



US Army Corps  
of Engineers®  
San Francisco District

SAN FRANCISCO DISTRICT

Regulatory Division, Eureka Field Office  
601 Startare Drive, Box 14  
Eureka, CA 95501

# PUBLIC NOTICE

PROJECT: Hog Island Oyster Company Aquaculture Project

PUBLIC NOTICE NUMBER: SPN-2021-00070N

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1. **INTRODUCTION:** Hog Island Oyster Company (HIOC) (POC: Mr. John Finger, 415-663-9218), 20215 Shoreline Highway 1, Marshall, CA 94940, through its agent, K and L Gates LLP (POC: Robert Smith, 206-370-5743), 925 Fourth Avenue, Suite 2900, Seattle, WA 98104, has applied to the U.S. Army Corps of Engineers (USACE), San Francisco District, for a Department of the Army Permit to develop approximately 30 acres of oyster aquaculture within a 34-acre farm area on leased, intertidal areas adjacent to the Mad River Slough, in Arcata Bay, Humboldt County, California. This Department of the Army permit application is being processed pursuant to the provisions of Section 10 of the Rivers and Harbors Act of 1899, as amended (33 U.S.C. § 403 *et seq.*).

## 2. PROPOSED PROJECT:

**Project Site Location:** The site is located in Humboldt Bay's Arcata Bay near the town of Arcata, in Humboldt County California. Mariculture sites are located adjacent to the Mad River Slough, east of the Highway 255/Mad River Slough Bridge and west of Highway 101 (see figures).

**Project Site Description:** The project area is comprised entirely of intertidal mudflats. The upland area adjacent to the HIOC project is relatively undeveloped, especially to the north near the Mad River Slough. There are several trail systems that include the Ma-le'l Dunes Park that travel along the Pacific Ocean. North of the Ma-le'l Dunes Park is Humboldt Bay National Wildlife Refuge land owned by the USFWS. To the east of this refuge there are agricultural, pasture, and ranching lands and State Highway 255. Finally, along the northern and northeastern shoreline of Arcata Bay there is the Mad River Slough Wildlife Area and McDaniel Slough

Restoration Project owned by the California Department of Fish and Wildlife (CDFW), which is located approximately 0.8 miles northeast of the HIOC Project. This area connects to the Arcata Marsh and Wildlife Sanctuary. There is a portion of the Mad River Slough Wildlife Area that is emergent wetlands located west of the HIOC Project parcel, approximately 700 feet from the nearest proposed culture area.

**Project Description:** The applicant proposes to grow 3 species of oyster that have been historically cultivated in Arcata Bay – Pacific oysters (*Crassostrea gigas*), Kumamoto oysters (*Crassostrea sikamea*), and the native “Olympia” oyster (*Ostrea lurida*) – with a primary focus on Pacific oysters. HIOC’s hatchery and nursery operations are already permitted to produce these species and will provide a steady, local seed.

HIOC will employ exclusively near-bottom culture methods, using bags or baskets on intertidal longlines (up to 27 acres), with up to 3 acres of “raised rack and bag” culture. The intertidal longline methods include the use of SEAPA-type culture baskets or “tipping bags.” The proposed HIOC Project will be phased in over a 5-year period, with an initial focus on those areas already classified as Conditionally Approved by the California Department of Public Health. Harvested oysters will be processed at HIOC’s Hatchery Facility in Samoa, California, and sold primarily within HIOC’s family of California seafood restaurants. Proposed culture areas will avoid eelgrass beds by working at higher tidal elevations ranging from +1.6 feet to +4.6 feet mean lower low water and incorporating a 5-meter buffer from eelgrass cover when installing shellfish aquaculture gear supply (see enclosure 1).

### Intertidal Longline Systems

The primary culture method will be intertidal longlines equipped with either SEAPA-type culture baskets or tipping bags. These intertidal longline systems may be deployed with or without floats that harness tidal energy to “tumble” the oysters. HIOC proposes up to 27 acres of this longline culture system, installed over a 5-year timeline. Intertidal longline systems used by HIOC are proposed to be 100 to 300 feet long, where possible, with anchor posts at both ends and supporting posts typically every 8 feet. Individual lines will be spaced at approximately 3 feet, with an additional space of 15 feet between grouped blocks of 4 lines to provide easement for boat access. The anchor posts are proposed to be galvanized steel pipe T-stakes, or other suitable materials, and are used to maintain line tension. The supporting posts in between will be made of schedule 80, 2-inch PVC. Intertidal longline systems may be 1 foot to 4 feet in elevation above the ground. Lines between the posts are plastic coated with a steel core. Tipping bags attached on longlines are made of durable VEXAR and are typically 2-foot by 3-foot with ½-inch mesh. These bags are attached to the line using a stainless-steel snap hook or plastic clip that connects to a plastic bearing. Bags attached to long lines have a small crab float attached to them opposite of the attachment to the long line. Floats are attached to the bag using 3/8-inch poly line. SEAPA baskets are typically 2-foot by 4-foot by 1.5-foot in diameter and are made of high density polyethylene.

### Rack and Bag System

HIOC also proposes up to 3 acres of “raised rack and bag” systems. Racks are proposed to consist of a 2-foot by 8.5-foot rebar frame to which 4, ½-inch VEXAR mesh bags measuring 2-foot by 3-foot are attached. After racks are stocked with oysters they are placed into the rows by a work vessel during a high tide. On the next low tide series (usually the same or following day), the racks are organized and placed into the notch on their 4 PVC pipe legs. PVC pipe legs are typically 12 inches to 24 inches above grade. A row of racks is typically 100 feet to 300 feet long with 2.5 feet between each rack (front to back). Rows of racks run parallel to each other. There are proposed to be 2 rows of racks with 3 feet of space between them (left to right) and then a 12 to 15 foot space until the next 2 rows. Racks are monitored and tipped monthly during their grow-out period. On a quarterly basis after initial planting, racks can be culled and graded. The harvest of racks will entail the crew removing the racks from their PVC legs and placing them on a vessel for transport, usually done with 2 feet to 3 feet of water to

allow the vessel to come up alongside the rows of racks for easier handling by the crew. All culling and grading would take place at HIOC’s Hatchery Facility. Final harvest of racks is typically 9 to 12 months after the initial planting date.

**Basic Project Purpose:** The basic project purpose comprises the fundamental, essential, or irreducible purpose of the project, and is used by USACE to determine whether the project is water dependent. The basic project purpose is commercial shellfish production in Humboldt Bay, California.

**Overall Project Purpose:** The overall project purpose serves as the basis for the Section 404(b)(1) alternatives analysis and is determined by further defining the basic project purpose in a manner that more specifically describes the applicant's goals for the project while allowing a reasonable range of alternatives to be analyzed. The overall project purpose is to develop a new shellfish culture operation in Arcata, Bay, California.

**Project Impacts:** 34 acres of Section 404 and Section 10 waters would be affected by the proposed project work. The HIOC Project area contains a stable mix of channels and high intertidal flats. Proposed culture areas will avoid eelgrass beds by working at higher tidal elevations ranging from +1.6 feet to +4.6 feet MLLW and incorporating a 5 meter buffer from eelgrass cover when installing shellfish aquaculture gear. Eelgrass that has been mapped at the site is restricted to tidal channels and depressions that hold water during low tides.

When stakes are placed or a vessel comes in contact with the bay bottom, sediment may be mobilized. However, the amount of sediment mobilized from near-bottom shellfish aquaculture operations is very low compared to the quantities of sediment mobilized during stormy conditions (e.g., strong winds). There is also potential for release of hazardous materials from internal combustion engines. However, potential impacts would not be expected to substantially degrade water or sediment quality.

The HIOC Project would increase shellfish aquaculture operations in Arcata Bay. The project would not involve any discharge of waste. No additives, feed, or chemicals will be used in shellfish aquaculture operations (other than fuel for the work vessels). Changes to water quality would be minor; potential impacts would be addressed through standard BMPs for vessel operation and the project would not violate any water quality standards.

The primary noise effect would be caused by the addition of small vessels with internal combustion

engines. These would generate noise similar to that generated by other small vessels on the bay. The HIOC Project vessels would not be heard from sensitive receptors, and the project includes a standard BMP used by HIOC for boat motors. The project would also cause temporary noise effects during the installation of aquaculture gear, but the noise generated is likely similar to ambient noise conditions at shoreline locations (e.g., cars along the road along the shoreline or other boats on the water). Because the HIOC Project's noise generation would be typical of what already occurs in Humboldt Bay, noise impacts are expected to be less than significant.

New aquaculture gear will not be present on this entire area or at all times of the culture cycle. Intertidal longline systems are separated by approximately 3 feet and grouped blocks of 4 lines are separated by 15 feet with a boat easement. Rack and bag systems are also separated by 3 feet with 12-foot boat easements. Bags and baskets are removed during harvest periods and cleaned off-site. Most information on the potential for deposition to become significant conclude that this potential is small (<100 mm) and happens in an inconsistent manner so that localized changes of this magnitude would not have an adverse effect on the environment. The amount of sediment that potentially accumulates will depend on the orientation of the shellfish aquaculture gear in relation to wind-waves, and adjustments will be made to the gear to reduce this potential impact if it is observed by HIOC.

**Proposed Mitigation:** HIOC seeks to avoid and minimize negative environmental impacts through adherence to the following specific mitigation measures and BMPs. HIOC is expected to install gear incrementally. Before gear is installed in new areas, eelgrass will be mapped in culture areas using unmanned aerial vehicles (UAV) and/or verified using ground surveys to identify eelgrass cover and establish 5 meter horizontal buffers. Eelgrass surveys will be conducted annually during the eelgrass growing season (May to September) prior to gear installation until gear is fully installed at the site.

- **Mit-1 (Marine Debris):** HIOC will implement a marine debris management plan. At the time of harvest of each cultivation area, HIOC will carry out a thorough inspection to locate and remove any loose, abandoned or out of use equipment and tools. All floating bags and baskets will be marked or branded with the HIOC's name and phone number.

**Mit-2 (Eelgrass [*Zostera marina*] Protection):** HIOC will install racks, intertidal longline systems, and other aquaculture gear at least 5 horizontal meters from native eelgrass (*Z. marina*) cover. This will not prevent

continued cultivation in areas where eelgrass moves into the project site.

**Mit-3 (Vessel Anchors):** HIOC will anchor vessels outside of areas containing eelgrass.

**Mit-4 (Vessel Routes):** HIOC will establish a vessel route to access its leases that avoids known native eelgrass (*Z. marina*) cover and maintain a no wake zone within a 1,000-foot buffer north of Tuluwat Island to avoid black brant (*Branta bernicla*) gritting sites in the winter (December 15-April 30).

**Mit-5 (Channel Buffers):** HIOC will establish a 10-foot buffer from the top of bank of channels. Culture equipment will not be installed in the buffer areas.

**Mit-6 (Pacific Herring [*Clupea pallasii*] Avoidance):** In any cultivation beds within or adjacent to eelgrass cover (in the event that eelgrass moves into the project site), HIOC will conduct visual surveys for Pacific herring spawn prior to conducting activities during the herring spawning season (October to April). If herring spawn is present, HIOC will suspend activities in the areas where spawning has occurred until the eggs have hatched and spawn is no longer present (typically 2 weeks).

#### **Best Management Practices:**

**BMP-1 (Vessel Maintenance and Fueling):** HIOC will maintain all vessels used in culture activities to limit the likelihood of release of fuels, lubricants, or other potentially toxic materials associated with vessels due to accident, upset, or other unplanned events. HIOC will use marine grade fuel cans that are refilled on land, and HIOC carries oil spill absorption pads and seals wash decks or isolates fuel areas prior to fueling to prevent contaminants from entering the water.

**BMP-2 (Vessel Motors):** HIOC will use highly efficient 4-stroke outboard motors. All motors will be muffled to reduce noise.

**BMP-3 (Fish and Wildlife):** During vessel transit, harvest, maintenance, inspection, and planting operations, HIOC will avoid approaching, chasing, flushing, or directly disturbing shorebirds, waterfowl, seabirds, or marine mammals.

**BMP-4 (Bed Marking):** HIOC culture beds will be marked with a long PVC pole to provide information to boaters of the location of shellfish aquaculture gear.

- **BMP-5 (Bed Mapping):** HIOC will provide a map of the culture bed locations and post the maps at the closest boat launch and adjacent wildlife area and on the Humboldt Bay Harbor, Recreation, and Conservation District website.

- **BMP-6 (Wetland Buffer):** HIOC has adopted a minimum of a 200-foot buffer between the wetlands associated with

the Mad River Slough Wildlife Area and the proposed culture area. Culture equipment will not be installed in the buffer areas.

- **BMP-7 (Bed Access):** Vessels may cross areas with eelgrass when the predicted tidal height is +4 feet MLLW or greater by putting the engine in neutral and drifting across areas where eelgrass is present. This type of approach will be used when weather and tidal elevations permit.

### 3. STATE AND LOCAL APPROVALS:

**Water Quality Certification:** State water quality certification or a waiver there of is a prerequisite for the issuance of a Department of the Army Permit to conduct any activity which may result in a fill or pollutant discharge into waters of the United States, pursuant to Section 401 of the Clean Water Act of 1972, as amended (33 U.S.C. § 1341 et seq.). No Department of the Army Permit will be issued until the applicant obtains the required certification or a waiver of certification. A waiver can be explicit, or it may be presumed if the RWQCB fails or refuses to act on a complete application for water quality certification within 60 days of receipt, unless the District Engineer determines a shorter or longer period is a reasonable time for the RWQCB to act.

Water quality issues should be directed to the Executive Officer, California Regional Water Quality Control Board, North Coast Region, 5550 Skylane Boulevard, Suite A, Santa Rosa, California 95403, by the close of the comment period.

**Coastal Zone Management:** Section 307(c) of the Coastal Zone Management Act of 1972, as amended (16 U.S.C. § 1456(c) *et seq.*), requires a non-Federal applicant seeking a federal license or permit to conduct any activity occurring in or affecting the coastal zone to obtain a Consistency Certification that indicates the activity conforms with the state's coastal zone management program. Generally, no federal license or permit will be granted until the appropriate state agency has issued a Consistency Certification or has waived its right to do so. Since the project occurs in the coastal zone or may affect coastal zone resources, the applicant has applied for a Consistency Determination from the California Coastal Commission to comply with this requirement.

Coastal zone management issues should be directed to the District Manager, California Coastal Commission, North Coast District Office, 1385 8<sup>th</sup> Street, Arcata,

California 95521, by the close of the comment period.

**Other Local Approvals:** The applicant has applied for the following additional governmental authorizations for the project: Humboldt Bay Harbor, Recreation and Conservation District Use Permit, and a Humboldt County Conditional Use Permit.

### 4. COMPLIANCE WITH VARIOUS FEDERAL LAWS:

**National Environmental Policy Act (NEPA):** Upon review of the Department of the Army permit application and other supporting documentation, USACE has made a *preliminary* determination that the project neither qualifies for a Categorical Exclusion nor requires the preparation of an Environmental Impact Statement for the purposes of NEPA. At the conclusion of the public comment period, USACE will assess the environmental impacts of the project in accordance with the requirements of the National Environmental Policy Act of 1969 (42 U.S.C. §§ 4321-4347), the Council on Environmental Quality's regulations at 40 C.F.R. § 1500-1508, and USACE regulations at 33 C.F.R. § 325. The final NEPA analysis will normally address the direct, indirect, and cumulative impacts that result from regulated activities within the jurisdiction of USACE and other non-regulated activities USACE determines to be within its purview of Federal control and responsibility to justify an expanded scope of analysis for NEPA purposes. The final NEPA analysis will be incorporated in the decision documentation that provides the rationale for issuing or denying a Department of the Army Permit for the project. The final NEPA analysis and supporting documentation will be on file with the San Francisco District, Regulatory Division.

**Endangered Species Act (ESA):** Section 7(a)(2) of the ESA or 1973, as amended (16 U.S.C. § 1531 *et seq.*), requires Federal agencies to consult with either the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) to ensure actions authorized, funded, or undertaken by the agency are not likely to jeopardize the continued existence of any Federally-listed species or result in the adverse modification of designated critical habitat. As the Federal lead agency for this project, USACE has conducted a review of the California Natural Diversity Data Base, digital maps prepared by USFWS and NMFS depicting critical habitat, and other information provided by the applicant to determine the presence or absence of such species and critical habitat in the project area. Based on this review, USACE has made a preliminary

determination that the following Federally-listed species and designated critical habitat are present at the project location or in its vicinity and may be affected by project implementation.

The proposed project has been reviewed for its impacts to listed species and their designated critical habitat. Southern DPS Green Sturgeon (*Acipenser medirostris*), Southern Oregon/Northern California Coho salmon (*Oncorhynchus kisutch*), California Coastal Chinook salmon (*Oncorhynchus tshawytscha*), and Northern California Coast steelhead (*Oncorhynchus mykiss*) and critical habitat are present in the area.

To address project related impacts to these species and designated critical habitat, USACE will initiate informal consultation with NMFS, pursuant to Section 7(a) of the Act. Any required consultation must be concluded prior to the issuance of a Department of the Army Permit for the project.

**Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA):** Section 305(b)(2) of the MSFCMA of 1966, as amended (16 U.S.C. § 1801 *et seq.*), requires Federal agencies to consult with the National Marine Fisheries Service (NMFS) on all proposed actions authorized, funded, or undertaken by the agency that may adversely affect essential fish habitat (EFH). EFH is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. EFH is designated only for those species managed under a Federal Fisheries Management Plan (FMP), such as the *Pacific Groundfish FMP*, the *Coastal Pelagics FMP*, or the *Pacific Coast Salmon FMP*. As the Federal lead agency for this project, USACE has conducted a review of digital maps prepared by NMFS depicting EFH to determine the presence or absence of EFH in the project area. Based on this review, USACE has made a *preliminary* determination that EFH is present at the project location or in its vicinity and that the critical elements of EFH may be adversely affected by project implementation. Species covered under the Pacific Groundfish FMP, the Coastal Pelagics FMP, and the Pacific Coast Salmon FMP are located in the project area. To address project related impacts to EFH, USACE will initiate consultation with NMFS, pursuant to Section 305(5)(b)(2) of the Act. Any required consultation must be concluded prior to the issuance of a Department of the Army Permit for the project.

**Marine Protection, Research, and Sanctuaries Act (MPRSA):** Section 302 of the MPRSA of 1972, as amended (16 U.S.C. § 1432 *et seq.*), authorizes the Secretary of Commerce, in part, to designate areas of

ocean waters, such as the Cordell Bank, Gulf of the Farallones, and Monterey Bay, as National Marine Sanctuaries for the purpose of preserving or restoring such areas for their conservation, recreational, ecological, or aesthetic values. After such designation, activities in sanctuary waters authorized under other authorities are valid only if the Secretary of Commerce certifies that the activities are consistent with Title III of the Act. No Department of the Army Permit will be issued until the applicant obtains any required certification or permit. The project does not occur in sanctuary waters, and a *preliminary* review by USACE indicates the project is not likely to affect sanctuary resources. This presumption of effect, however, remains subject to a final determination by the Secretary of Commerce or his designee.

**National Historic Preservation Act (NHPA):** Section 106 of the NHPA of 1966, as amended (16 U.S.C. § 470 *et seq.*), requires Federal agencies to consult with the appropriate State Historic Preservation Officer to take into account the effects of their undertakings on historic properties listed in or eligible for listing in the *National Register of Historic Places*. Section 106 of the Act further requires Federal agencies to consult with the appropriate Tribal Historic Preservation Officer or any Indian tribe to take into account the effects of their undertakings on historic properties, including traditional cultural properties, trust resources, and sacred sites, to which Indian tribes attach historic, religious, and cultural significance. As the Federal lead agency for this undertaking, USACE has conducted a review of the latest published version of the *National Register of Historic Places*, survey information on file with various city and county municipalities, and other information provided by the applicant to determine the presence or absence of historic and archaeological resources within the permit area. Based on this review, USACE has made a *preliminary* determination that historic or archaeological resources are not likely to be present in the permit area and that the project either has no potential to cause effects to these resources or has no effect to these resources. USACE will render a final determination on the need for consultation at the close of the comment period, taking into account any comments provided by the State Historic Preservation Officer, the Tribal Historic Preservation Officer, the Advisory Council on Historic Preservation, and Native American Nations or other tribal governments.

**5. COMPLIANCE WITH THE SECTION 404(b)(1) GUIDELINES:** Projects resulting in discharges of dredged or fill material into waters of the United States must comply with the Guidelines promulgated by the

Administrator of the Environmental Protection Agency under Section 404(b) of the Clean Water Act (33 U.S.C. § 1344(b)). Since the project does not entail the discharge of dredged or fill material into waters of the United States, application of the Guidelines will not be required.

**6. PUBLIC INTEREST EVALUTION:** The decision on whether to issue a Department of the Army Permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the project and its intended use on the public interest. Evaluation of the probable impacts requires a careful weighing of the public interest factors relevant in each particular case. The benefits that may accrue from the project must be balanced against any reasonably foreseeable detriments of project implementation. The decision on permit issuance will, therefore, reflect the national concern for both protection and utilization of important resources. Public interest factors which may be relevant to the decision process include conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

**7. CONSIDERATION OF COMMENTS:** USACE is soliciting comments from the public; Federal, State, and local agencies and officials; Native American Nations or other tribal governments; and other interested parties in order to consider and evaluate the impacts of the project. All comments received by USACE will be considered in the decision on whether to issue, modify, condition, or deny a Department of the Army Permit for the project. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, and other environmental or public interest factors addressed in a final environmental assessment or environmental impact statement. Comments are also used to determine the need for a public hearing and to determine the overall public interest in the project.

**8. SUBMITTING COMMENTS:** During the specified comment period, interested parties may submit written comments to L. Kasey Sirkin, San Francisco District, Regulatory Division, Eureka Field Office, 601 Startare Drive, Box 14, Eureka, California 95501; comment letters should cite the project name, applicant name, and public notice number to facilitate review by the Regulatory Permit Manager. Comments may include a request for a

public hearing on the project prior to a determination on the Department of the Army permit application; such requests shall state, with particularity, the reasons for holding a public hearing. All substantive comments will be forwarded to the applicant for resolution or rebuttal. Additional project information or details on any subsequent project modifications of a minor nature may be obtained from the applicant and/or agent or by contacting the Regulatory Permit Manager by telephone or e-mail (cited in the public notice letterhead). An electronic version of this public notice may be viewed under the *Public Notices* tab on the USACE website: <https://www.spn.usace.army.mil/Missions/Regulatory>.