



**DEPARTMENT OF THE ARMY**  
SAN FRANCISCO DISTRICT, CORPS OF ENGINEERS  
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SAN FRANCISCO, CALIFORNIA 94105-2197

September 16, 2016

Mr. Jack Crider  
Humboldt Harbor, Recreation and Conservation District  
PO Box 1030  
Eureka, CA 95502

Dear Mr. Crider,

Thank you for the opportunity to review the Humboldt Bay Harbor, Recreation, and Conservation District's (District) re-circulated Draft Environmental Impact report (DEIR) for the proposed Coast Seafood Company (Coast) Humboldt Bay Shellfish Aquaculture Permit Renewal and Expansion Project (Project). According to the recirculated DEIR, Coast is proposing to extend authorization for its existing 296 acres of aquaculture operations in addition to obtaining authorization to expand shellfish aquaculture operations into 622 acres of intertidal acres within Humboldt Bay. The Corps took the opportunity to review the document and identify issues that may need to be addressed in the upcoming National Environmental Policy Act (NEPA) process, during which we will be reviewing the forthcoming NEPA document to initiate an Endangered Species Act (ESA) Section 7 consultation with the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS).

According to the information provided, the Project is located within the jurisdiction of the Corps, San Francisco District and, given the location of the proposed shellfish aquaculture operations below mean high water (MHW) in Humboldt Bay (delineated as other waters of the US), requires a new Corps permit. The Corps has permitting authority over activities affecting waters of the United States, pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. Section 403) and Section 404 of the Clean Water Act (33 U.S.C. Section 1344).

All proposed discharges of dredged or fill material occurring below the plane of ordinary high water in non-tidal waters of the United States; or below the high tide line in tidal waters of the United States; and within the lateral extent of wetlands adjacent to these waters, typically require Department of the Army authorization and the issuance of a permit under Section 404. Waters of the United States generally include the territorial seas; all traditional navigable waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including

waters subject to the ebb and flow of the tide; wetlands adjacent to traditional navigable waters; non-navigable tributaries of traditional navigable waters that are relatively permanent, where the tributaries typically flow year-round or have continuous flow at least seasonally; and wetlands directly abutting such tributaries. Where a case-specific analysis determines the existence of a "significant nexus" effect with a traditional navigable water, waters of the United States may also include non-navigable tributaries that are not relatively permanent; wetlands adjacent to non-navigable tributaries that are not relatively permanent; wetlands adjacent to but not directly abutting a relatively permanent non-navigable tributary; and certain ephemeral streams in the arid West.

All proposed structures and work, including excavation, dredging, and discharges of dredged or fill material, occurring below the plane of mean high water in tidal waters of the United States; in former diked baylands currently below mean high water; outside the limits of mean high water but affecting the navigable capacity of tidal waters; or below the plane of ordinary high water in non-tidal waters designated as navigable waters of the United States, typically require Department of the Army authorization and the issuance of a permit under Section 10. Navigable waters of the United States generally include all waters subject to the ebb and flow of the tide; and/or all waters presently used, or have been used in the past, or may be susceptible for future use to transport interstate or foreign commerce.

As part of the upcoming NEPA process, the Corps is required to analyze the Project for potential adverse impacts to aquatic resources within our jurisdiction. Therefore, we are providing the following comments as a guide to what additional information we will need for the NEPA review of the project. We have identified several fundamental issues that will require further explanation or information to allow the Corps to complete an analysis under NEPA as part of our permit process.

### Project Description

According to page 1-8, section 1.5 "the project consists of renewing regulatory approvals for approximately 300 acres of Coast's existing shellfish culture, including intertidal cultch-and-basket-on-longline culture, intertidal nurseries, subtidal FLUPSY rafts, subtidal wet storage floats and subtidal clam rafts. In addition, the Project proposes a two phase, 622-acre expansion of intertidal. ". This project description is again stated on page 4-21, section 4.5.4.1 (continuation of existing culture) as "Coast is proposing to continue its existing operation as part of the Project". However, the remaining areas of the document do not provide any information regarding the renewal of regulatory approvals for existing operations. While we recognize that under the California Environmental Quality Act (CEQA) for which this document was prepared, ongoing operations are considered to be part of the baseline of environmental conditions and therefore not part of the analysis, given the request for renewed

regulatory approvals, these operations will require analysis as part of the NEPA process. Please ensure that your permit application package contains a comprehensive project description that encompasses the full project footprint. Additions to the project description for the permit application should include: a complete description of all existing aquaculture operations for which renewal is being requested; a description and analysis of all adverse effects from all proposed aquaculture operations; a description of all avoidance and minimization measures that have been and will continue to be implemented to decrease the level of adverse effects to an insignificant level; and a narrative of all ongoing and proposed mitigation measures that will ensure that the overall project (including effects from ongoing and expansion activities) will meet the 'no net loss of eelgrass' objective established by the DEIR.

### Eelgrass Effects Analysis

According to the information provided in Section 6.0, and discussed above, the eelgrass effects analysis provided is limited solely to the potential effects from the proposed expansion portion of the Project and does not include an eelgrass effects analysis on current operations. However, according to the project description section of the document, the Project includes a request for renewal of regulatory approval for existing operations. In light of the expanded project description required under NEPA, please ensure that the permit application contains a full eelgrass effects analysis for the entire project footprint, including the current operations as well as proposed expansion activities.

According to the information provided, existing aquaculture longlines within the current project footprint are spaced at 2.5-ft. According to the information in Rumrill and Poulton (2004), as referenced by the DEIR, aquaculture operations at this spacing have an adverse effect on eelgrass and will result in a loss of eelgrass habitat. Therefore, the expanded eelgrass effects analysis must include analysis of these impacts, including an estimate of total loss of spatial extent, density, and percent cover of eelgrass within the entire project footprint, as well as describing any temporal losses associated with the Project. In addition, the expanded analysis should describe associated mitigation measures that will assure that the project meets the no-net loss goal as established by the Project and the National Marine Fisheries Service's (NMFS) California Eelgrass Mitigation Policy (CEMP), as well as a comprehensive discussion and analysis of all avoidance, minimization, and mitigation measures that have been included in the project design.

Following review of the information provided in Section 6.0 (Environmental Analysis and Effects of Alternatives), Subsection 6.5 (Biological Resources), and referenced peer reviewed literature, the Corps cannot agree with the determination that aquaculture longline operations set apart at 10-ft spacing will have a neutral/beneficial effect on eelgrass habitat. As displayed in Figures 5 and 6 of Rumrill and Poulton (2004) percent

cover and density of eelgrass were significantly decreased in experimental plots where aquaculture longlines were spaced 10-ft apart, as compared to adjacent control plots. Additionally, as presented in figure 7 of Rumrill and Poulton (2004), the number of eelgrass shoots/m<sup>2</sup> in experimental plots where aquaculture longlines were spaced 10-ft apart was significantly lower than in control plots where no long lines had been placed. According to information provided by Coast, suppression of eelgrass occurs directly beneath the longlines and adverse effects from shading to adjacent eelgrass habitat is not significant. Given that the Project proposes to install longlines in a similar manner as those in its existing operations, the Corps has determined that suppression of eelgrass habitat would continue under the proposed Project since the persistent adverse effect would be from the existence of the longlines and not from indirect shading. Therefore, the Corps ascertains that the suppression of eelgrass will continue to occur and that the project will have an adverse effect on eelgrass habitat. Consequently, the Corps cannot agree with the determination that there would be neutral or beneficial effects from longlines spaced at 10-ft intervals.

The Corps recommends that Coast reassess its determination that the Project will have a neutral/beneficial effect on eelgrass habitat. In order to provide a comprehensive review of the Project during the NEPA process, the Corps requests that a new eelgrass effects analysis be submitted that evaluates the full suite of adverse effects from the Project, including adverse effects from current operations for which continuing regulatory approval is being sought. Subsequent to the re-analysis of adverse effects to eelgrass effects the Corps recommends Coast provide a mitigation plan that includes a full suite of mitigation measures that will fully offset losses to eelgrass and achieve the no net loss objective established by the Project and mandated by the CEMP.

### Mitigation

As described in the recirculated DEIR, Coast proposes to increase the line spacing from 2.5-ft to 10-ft within 100 acres of existing operations to provide mitigation for potential and ongoing project impacts. Although the increased spacing would constitute a minimization measure for impacts to eelgrass habitat, it does not provide compensatory mitigation given the ongoing impacts from the 10-ft spacing. Therefore, as currently described, no mitigation is currently proposed to address the impacts of the Project. Given the large scale of the Project, the Corps believes the adverse effects to eelgrass habitat from current and ongoing operations requires large scale mitigation to ensure that the project achieves the no net loss policy established by state and federal mandates. When submitting the forthcoming NEPA document, please provide a comprehensive mitigation plan that provides a full suite of mitigation activities that would offset the entirety of the Projects adverse effects to eelgrass habitat, including a full suite of alternatives that may also provide for the full mitigation of all project adverse effects if needed.

## Conservation Measures

After reviewing the information provided in Section 1.9 'Summary of Environmental impacts, mitigation measures, and levels of significance after mitigation (Table 1.1)', it appears that many of the proposed conservation and mitigation measures do not address the potential impacts that they are intended to be addressing. Specifically, the Corps recommends that Coast address the discrepancies in the conservation measures that will be included in the permit application that are intended to address the following impacts:

Impact Bio 2: As described, this impact is related to the amount of aquaculture gear to be installed and the potential for associated changes to unstructured habitat from addition of aquaculture gear. However, the conservation measure (Conservation Bio 1) discusses shell deposition and post storm inspections which does not address adverse impacts from the installation and presence of aquaculture gear from the proposed expansion.

Impact Bio 3: As described, this impact is related to the decrease in density of eelgrass under the longlines. However, the Corps does not consider mitigation Bio-1 to be a mitigation measure, but instead considers this a minimization measure, and therefore as currently proposed there is are no mitigation measures proposed for this impact. Please provide mitigation measures that would provide for the full offset of impacts to eelgrass habitat.

Impact Bio 4: According to the table, this impact is related to the trampling of eelgrass from aquaculture and harvesting activities. However, conservation measure-4 only addresses rack and bag culture, which is a very small percentage of the overall expansion project (<1%). Additionally, there are no conservation or mitigation measures listed for impacts from cultch or basket long lines, which are the primary proposed aquaculture techniques and encompass the majority of the proposed project expansion and therefore, require conservation measures to decrease the potential for adverse impacts from the proposed project. Please provide additional conservation and mitigation measures that will assist in the avoidance and minimization of these impacts.

Impact Bio-5: This impact is related to the potential for habitat fragmentation from the placement of aquaculture gear within eelgrass. However, the associated conservation measures listed (Conservation Bio Measures 5, 6, 7 and 8) do not address placement of aquaculture gear and as it is described, is focused on boat handling. Therefore, the proposed conservation measures do not provide any significant minimization measures for the impact listed. Please provide additional conservation and mitigation measures that directly address this impact.

Impact Bio-6: Please provide additional data regarding double hung, 10-ft spacing that supports the determination that conservation bio measure -2 would adequately address

this impact and provide significant minimization for this impact.

Impact Bio -7: similar to the comments provided above for impact bio-5 , the associated conservation measure is not related to the described impact and does not provide minimization measures to decrease the potential impacts from the placement of line or rack and bag on sediment distribution. Please provide additional conservation and minimization measures that will directly minimize the described impact.

#### Adaptive Management and Monitoring Plan

According to Section 4.5.5 'Project Implementation – Phase II', implementation of Phase II is dependent on the verification of Coasts determination that the Phase I operations will have no net loss of eelgrass, as verified via a monitoring plan. According to the information provided, if the impacts associated with 10-ft, single hung longlines are found to exceed the threshold of significance, Phase II will not be implemented until those impacts are balanced with appropriate mitigation, as mandated by the decision tree and adaptive management plan.

However, the recirculated DEIR does not contain the referenced mitigation or adaptive management plan. When submitting a permit application to the Corps for this project, please provide an adaptive management plan, including potential changes to Phase II longline spacing, location of longlines, or any other adaptive management activities that would ensure that the project would avoid, minimize and mitigate for all potential adverse effects to meet the no net loss objective. Additionally, please provide the referenced monitoring plan so that the Corps may evaluate the potential for the monitoring plan to provide the necessary data that would allow for Phase II operations to be implemented in the described manner or altered to achieve the no net loss objective mandated by federal statutes.

Should you have any questions regarding this matter, please call L. Kasey Sirkin of our Regulatory Division at (707)443-0855 or l.k.sirkin@usace.army.mil. Please address all correspondence to the Regulatory Division and refer to the File Number at the head of this letter.

#### References:

Rumrill, S. and V. Poulton. 2004. Ecological role and potential impacts of molluscan shellfish culture in the estuarine environment of Humboldt Bay, CA. Western Regional Aquaculture Center Annual Report November 2004. 79p