sequestration benefits of commercial seaweed aquaculture are speculative and unlikely to be significant; it is premature to include those as a benefit. In raising this concern, we do want to make a distinction between commercial seaweed aquaculture and restoration projects, the latter which we support. We appreciate the good work that the state of California has begun around supporting blue carbon and wetland restoration projects. However, regarding commercial state water bottom leases, there is a potential for the commercial structures to damage natural ecosystems, wildlife, wild fish populations, or habitats, in which case the proposals may actually harm adaptation, rather than aiding in climate resilience.

Related to Benefit #5, commercial grow operations do not benefit native fish stocks or fisheries – in fact they are more likely to harm them - unless the explicit purpose is conservation aquaculture, in which products would not be sold. Such projects (e.g., hatcheries) should be considered separately and have their own set of criteria, for example the potential genetic impacts and the evidence of the extent to which they would enhance wild populations.

In the final consideration (Benefit #6), the language should be stronger, such as “prevent[ing] financial burden and monopolies.”

Thank you for the consideration of our comments and your substantial work on the criteria. This is an important opportunity for the Commission to ensure that as interest in aquaculture grows, there is clarity to stakeholders on the types of aquaculture that are in the public interest and that any projects that move forward are carefully and appropriately sited based on a review of the best available science and data. We look forward to continued public participation on this topic.

Sincerely,

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