UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

November 18, 2019

Theresa Stevens
U.S. Army Corps of Engineers
Los Angeles District, Regulatory Division
60 South California Street, Suite 201
Ventura, CA 93001- 2598

Dear Dr. Stevens:

On May 2, 2019, NOAA's National Marine Fisheries Service (NMFS) received your letter requesting initiation of informal consultation with NMFS pursuant to section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.) and your request to consult on Essential Fish Habitat (EFH) under the Magnuson-Stevens Fishery Conservation and Management Act (MSA) for the proposed Ventura Shellfish Enterprise (VSE) project. We reviewed these documents and conducted follow up conversations with you and Bonnie Rogers, formerly with the United States Army Corps of Engineers (USACE), on multiple occasions. A record of these discussions follows.

During the June 17, 2019, call with Ms. Rogers, she explained that informal consultation was initiated based on the USACE's determination that project activities may affect but are unlikely to adversely affect 7 species of whales and 4 species of sea turtles, based on the lack of data and observations of interactions between listed species and aquaculture gear. On July 2, 2019, NMFS emailed you a list of comments regarding the proposed action, and we received a response from you that same day through email. Tentative plans for a conference call to discuss project details and its potential effects were suggested by email, but a teleconference was ultimately never confirmed by the USACE and/or the applicant.

On August 29, 2019. NMFS sent the USACE a notice of consultation close out due to insufficient information to initiate informal consultation under Section 7(a)(2) of the Endangered Species Act and to consult on Essential Fish Habitat under the Magnuson-Stevens Fishery Conservation and Management Act for the proposed Ventura Shellfish Enterprise project.

On October 17, 2019, we received your email requesting a letter from NMFS summarizing the information the USACE will need to include in their reinitiation packet. In response, we offer the following comments pursuant to the MSA, ESA, and Marine Mammal Protection Act (MMPA).

Proposed Action

The proposed action is in federal waters of the Pacific Ocean. The Ventura Port District is seeking authorization for a project whereby they would seek Growers/Producers who would individually install structures and operate shellfish aquaculture within authorized plots. The project would occur off the coast of Ventura County outside the three mile state limit (approximately 3.53 miles from shore), in water depths between 80 −114 feet below sea level, within the Santa Barbara Channel over sandy soft-bottom substrate. The project includes establishing twenty, 100-acre plot areas (2,000 acres) covering an area of approximately 1.8 miles by 1.8 miles, installing a total of 960 sand anchors (48 per plot) in the seafloor with 480 associated longlines (24 per plot) and 1,440 buoys (3 per each long-line), all within waters of the United States, for the purpose of conducting a commercial aquaculture bivalve operation for non-native, but considered naturalized, Mediterranean mussel (*Mytilus galloprovincialis*) harvest. Each longline system would be approximately 1,100 feet long, comprised of a 600-foot long backbone line from which 'grow ropes' would be deployed, plus a 250 foot-long anchor line at each end. Each 100-acre Grower/Producer would have 24 individual longlines with 100-foot spacing between each longline. Lines were designed to be positioned roughly parallel to the prevailing winds and currents in the Channel.

Settled mussel spat on ropes would be purchased from farm sources, buoy sources, or land-based seed hatcheries. Cultivation of Mediterranean mussel is proposed because there exists a reliable source of spat from hatcheries certified by CDFW and there is a market for the species. No spat collector lines are proposed, in order to avoid potential marine mammal gear interactions. Cotton sock bags would be attached alongside the ropes until mussels naturally attach onto the socks. Maintenance and inspection of longlines are proposed to occur during daylight and/or night hours, monthly for at least the first two years. Mussels would feed on phytoplankton naturally occurring in the ocean environment; no feed, pesticides, or chemicals (such as antibiotics and hormones) are proposed. Harvesting would occur when mussels reach market size after about one year, with anticipated annual production of between 9,000 tons (20,000,000 pounds) to 11,000 tons (24,000,000 pounds) mussels. All harvesting, grading, and restocking of mussels on lines would occur on specialized vessels.

Magnuson-Stevens Fishery Conservation and Management Act Comments

The USACE determined the adverse effect on EFH is substantial and requested expanded EFH consultation in the EFH Assessment Worksheet dated May 2, 2019, and also provided a separate EFH Assessment developed on behalf of the applicant. Collectively, the information provided by the USACE contains the mandatory contents of an EFH Assessment. However, the proposed mitigation measures that address EFH are not described in any detail. Based on additional information provided by the USACE, a sediment quality monitoring plan, aquaculture gear monitoring and escapement plan, and a decommissioning plan will be developed in conjunction with the permit process. As these are important mitigation measures to address adverse effects to EFH, NMFS requests that draft versions of the above plans be provided to inform our review and consultation response.

Endangered Species Act Comments

In the BA, the USACE determined that 7 species of whales, 4 species of turtles, (Table 2) may be affected, given they are known to occur in the project area. In the BA, the USACE identified possible effects to listed species that included: entanglement in aquaculture gear; vessel strikes; noise disturbance

from vessels, and interference with migration or feeding routes. The BA highlights some measures to avoid adverse impacts during project activities, ultimately concluding that any impacts to listed species are either insignificant or discountable.

Table 2. List of ESA-listed species that may occur in the action area.

Species	ESA Listing	Critical Habitat	Citation(s) for listing determinations
Blue whale (*Balaenoptera musculus*)	Endangered	N/A	35 FR 18319; December 2, 1970
Fin whale (*B. physalus*)	Endangered	N/A	35 FR 8491; June 2, 1970
Sei whale (*B. borealis*)	Endangered	N/A	35 FR 12024; December 2, 1970
Humpback whale – Central America distinct population segment (DPS) and Mexico DPS (*Megaptera novaeangliae*)	Endangered Threatened	N/A	81 FR 62260; September 8, 2016
Northern Pacific right whale (*Eubalaena japonica*)	Endangered	N/A	73 FR 12024; April 7, 2008
Sperm whale (*Physeter macrocephalus*)	Endangered	N/A	35 FR 18319; December 2, 1970
Southern resident killer whale DPS (*Orcinus orca*)	Endangered	N/A	70 FR 69903; November 18, 2005
Leatherback sea turtle (*Dermocheyls coriacea*)	Endangered	77 FR 4170; January 26, 2012	35 FR 8491; June 2, 1970
Loggerhead sea turtle (*Caretta caretta*) North Pacific DPS	Endangered	N/A	76 FR 58868; September 22, 2011
Green sea turtle (*Chelonia mydas*) East Pacific DPS	Threatened	N/A	81 FR 20058; April 6, 2016
Olive ridley sea turtle (*Lepidochelys olivacea*)	Threatened/ Endangered	N/A	43 FR 32800; July 28, 1978

At the time of our action to close this consultation (August 29, 2019), based on the information provided in the BA and other supplemental materials, we were not able to concur with the effect determination for listed species and their critical habitat made by the USACE regarding the proposed project. There are a number of outstanding questions and concerns that need additional explanation or need to be addressed before we can initiate ESA consultation. In particular, we identified the following questions/issues that need to be resolved:

Timeline:

- The description of the proposed action does not include a description of the sequence of events that will occur during the project, or many details regarding the timing and duration of various project activities. Please explain how the process for the plot development. For example, is the applicant planning on starting with one plot to determine interest in developing more plots, or will they move forward with all 20 plots at once? In the absence of specific plans, what assumptions are being used by the USACE and the applicant on plot development timing?
- Please clarify VSE's timeline including what activities will affect listed species and when these activities are to occur. For example, during the first year, the mussels are growing, so impacts may only include acoustic disturbance from installation of anchors, and vessel noise from trips to

inspect the lines. Does harvesting occur in year 2? Describe how often harvesters will be out in the plots once they start harvesting and describe the resulting effects.

Species potentially affected:
Consider the following changes to the list of DPS/species that may be affected:

- Humpback whale, Mexico distinct population segment (DPS). Within the Central North Pacific Stock, 2 ESA DPSs of humpback whales occur: the threatened Mexico DPS and the endangered Central America DPS. Based on information in Wade (2016) and other sources, NMFS assumes that approximately 90% of the whales could belong to the Mexico DPS, and approximately 20% of the whales could belong to the Central America DPS.
- Gray whale, Western North Pacific stock. While this stock is mostly found off the Asian Pacific coast, genetic studies show that both stocks (Western and Eastern North Pacific stocks) occur in both the Eastern and Western Pacific (Bruniche-Olsen et al., 2018), albeit in very low numbers for the WNP stock. This means that some of the gray whales off the U.S. West coast could be from the endangered population.
- Guadalupe fur seal *(Arctocephalus townsendi)*. This threatened species has been observed interacting with fishing gear (Carretta et al., 2019). Therefore, the no effect determination based on the observation that pinnipeds are agile and would avoid entanglements with nets, and the prey for GFS would not be in the project area, is not correct. Interactions have been documented to occur with other pinniped species as well, and therefore, we suggest considering changing the determination to NLAA.

Mitigation Measures:

- Please describe how the applicant will be able to detect entanglements or interactions with the gear. While the BA notes that applicants will be required to complete monthly inspections of the lines, it is unclear how this would reduce the likelihood of entanglement. Please describe how inspections reduce the likelihood of entanglement and any other measures proposed to reduce entanglement.
- The BA does not explain how compliance with the mitigation measures will be ensured. It will be up to applicant to train the clients, but how will they enforce it? Because each of the 20 plots could have different companies/clients, their compliance may vary. Without a way to ensure compliance with mitigation measures, we may not be able to concur that the effects are not likely to adversely affect listed species.
- The BA states that work at the plots may occur at night. Please explain what activities may occur at night and why these activities could not occur during the day when observations of listed species could occur in order to reduce impacts?

Insufficient Information:

- Please provide more specific information on why or how the threats listed in the BA will or will not impact listed species? There are a many instances throughout the BA that claims that impacts are "expected to be low" but no explanation as to why. The main threats to listed species from project activities include: threat of entanglement, threat of vessel collision, and potential acoustic disturbance during the vessel transits. Each of the threats should be analyzed for their potential impact on listed species. Impacts from installation of the anchors (e.g. sand screws) should also be analyzed. Table 1, comments 1, 3, and 10 are related to this comment.
- Please provide source levels for sand screws. Acoustic sources should be compared to the new acoustic guidance (NMFS 2018). The BA references outdated injury thresholds (180dB for cetaceans and 190dB for pinnipeds in Table 1 of the BA). Please update this information.

- If there are additional details described in the Environmental Assessment for the proposed project regarding descriptions of the proposed project, proposed measures to avoid and minimize the possible extent of impacts for listed species, and/or additional analyses of potential impacts resulting from the proposed action, the BA should make specific reference to where these details or analyses may be found.
- The USACE concluded "not likely to adversely effect" on the basis that there is insufficient information available about interactions of listed species with aquaculture gear. However, information exists that demonstrates protected species interactions with a variety of aquaculture gear throughout the world (Price et al., 2017). Thus, NMFS believes that a determination that project activities are not likely to adversely affect listed species on the basis of "insufficient information" when available information suggests that adverse effects are possible cannot be justified. NMFS expects that formal consultation will be required to adequately determine potential impacts from the project activities absent better information and analysis from the USACE to support their finding of "not likely to adversely effect."

Based on the limited amount of details provided in the BA, we were unable to concur with the "not likely to adversely affect" determination for the listed species made by the USACE for this proposed project. Based on the information we have, we are specifically concerned about the justification for the determination due to the lack of information about: interactions of shellfish aquaculture gear with listed species, the timeline and sequence of events for the proposed action, and assurance of compliance with mitigation measures. In order to conclude this ESA consultation, the USACE will need to further consider and address these impacts in the BA, along with the rest of the questions and issues raised above.

Marine Mammal Protection Act Comments

Marine mammals are protected under the Marine Mammal Protection Act (MMPA) (16 U.S.C. § 1361 et. seq.). Under the MMPA, it is illegal to "take" a marine mammal without prior authorization from NMFS. "Take" is defined as harassing, hunting, capturing, or killing, or attempting to harass, hunt, capture, or kill any marine mammal. Except with respect to military readiness activities and certain scientific research conducted by, or on behalf of, the Federal Government, "harassment" is defined as any act of pursuit, torment, or annoyance which has the potential to injure a marine mammal in the wild, or has the potential to disturb a marine mammal in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering. Please note that this letter does not provide Incidental Take Authorization (ITA) for any marine mammals; any authorization will come from NMFS Office of Protected Resources, in Silver Spring, Maryland. These comments are provided to facilitate direct coordination with the local NMFS West Coast Regional Office responsible for marine mammal conservation in the area of the proposed project.

California sea lions (*Zalophus californianus*), Pacific harbor seals (*Phoca vitulina richardii*), and many odontocete species (e.g. bottlenose dolphins (*Tursiops truncatus*), short-beaked (*Delphinus delphis*) and long-beaked (*D. capensis*) common dolphins, striped dolphins (*Stenella coruleoalba*), etc.) may be found in the project area. As a result of the potential threats that may result from the proposed action, NMFS suggests contacting our Office of Protected Resources (301-427-8400) to determine if an ITA is necessary for the incidental harassment of marine mammals over the course of this proposed project.

In addition to any monitoring or reporting that might be required pursuant to an ITA by NMFS Office of Protected Resources, in the unlikely event of an injury or mortality of a marine mammal due to this project, please immediately contact our regional stranding coordinator, Justin Viezbicke at (562) 980-3230.

Upon request, we are available to further discuss these issues with the USACE to help address these concerns and conclude the EFH and ESA consultations. If you have any questions about the ESA or local marine mammal conservation and MMPA issues, please contact Laura McCue at (562) 980-3232 or Laura.McCue@noaa.gov. For questions about our EFH comments, please contact Bryant Chesney at (562) 980-4037 or Bryant.Chesney@noaa.gov. Thank you for considering our comments and we look forward to continued coordination with the USACE on this project.

Sincerely,

for Chris Yates
Assistant Regional Administrator
for Protected Resources

Literature Cited

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