

**CALIFORNIA COASTAL COMMISSION**

ENERGY, OCEAN RESOURCES AND FEDERAL CONSISTENCY DIVISION  
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**H.B.H.R. & C.D.**

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January 31, 2018

Permit Application No.: 9-16-0204

**COASTAL DEVELOPMENT PERMIT**

On November 4, 2016, the California Coastal Commission granted to the **Humboldt Bay Harbor, Recreation & Conservation District** this permit subject to the attached Standard and Special Conditions, for development consisting of placement and operation of approximately three total acres of shellfish nursery rafts, floating upwelling systems (FLUPSYs), macroalgae cultivation longlines, and floating walkways across three areas of submerged lands with sizes between 6.0 and 8.6 acres, more specifically described in the application filed in the Commission offices.

The development is within the coastal zone in Humboldt Bay along the shoreline of the Samoa Peninsula near Vance Ave.

Issued on behalf of the California Coastal Commission by

Sincerely,

John Ainsworth  
Executive Director

A handwritten signature in black ink, appearing to read "Mark Delaplaine".

By: Mark Delaplaine  
Manager  
Energy, Ocean Resources, and Federal Consistency  
Division

**ACKNOWLEDGMENT:**

The undersigned permittee acknowledges receipt of this permit and agrees to abide by all terms and conditions thereof.

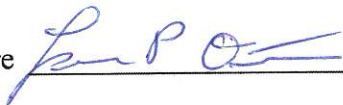
The undersigned permittee acknowledges that Government Code Section 818.4 which states in pertinent part of that: "A Public entity is not liable for injury caused by the issuance... of any permit..." applies to the issuance of this permit.

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IMPORTANT: THIS PERMIT IS NOT VALID UNLESS AND UNTIL A COPY OF THE PERMIT WITH THE SIGNED ACKNOWLEDGEMENT HAS BEEN RETURNED TO THE COMMISSION OFFICE. 14 Cal. Admin. Code Section 13158(a).

Date: February 8, 2018Signature **STANDARD CONDITIONS:**

1. **Notice of Receipt and Acknowledgment.** The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. **Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. **Interpretation.** Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

**SPECIAL CONDITIONS:**

1. **Permit Term Limit.** This coastal development permit shall expire upon expiration of Humboldt Bay Harbor, Recreation, and Conservation District (Harbor District) Permit No. 13-03 but not later than February 25, 2026 (the maximum term provided for Harbor District Permit No. 13-03). Prior to this February 25, 2026 expiration date, the Harbor District may apply to the Commission for a permit amendment to extend the term of this permit for an additional ten year period if a new Harbor District permit is issued with a similar term. This permit amendment application shall include a report describing (1) the status of aquaculture operations within the three subtidal sites; (2) the consistency of these operations with all provisions and conditions included in their leases and the Harbor District's state and federal permits and authorizations; and (3) the current and projected level of demand for coastal-dependent industrial uses along the shoreline of Humboldt Bay and the land and infrastructure available to accommodate that demand. The information in this report shall be reviewed and an analysis of it provided to the

## COASTAL DEVELOPMENT PERMIT

Commission for consideration if an amendment application to extend this permit term is made. All individual leases for aquaculture activities within each of the subtidal sites shall be revoked by the Harbor District if this permit expires without replacement or an amendment to extend the permit term limit.

2. **Maintenance Cleaning.** All maintenance cleaning operations of the raft hulls, raft floats, and well infrastructure (not including floating upwelling system bins) within Subtidal Site 1, 2, and 3 shall be carried out onshore. All biofouling organisms and biological materials removed during these cleaning operations shall be collected and disposed of at an appropriate upland facility. Regular scraping of the floating upwelling system channels can occur on the rafts, provided that all biofouling organisms and biological materials are contained using tarps and/or screens. No discharge of untreated wash water or biofouling materials into Humboldt Bay shall occur during maintenance cleaning operations.
3. **Marine Wildlife.** If any marine mammals or more than ten pelicans and/or cormorants at any one time are observed on one of the nursery rafts, cultivation rafts or FLUPSYs for more than two weeks, the Harbor District shall within 10 days notify the Executive Director and within 30 days of such notification to the Executive Director submit, for review and approval, a plan to install passive deterrent devices (such as exclusionary fencing or netting) to prevent future use of the rafts or FLUPSYs by marine mammals or seabirds. The Harbor District shall install or require relevant lessee(s) to install the passive deterrent devices and maintain them as approved by the Executive Director.
4. **Intake System Design.** Intake systems shall be limited to those on nursery rafts and floating upwelling systems and shall be designed with a screened intake with (a) round or square openings of no more than 3/32 inches or slotted/wedge wire openings of no more than 1.75 millimeters, a screen area of at least 5 square feet per cubic foot per second water volume intake, a minimum open area of 27%, and a maximum intake water approach velocity of 0.2 feet per second if a self-cleaning device is installed that clears the entire screen face at least once every five minutes; or (b) round or square openings of no more than 3/32 inches or slotted/wedge wire openings of no more than 1.75 millimeters, a screen area of at least 20 square feet per cubic foot per second water volume intake, a minimum open area of 27%, and a maximum intake water approach velocity of 0.05 feet per second if a self-cleaning device is not installed.
5. **Non-native Species Management.** All aquaculture operations within Subtidal Sites 1, 2, and 3 shall: (1) use screens during washdown of Manila clam seed and equipment to contain all clams regardless of size and prevent seed from falling into the bay; (2) remove all Manila clam seed from the nursery raft and FLUPSY system prior to reaching 12 millimeters shell size, at which size they are not sexually mature; (3) not discard culled shellfish into Humboldt Bay; and (4) be limited to the cultivation of Pacific oysters (*Crassostrea gigas*), Kumamoto oysters (*Crassostrea sikamea*), Manila clam seed (*Tapes philippinarum*), and native red algae such as *Chondracanthus*, *Gracilaria*, *Palmaria*, and *Porphyra* species. Culture of additional shellfish or algae species may be considered through an amendment to this permit.
6. **Pile Driving Marine Wildlife Precautions.**

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- (a) Pile driving shall only occur between July 1<sup>st</sup> and October 15<sup>th</sup>.
- (b) A marine mammal monitor approved by the Executive Director shall be present at all times during pile driving. The monitor shall ensure that the Harbor District and its contractors fully comply with the conditions of this permit related to biological protection during pile driving.
- (c) During pile driving of the initial five piles used for the Harbor District's acoustic testing, work that causes elevated levels of underwater sound shall be suspended if any marine mammal is observed within or approaching 500 meters of the work site. For the first two piles, this 500 meter wide area surrounding the work site shall be the Hazard Zone. Pile driving may resume once the mammal is observed outside of this Hazard Zone or more than 30 minutes have elapsed since the last sighting of the marine mammal within the Hazard Zone. After the initial two piles, the width of the Hazard Zone shall be determined based on the results of hydroacoustic monitoring showing the maximum distance from the work site at which the recorded peak sound pressure level (SPL) exceeds 196 dB<sup>1</sup> re 1  $\mu$ Pa or the calculated cumulative sound exposure level (SEL) exceeds 140 dB re 1  $\mu$ Pa<sup>2</sup> - sec. The marine mammal monitor will be responsible for monitoring this Hazard Zone during pile driving activities. In the event that the monitor determines a marine mammal has entered this zone, the monitor shall have the authority to suspend pile-driving activities until the marine mammal has passed outside of this Hazard Zone or more than 30 minutes have elapsed since the last sighting of the marine mammal within the Hazard Zone.
- (d) An initial ramp-up period shall occur when starting pile-driving activities to avoid potential impacts to marine mammals that may be undetected within the Hazard Zone.
- (e) The pile driver shall be operated at its lowest practicable power setting and shall employ the use of sound dampening techniques and/or devices (such as pile cushions or caps) if such techniques and/or devices can be safely used without interfering with effective operations.

### 7. Underwater Acoustic Monitoring.

- (a) Underwater hydroacoustic monitoring shall be carried out during the first two pile driving events to determine the maximum distance from the work site at which the recorded peak sound pressure level (SPL) exceeds 196 dB re 1  $\mu$ Pa or the calculated cumulative sound exposure level (SEL) exceeds 140 dB re 1  $\mu$ Pa<sup>2</sup> - sec, the underwater acoustic threshold levels for high frequency cetaceans such as harbor porpoise specified in the National Marine Fisheries Service's July 2016 Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing. These first five piles shall be selected to be representative of the conditions at the site of the eight proposed piles (water depths, substrate types, etc.) and the hydroacoustic monitoring stations shall start as close as practicable to the site of active pile driving and extend outward at increasing distances to the edge of the initial Hazard Zone. Prior to the initiation of pile driving activities for the sixth pile, the results of the hydroacoustic monitoring of the initial five piles and the resulting recommended size of the Hazard Zone shall be provided to the Executive Director for review and approval.
- (b) To prevent adverse impacts to fish from elevated levels of underwater sound associated with pile driving, an underwater acoustic monitoring device capable of recording both peak and accumulated sound pressure levels shall be placed as close as practicable to the site of active

<sup>1</sup> Decibel (dB) references in this report are for underwater sound and use the water (not air) standard (i.e., re 1  $\mu$ Pa).

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pile driving. The data collected by this device shall be monitored throughout the course of pile driving operations.

- (c) As specified in the interagency Fisheries Hydroacoustic Working Group June 12, 2008, memorandum, pile driving activity shall immediately cease if at any time: (a) the recorded peak sound pressure level exceeds 206 dB re 1  $\mu$ Pa; or (b) the calculated cumulative sound exposure level (SEL) exceeds 183 dB re 1  $\mu$ Pa<sup>2</sup> - sec.
  - (d) If the cumulative sound exposure level threshold is exceeded, pile driving shall cease for as long as possible without risking sediment consolidation and not less than 30 minutes.
  - (e) If the peak sound pressure level threshold is exceeded and/or if the marine mammal monitor observes dead or injured fish in the vicinity of active pile driving operations, the Harbor District shall implement additional feasible power reduction and/or sound dampening measures necessary to reduce the peak sound pressure level below the threshold.
  - (f) Peak sound pressure and cumulative SEL data from the first two of the eight piles shall be compiled and submitted to the Executive Director within 14 days of the completion of pile driving activities on the fifth pile. If this data demonstrates that neither the peak sound pressure nor accumulated SEL thresholds specified in part (c) above were exceeded, the remaining replacement piles may be installed without underwater acoustic monitoring.
8. **Eelgrass Protection.** Prior to the initiation of installation activities for aquaculture gear or mooring piles, the Harbor District shall submit for Executive Director review and approval a plan showing that all such activities and associated structures or infrastructure (including pilings, moorings, anchors, longlines, surface rafts, FLUPSYs) shall remain a minimum of 30-foot away from the outside edge of any eelgrass bed within or adjacent to the three subtidal aquaculture sites. This report shall include a map of all eelgrass within each subtidal site and a 50-foot perimeter outside. The map shall be based on the results of an eelgrass survey carried out consistent with the timing and methodology guidelines of the National Marine Fisheries Service's California Eelgrass Management Program. Areas with depths greater than twice the minimum expected eelgrass growing depth in Humboldt Bay are exempt from this survey requirement.
9. **Marine Habitat Mitigation.** PRIOR TO PERMIT ISSUANCE, the Harbor District shall submit, for Executive Director review and written approval, a Marine Habitat Mitigation Plan that clarifies the location, and removal method for the 21 derelict piles that are proposed to be removed to create new soft substrate benthic habitat as mitigation for the benthic habitat that would be lost to install the eight project piles and the additional benthic habitat that would be used to support the project anchors and mooring devices.
10. **Clean-up and Abandonment.** Within 90 days of the expiration or revocation of any lease for aquaculture operations within the three subtidal aquaculture sites, the Harbor District shall submit either a report demonstrating that all cultivation gear, equipment, and material associated with that lease has been removed, or a coastal development permit application for the complete collection and removal of all remaining cultivation gear, equipment, and material associated with that lease. Upon issuance of that coastal development permit, the Harbor District shall implement approved removal and collection operations within 90 days.

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11. **Marine Debris Prevention and Response.**
  - (a) To the extent practicable, all aquaculture structures and pieces of gear and equipment shall be labeled with the name of the individual or business responsible for its use and installation.
  - (b) All practical efforts shall be made to avoid the loss or displacement of these materials during aquaculture operations and to quickly recover any and all material that becomes lost or displaced. Lost or displaced material that is not recovered shall be documented by the Harbor District during lease inspections along with recommendations on how to avoid similar losses in the future. Continual improvement to gear design and practices shall take place to reduce loss of gear over time.
  - (c) The Harbor District shall carry out lease inspections as soon as practicable after large storm, seismic, tsunami, or wind events and expedite recovery and clean-up operations for storm related losses of equipment and material.
  - (d) The Harbor District shall collect data on where and what kind of loose gear or debris they find during inspections and share it with lessees and interested parties so that clean-up efforts by growers and outside parties can be more effectively carried out and efforts to better design gear to minimize loss can be pursued.
  - (e) All leases in Subtidal Sites 1, 2, and 3 and equipment within them shall be maintained in good working condition.
  - (f) Waste or loose material or equipment shall not be stored onsite, including tools or materials not in active use to grow shellfish, food items or water bottles.
  - (g) Work barges, skiffs, or other vessels servicing the floating or submerged aquaculture structures shall not be stored, anchored, or moored overnight within the subtidal aquaculture sites.
  - (h) No construction activities or maintenance requiring construction activities shall occur on the Subtidal Sites 1, 2, or 3 or the lease areas within them.
  
12. **Compliance and Status Reporting.** By January 31 of each year, the Harbor District shall provide, for Executive Director review and written approval, an Annual Compliance and Status Report (Annual Report) for all active leases. This Annual Report shall include all lease status and lease inspection reports developed or received by the Harbor District during the previous year as well as a summary of the as-built conditions and production levels for each of the three subtidal aquaculture sites that includes, at a minimum, the surface area and volume of aquaculture structures and equipment, the type and size of anchoring or mooring structures, and the biomass of cultured organisms.
  
13. **Other Agency Review and Approval.** PRIOR TO COMMENCEMENT OF PROJECT CONSTRUCTION AND/OR INSTALLATION ACTIVITIES, the Harbor District shall submit to the Executive Director written evidence that all necessary permits, permissions, approvals, and/or authorizations for the approved project have been granted, including those from the North Coast Regional Water Quality Control Board (RWQCB) and U.S. Army Corps of Engineers. Any changes to the approved project required by these agencies shall be reported to the Executive Director. No changes to the approved project shall occur without an amendment to this coastal development permit unless the Executive Director determines that no amendment is legally necessary.