

**CALIFORNIA STATE LANDS COMMISSION**

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*Established in 1938*

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**Mar 16 2021**

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**STATE CLEARINGHOUSE**

March 15, 2021

File Ref: SCH #2021020128

Humboldt Bay Harbor, Recreation, and Conservation District  
Adam Wagschal, Deputy Director  
601 Startare Drive  
Eureka, CA 95502

VIA ELECTRONIC MAIL ONLY ([awagschal@humboldtby.org](mailto:awagschal@humboldtby.org))

**Subject: Initial Study and Draft Mitigated Negative Declaration (Draft MND) for the Hog Island Oyster Company Shellfish Farm in Arcata Bay Project, Humboldt County**

Dear Adam Wagschal:

The California State Lands Commission (Commission) staff has reviewed the March 8, 2021, revised Draft MND for the Hog Island Oyster Company Shellfish Farm in Arcata Bay Project (Project), which is being prepared by the Humboldt Bay Harbor, Recreation, and Conservation District (District). The District, as the public agency proposing to carry out the Project, is the lead agency under the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.). The Commission is a trustee agency for projects that could directly or indirectly affect State-owned sovereign land and their accompanying Public Trust resources or uses.

**Commission Jurisdiction and Public Trust Lands**

The Commission has jurisdiction and management authority over all ungranted tidelands, submerged lands, and the beds of navigable lakes and waterways. The Commission also has certain residual and review authority for tidelands and submerged lands legislatively granted in trust to local jurisdictions (Pub. Resources Code, §§ 6009, subd. (c); 6009.1; 6301; 6306). All tidelands and submerged lands, granted or ungranted, as well as navigable lakes and waterways, are subject to the protections of the common law Public Trust Doctrine.

California acquired sovereign ownership of all tidelands and submerged lands and beds of navigable lakes and waterways upon its admission to the United States in 1850. The State holds these lands for the benefit of all people of the State for Public Trust

purposes, which include waterborne commerce, navigation, fisheries, water-related recreation, habitat preservation, and open space. On tidal waterways, the State's sovereign fee ownership extends landward to the mean high tide line, except for areas of fill or artificial accretion or where the boundary has been fixed by agreement or a court. On navigable non-tidal waterways, including lakes, the State holds fee ownership of the bed of the waterway landward to the ordinary low water mark and a Public Trust easement landward to the ordinary high water mark, except where the boundary has been fixed by agreement or a court. The boundaries may not be apparent from present day site inspections.

Based upon the information provided and a preliminary review of our records, the proposed Project is located within lands the State patented as Tide Land Location 253 (TLS 122), no minerals reserved. Any remaining State interest at this location has been granted to the District (Humboldt Bay Harbor, Recreation, and Conservation District) pursuant to 1283, Statutes of 1970, as amended. Although the underlying fee has been patented, there is a Public Trust use easement over the Project Area.

Although it does not appear a lease is required from the Commission for the Project, the Commission staff submit the following comments in its role as trustee agency. If you have any questions specific to jurisdiction or lease, please contact Reid Boggiano (contact information provided below).

### **Project Description**

The District proposes to farm oysters in Humboldt Bay, California. Under the Project, approximately 30 acres of culture would be established in intertidal areas using methods that suspend cultured shellfish off the bay bottom to meet the District's objectives and needs as follows:

- Develop a shellfish farm to complement Hog Island Oyster Company (Applicant)'s existing shellfish Hatchery Facility located near Samoa
- Locate oyster beds in areas with optimal growing conditions to maximize efficiency and limit the spatial footprint of the farm
- Produce premium oysters to meet demand from the Applicant's restaurants as well as provide sustainable seafood for local markets
- Create additional job opportunities and sustainable economic development for Humboldt Bay and local jurisdictions

From the Project Description, Commission staff understands that the Project would grow the following three species that could have possible impacts on legislatively granted sovereign land:

- Pacific oysters (*Crassostrea gigas*)- primary focus
- Kumamoto oysters (*Crassostrea sikimeia*)
- Native "Olympia" oyster (*Ostrea lurida*)

## Environmental Review

Commission staff requests that the District consider the following comments on the Project's Draft MND, to ensure that impacts to the State's legislatively granted sovereign lands are adequately analyzed for the Project.

### IV. Biological Resources

#### Bio-A7: Fouling Organisms and Non-native Species:

- The MND relies upon Boyd et al. (2002) as the source of information on the presence of non-native species in Humboldt Bay. That study is almost 20 years old and may not be reflective of the current diversity and distribution of non-native species in the Bay. A more recent synopsis of the spatial and temporal patterns of non-native species in Humboldt Bay is available in Ruiz and Geller (2018; full reference below).
- The MND focuses on whether oyster spat will serve as a source of new non-native species introductions within the Bay but does not adequately address the role of the Project in contributing to the abundance of hard substrate in the Bay for settling and proliferation of non-native species already present or that may enter the Bay via shipping activities.
- The MND indicates that the invasive tunicate (*Didemnum* sp.) has been found on shellfish aquaculture gear in Drakes Estero Bay. Based on Ruiz and Geller (2018; full reference below), the species is not yet present in Humboldt Bay. *Didemnum* has documented impacts on native seagrasses, including eelgrass (see Long and Grosholz 2015), hard substrate communities, and can foul infrastructure. *Didemnum* can be spread by aquaculture operation equipment, and there is potential for significant impacts to biological resources in Humboldt Bay if this species becomes established. Staff recommends reanalyzing potential impacts from non-native species introductions to Humboldt Bay from the proposed Project, incorporating updated data from Ruiz and Geller (2018), and considering developing an invasive species management mitigation measure to reduce any potential impacts.

#### Bio-A9: Effects to Habitats:

- Vessel Anchors: Staff recommends that **Mit-3 Vessel Anchors** (Applicant will anchor vessels outside of areas containing eelgrass) be augmented to include a specific minimum distance between placed anchors and the edge of eelgrass beds to minimize impacts (turbidity) to eelgrass. Staff recommends that the distance be at least 5 horizontal meters (or 16 feet), similar to the minimum distance required between operation equipment and eelgrass in **Mit-2 Eelgrass Protection**.

Bio-E: Local Policies:

- An additional relevant document that should be included on this list (starting on MND page 52) is the Assembly Bill (AB) 691 Sea Level Rise Vulnerability Assessment for the District. This document should be submitted to the Commission (State Lands Commission) as soon as possible to bring the District into compliance with AB 691 (Muratsuchi; Stats. 2013, ch. 592). The document is relevant to this Project because it is meant to assess the vulnerability to sea level rise of the Public Trust lands, resources, assets, and values that the District manages pursuant to its [granting statutes](#), as well as describe potential adaptation strategies to increase coastal resiliency to sea-level rise. There is a Public Trust easement across the water bottom of the Project area, and the District is responsible for the management of the Public Trust in this area. The Commission requests the District include information from their AB 691 assessment in the discussion of local plans, policies, and relevant documents.
- On page 53 in the second paragraph, it is stated that Humboldt Bay is experiencing the largest annual relative sea-level rise of any location on the California coast, owing to the combination of rising seas and land subsidence. It goes on to discuss the prediction that the habitat range of eelgrass is likely to shift upslope in response, into the Project area, and suggests that the eelgrass and Project activities may be compatible. Staff recommends that the District create a monitoring plan, not only for eelgrass, but for the other biological resources and species of special concern described throughout this section (IV. Biological Resources) in consideration of the likelihood that habitat shifts will occur for all the resources in the Bay due to sea-level rise and other climate change-induced phenomena (increases in water temperatures, changes in water chemistry like ocean acidification and hypoxia, etc.). The monitoring plan should inform an adaptive management plan for this aquaculture operation and others within the District. The purpose of the adaptive management plan should be to establish protocols for how to respond to habitat shifts in a way that protects sensitive habitats like eelgrass beds and the ecological needs and functions of threatened, endangered, and endemic species. The adaptive management plan should include a series of actions to consider taking once events occur like habitat and species migration into the current Project area. Potential actions would include the identification of alternative locations that could host aquaculture operations when current Project locations are encroached on by a significant amount of eelgrass and other species. The adaptive management plan would ensure that the subject aquaculture operations would also be able to thrive in the best conditions suited for the cultivated species, conditions which are also likely to shift due to climate change effects over time. An adaptive management plan for the area would minimize harm to migrating habitats and species and maintain the productivity of the aquaculture operation itself.

- Staff recommends that the MND replace the projections for sea-level rise found in the second paragraph on page 53 with the most recent, best available science on sea-level rise projections, using the ‘Low Risk Aversion; High Emissions’ scenario from Table 4 (North Spit Tidal Gauge) in the [2018 State of California Sea-Level Rise Guidance](#).
- In the [Humboldt County Humboldt Bay Area Plan Sea Level Rise Vulnerability Assessment](#), Sections 3.5.1 and 3.5.2 (pages 132-140) discuss potential impacts to the navigational channels and some of the commercial fishing and aquaculture infrastructure in Humboldt Bay, including onshore facilities that will be impacted by sea-level rise. The same areas and resources are a part of this Project. The navigation route identified in Fig. 10 of the MND appears to be through the Samoa Channel and the onshore hatchery facility appears to be on the Samoa Peninsula. Both areas are analyzed for sea-level rise in the Sea Level Rise Vulnerability Assessment mentioned above. Staff recommends including this document in the list of Local Policies (page 52 of MND) and discussing how these impacts will be addressed by the Project since they are physically and functionally connected.

#### XVII. Transportation:

In the MND Discussion, it states that there is a potential for the Project equipment to impact public recreation in Arcata Bay during relatively low tides (page 71):

“While recreational boaters primarily use the channels and not intertidal habitats, the addition of shellfish aquaculture gear could interfere with the movement of vessels (e.g., boats, kayaks) within those intertidal areas. This interference would occur only when the tides are high enough for vessels to move through the intertidal areas, but so low that that the vessels couldn’t move readily over the gear.”

Commission staff recommends that the Project make efforts beyond **BMP-4 Bed Marking** to inform recreational boaters and water users near the Project area of the Project’s location and how to avoid disturbing the equipment and livestock. The more information recreational boaters and water users have about the Project’s location and activities, the more user conflicts will be avoided, and the less likely it will be that there will be impacts to the health and safety of both recreationists and livestock. Commission staff recommends the District post notices and maps of the Project location and activities at boat launch sites and public access points around Arcata Bay.

Thank you for the opportunity to comment on the Draft MND for the Project. As a trustee agency, we request that you consider our comments before adopting the MND.

Please send links to or copies of future Project-related documents, including electronic copies of the adopted MND, Mitigation Monitoring and Reporting Program, and Notice of Determination, when they become available. Please refer questions concerning environmental review to Maren Farnum, Senior Environmental Scientist, at (916) 574-0966 or [Maren.Farnum@slc.ca.gov](mailto:Maren.Farnum@slc.ca.gov). For questions concerning Commission leasing jurisdiction, please contact Reid Boggiano, Public Land Management Specialist, at (916) 574-0450 or [Reid.Boggiano@slc.ca.gov](mailto:Reid.Boggiano@slc.ca.gov).

Sincerely,



Nicole Dobroski, Chief  
Division of Environmental Planning  
and Management

cc: Office of Planning and Research  
Afifa Awan, Commission  
Reid Boggiano, Commission  
Maren Farnum, Commission  
Jamie, Garrett, Commission  
Emma Kennedy, Commission

**Literature Cited:**

Long, H.A. and E.D. Grosholz. 2015. Overgrowth of eelgrass by the invasive colonial tunicate *Didemnum vexillum*: Consequences for tunicate and eelgrass growth and epifauna abundance. *Journal of Experimental Marine Biology and Ecology*, 473: 188-194.

Ruiz, G.M. and J. Geller. 2018. Spatial and temporal analysis of marine invasions in California, Part II: Humboldt Bay, Marina del Rey, Port Hueneme, and San Francisco Bay. <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=168904&inline>.