REGION 4
ATLANTA, GA 30303

May 15, 2025

MEMORANDUM

SUBJECT: EPA's analysis supporting the draft and final modified NPDES permit for Ocean Era (FL0A00001)

FROM: Kip Tyler, Environmental Engineer
NPDES Permitting Section

TO: Final modified NPDES permit administrative record

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1.0 Background

The U.S. Environmental Protection Agency Region 4 (EPA) issued a National Pollutant Discharge Elimination System (NPDES) permit to Ocean Era in 2020 following a public comment period and public hearing. Petitioners sought review of the NPDES permit before EPA's Environmental Appeals Board (EAB). On May 6, 2022, the EAB issued a decision that remanded in part and denied review in part for the permit appeal. The EAB remanded the permit decision to the region "to clearly state whether the region determined that the permitted discharge will not cause unreasonable degradation of the marine environment." In response to the EAB decision, EPA revised the permit record and issued a final permit on June 9, 2022. The permit issued in 2022 (the 2022 permit) remains effective for Clean Water Act (CWA) purposes.

Two petitions for review challenging the final permit were filed in the U.S. Circuit Court of Appeals for the Second Circuit and the U.S. Circuit Court of Appeals for the D.C. Circuit. The petitions were subsequently consolidated in the D.C. Circuit, where the consolidated petition remains pending. Additionally, the petitions were partially remanded to EPA to allow it to consider and process Ocean Era's request for permit modification.

2.0 Request for Permit Modification and Revocation

On May 10, 2023, Ocean Era provided written notification to EPA that the project would not proceed as planned and provided preliminary information about changes to the planned operation. On May 23, 2023, EPA asked Ocean Era to provide a written request to modify the permit, a revised application, and other supporting information to enable EPA to determine the appropriate permitting action. On July 5, 2023, Ocean Era formally submitted a request for permit modification under 40 CFR 124.5 and provided relevant ancillary information. On July 17, 2023, Ocean Era submitted a revised NPDES permit application and detailed information to support the permit modification and any necessary consultations with other federal agencies.

On June 7, 2023, EPA received a letter from Eubanks and Associates on behalf of multiple petitioners involved with the petitions for review of the final permit currently pending in the U.S. Court of Appeals for the D.C. Circuit. This letter stated "(a)t a minimum, EPA must reopen its permitting process with respect to the new aspects of the proposal… and ensure that those issues are properly subjected to supplemental analysis under applicable laws and an accompanying, full public process."[1]

The appendix contains some of the records referenced in this section.

3.0 Regulatory Context for NPDES Permit Modifications

Requests for NPDES permit modifications are processed pursuant to the CWA implementing regulations within 40 CFR 122.62 (modification or revocation), 40 CFR 122.63 (minor modifications), and 40 CFR 124.5 (modification, revocation and reissuance, and termination of permits). Permits may be modified at the request of the permittee or any interested party, or upon EPA's initiative.

Modifications to NPDES permits may only occur when one of the causes for modification listed in 40 CFR 122.62 and 40 CFR 122.63 exists. The cause for minor modifications in 40 CFR 122.63 is limited to non-substantive changes (e.g., typographical errors, more stringent monitoring or reporting, and change of ownership, etc.).

[1] The letter from Eubanks Associates did not specifically request a permit modification. However, EPA believes that the letter contemplated a request for a permit modification in stating "At a minimum, EPA must reopen its permitting process with respect to the new aspects of the proposal (i.e., the shifts to red drum and a grid mooring system) and ensure that those issues are properly subjected to supplemental analysis under applicable laws and an accompanying, full public process."

Minor modifications are exempt from the administrative procedures for permit issuance, including public review and comment as required by 40 CFR Part 124.

Any permit modification not processed as a minor modification must be made for one of the causes listed in 40 CFR 122.62(a) or (b). Modifications are subject to the permit issuance procedures in 40 CFR Part 124, including public notice and comment procedures. In a permit modification, only the conditions subject to change are reconsidered while all other permit conditions remain in effect (see 40 CFR 122.62).

4.0 Summary of Proposed Changes to the Facility

Ocean Era indicated that it will not proceed with its aquaculture project as currently permitted in the 2022 permit because it intends to make changes to certain aspects of the operation. Specifically, Ocean Era has requested to alter: (1) the species of fish to be cultured (from Almaco jack to red drum); (2) net material (copper to monofilament); and (3) the type of rearing system (from swivel point mooring system to a stationary cage attached to a grid mooring system). Other operational changes related to the discharge include a decreased fish production amount and lower nutrient load. More details for the proposed facility changes are provided below with a comparison to the 2022 permitted project (also see Tables 1 and 2).

- **Fish Species:** Ocean Era will raise red drum (*Sciaenops ocellatus)* rather than Almaco jack (*Seriola rivoliana*). Both fish species are native to the Gulf of America. The red drum brood stock will be sourced from wild fish caught in the Gulf of America in the Sarasota region. Ocean Era will obtain juvenile red drum from first generation offspring of wild fish that are produced and raised at Mote Aquaculture Park, University of Miami, or Live Advantage Bait, LLC.
- **Fish Quantity:** The 2022 permit application states that 20,000 Almaco jack fingerlings would be initially stocked into the cage and an estimated 17,000 fish would be harvested. Ocean Era's modification shows that 20,000 red drum fingerlings would be stocked into the cage and approximately 17,000 fish would be harvested within approximately 12 months assuming an 85% survival rate. No appreciable changes to the number of fish produced is anticipated by Ocean Era.
- **Survival Rate:** Ocean Era estimates that the survival rate (85%) for red drum will be the same as Almaco jack.
- **Fish Size and Production:** The maximum production amount (without accounting for mortality) for the 2022 permit and modified permit is 88,000 lbs and 55,000 lbs, respectively. Red drum grow slower than Almaco jack; therefore, the red drum harvest size will be approximately 2.75 lbs rather than 4.4 lbs for Almaco jack. When accounting for the 15% mortality rate, the red drum's smaller harvestable size equates to a total estimated harvest of 46,750 lbs vs. the currently estimated harvest of 74,800 lbs, or approximately 63% of the currently estimated fish production.
- **Fish Feed:** Red drum require a different feed than Almaco jack that is lower in protein and nutrients. The previous feed proposed by Ocean Era for Almaco jack was EWOS Marine Juvenile (juvenile fish) and Skretting Kona Pacific (adult fish). See table 1 for certain feed characteristics. For the modified permit, Ocean Era will use Cargill Aquacell Starter 5014 (juvenile) and Cargill Triton 4413 redfish feed (adult).
- **Feed Rate:** The daily feed rate for Almaco jack and red drum are approximately the same. The estimated feed rate is approximately 1% of fish body weight per day. Due to the slower growth rate and smaller harvest size, the total amount of feed used during production for the modified permit application would be approximately 49,000 lbs less than the feed amount for the 2022 permit.
- **Fish Density:** The fish density at harvest for the currently permitted and modified permit are approximately 1.3 and 1.0, respectively. The stocking density will remain at a commercial scale aquaculture density.

- **Cage Design:** Ocean Era reported that minor changes to the submersible net pen design are anticipated. The permitted net pen and the proposed cage are based on a PolarCirkel-style submersible design. The diameter of the 2022 permitted and proposed cage is 17 m and 25.5 m, respectively. The total fish rearing volume will be maintained at approximately 56,504 ft^3.
- **Cage Net Material:** The permitted net mesh material was CopperNet that uses copper alloy wire woven into chain-link fence mesh. The proposed net material is KikkoNet – a black colored, UV stabilized, and lightweight polyethylene terephthalate monofilament that is woven into a hexagonal mesh. Ocean Era reported that there is no functional difference between the two cage materials in terms of entanglement risk or other concerns. The monofilament and copper cage material have the same opening size of 40 mm. The diameter of the KikkoNet and copper net are 2.8 mm and 4 mm, respectively.
- **Mooring System:** Mooring design for the proposed cage uses eight embedment anchors compared to the permitted mooring design of three embedment anchors. The mooring design for the proposed cage also uses four ballast blocks that touch the sea floor as part of the anchoring system (which were not part of the embedment design for the 2022 permit). The estimated size of the concrete ballast blocks is 1.7 m^3 and weigh 1,750 kg.
- **Mooring Lines:** Mooring lines will be used at multiple locations. The proposed configuration uses rope or chain to create the grid system, attach anchors to the grid system, connect ballast blocks to the grid system, and connect the grid system to the cage. Additionally, there are lines that connect from the anchor system to small buoys at the water surface to mark the location of anchors and show the grid boundary. Overall, the lines used for the proposed stationary cage system result in increased length of at least 4,750 ft. All ropes and lines are two inches in diameter.
- **Operational footprint:** When accounting for the mooring system, lines, and anchorages, the currently permitted swivel mooring produced a project footprint of approximately 11 acres. The proposed stationary grid system boundary area is approximately 23 acres.
- **Location and Water Depth**: No changes are proposed for the facility location and water depth. The proposed project would be placed in the Gulf at an approximate water depth of 130 ft, generally located 45 miles southwest of Sarasota, Florida.
- **Drugs:** Ocean Era is not proposing any changes to the drugs or therapeutants used during fish production. As currently permitted, Ocean Era does not intend to use therapeutants for the modified action, but use of therapeutants is authorized. Ocean Era reports that red drum are better suited to a stationary net pen and less likely to need therapeutants to control pathogens due to being naturally more tolerant to skin flukes.
- **Other:** Ocean Era did not report any other revisions to the modified operations.

Table 1 - Summary of Project Information

Item	Current NPDES Permit	Modified NPDES Permit
Fish Species	Almaco jack (*S. rivoliana)*	Red drum (*S. ocellatus*)
Fish Quantity		
@ stocking	20,000	20,000
@ harvest	17,000	17,000
Total Fish Production (lbs)		
Maximum (lbs)	88,000	55,000
Survival Rate (%)	85%	85%
Estimated (lbs)	74,800	46,750
Harvest Fish Size (lbs)	4.4	2.75
Harvest Fish Density (lbs/ft^3)	1.3	1.0
Fish Feed (Juvenile)		
Manufacturer and Name	EWOS Marine Juvenile	Cargill Aquaxcel Starter 5014
Feed Rate (% fish body wt)	~1%	~1%
Protein (%)	50	50
Phosphorus (%)	1.4	1.0
Nitrogen (%)	8.0	8.0
Fish Feed (Adult)		
Manufacturer and type	Skreeting Kona Pacific	Cargill Triton 4413
Feed Rate (% fish body wt)	~1%	~1%
Protein (%)	41	44
Phosphorus (%)	1.2	1.0
Nitrogen (%)	6.56	7.04
Total Estimated Load @ Max Production		
Total Feed Amount (lbs)	175,320	126,210
Phosphorus (lbs)	2,104	1,262
Nitrogen (lbs)	14,026	10,097
Solids (lbs)	61,345	44,161
Total Ammonia Nitrogen (lbs)	6,899	5,330
Cage Information		
Cage Type	PolarCirkel-style	PolarCirkel-style
Mooring Type	swivel	stationary
Rearing Volume (ft^3)	56,504	56,504
Diameter (ft)	56	84
Net material	copper	monofilament
Operational Footprint (acres)	11	23

Table 2 - Summary of Mooring System

Item	Current Permit		Modified Permit		Difference	
	Qty	Length (ft)	Qty	Length (ft)	Qty	Length (ft)
Embedment anchors	3	-	8	-	+5	-
Concrete nodes	-	-	4	-	+4	-
Mooring chain/line	3	787	8	3,306	+5	+2,519
Mooring rope	3	394	-	-	-3	-394
Bridle lines	3	295	8	1,128	+5	+833
Node block to buoy	-	-	4	328	+4	+328
Grid line	-	-	4	787	+4	+787
Anchor to buoy line	-	-	8	656	+8	+656
Total	**12**	**1,476**	**44**	**6,205**	**35**	**+5,123**

5.0 EPA's Determination to Approve Ocean Era's Request to Modify the NPDES Permit

The 2022 permit is based on the information that was provided in the application and supporting materials submitted to and collected by EPA during the permitting process. The 2022 permit record described the production of Almaco jack, which was disclosed in the application process and analyzed in the permit record. Ocean Era disclosed a new pollutant (red drum) in its modified application because escapement of cultured fish is considered a pollutant as a "biological material" under the CWA and NPDES implementing regulations.[2] The potential impacts of red drum escapes into the Gulf of America are a discharge that was not previously analyzed in the existing permit record. Accordingly, the incidental release of red drum due to fish escapes is not authorized under the current permit. Further, certain culture related characteristics (i.e., fish feed, fish growth rates, pathogens, etc.) should be considered when growing a different fish species, and these changes could alter the nature and/or volume of pollutants discharged. EPA seeks to ensure that the permit record reflects an analysis of the changes in the revised operations.

Additionally, although the change in facility design would not likely have a significant effect on the nature or volume of pollutants discharged, it could alter the interaction of the facility with protected species under the Endangered Species Act (ESA) or protected habitats under the Essential Fish Habitat (EFH) provisions of the Magnuson-Stevens Act. The potential change in interactions with protected species or fish habitat may necessitate further review of EPA's existing ESA and EFH evaluations, determinations, and consultations.

On September 25, 2024, EPA requested guidance from NMFS about whether a supplemental EFH consultation is necessary. On September 25, 2024, NMFS determined that the proposed revisions to the facility would only have minimal effects on marine fishery resources, no EFH conservation recommendations were necessary, and that supplemental EFH consultation is not necessary.

With respect to species within NMFS jurisdiction, EPA decided to reinitiate informal consultation with NMFS under ESA's Section 7 implementing regulations at 50 CFR 402.16(a)(2) and (3). On December 23, 2024, EPA reinitiated an expedited informal consultation under FWCA and ESA Section 7 based on new information that became available from Ocean Era making modifications to the aquaculture facility. EPA and USACE determined that the modifications to the proposed activity are "not likely to adversely affect" some species and critical habitats and have "no effect" to other species or critical habitats that are relevant to the proposed action under ESA in the action area. On February 18, 2025, NMFS issued an ESA concurrence letter that stated, "the proposed action is not likely to adversely affect the NMFS ESA-listed species and/or designated critical habitat." On February 18, 2025, NMFS also determined that under the FWCA that adverse effects that might occur on marine and anadromous fishery resources would be minimal and NMFS did not object the issuance of the permit under FWCA.

The permit modification process also allowed EPA an opportunity to coordinate, as necessary, with state and federal agencies to determine if the facility and operational changes affect decision-making under the Coastal Zone Management Act (CZMA), National Environmental Policy Act (NEPA), Fish and Wildlife Conservation Act (FWCA), and National Historic Preservation Act (NHPA).

[2] Living organisms can be pollutants when they fall within the CWA definition of biological materials, and their release has the potential to affect the quality and health of surrounding waters and ecosystems. See Nw. Envtl. Advocates v. U.S. EPA, 537 F.3d 1006, 1021 (9th Cir. 2008) (holding that in the context of ballast water discharged from ships, "the term 'biological materials' includes invasive species"); Nat'l Wildlife Fed'n v. Consumers Power Co., 862 F.2d 580, 583, 586 (6th Cir. 1988) (holding entrained fish redistributed from a dam's turbine system in Lake Michigan were biological materials within the Act's definition of pollutants, but were not added to Lake Michigan since they came from the Lake originally and were merely being "redistributed" by the turbine system); U.S. PIRG v. Atlantic Salmon of Maine, LLC, 215 F. Supp. 2d 239, 247 (D. Maine 2002) (holding that the release of non-native salmon constitutes the addition of a pollutant).

Of the 18 reasons listed as causes for permit modifications within 40 CFR 122.62(a), it is EPA's determination that cause exists to modify the permit based on the project alterations that occurred after permit issuance (40 CFR 122.62(a)(1)) and new information being received that was not available when the permit was issued in 2022 (40 CFR 122.62(a)(2)).[3] EPA notes that a permit modification processed under 40 CFR 124.5 only allows the conditions that are modified to be reopened when a new permit is prepared (see 40 CFR 122.62 and 40 CFR 124.5(c)(2)).

The proposed project modifications are not eligible for a minor modification because a change in authorized pollutants is not included within the narrow list of changes eligible for processing as a minor modification under 40 CFR 122.63.

6.0 Revisions to the Modified NPDES Permit

All conditions of the 2022 permit and the modified permit remain the same except for the following revisions to the modified permit:

1. The maximum fish production level has been reduced from 88,000 lbs to 55,000 lbs on the cover page of the modified Permit and in Part II.B.14;
2. The cultured fish species (red drum) has been included in Part II.A of the modified Permit;
3. Considering Ocean Era's decision to use a material other than copper for the net pen, effluent monitoring for total copper has been removed from Table 1 of modified Permit Part II.A.1; and
4. A prohibition on the intentional or negligent release of produced fish is included as a clarification in the modified Permit Part II.B.15.
5. A condition was added to Part II.B.16 to require the permittee to conduct and provide to EPA a site-specific dynamic analysis of the SeaProtean pen and mooring system at least 60-days prior to installation of any equipment.

7.0 Clean Water Act Section 401

CWA Section 401 provides states and authorized tribes with a tool to protect the quality of their waters from adverse impacts resulting from the operation of federally permitted projects. Under CWA Section 401, a federal agency cannot issue a permit or license for an activity that may result in a discharge to waters of the United States until the state or tribe where the discharge originates has granted or waived Section 401 certification. CWA Section 401(a)(2) also requires EPA to notify a neighboring state when a discharge for which certification is being requested may affect the quality of waters of that state(s).

Based on the location and nature of the proposed discharge, EPA determined for the 2022 permit that the discharge will not affect any neighboring state or tribal waters in the Gulf of America and that a CWA Section 401 certification was not required. The modified permit application does not change the discharge in a material

[3] 40 CFR § 122.62(a) Causes for modification. The following are causes for modification but not revocation and reissuance of permits except when the permittee requests or agrees. (1) Alterations. There are material and substantial alterations or additions to the permitted facility or activity (including a change or changes in the permittee's sludge use or disposal practice) which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit. (2) Information. The Director has received new information. Permits may be modified during their terms for this cause only if the information was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and would have justified the application of different permit conditions at the time of issuance. For NPDES general permits (§ 122.28) this cause includes any information indicating that cumulative effects on the environment are unacceptable. For new source or new discharger NPDES permits §§ 122.21, 122.29), this cause shall include any significant information derived from effluent testing required under § 122.21(k)(5)(vi) or § 122.21(h)(4)(iii) after issuance of the permit.

way that would alter EPA's determination that the permit will not affect any state or tribal waters. In fact, the production of fish and pollutants associated with the discharge are decreasing in magnitude and severity. Based on a review of the modified application and other relevant information, EPA determined that a CWA Section 401 certification for the modified permit is not required.

8.0 Clean Water Act Section 403

All NPDES permitted discharges into the territorial sea, the waters of the contiguous zone, or the oceans must be consistent with the Ocean Discharge Criteria (ODC) promulgated by EPA pursuant to the CWA Section 403. Consequently, NPDES permits can require any necessary limits that are consistent with EPA's ODC. The implementing regulations of the ODC (40 CFR Subpart M) "establishes guidelines for issuance of NPDES permits for the discharge of pollutants from a point source into territorial sea, the contiguous zone and the oceans" to prevent unreasonable degradation of the marine environment. Unreasonable degradation of the marine environment is defined in 40 CFR 125.121(e) as:

1. Significant adverse changes in ecosystem diversity, productivity and stability of the biological community within the area of discharge and surrounding biological communities;
2. Threat to human health through direct exposure to pollutants or through consumption of exposed aquatic organisms; or
3. Loss of aesthetic, recreational, scientific, or economic values which is unreasonable in relation to the benefit derived from the discharge.

The 2022 NPDES Permit

The ODC evaluation for the 2022 permit was partially based on EPA and NOAA's National Center for Coastal and Ocean Science (NCCOS) water quality and depositional modeling that estimated the pollutant loading to the surrounding marine environment. The analysis included water quality impacts related to HABs such as nutrients, organic enrichment impacts to the seafloor sediments and benthic communities, estimated water current magnitude and direction, dilution availability, and solid and dissolved waste impacts. NCCOS modeled the proposed project under the 2022 permit for three scenarios: (1) one year production with a constant fish biomass of approximately 80,000 lbs; (2) one year production with a constant fish production of approximately 160,000 lbs; and (3) five years under a maximum fish production assuming the cage had a constant biomass of about 80,000 lbs. For the 2022 permitted facility, all the modeled scenarios used fish production amounts greater than the actual number of fish produced in the cultured system.

The deposition modeling results concluded that accumulation of wastes following a one-year production cycle, even when doubling fish production amounts, would likely not be distinguishable from background levels of organic carbon. Even when the period of discharge was increased to the full five-year NPDES permit term for a constant daily biomass of 80,000 lbs, the modeling report indicated that the proposed project "will not likely have a discernable impact on benthic communities around the project location" and that the project "will present challenges for monitoring and detecting environmental impacts on sediment chemistry or benthic communities because of the circulation around the project location and the small mass flows of materials from the net pen installation."

The 2022 permit contains ODC-related conditions to protect the surrounding ocean environment such as a comprehensive environmental monitoring plan, fish health certification from a licensed veterinarian prior to stocking, and a prohibition on causing unreasonable degradation. Due to the relatively small amount of fish produced, the volume and constituents of the discharged material are not considered sufficient to pose a

significant environmental threat. EPA's ODC Evaluation for the facility covered by the 2022 permit determined that sufficient information exists to conclude that the discharge from the marine aquaculture facility would not cause unreasonable degradation of the marine environment in accordance with 40 CFR 125.123(a). More information can be found in the ODC Evaluation prepared for the 2022 permit.

Proposed NPDES Permit Modification

As documented in Section 4, the overall scale of discharge-related pollutant pathways evaluated (fish species, fish production, feed rate, nutrients, solids, etc.) are decreasing. Therefore, all pollutant loadings, including the nutrient load and water column concentrations of nitrogen and phosphorus, will be reduced. Further pollutant monitoring will be performed during the permit term for the pollutants that were considered. The facility will still be subjected to strong and constant currents capable of assimilating and dispersing solids and nutrients without adverse effects. Furthermore, the 2022 permit and the modified NPDES permit contains a condition that requires the permittee to stay 500 meters away from any hard bottom habitat to minimize the risk of deposition impacting hard bottom habitats.[4]

The water quality and depositional modeling performed for pollutants considered in the 2022 permit remains applicable to the proposed permit modification due to the assumptions used in the modeling calculations or software. The model software that NCCOS used (DEPOMOD and New DEPOMOD) for the 2022 permit did not allow the cage to move in space or time on a swivel, therefore, the model was executed at a fixed location like the proposed aquaculture system in the modified NPDES permit action. Instead of using the fecal settling velocity for Almaco jack in the 2022 permit modeling, salmonid fecal settling velocity was used for the 2022 permit modeling because salmonids are well studied, validated, and allowed for a maximum benthic impact assessment due to salmon having increased fecal settling velocities. The feed settling velocity (9.50 cm/s) and the fecal particle settling velocity (0.64 cm/s) used in the 2022 permit model simulations falls within the range of feed settling velocity (3.67 – 15.68 cm/s) and fecal particle settling velocity (0.17 – 5.24 cm/s) for red drum in a recent study.[5] The feed digestibility of 85% that was used for the 2022 permit model remains within range for red drum feed digestibility and are consistent with marine farm waste model methods.[6]

The changes to the facility under the modified permit's discharge do not affect EPA's ODC Evaluation that was prepared for the 2022 permit. EPA has determined that the modified permit would not cause unreasonable degradation of the marine environment and that no changes to the ODC evaluation conducted for the 2022 permit are needed.

9.0 Other Federal Laws Applicable to NPDES Permits

This section addresses additional federal laws, other than the CWA, that EPA should consider when drafting an NPDES permit. The NPDES regulations at 40 CFR 122.49 include a discussion of how some of the laws described below relate to the federal NPDES program.

9.1 Federal Coordination and Lead Agency Determination

[4] Modeling indicated that a 500-meter buffer area from the proposed facility was sufficient to protect hard bottom habitats in the area surrounding the proposed farm. EPA notes that the baseline environmental survey conducted at the site showed that hardbottom habitat was likely not present.

[5] Chary, K., Callier, M.D., Coves, D., Aubin, J., Simon, J., and Fiandrino, A. 2021. Scenarios of fish waste deposition at the sub-lagoon scale; a modelling approach for aquaculture zoning and site selection. ICES Journal of Marine Science (2021), 78(3), 922-939. DOI:10.1093/icesjms/fsaa238

[6] Gaylord, T.E., Gatlin, D.M. 1996. Determination of digestibility coefficients for various feedstuffs for red drum (*sciaenops ocellatus*). Aquaculture 139, 303-314. DOI:10.1016/0044-8486(95)01175-7

Certain consultations and environmental evaluations require or allow a designated lead agency when the proposed action involves more than one federal agency. For example, the NEPA regulations require a lead agency for the preparation of an environmental assessment (EA) when more than one federal agency proposes or is involved with the same action (see 40 CFR 1501.7). Additionally, the ESA and EFH consultation and conference responsibilities allow a lead agency pursuant to 50 CFR 402.07[7] and 50 CFR 600.920(b),[8] respectively. Using lead agencies during these environmental reviews promotes efficiency and consistency. The FWCA does not require or suggest a lead agency for consultations involving multiple agencies for the same action.

The 2022 NPDES Permit

Given that the action of authorizing the proposed project involved more than one federal agency, EPA elected to act as the lead agency to complete the NEPA review as well as the action agencies' ESA and EFH consultation responsibilities. EPA's decision to act as the lead agency was also informed by the 2017 Memorandum of Understanding for Permitting Offshore Aquaculture Activities in Federal Waters of the Gulf of America that was effective during the 2022 NPDES permit issuance for seven federal agencies with permitting or authorization responsibilities. EPA notified NMFS that EPA is acting as the lead agency. NMFS and USACE were cooperating or co-federal agencies for these environmental reviews.

Proposed NPDES Permit Modification

The modified NPDES permit remains subject to multiple federal actions (NPDES and Section 10 permitting actions), therefore, EPA elected to maintain the lead federal agency roles for NEPA, ESA, and EFH. [9] On November 2, 2023, NMFS and USACE were informed by EPA that it will serve as the lead agency for any subsequent EA revisions or analysis, if necessary, due to proposed project modifications requested by Ocean Era, and requested that NMFS and USACE become a cooperating agency for NEPA if additional analysis is needed to evaluate potential effects with the proposed modification. These letters also notified the NMFS and USACE that EPA will maintain the lead agency role for ESA and EFH if re-initiating the consultations are required. On November 3, 2023, NMFS and USACE accepted EPA's lead role for NEPA, ESA, and EFH while also acknowledging that they will operate as cooperating agencies under NEPA.

9.2 Endangered Species Act

Interagency consultation and coordination with the NMFS and the USFWS is required by ESA Section 7 to insure that any action authorized, funded, or carried out by an action agency is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of any designated critical habitat (ESA Section 7(a)(2)), and confer with the NMFS and USFWS on any agency actions that are likely to jeopardize the continued existence of any species that is proposed for listing or result in the destruction or adverse modification of any critical habitat proposed to be designated (ESA Section 7(a)(4)). Additionally, the implementing regulations for the CWA related to the ESA require EPA to ensure, in consultation with the NMFS

[7] 50 CFR § 402.07 allows a lead agency: "When a particular action involves more than one Federal agency, the consultation and conference responsibilities may be fulfilled through a lead agency. Factors relevant in determining an appropriate lead agency include the time sequence in which the agencies would become involved, the magnitude of their respective involvement, and their relative expertise with respect to the environmental effects of the action. The Director shall be notified of the designation in writing by the lead agency."

[8] 50 CFR § 600.920(b) allows a lead agency: "If more than one Federal agency is responsible for a Federal action, the consultation requirements of sections 305(b)(2) through (4) of the Magnuson-Stevens Act may be fulfilled through a lead agency. The lead agency should notify NMFS in writing that it is representing one or more additional agencies."

[9] The NPDES permit at issue is exempt from NEPA requirements, but EPA elected to voluntarily prepare an environmental assessment of impacts and alternatives in accordance with its Policy for Voluntary Preparation of NEPA Documents, 63 FR 58045 (Oct. 29, 1998).

and USFWS, that "any action authorized by EPA is not likely to jeopardize the continued existence of any endangered or threatened species or adversely affect its critical habitat."[10]

The 2022 NPDES Permit

A biological evaluation (BE) was prepared by EPA and USACE to jointly consider the potential direct, indirect, and cumulative effects that the proposed actions may have on listed and proposed species as well as designated and proposed critical habitat, and to assist the action agencies in carrying out their activities for the proposed action pursuant to ESA Section 7(a)(2) and ESA Section 7(a)(4). EPA and USACE reviewed the proposed activity and determined that a BE was appropriate to evaluate the scope of the proposed project. The action agencies considered the potential effects to threatened and endangered species from five groups of species: birds, fish, invertebrates, marine mammals, and reptiles. EPA and USACE concluded that the proposed project's potential threats (disturbance, entanglement, vessel strike, water quality) to ESA-listed species and critical habitat are highly unlikely to occur or extremely minor in severity; therefore, the potential effects to ESA protected species and critical habitats are extremely unlikely to occur.

On August 13, 2019, EPA and USACE provided the jointly developed BE to USFWS. EPA and USACE determined that the discharges authorized by the NPDES permit will have "no effect" on any federally listed species, proposed species, or critical habitat for sea birds that are under the jurisdiction of the USFWS and within the proposed action area. On August 27, 2019, the USFWS provided notification that it did not object to the permit issuance for the proposed project and had no additional comments.

On August 13, 2019, EPA and USACE provided the jointly developed BE to NMFS and initiated consultation with the NMFS. Regarding federally listed species, proposed species, and critical habitat under the jurisdiction of NMFS, EPA and USACE determined that the discharges authorized by the NPDES permit "may affect but [are] not likely to adversely affect" certain fish, invertebrates, marine mammals, and reptiles within the proposed action area. On September 30, 2019, NMFS concurred with some of the "not likely to adversely affect" determinations made by the federal action agencies with respect to some species and revised the determinations to "no effect" for other species.

Completion of the informal consultation with USFWS and NMFS satisfied EPA's obligations under ESA Section 7(a)(2) for the 2022 permit NPDES permit. More information about the ESA consultation, including the BE and consultation coordination documents are provided in the EA.

Additional Analysis Conducted by NMFS After the 2022 NPDES Permit was Issued

Following the final NPDES permit issuance in 2022, NMFS issued a letter of concurrence (LOC) that amended the consultation record to add a late-arriving action agency and to include additional relevant information related to the project's potential impacts. The LOC did not change NMFS's determination that the Ocean Era project is not likely to adversely affect any listed or proposed species or designated or proposed critical habitat. The LOC included an additional analysis on (1) the project-related vessel route between the marina and farm location; (2) potential route of effects to species from vessel strikes associated with the project and from non-project vessels

[10] 40 CFR § 122.49: The following is a list of Federal laws that may apply to the issuance of permits under these rules. When any of these laws is applicable, its procedures must be followed. When the applicable law requires consideration or adoption of particular permit conditions or requires the denial of a permit, those requirements also must be followed. … (c) The Endangered Species Act, 16 U.S.C. 1531 et seq. section 7 of the Act and implementing regulations (50 CFR part 402) require the Regional Administrator to ensure, in consultation with the Secretary of the Interior or Commerce, that any action authorized by EPA is not likely to jeopardize the continued existence of any endangered or threatened species or adversely affect its critical habitat.

due to a potential increase in recreational or commercial traffic near the facility; (3) potential effects of the aquaculture facility acting as a fish aggregating device that could lead to behavioral changes, increased predation, and increased bycatch; and (4) the potential risk of harmful algal blooms (HAB) from the project on listed species. Because all potential project effects to listed species were found to be extremely unlikely to occur, NMFS reiterated their concurrence with the EPA and USACE assessment that the proposed action is not likely to adversely affect any listed species or designated critical habitat (see appendix).

Proposed NPDES Permit Modification

According to 50 CFR 402.16, a federal agency is required to reinitiate ESA Section 7 consultation if any one of four thresholds are triggered.[11] EPA, as the lead agency, evaluated the triggers as described below:

1. **If the amount or extent of taking specified in the incidental take statement is exceeded. (50 CFR 402.16(a)(1))**
   Incidental take refers to takings of ESA species that result from, but are not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or applicant. The proposed project is not subject to an incidental take statement, and no incidental take is expected or allowed. ESA consultation reinitiation is not required based on this trigger.

2. **If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered. (50 CFR 402.16(a)(2))**
   EPA and USACE evaluated the potential impacts to listed species and critical habitat in the 2020 BE. The risks to ESA-listed species and critical habitat that was considered during the 2022 permit were water quality, disturbance, vessel strike, and entanglement. The additional analysis conducted by NMFS in 2022 further potential impacts related to HABs, fish aggregation devices, and vessel strikes. The routes of effects and potential impacts to listed species and critical habitat for the modified action are presented below.

   <u>Potential Effects to Listed Species</u>

   Water Quality

   All potential water quality risks associated with the modified permit are less when compared to the 2022 permit due to the change in fish species, decreased fish production amount, lower total feed, and reduced phosphorus and nitrogen feed contents. As shown in Table 1, the total load for nitrogen, phosphorus, and total ammonia nitrogen have decreased by 28%, 40%, 23%, respectively. EPA does not anticipate that the modified project's discharge will contribute to HABs due to the offshore location and scale of the facility; however, any HAB effects from the project are mitigated by the reduced scale of pollutants compared to pollutants that were already evaluated in the 2022 permit record.

[11] 50 CFR 402.16: Reinitiation of consultation: (a) Reinitiation of consultation is required and shall be requested by the Federal agency, where discretionary Federal involvement or control over the action has been retained or is authorized by law and: (1) If the amount or extent of taking specified in the incidental take statement is exceeded; (2) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (3) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion or written concurrence; or (4) If a new species is listed or critical habitat designated that may be affected by the identified action.

Ocean Era indicated that the netting material would need more regular cleaning unlike the previous cage material proposed.[12] More frequent cleanings may temporarily increase floating biosolids or turbidity in the water surrounding the cage for a short duration directly after the cage cleaning. Because the listed species in the action area are highly mobile, and the time of increased turbidity in the water column will be very short, the effects of cage cleaning will be insignificant. The net material allows for more efficient cleaning that allows an increased cleaning frequency which can further control biofouling.

The revised fish species (red drum) is native to the Gulf of Mexico that has historically supported commercial and recreational fisheries. Similar to the fish species that were evaluated during the 2022 permit issuance (Almaco jack), red drum will be the first-generation offspring of wild-caught red drum in the vicinity of the facility. NPDES permit conditions limiting fish escapes have been further clarified by the modified permit's express condition prohibiting the intentional or negligent release of cultured fish.

Other biological materials such as pathogens that are considered pollutants under the NPDES program were previously assessed. The draft modified permit maintains conditions to reduce the probability of fish contracting diseases and limit pathogen transfer such as a veterinarian certificate attesting to fish health, and best management practices to prevent and minimize the indirect transfer or discharge of aquaculture pathogens. Ocean Era reports that red drum are more tolerant to skin flukes than Almaco jack and will be better suited for a stationary culture system. Additionally, the netting is a smooth non-fibrous material that minimizes the development of biofouling marine benthic fauna on its surface. By limiting the amount of biofouling on the cage, the cultured fish receive increased water flow that maintains water quality levels that are optimal for fish health. The promotion of disease prevention practices within the cage decreases the transfer risk of pathogens or diseases to native fish outside of the culture system.

The usage of certain drugs or therapeutants is allowed for freshwater and marine aquaculture under the NPDES program, and under the 2022 permit and draft modified permit. The draft modified NPDES permit contains monitoring and reporting provisions for all drugs and chemicals used because Ocean Era previously identified three drugs as potential candidates (hydrogen peroxide, oxytetracycline dihydrate, and florfenicol) should the need for drug usage arise. Drug treatment usage is mitigated or minimized by the strong open ocean currents that will constantly flush the fish culture area, the properties of the net mesh material that minimizes biofouling, and the lack of nearby aquaculture facilities that increase the risk of disease and pathogen transmission. Additionally, the operational practices mentioned previously regarding pathogen control (e.g., regular maintenance and cleaning of the cage, monitoring effluent water quality, fish health monitoring) help minimize therapeutant usage.

Vessel Strike and Disturbance

Ocean Era is not proposing more vessels or more trips to the facility for the modified action. Vessel traffic from boats not associated with Ocean Era are estimated to be similar to that

[12] On October 10, 2024, Ocean Era proposed more regular cleaning of the net pen to occur "approximately biweekly for the first 6 months, then increasing the cleaning (as needed) to potentially weekly for the last 6 months." EPA has not approved any revised BMPs that may contain updated operational practices that may be documented within the PSMP that is approved by NMFS.

previously evaluated. Ocean Era has also not reported any operational changes that bear on the previous analysis conducted for disturbance to ESA-listed species. EPA has determined that the exposure routes associated with vessel strikes and disturbance will be the same as evaluated in the 2019 BE, the NMFS 2022 LOC, and the 2022 permit record. Therefore, effects due to vessel strike and disturbance from the project modifications are extremely unlikely to occur.

Fish Aggregation

There are potential risks to ESA-listed species from the proposed project acting as a fish aggregating device. As discussed above, the proposed project modification changes the cage net material from
copper alloy mesh to KikkoMesh. Copper alloy mesh has increased anti-biofouling properties over monofilament; however, KikkoNet is known to foul less than other fiber-based monofilament due to its rigidness and smooth material.[13] KikkoNet may have increased risk of biofouling than the original copper alloy mesh net material. Due to increased biofouling that may occur, fishes and sea turtles may be attracted to the cage to feed on biofouling algae and crustaceans. In an effort to reduce biofouling, the applicant has indicated that biofouling reduction strategies will be implemented (e.g., regular inspections and maintenance, brushing, pressure washing). Therefore, the increase in biofouling from the modified netting material is likely to be negligible and the effects due to fish aggregation from the proposed project modifications are insignificant.

Entanglement

Regarding entanglement concerns, the modified project will increase the operational footprint (e.g., the total area used from the water surface to seafloor), include more lines in the water column, add more structures on the seafloor, and change the primary cage netting material from copper to monofilament. The facility footprint is being increased because a stationary grid system requires an anchoring design that is different than a swivel point system as consulted on during the 2022 permit. More details about the mooring and cage design can be found in within the Section titled Summary of Proposed Changes to the Facility.

While the number of mooring lines is greater than the 2022 permitting action (see Table 2), EPA does not expect there to be an increase in effects to listed species beyond those that have previously been considered. As noted in the 2022 permit consultation, the risk of entanglement in mooring lines is reduced by using durable materials such as thick rope and steel chain that will be always maintained under tension. In the 2022 permit consultation, the applicant agreed to encase the bridle lines in rigid pipe to minimize entanglement risks because the mooring system was not designed to be in tension. Due to the proposed change in net pen mooring from a swivel mooring to a grid mooring system, the bridle lines will no longer be slack during the fish farming operation. A 2023 global review of aquaculture entanglements found that tensioning of mooring lines decreases risks from entanglement while also noting that there are instances of marine mammal physical interactions that result in fatal entanglements at offshore finfish farms.[14] The only time that some lines may be slack is when the cage is raised and lowered (e.g.,

[13] Lowell, J.M.S. 2012. Effect of netting materials on fouling and parasite egg loading on offshore net pens in Hawaii. Final Report, Blue Ocean Mariculture (2012), pp. 1-5. < https://internationalcopper.org/wp-content/uploads/2017/05/Trematode-Study.pdf >

[14] Bath G.E., Price C.A., Riley K.L., Morris J.A. Jr. 2023. A global review of protected species interactions with marine aquaculture. Review in Aquaculture; 1-34. doi:10.1111/raq.12811

maintenance or storm events). As the applicant has agreed to implement a protected species monitoring plan, farm workers will be able to monitor for any listed species interactions during most situations that the cage is being raised and lowered. The entanglement risks that are associated with an increased quantity of gear are mitigated by the stationary grid system that will be maintained under tension to reduce the risk of entanglement to listed species and marine mammals. Therefore, the addition of mooring lines will not increase the risk of entanglement to any listed species and the effects from entanglement due to the project gear modifications are insignificant.

Regarding entanglement risks related to the net material (KikkoNet) – it is a hard plastic chain-link material that is highly predator resistant and withstands oceanic conditions for several years. The KikkoNet material has a long history of being used in marine aquaculture internationally. Unlike woven monofilament netting, KikkoNet is a UV stabilized polyethylene terephthalate monofilament. KikkoNet is kept in tension and is rigid like the previous copper alloy mesh netting considered in the 2022 permit consultation. A previous EA[15] and biological opinion[16] evaluated the usage of advanced monofilaments like KikkoNet in marine aquaculture and found that its rigidness offers lower risk of entanglement of marine mammals and helps prevent cage breaches. In open ocean environments, the net material is kept in tension which reduces the likelihood of entanglement. In addition, the KikkoNet proposed is the same mesh size as the original proposed mesh size (40mm). The risk of entanglement, particularly by sea turtles, in the mesh netting is unchanged from the 2022 permit consultation. Furthermore, Ocean Era is required to develop operational practices (e.g., net pen inspections, routine net maintenance, debris removal, and monitoring of net pen thickness material) that ensures structural integrity and limits the risk of entanglement.[17] Therefore, the permit modification associated with changing the net material will not increase the risk of entanglement to any listed species and the effects due to the project modification are insignificant.

The length of time the facility will be deployed, and the small-scale nature of the system, are additional factors that make entanglement impacts to ESA-listed species highly unlikely to occur or extremely minor in severity. The gear changes associated with the modified project will not pose any increased effects to ESA-listed species and critical habitat beyond those previously evaluated. Additionally, Ocean Era will use a PSMP throughout the permit term that was developed in coordination with NMFS to protect and monitor for any protected species and collect data on potential interactions between aquaculture facilities and protected species.

Marine Debris

The use of KikkoNet netting material instead of copper alloy mesh may introduce plastic particles into the marine environment due to the natural wear and tear of the mesh netting over

[15] State of Hawaii. 2009. Final Environmental Assessment/Finding of No Significant Impact for HA-3497. State of Hawaii, Department of Land and Natural Resources. < https://files.hawaii.gov/dbedt/erp/EA_EIS_Library/2009-05-08-HA-FSEA-Kona-Blue-Water-Aquafarm.pdf >

[16] NMFS. 2022. Endangered Species Act (ESA) Section 7(a)(2) biological Opinion for authorization to install new net pens and ongoing, revised mariculture operations by Blue Ocean Mariculture, LLC. NMFS File No. PIR-2018-10334.

[17] Ocean Era is required to monitor the structural integrity of the system pursuant to NPDES permit. Ocean Era has proposed in the PSMP to regularly monitor the strength of the net pen material that includes measuring the width of the netting. When any netting is measured to be less than 1.4 mm due to degradation or material elongation, the fish will be removed, and the net pen will be retired. Net pen material replacement is unlikely given the 1-year duration of cage deployment. EPA has not approved any revised BMPs that may contain updated operational practices that may be documented within the PSMP that is approved by NMFS.

time. While the KikkoNet mesh is known to be very durable for extended periods of time, there is the potential for some amount of wear and tear which may lead to plastic entering the water column. However, due to the durability of the netting, regular netting inspections, and the short time span of the project (only one year), the effects from natural wear and tear of the KikkoNet to listed species is expected to be insignificant on ESA-listed species.

Potential Effects to Critical Habitat

The proposed project does not overlap with any critical habitats. Therefore, the modified project modifications will not have any effect on any critical habitats.

Based on the foregoing, there is a limited amount of new information related to the revised project cage material, increased gear, and changed fish species that was not previously considered by EPA, USACE, NOAA Sea Grant, or NMFS. EPA elected to reinitiate informal consultation based on new information being available that was not previously considered under 50 CFR 402.16(a)(2).

3. **If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion or written concurrence. (50 CFR 402.16(a)(3))**

A *biological opinion* is a document that provides the opinion of the service(s) as to whether the federal action is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. A biological opinion was not prepared by NMFS or USFWS for the 2022 permit because a "may affect, likely to adversely affect" determination was not made. NMFS and USFWS used the 2019 BE as the basis for not preparing a Biological Opinion on the proposed federal actions and did not identify any reasonable and prudent measures to minimize any take incidental to otherwise lawful activities.

The NPDES permit's proposed modifications are described in the project summary section. The proposed modifications are not anticipated to cause an effect to listed species or critical habitat. All routes of exposure that were analyzed in the 2019 BE remain appropriate. However, some details associated with subsequent modifications to the proposed project (see item 2 above) may not have been previously considered in evaluating potential impacts to ESA species and habitat. In order to ensure that all project revisions that were not previously evaluated in NMFS's written concurrence that may cause an effect to ESA-listed species or critical habitat are properly considered in the ESA consultation process, EPA reinitiated informal consultation based on 50 CFR 402.16(a)(3).

4. **If a new species is listed or critical habitat designated that may be affected by the identified action. (50 CFR 402.16(a)(4))**

EPA has identified and evaluated below the endangered and threatened species and critical habitats that have been listed or proposed to be listed since the 2022 permit issuance. Other than the listings identified, there are no new or proposed species listings or critical habitat designations that could be affected by the modified action. Based on the evaluation described below, EPA has determined that the modified action will have no effect on the following newly listed or proposed species or critical habitats. Given that the federal action agencies are making a "no effect" determination for the newly listed species and critical habitat listed below, EPA is not required to reinitiate ESA consultation with NMFS under 50 CFR 402.16(a)(4).

Queen conch (*Aliger gigas*)
On February 14, 2024, NMFS published a notice in the Federal Register (89 FR 11208) listing the queen conch as a threatened species under the ESA. The queen conch's maximum habitat depth is 30 meters; the project is located at a water depth of 40 meters. The increased quantity of anchors or ballast blocks placed on the seafloor will not have any effect on ESA-listed coral species due to the facility location being outside the conch's habitat. Additionally, the NPDES permit requires Ocean Era to stay 500 meters away from any hardbottom habitat. EPA and USACE have determined that this project would have no effect on the queen conch based on the project location being outside the queen conch's habitat range.

Nassau grouper (*Epinephelus striatus*)
Critical habitat for the threatened Nassau grouper was designated effective February 1, 2024 (89 FR 126). The 920 miles2 of critical habitat for the Nassau grouper was in various locations in the Atlantic Ocean and southern portions of Gulf of Mexico. The proposed project is not located near the designated critical habitat; therefore, there is no effect on the Nassau grouper critical habitat.

Rice's whale (*Balaenoptera ricei*)
NMFS proposed to designate critical habitat for the Rice's whale within the Gulf of Mexico on July 24, 2023 (88 FR 47453). The waters from the 100-meter isobath to the 400-meter isobath were identified as the core distribution area that informed the proposed critical habitat designation. The proposed project is located well-inshore of the 100-meter bathymetry boundary in approximately 40-meters of water depth. Therefore, there will not be any direct impacts such as entanglement, from the proposed project as previously considered, or the proposed project modification to the proposed Rice's whale critical habitat.

The physical and biological features that are essential to support the conservation of the critical habitat are prey, marine water quality, and sufficiently quiet conditions. As analyzed in the previous consultation, the project may adversely affect water quality due to uneaten feed, ammonia excretions, fish feces, chemicals, cleaning, etc. As noted in the previous consultation, the effluent from the project will not extend more than 30-meters (0.02 miles) away from the project location. As the amount of production from the proposed project modifications is slightly decreased from the original proposal, the effluent radius is not expected to change significantly. Thirty meters from the project location is still in approximately 40-meters of water depth. Therefore, any water quality effects from the project are not expected to extend into the proposed critical habitat for Rice's whales. In addition, as this is a one cage one year demonstration project, the water quality effects are expected to be short-lived. Therefore, there will not be any expected impacts from this proposed project, including the project modification to the water quality feature of the proposed Rice's whale critical habitat. A similar lack of effects is expected to the prey feature of the proposed critical habitat. This project also will not have any effects on the quiet conditions feature, as any sound associated with the project will be well inshore of the 100-meter bathymetry boundary of the proposed critical habitat.

Therefore, since the facility is not located near the proposed Rice's whale critical habitat and will have no effect on the proposed physical and biological features, there will be no effects from the project to the proposed Rice's whale critical habitat. EPA notes that this effects determination for proposed Rice's whale critical habitat does not change the "not likely to adversely affect"

determination made for the Rice's whale (see NMFS's determination for the 2022 permit NPDES permit).

Green sea turtle (*Chelonia mydas*)
On July 19, 2023, NMFS proposed to designate new areas of critical habitat for the Green sea turtle in nearshore waters (from the mean high-water line to 20 meters depth) off the coasts of Florida, Texas, and other areas within the Atlantic and Pacific Oceans (88 FR 46572). The essential features that are needed in specific areas to support the life-history needs of the Green sea turtle are not impacted based on the modified project being outside of the 20-meter isobath. There are no expected effects from the proposed project on the proposed green sea turtle critical habitat because the newly proposed critical habitat areas are inshore of this project.

Pillar coral (*Dendrogyra cylindrus*)
NMFS proposed to change the status of pillar coral from threatened to endangered due to multiple threats to the species on August 29, 2023 (88 FR 59494). The increased quantity of anchors or ballast blocks on the ocean bottom will not have any effect on ESA-listed coral species due to the facility location being outside all known invertebrate habitat. Additionally, placement of facility related structures must stay 500 meters away from any hardbottom habitat in accordance with NPDES permit. As a result of this project not overlapping with any areas of hard bottom including pillar coral, there are no expected effects to pillar coral from this project.

Black-capped petrel (*Pterodroma hasitata*)
USFWS listed the black-capped petrel as an endangered species effective January 29, 2024 (88 FR 89611). Critical habitat for this petrel was not proposed in the listing. The FR notes that new information associated with the species' occurrence at sea indicates an expansion of the species' range within the northern Gulf of America that was not previously documented. USFWS evaluated many threats to the black-capped petrel within the listing including marine fisheries. The FR noted that it was "difficult to conclusively determine the direct and indirect impacts to black-capped petrels from marine fisheries based on the available information." As evaluated for other seabirds in the EA and BE, the submerged position of the cage should limit the visibility of fish in the cage and substantially decrease the incidents of petrel interactions with the facility. Additionally, as required by the facility's protected species monitoring plan (PSMP), project staff will suspend all water surface activities in the unlikely event that an ESA-listed seabird comes within 100 meters of the activity until the bird leaves the area.

The issuance of the modified action will likely have very minimal impacts to any black-capped petrel that may occur within the vicinity of the proposed facility and during the one-year project duration. Any potential effects from the proposed action on ESA-listed birds are discountable because the effects are extremely unlikely to occur. EPA concludes that there will be "no effect" on the endangered black-capped petrel.

The federal action agencies determined that reinitiation of ESA Section 7 consultation with USFWS was not warranted. On September 24, 2024, EPA provided a draft justification to USFWS and requested that USFWS determine if reinitiation of ESA Section 7 consultation was necessary. USFWS determined on October 2, 2024, that EPA's responsibility under ESA Section 7 was satisfied.

As described above, with respect to species within NMFS jurisdiction, EPA decided to reinitiate informal consultation with NMFS under ESA's Section 7 implementing regulations at 50 CFR 402.16(a)(2) and (3). On December 23, 2024, EPA reinitiated an expedited informal consultation under FWCA and ESA Section 7 based on new information that became available from Ocean Era making modifications to the aquaculture facility. EPA and USACE determined that the modifications to the proposed activity are "not likely to adversely affect" some species and critical habitats and have "no effect" to other species or critical habitats that are relevant to the proposed action under ESA in the action area. On February 18, 2025, NMFS issued an ESA concurrence letter that stated, "the proposed action is not likely to adversely affect the NMFS ESA-listed species and/or designated critical habitat."

See appendix for documentation related to reinitiation of consultation with USFWS and NMFS.

9.3 Essential Fish Habitat Provisions of the Magnuson-Stevens Act

The EFH provisions of the Magnuson-Stevens Act (MSA) mandate the identification and protection of important marine habitat. Pursuant to the MSA 305(b)(2), federal agencies are required to consult with NMFS on any action that may result in adverse effects to EFH or habitats of particular concern. Federal action agencies which permit activities that may adversely affect EFH are required to consult with NMFS regarding the potential impacts of their actions on EFH and respond in writing to NMFS recommendations.

Federal agencies can use any of the five approaches within the EFH implementing regulations to fulfill the consultation requirements: use of existing environmental review procedures, general concurrence, abbreviated consultation, expanded consultation, or programmatic consultation. The approach used for handling EFH consultation depends on the nature and scope of the actions that may adversely affect EFH.

The 2022 NPDES Permit

Because the action of permitting the project that is currently covered by the 2022 permit involved more than one federal agency in the permitting process,[18] EPA acted as the lead agency to fulfill the consultation responsibilities. An EFH assessment was prepared by EPA and USACE for the 2022 NPDES permit. The EFH assessment determined that the minimal short-term impacts associated with the discharge will not result in substantial adverse effects on EFH, habitats of particular concern, or managed species within the facility area. Based on the EFH assessment, EPA included conditions in the NPDES permit to avoid or limit organic enrichment and physical impacts to habitat that may support associated hardbottom biological communities. The NPDES permit contains a condition that the facility must be positioned at least 500 meters from any hardbottom habitat.

On March 8, 2019, EPA initiated an abbreviated consultation with NMFS and provided the EFH assessment. On March 12, 2019, NMFS concurred with the EFH determination made by EPA and the USACE. After completion of consultation and receipt of NMFS's concurrence on the assessment, minor revisions were made to the EFH document that did not change the findings of the EFH assessment. On August 2, 2019, EPA provided an updated EFH assessment that included minor modifications and clarifications to NMFS for concurrence. The minor revisions did not change the EFH determination or the mitigation measures that were sent to NMFS previously. On August 23, 2019, NMFS concurred with the determination made within the EFH assessment and did not make any conservation recommendations to avoid, minimize, mitigate, or otherwise offset adverse effects on

[18] EPA issued the NPDES permit and USACE is considering issuance of a Rivers and Harbors Act Section 10 permit.

EFH resulting from actions or proposed actions. Completion of the abbreviated consultation with NMFS satisfied EPA's obligations under MSA 305(b)(2).

Proposed NPDES Permit Modification

EPA elected to act as the lead agency to fulfill EFH obligations for the federal actions (NPDES permit issuance by EPA and Section 10 permit issuance by USACE) if the project modifications require any consultations. The permittee has requested an NPDES permit modification to authorize certain changes to the project plans, including a change of fish species to be produced from Almaco jack to red drum, and a reduction in fish production level and feed rate, as described in detail above. In addition, the permittee is proposing to modify the facility/cage design. As stated previously, the EFH consultation obligations were satisfied for the 2022 NPDES permit. Federal agencies are required to reinitiate an EFH consultation with NMFS under two conditions: (1) when the permitting agency substantially revises its action in a manner that may adversely affect EFH; or (2) if new information becomes available that changes the basis for NMFS conservation recommendations.[19]

Regarding whether the modified NPDES permit is substantially revised in a manner that may adversely affect EFH, the modified permit was revised to replace Almaco jack as the fish to be cultured with red drum; this modification will result in a lower fish production level and feed rate. Additionally, the modified permit will not require water quality sampling for copper because the cage material is no longer constructed of copper. All other aspects of the modified permit will remain the same as the 2022 permit including conditions to limit nutrient enrichment and physical impacts to habitat that may support associated hardbottom biological communities and the permit requirement that the facility must be positioned at least 500 meters from any hardbottom habitat. Given that the scale of the project associated with the NPDES permit is decreasing (fish production, depositional waste, nutrient load, etc.), EPA has determined that the project modifications related to the discharge of pollutants will not adversely affect EFH.

Regarding USACE's Section 10 permit, USACE had been working on issuance of the permit in accordance with the original project plans and had been relying on the original EFH consultation from 2019, but never issued a RHA Section 10 permit for the facility. USACE is currently considering an individual Section 10 permit for the modified project proposal. The previous EFH assessment for the Section 10 authorization evaluated a similar cage design and size to the modified cage. The EFH assessment conducted for the previous anchoring and mooring system was for a cage rotating from the center connection point based on water current magnitude and direction. While the modified operation will have more anchors connecting to the seafloor and lines within the water column, the project is not substantially being altered in a way that will impact EFH. Ocean Era has characterized the seafloor surface and subsurface to site the facility away from physical and biological features, such as hard bottom habitat, where EFH could be affected. USACE permit will include a condition that will require the permittee to install the anchor system on substrate without vegetated or hardbottom habitat. USACE has determined that the EFH assessment previously conducted sufficiently covers the scope of facility modifications, and that the project changes are not a significant change that will adversely affect EFH through installation of structures in the water column or on the seafloor.

The federal action agencies believe that ecosystem diversity will be maintained, ecological productive capacity will be preserved, the marine ecosystem will retain its ability to regulate itself surrounding the project, and proposed permit modifications will not decrease the quality and/or quantity of EFH. The previous EFH

[19] 50 CFR 600.920(l): Supplemental consultation. A Federal agency must reinitiate consultation with NMFS if the agency substantially revises its plans for an action in a manner that may adversely affect EFH or if new information becomes available that affects the basis for NMFS EFH Conservation Recommendations.

assessment included an analysis of the potential adverse effects of the action on EFH and managed species (including red drum), a review of pertinent literature, and contained the federal action agencies' conclusions regarding the effects of the action on EFH. The adverse effects considered in the previous EFH assessment are commensurate with the complexity and magnitude of the potential adverse effects of the proposed action as required by 50 CFR 600.920(e)(2), and the prior assessment meets the information requirements that all EFH assessments must include according to 50 CFR 600.920(e)(3).

The project modifications do not warrant revising the final 2019 EFH Assessment that was conducted for the previously effective NPDES permit and draft RHA Section 10 permit. The new information available from the modified action does not change the project in a way that affects the basis for conservation recommendations by NMFS.

On September 25, 2024, EPA requested guidance from NMFS about whether a supplemental EFH consultation is necessary. On September 25, 2024, NMFS determined that the proposed revisions to the facility would only have minimal effects on marine fishery resources, no EFH conservation recommendations were necessary, and that supplemental EFH consultation is not necessary. More information about the EFH process and analysis for the previously issued permit can be obtained within the original EFH Assessment and the appendix to this document.

9.4 National Historic Preservation Act

NHPA Section 106 and its implementing regulations (36 CFR Part 800) require federal agencies to take into account the effects of their activities on historic properties. Additionally, EPA must adopt measures when feasible to mitigate potential adverse effects of the licensed activity on properties listed or eligible for listing in the National Register of Historic Places before issuing a NPDES permit (40 CFR 122.49(b)).[20] NHPA's requirements are to be implemented in cooperation with state historic preservation officers (SHPO) and upon notice to, and when appropriate, in consultation with the Advisory Council on Historic Preservation.

The 2022 Permit

The permittee provided a siting analysis and conducted a comprehensive baseline environmental survey that included an assessment of the seafloor and seafloor subsurface to determine if habitat and archeological resources were present at the project site. The siting analysis and survey showed that archeological resources were likely not present on or under the seafloor.

During the interagency permitting process for the project authorized under the 2022 permit, Ocean Era coordinated with the Florida SHPO to ensure compliance with NHPA. On January 3, 2019, Ocean Era submitted a NHPA consistency certification to the Florida State Clearinghouse with the Florida Department of Environmental Protection (FDEP). On February 8, 2019, the Florida SHPO found that the proposed project will not affect historic properties if the facility anchors are placed within 100 feet of the surveyed lines on the seafloor. The Florida

[20] 40 CFR § 122.49: The following is a list of Federal laws that may apply to the issuance of permits under these rules. When any of these laws is applicable, its procedures must be followed. When the applicable law requires consideration or adoption of particular permit conditions or requires the denial of a permit, those requirements also must be followed. … (b) The National Historic Preservation Act of 1966, 16 U.S.C. 470 et seq. section 106 of the Act and implementing regulations (36 CFR part 800) require the Regional Administrator, before issuing a license, to adopt measures when feasible to mitigate potential adverse effects of the licensed activity and properties listed or eligible for listing in the National Register of Historic Places. The Act's requirements are to be implemented in cooperation with State Historic Preservation Officers and upon notice to, and when appropriate, in consultation with the Advisory Council on Historic Preservation.

SHPO also recommended that the permit include an "unexpected discovery protocol" condition.[21] The appropriate permitting agency with jurisdictional oversight for an unexpected discovery protocol permit provision is the USACE; the USACE will include this provision within their Section 10 permit.

Proposed NPDES Permit Modification

The revisions to the project will result in additional structures on the seafloor; however, the baseline environmental survey showed that archaeological resources like sites, shipwrecks, and other cultural resources were likely not present in the project anchorage area. Comments from the Florida SHPO sent during the consultation for the 2022 permit stated that "should the anchoring design for the proposed project require placing ground tackle outside of the 100-foot corridors centered on the data track lines or project plans change, we request additional consultation with our office, as supplemental remote sensing surveying may be required." While the project plans have changed slightly, the revised project will still be placed within one of the four pen placement areas that were originally identified by the permittee. Each of these four placement areas are approximately 247 acres which is more than enough to accommodate the 23-acre grid.

Additionally, USACE, as the appropriate federal agency with jurisdictional oversight of structures placed on the seafloor, will include the unexpected discovery protocol within the Section 10 permit. Furthermore, the permittee will be required under the Section 10 permit to immediately notify the Florida SHPO in the event of an unanticipated discovery of an archaeological resource.

The draft modified permit was sent to the appropriate Florida SHPO and other Florida agencies during the public notice period to allow another opportunity for coordination and consultation regarding NHPA and allow the Florida agencies to identify any concerns arising from further review for the modified project. On October 24, 2024, EPA provided the draft modified permit to multiple state of Florida agencies - FDEP's Florida State Clearinghouse, FDEP's NPDES program, and the Florida Department of Agriculture and Consumer Services (FDACS). The Florida State Clearinghouse reviewed the project under multiple authorities: Presidential Executive Order 12372; § 403.061(42), Florida Statutes; the CZMA, 16 USC §§ 1451-1464; and NEPA, 42 USC §§ 4321-4347. On December 16, 2024, the Florida State Clearinghouse documented that "the State has no objections to the subject project."

9.5 Coastal Zone Management Act

Federal consistency is the CZMA requirement that federal actions and federally licensed or permitted actions that have reasonably foreseeable effects on any land or water use or natural resource of the coastal zone (also referred to as coastal uses or resources, or coastal effects) should be consistent with the enforceable policies of a coastal state's federally approved Coastal Management Plan (CMP). This is referred as the CZMA "federal consistency" provision. CZMA federal consistency review is required for projects that: (1) are proposed in or outside the coastal zone that have reasonably foreseeable effects on any land or water use or natural resource of a state's coastal zone - coastal uses and resources, the federal action, or the source of the coastal effects may be found outside of the coastal zone, and (2) require federal licenses or permits, receive certain federal funds, are a proposed activity by a federal agency, or are part of outer continental shelf plans for exploration, development, and production.

[21] The "unexpected discovery protocol" provision recommended by the Florida SHPO states "In the event that any project activities expose potential prehistoric/historic cultural materials not identified during the remote-sensing survey, operations should be immediately shifted from the site. The respective Point of Contact for regulatory agencies with jurisdictional oversight should be immediately apprised of the situation. Notification should address the exact location, where possible, the nature of material exposed by project activities, and options for immediate archaeological inspection and assessment of the site.

A private individual or business or non-federal party applying to the federal government for a required permit for a project that may have reasonably foreseeable coastal effects is subject to state CZMA federal consistency review if required by CZMA 307(c)(3)(A) and the procedural provisions of the National Oceanic and Atmospheric Administration's (NOAA) CZMA regulations at 15 CFR Part 930, Subpart D. If required by the CZMA regulations, an applicant must submit to the state's CZMA agency a "consistency certification" and other necessary data to obtain concurrence on the certification from that agency. If a state CMP objects, then EPA cannot authorize the proposed project unless the applicant files a CZMA appeal with the NOAA Administrator to override the state CMP's objection. Additionally, the implementing regulations for the CWA prohibit EPA from issuing a permit for an activity affecting land or water use in the coastal zone until the applicant certifies that the proposed activity complies with the state CMP, and the state concurs with the certification (40 CFR 122.49(d)).[22]

The 2022 Permit

FDEP is the designated Florida state CZMA agency with the authority to make CZMA federal consistency decisions for the state. On January 3, 2019, Ocean Era voluntarily submitted a CZMA consistency certification to the Florida State Clearinghouse within FDEP. On February 26, 2019, the Florida State Clearinghouse within FDEP concurred with Ocean Era's consistency certification and documented that there were no objections to the proposed project from other state agencies.[23] EPA determined that the action covered by the 2022 permit is consistent with the CZMA and its implementing regulations.

Proposed NPDES Permit Modification

There are essentially four elements for determining that an authorization from a federal agency is a "federal license or permit" subject to federal consistency review.[24] First, federal law requires that an applicant obtain a federal authorization. Second, the purpose of the federal authorization is to allow a non-federal applicant to conduct a proposed activity. Third, the activity proposed has reasonably foreseeable effects on a state's coastal uses or resources, and fourth, the proposed activity was not previously reviewed for federal consistency by the state CMP agency (unless the authorization is a renewal or major amendment pursuant to 930.51(b)).

A modified NPDES permit typically qualifies as a "major amendment" under the definition of terms in the CZMA implementing regulations that apply to federal permits, only if the modification would have substantially different coastal effects than the description or understanding of effects at the time of the original activity.[25] Additionally, these regulations provide further guidance about when an authorizing federal agency, in this case

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[22] 40 CFR 122.49: The following is a list of Federal laws that may apply to the issuance of permits under these rules. When any of these laws is applicable, its procedures must be followed. When the applicable law requires consideration or adoption of particular permit conditions or requires the denial of a permit, those requirements also must be followed. … (d) The Coastal Zone Management Act, 16 U.S.C. 1451 et seq. section 307(c) of the Act and implementing regulations (15 CFR part 930) prohibit EPA from issuing a permit for an activity affecting land or water use in the coastal zone until the applicant certifies that the proposed activity complies with the State Coastal Zone Management program, and the State or its designated agency concurs with the certification (or the Secretary of Commerce overrides the State's nonconcurrence).

[23] On January 15, 2019, the Florida Department of Agriculture and Consumer Services (FDACS) documented that the coastal consistency determination submitted by the applicant was consistent with all FDACS statutory responsibilities for aquaculture. On February 18, 2019, the Florida Fish and Wildlife Conservation Commission found that the applicant's coastal consistency determination was consistent with Florida's CMP.

[24] National Oceanic and Atmospheric Administration. 2020. CZMA Federal Consistency Overview – Section 307 of the Coastal Zone Management Act of 1972. NOAA, National Ocean Service, Office for Coastal Management. < www.coast.noaa.gov/czm/consistency/ >

[25] 15 CFR 930.51(c): The term "major amendment" of a federal license or permit activity means any subsequent federal approval that the applicant is required to obtain for modification to the previously reviewed and approved activity and where the activity permitted by issuance of the subsequent approval will affect any coastal use or resource, or, in the case of a major amendment subject to § 930.51(b)(3), affect any coastal use or resource in a way that is substantially different than the description or understanding of effects at the time of the original activity.

EPA, determines whether a project modification is a “major amendment” and subject to further state CZMA federal consistency review after coordination with the appropriate State CMP agency.[26]

A critical element for determining if the modified NPDES permit is subject to federal consistency review is that the proposed activity must have reasonably foreseeable effects on the coastal uses or resources of the state’s coastal zone that are substantially different from those originally reviewed by the state agency.[27] In this case, the changes to the project do not involve effects on the coastal zone or coastal resources that are substantially different from those originally reviewed by the state program. Thus, further CZMA review is not required.

However, to ensure that FDEP and other state of Florida agencies that are a part of the Florida CMP, have the opportunity to review the modified activity and raise any concerns with the proposed modification, EPA sent the draft modified permit and supporting information to FDEP so that coordination with other Florida CMP agencies (e.g., FDACS, FWC, Florida Department of State) can occur during the public notice period, as appropriate. On October 24, 2024, EPA provided the draft modified permit to multiple State of Florida agencies - FDEP’s Florida State Clearinghouse, FDEP’s NPDES program, and the FDACS. The Florida State Clearinghouse reviewed the project under multiple authorities: Presidential Executive Order 12372; § 403.061(42), Florida Statutes; the CZMA, 16 USC §§ 1451-1464; and NEPA, 42 USC §§ 4321-4347. On December 16, 2024, the Florida State Clearinghouse documented that “the State has no objections to the subject project.”

9.6 Fish and Wildlife Coordination Act

The FWCA requires that federal agencies consult with USFWS, NMFS, and state wildlife agencies for activities that affect, control, or modify streams or other bodies of water for any purpose, in order to minimize the adverse impacts of such actions on fish and wildlife resources and habitat. The FWCA establishes fish and wildlife conservation as an objective of all Federally funded, permitted, or licensed water-related development projects. The FWCA states that the consultation purpose is for “preventing loss and damage to wildlife resources.” In the context of the FWCA, "wildlife" and "wildlife resources" are used to describe “birds, fishes, mammals, and all other classes of wild animals and all types of aquatic and land vegetation upon which wildlife is dependent.” The FWCA does not require or suggest a lead agency for consultations involving multiple agencies for the same action.

Federal action agencies developing water-related projects are to include justifiable means and measures to benefit and reduce impacts to fish and wildlife, and mitigation and enhancement recommendations are to be given full and equal consideration with other project purposes. Additionally, the CWA implementing regulations related to the FWCA require EPA to consult with USFWS and NMFS, and the appropriate state agency exercising jurisdiction over wildlife resources to conserve those resources, before issuing a permit proposing or authorizing

[26] 15 CFR 930.51(e): The determination of substantially different coastal effects under paragraphs (b)(3), and (c) of this section is made on a case-by-case basis by the Federal agency after consulting with the State agency, and applicant. The Federal agency shall give considerable weight to the opinion of the State agency. The terms “major amendment,” “renewals” and “substantially different” shall be construed broadly to ensure that the State agency has the opportunity to review activities and coastal effects not previously reviewed.

[27] 15 CFR 930.51(b): The term also includes the following types of renewals and major amendments which affect any coastal use or resource: (1) Renewals and major amendments of federal license or permit activities not previously reviewed by the State agency; (2) Renewals and major amendments of federal license or permit activities previously reviewed by the State agency which are filed after and are subject to management program changes not in existence at the time of original State agency review; and (3) Renewals and major amendments of federal license or permit activities previously reviewed by the State agency which will cause an effect on any coastal use or resource substantially different than those originally reviewed by the State agency.

the impoundment (with certain exemptions), diversion, or other control or modification of any body of water (40 CFR 122.49(e)).[28]

The 2022 Permit

On August 13, 2019, EPA and USACE provided the jointly developed BE to USFWS and NMFS, and initiated FWCA consultation with USFWS and NMFS. EPA is not permitting any loss or damage to wildlife resources and has conducted environmental and wildlife consultations or evaluations as documented throughout the 2022 permit record. Therefore, EPA does not anticipate any impacts resulting in substantial modifications to the receiving water body, either from the originally permitted project or the project modifications. On August 27, 2019, USFWS provided notification that they do not object to the permit issuance for the proposed project and have no additional comments. On September 30, 2019, NMFS concluded that "any adverse effects that might occur [from the proposed project] on marine and anadromous fishery resources would be minimal" and did not object to issuance of the permit pursuant to the FWCA. Completion of the consultation with USFWS and NMFS satisfied EPA's obligations under the FWCA.

Given that the project is in federal waters approximately 36 miles from Florida state waters, EPA did not specifically consult with any state agency under the FWCA; however, EPA did coordinate with multiple state of Florida agencies and provided them with an opportunity to comment on the facility during the draft permit public notice period.

Proposed NPDES Permit Modification

The FWCA does not contain any guidance on conducting supplemental consultations or reinitiating consultation. EPA and USACE do not deem the project modifications significant enough such that they will result in loss of wildlife or damage to wildlife resources. The modifications to the project that are proposed will not have any appreciable impact on the previous FWCA determination. However, EPA contacted USFWS and NMFS to confirm that no further consultation was needed under FWCA.

On September 24, 2024, EPA requested that USFWS determine if a supplemental FWCA consultation is necessary. USFWS determined on October 2, 2024, that EPA's responsibility under the FWCA was satisfied.

On February 18, 2025, NMFS determined that under the FWCA that adverse effects that might occur on marine and anadromous fishery resources would be minimal and NMFS did not object to the issuance of the permit under FWCA.

9.7 Marine Mammal Protection Act

The Marine Mammal Protection Act (MMPA) prevents marine mammals from population decline beyond the point where they cease to be significant functioning elements of the marine ecosystem. The MMPA prohibits the taking of marine mammals which includes harassment, hunting, capturing, or killing of marine mammals without a permit from either the Secretary of the Interior or the Secretary of Commerce. There are some exemptions to marine mammal takes which are specified in MMPA Sections 101 and 118. The MMPA delegates NMFS as the

[28] 40 CFR § 122.49: The following is a list of Federal laws that may apply to the issuance of permits under these rules. When any of these laws is applicable, its procedures must be followed. When the applicable law requires consideration or adoption of particular permit conditions or requires the denial of a permit, those requirements also must be followed. … (e) The Fish and Wildlife Coordination Act, 16 U.S.C. 661 et seq., requires that the Regional Administrator, before issuing a permit proposing or authorizing the impoundment (with certain exemptions), diversion, or other control or modification of any body of water, consult with the appropriate State agency exercising jurisdiction over wildlife resources to conserve those resources.

authority responsible for the conservation and management of cetaceans (whales, dolphins, porpoises) and pinnipeds (other than walruses).

The MMPA does not place any consultation obligations on federal agencies when permitting projects in federal waters. Ocean Era is responsible for complying with MMPA and obtaining any necessary marine mammal authorization program certificate. The MMPA requires fishermen (including facilities engaging in marine aquaculture) engaging in a Category I or II fishery must obtain a Marine Mammal Authorization Program certificate from NMFS. Fishermen engaging in a Category I, II, or III fishery must report incidental death or injury of marine mammals that results from the aquaculture facility within 48 hours.

All marine mammals are covered under the MMPA; some are also covered under the ESA if they have been listed as or proposed to be listed as endangered or threatened. EPA and USACE evaluated the potential impacts to ESA-listed marine mammals (i.e., whales) in the BE that may be in the proposed action area. The potential impacts to marine mammals that are not ESA-listed were evaluated in the EA by both permitting agencies.

The 2022 Permit

The permittee partnered with NMFS to develop a PSMP to monitor marine mammals and collect valuable information about potential interactions between aquaculture operations and protected species, including marine mammals. The data collected under the PSMP will help NMFS understand interactions between marine mammals and aquaculture facilities and will inform future risk assessments for projects of this nature.

Monitoring under the PSMP will occur throughout the life of the Ocean Era project and represents an important minimization measure to reduce the likelihood of any unforeseen potential injury to all protected species. Ocean Era has also agreed to the NMFS Protected Species Construction Conditions which require the project staff to suspend all surface activities (including stocking fish, harvesting operations, and routine maintenance operations) in the unlikely event that any protected species comes within 100 meters of the activity until the animal leaves the area.[29] Should there be activity that results in an entanglement or injury to protected species, the on-site staff would follow the steps outlined in the PSMP and alert the appropriate experts for an active entanglement.

Proposed NPDES Permit Modification

The proposed modifications to the facility do not change the PSMP, which remains effective. Ocean Era remains obligated to engage with NOAA if revisions to the PSMP become necessary or should a Marine Mammal Authorization Program certificate be required.

9.8 Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (MBTA) implements four international conservation treaties that the U.S. entered into with Canada, Mexico, Japan, and Russia. It is intended to ensure the sustainability of populations of all protected migratory bird species. The MBTA prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by USFWS. The Migratory Bird Treaty Reform Act of 2004 amended the MBTA by stating the MBTA applies only to migratory bird species that are native to the United States or U.S. territories, and that a native migratory bird species is one that is present as a result of natural biological or ecological processes.

[29] NMFS Southeast Regional Office Protected Resources Division:
< https://media.fisheries.noaa.gov/2021-06/Protected_Species_Construction_Conditions_1.pdf?null >

EPA and USACE evaluated the proposed project's potential impacts on migratory seabirds and other migratory birds in the EA. The BE also evaluated potential impacts to two protected species of seabirds (piping plover and rufa red knot). The federal agencies determined that the issuance of the permits would have only very minimal impacts to seabirds expected to occur near the proposed facility due to operational practices (taut mesh cover on the cage) and the unlikelihood of interaction with the project due to its location being approximately 45 miles from shore. Additionally, the permittee's PSMP applies to seabirds as well as marine fish and mammals. The assessments within the EA and BE satisfy our obligations under the MBTA for the 2022 permit and proposed modified NPDES permit.

9.9 National Marine Sanctuary Resources Act

Section 304(d) of the National Marine Sanctuaries Act (NMSA) requires any federal agency issuing permits to consult with the NMFS if the proposed aquaculture activity is likely to destroy, cause the loss of, or injure sanctuary resources. As part of the consultation process, the NMSP can recommend reasonable and prudent alternatives. While such recommendations may be voluntary, if they are not followed and sanctuary resources are destroyed, lost, or injured during the action, the NMSA requires the federal action agency(ies) issuing the permit(s) to promptly prevent and mitigate further damage, and restore or replace the damaged resources in a manner approved by NOAA.

The Flower Garden Banks National Marine Sanctuary is the only federally designated underwater sanctuary in the Gulf of America. It is located 80 to 125 miles off the coast of Texas and Louisiana. In 2021, Flower Garden Banks sanctuary was expanded from 56 miles^2 to 160 miles^2 to protect additional critical habitat. The sanctuary now comprises 17 different banks with 19 separate boundaries.

EPA and USACE considered the Flower Garden Banks sanctuary as a habitat of particular concern in the EFH Assessment and in the NEPA evaluation for the 2022 permit. The proposed project will not have any effect on this sanctuary due to the sanctuary being hundreds of miles from the proposed facility. Given that the proposed aquaculture facility will not impact any sanctuary resources, consultation with NMFS is not required for the 2022 permit issuance and the modified permit.

9.10 National Environmental Policy Act

NEPA requires federal agencies to assess the environmental effects of certain proposed actions prior to making decisions. The range of actions covered by NEPA is broad and includes making decisions on permit applications. Using the NEPA process, agencies evaluate the environmental and related social and economic effects of their proposed actions. Agencies also provide opportunities for public review and comment on those evaluations.

In actions subject to NEPA requirements, federal agencies are responsible for ensuring that their environmental review procedures under NEPA comply with the Council on Environmental Quality's (CEQ) regulations (40 CFR Parts 1500-1508). In addition, federal agencies have their own procedures to implement the CEQ regulations to facilitate efficient decision making and ensure that federal agencies make decisions in accordance with the policies and requirements of NEPA. The CEQ regulations were recently updated and became effective on July 1, 2024. EPA and USACE implementing regulations for NEPA are 40 CFR Part 6 and 33 CFR Part 230 and Part 325 Appendix, respectively.

The 2022 Permit

The EPA is required to comply with the procedural requirements of NEPA when issuing NPDES permits for "new sources," as defined in CWA Section 306. The proposed facility does not meet the definition of a "new source"

under CWA Section 306 of the CWA and therefore is exempt from NEPA compliance under section 511(c) of the CWA and is not subject to NEPA analysis requirements.[30] Nevertheless, as a matter of discretion, EPA voluntarily used NEPA procedures for this proposed action since the Agency determined that such an analysis would be beneficial.[31] While EPA voluntarily used NEPA review procedures in conducting the analysis for the NPDES permit issuance, EPA also has explained that the voluntary preparation of these documents in no way legally subjects the Agency to NEPA's requirements.[32] Although not required, the EA was prepared consistent with the requirements of 40 CFR 6.205(a), which allow for an EA when the result of the environmental impacts and the significance of the impacts are not known.[33] Substantive public comments were received on the draft NPDES permit and on the EA. EPA's and USACE's responses to those comments were included in a response to comment document which is included in the final NPDES permit package and administrative record for the 2022 permit. The response to comments for the 2022 permit is incorporated by reference to the modified permit package. The EA also supported the USACE Section 10 permitting action.

The environmental review process, which is documented in the EA, indicated that no significant environmental impacts are anticipated from the proposed action as permitted currently. The NPDES permit conditions include protective measures, and these measures are described in the EA and the final NPDES permit. The previous issuance of the NPDES permit to the applicant was determined to not cause a significant environmental impact to water quality or result in any other significant impacts to human health or the natural environment. Accordingly, EPA issued a Finding of No Significant Impact (FONSI) to document this determination on September 30, 2020.

Proposed NPDES Permit Modification

The CEQ regulations provide information about when a supplemental EA should occur within 40 CFR 1501.5(h). EPA's NEPA implementing regulations at 40 CFR 6.200(h) also provide guidance about when a reevaluation is required following the completion of a final EA. The USACE implementing regulations for NEPA require a supplement to a draft or final NEPA document whenever required by CEQ's regulations (see 33 CFR Part 325 Appendix B, 33 CFR 230.13(b)).

[30] CWA Section 511(c)(1) expressly exempts NPDES permit issuance from NEPA requirements unless the permit is for a "new source" as defined under CWA Section 306. The Facility is not a "new source" because a "new source" is defined under 40 CFR 122.2 as a facility that (i) is subject to a New Source Performance Standard (NSPS) promulgated pursuant to section 306 of the CWA, and (ii) commenced construction after promulgation of the applicable NSPS (see 40 CFR 122.29 and 40 CFR 122.2). There is no NSPS applicable to the Facility because the volume of production proposed by the Facility does not meet the minimum threshold (100,000 lbs annual production) for triggering applicability of the Effluent Limitation Guidelines for Concentrated Aquatic Animal Production facilities at 40 CFR Part 451, including the NSPS at 40 CFR 451.24.

[31] EPA's election to use NEPA review procedures was in accordance with EPA's Policy for Voluntary Preparation of NEPA Documents, 63 Fed. Reg. 58,045 (Oct. 29, 1998).

[32] In its decision on the appeal of the original final permit, the EPA's Environmental Appeals Board rejected the NEPA claims on the ground that Petitioner's did not contest EPA's determination that NEPA was inapplicable during the comment period on the permit and limited its arguments in its comments to the adequacy of the NEPA review, assuming that NEPA applied (see In Re Ocean Era, Inc., 18 EAD 678, at 694-99 (2022).

[33] 40 CFR 6.205(a): The Responsible Official must prepare an environmental assessment (EA) (see 40 CFR 1508.9) for a proposed action that is expected to result in environmental impacts and the significance of the impacts is not known. An EA is not required if the proposed action is categorically excluded, or if the Responsible Official has decided to prepare an EIS.

Review and Analysis Under EPA Regulations at 40 CFR 6.200(h)[34]

When an EA that is more than five years old, and for which the action subject to the evaluation has not been implemented, agencies are required to re-evaluate the proposed action. While the Ocean Era project has not been constructed and is not operational, the FONSI is not more than five years old (signed on September 30, 2020).

A supplemental environmental review is required by EPA's regulations if there is a substantial change to the action that is relevant to environmental concerns or if there are significant new circumstances or new information relevant to environmental concerns. These regulatory requirements mirror those within the CEQ regulations that are evaluated below.

Review and Analysis Under CEQ Regulations at 40 CFR 1501.5(h)(1)(i)[35]

When a federal action that is subject to environmental review under NEPA is incomplete or ongoing, 40 CFR 1501.5(h)(1)(i) requires a supplemental EA if the federal agency makes substantial changes to the proposed action that are relevant to environmental concerns.

EPA is not making substantial changes to the 2022 permit (see Section titled "Revisions to the Modified Permit and Fact Sheet") in relation to the environmental concerns. The modified permit will maintain the monitoring and compliance plans in the 2022 permit that prevent marine degradation from occurring such as environmental monitoring, facility prohibitions, best management practices, reporting of any drugs used, and facility damage prevention. EPA has also elected to include a clarifying provision in the modified permit related to the prohibition of fish releases.[36] While EPA is proposing to modify the NPDES permit based on revisions to Ocean Era's project, the changes to the project (e.g., fish species, cage material, stationary cage, and mooring system) are not changing to a significant degree and the changes will not significantly affect the environmental impacts. The scale of potential environmental impacts related to the discharge of pollutants is less than the 2022 permit.

The action proposed in the 2022 permit is largely the same as the action within the modified permit and the potential project impacts are within the scope of those considered in previous EA. There are no unique or extraordinary circumstances within the modified permit that would normally require preparation of a supplemental EA. As such, EPA is not making substantial changes to the proposed action (issuance of a modified NPDES permit).

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[34] 40 CFR 6.200(h): For all NEPA determinations (CEs, EA/FONSIs, or EIS/RODs) that are five years old or older, and for which the subject action has not yet been implemented, the Responsible Official must re-evaluate the proposed action, environmental conditions, and public views to determine whether to conduct a supplemental environmental review of the action and complete an appropriate NEPA document or reaffirm EPA's original NEPA determination. If there has been substantial change in the proposed action that is relevant to environmental concerns, or if there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts, the Responsible Official must conduct a supplemental environmental review of the action and complete an appropriate NEPA document.

[35] 40 CFR 1501.5(h) Agencies: (1) Should supplement environmental assessments if a major Federal action is incomplete or ongoing, and: (i) The agency makes substantial changes to the proposed action that are relevant to environmental concerns; or (ii) There are substantial new circumstances or information about the significance of the adverse effects that bear on the analysis to determine whether to prepare a finding of no significant impact or an environmental impact statement. (2) May also prepare supplements when the agency determines that the purposes of the Act will be furthered by doing so.

[36] The new permit provision expressly prohibits the intentional or negligent release of cultured fish; this replicates the import of requirements in the 2022 permit to properly operate and maintain the facility and comply with various BMP requirements, but the added provision makes this obligation clearer.

Review and Analysis Under CEQ Regulations at 40 CFR 1501.5(h)(1)(ii)[37]

40 CFR 1501.5(h)(1)(ii) states that an EA supplement is required when there are substantial new circumstances or information about the significance of the adverse effects that bear on the analysis to determine whether to prepare a FONSI.

When determining whether the adverse effect of the proposed action is significant or if there are substantial new circumstances or information about the significance that bear on the analysis, EPA considers the modified action's context and intensity of the effect. Critically, the marine impacts associated with the modified permit's discharge are expected to be less than those evaluated in the 2022 permit due to the production of fish being decreased (see previous sections).

EPA has reviewed the potential environmental effects for individual resources associated with the action evaluated in the EA. The permit modification does not involve any revision to the project's purpose and need, which further supports EPA's determination that supplementation of the EA is not necessary. Additional alternatives do not need to be considered beyond those that were already reviewed. The duration of any potential effects has not changed with the modified facility as the permittee can only culture fish for one production cycle. The physical resources and biological characteristics previously considered have not substantially changed in the geographic area. The environmental consequences associated with social and economic conditions, cultural resources, and communities with environmental justice concerns, will not be changed by producing a lower total mass of fish and changing to a species that, like the originally permitted species, is native to the Gulf of America.

The purpose of EA supplementation is to address circumstances where the analysis upon which the agency based its decision has changed and there is potential for new significant effects. The action of issuing a modified NPDES permit does not change the assumptions within the previous EA. As required by the CEQ regulations, EPA has focused on whether a change to the proposed action could have environmental effects that have not been analyzed in determining whether changes to the proposed action require supplementation. In this case, the potential effects on the human environment are only minimally changed and will be less severe due to the volume of pollutant discharge decreasing.

Review and Analysis Under CEQ Regulations at 40 CFR 1501.5(h)(2)[38]

Under 40 CFR 1501.5(h)(2), EPA may also prepare a supplemental EA when the agency determines that the purposes of NEPA will be furthered by doing so. EPA has discretion when determining if a supplemental environmental review will further the purposes of NEPA. Using this discretion, in light of the lack of significant change from the originally permitted project, EPA does not believe that a reevaluation of the EA for the project revisions and modified NPDES permit will promote the purposes of NEPA.

As described above, EPA has determined that the changes to the modified federal action and new circumstances relevant to environmental concerns do not indicate the potential for significant effects and therefore do not require a supplement. The underlying assumptions of the original analysis remain valid and still support EPA's FONSI. In accordance with 40 CFR 1501.5(i),[39] EPA and USACE have used their discretion to reevaluate the

[37] *Id* at 30.

[38] 40 CFR 1501.5(h) Agencies: (2) May also prepare supplements when the agency determines that the purposes of the Act will be furthered by doing so.

[39] 40 CFR 1501.5(i): Agencies may reevaluate an environmental assessment to determine that the agency does not need to prepare a supplemental environmental assessment and a new finding of no significant impact or an environmental impact statement.

previous EA and determined that a supplemental environmental review and new FONSI is not necessary. The analysis documented herein explains EPA's decision-making process regarding reevaluation and considers the changes to the 2022 permit action. The proposed project modifications do not change the evaluation conducted in the EA in a manner that warrants supplementation of the Final EA NPDES Permit for Ocean Era, Inc – Velella Epsilon Offshore Aquaculture Project – Gulf of America (Document ID 904-P-19-001). Pursuant to the CEQ regulations at 40 CFR 1501.5(h) and EPA's NEPA procedures, EPA is documenting its determination that the new information, changed circumstances, or proposed changes to the modified action are not relevant to environmental concerns and do not bear on the action or its impacts.

EPA notes the voluntary nature of EPA's use of NEPA procedures in the 2022 permit action. EPA's use of the voluntary NEPA procedures also applies to the NPDES permit modification. EPA has voluntarily considered whether supplementation is warranted and has determined that it is not necessary.

Finally, EPA also notes that on January 20, 2025, Executive Order (EO) 14154 directed the Council on Environmental Quality (CEQ) to provide guidance on implementing NEPA to expedite and simplify the permitting process. Consistent with EO 14154, Federal agencies must revise or establish their NEPA implementing procedures to expedite permitting approvals and for consistency with NEPA. Importantly, CEQ rescinded its NEPA implementing regulations at 40 CFR 1500-1508 with an effective date of April 11, 2025. On February 19, 2025, a Memorandum from CEQ (CEQ's memorandum)[40] instructed federal agencies to not delay pending or ongoing NEPA analyses while CEQ undertakes revisions to the NEPA regulations, and to continue adhering to their existing NEPA practices and procedures during the interim period prior to any new NEPA regulations becoming final. CEQ's memorandum also recommends that agencies consider voluntarily relying on the rescinded regulations from 40 CFR Parts 1500–1508 when completing ongoing NEPA reviews or defending challenges to previously completed reviews conducted under those regulations.

[40] CEQ's memorandum is available at: ceq.doe.gov/docs/ceq-regulations-and-guidance/CEQ-Memo-Implementation-of-NEPA-02.19.2025.pdf

Appendix

A. Email from Ocean Era dated May 10, 2023
B. Ocean Era request for NPDES permit modification dated July 5, 2023
C. Ocean Era revised NPDES permit application dated July 13, 2023
D. Letter from Eubanks and Associates on behalf of multiple Petitioners dated June 7, 2023
E. Additional analysis conducted by NMFS after the 2022 NPDES permit was issued dated August 26, 2022
F. EFH concurrence from NMFS dated September 25, 2024
G. ESA and FWCA documentation from USFWS dated October 2, 2024
H. EPA's re-initiation of ESA Section 7 and FWCA consultation with NMFS dated December 23, 2024
I. ESA and FWCA concurrence from NMFS dated February 18, 2025

Appendix A

Email from Ocean Era dated May 10, 2023

RE: Notification of Project Changes; NPDES Permit FL0A00001 May 10, 2023

Kip Tyler
Environmental Engineer
U.S. EPA Region 4 | NPDES Permitting Section
61 Forsyth Street SW | Atlanta GA 30303-8960
m: 404.323.6094 | w: 404.562.9294
e: Tyler.Kip@epa.gov

Dear Mr. Tyler,

Pursuant to EPA's 05/03/2023 email request "regarding potential changes to the marine aquaculture project authorized by NPDES permit number FL0A00001", we provide the enclosed Velella Epsilon (VE) Project history and progress status that now impose these changes.

Proposed Changes –

- Grid mooring system vs. FL0A00001-permitted single- or swivel-point mooring (SPM) system
- Red drum (*Sciaenops ocellatus*) vs. FL0A00001-permitted almaco jack (*Seriola rivoliana*)

Background –

Ocean Era's previous success with multiple pilot and demonstration operations culturing almaco jack was based in part on the use of the SPM system as a fundamental best management practice (BMP) for effectively eliminating the *Neobenedenia* skin fluke issue. This ectoparasite is a common fish health challenge with many marine species, particularly *Seriola* spp. The VE Project's original Chilean partner had agreed to provide the FL0A00001-permitted SPM system as an in-kind contribution for VE. However, this company met with financial difficulties, and ceased operations about 5 years ago. Since that time, the Ocean Era team has pursued numerous other U.S. and European manufacturers who might be willing and able to design, engineer, and construct a similar net pen system. None have been identified to date. Several of these companies have pointed out the challenge for manufacturers to provide the one-time financial investment needed for such non-recurring engineering costs for a demonstration-scale SPM net pen. One U.S. company (InnovaSea) has proposed a demonstration SeaProtean submersible net pen on a fixed grid mooring (but is not willing to provide this as an in-kind contribution).

Without an SPM net pen system, there is a very strong likelihood that almaco jack originally proposed for the VE Project would become infested with skin flukes. This would then require either a therapeutic bath treatment (hydrogen peroxide as a standard operating procedure for the commercial almaco jack operations), or the early harvest of the fish. Neither of these options represent a good demonstration of offshore aquaculture's potential. Therapeutic bath treatments would also be impractical, given the need for specialized equipment and an experienced team to undertake the process. Further, the VE permits all specifically state that the project will not use any therapeutants in the offshore growout operations.

Over the same timeframe, the VE Project's hatchery partner (Mote Aquaculture Park) suffered a power failure during one of the recent hurricanes causing the total loss of the conditioned almaco jack broodstock. While newly-captured wild broodstock could certainly be obtained, this would then mandate a minimum of 6 to 12 months to condition new broodstock for spawning. Mote also had faced challenges with the almaco jack larvae, regarding poor egg viability and low larval survival.

Justification –

The project therefore currently has no almaco broodstock available, a poor history of fingerling production, and no manufacturer who is willing and able to design, engineer, and construct a single-use, demonstration scale SPM net pen system. The VE Project team has therefore been compelled to redirect the project towards a commercially available species, and a multi-point fixed grid mooring system.

Red drum are considered highly successful candidates for offshore culture in the Gulf of Mexico. Fingerlings for this species are readily and abundantly available from several Florida hatcheries throughout the region. There is an existing pond-based aquaculture industry for red drum in Texas, and a large market and strong demand for the product.

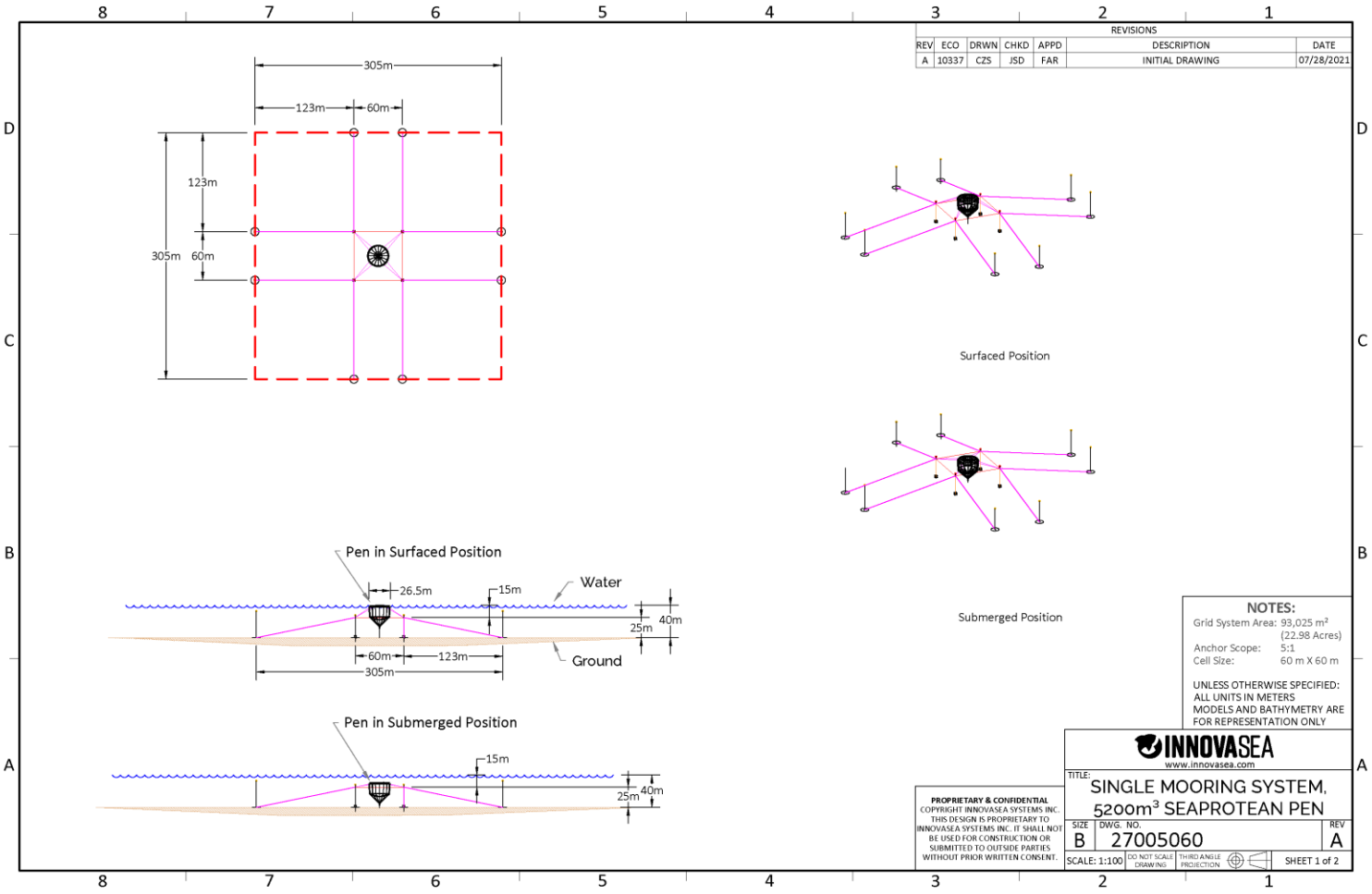
There are no reported health issues (i.e., skin flukes) with red drum in offshore culture systems, and thus no need for a SPM net pen system as a BMP. InnovaSea and other net pen manufacturers would be willing to provide a standard grid moored net pen system.

Comparisons –

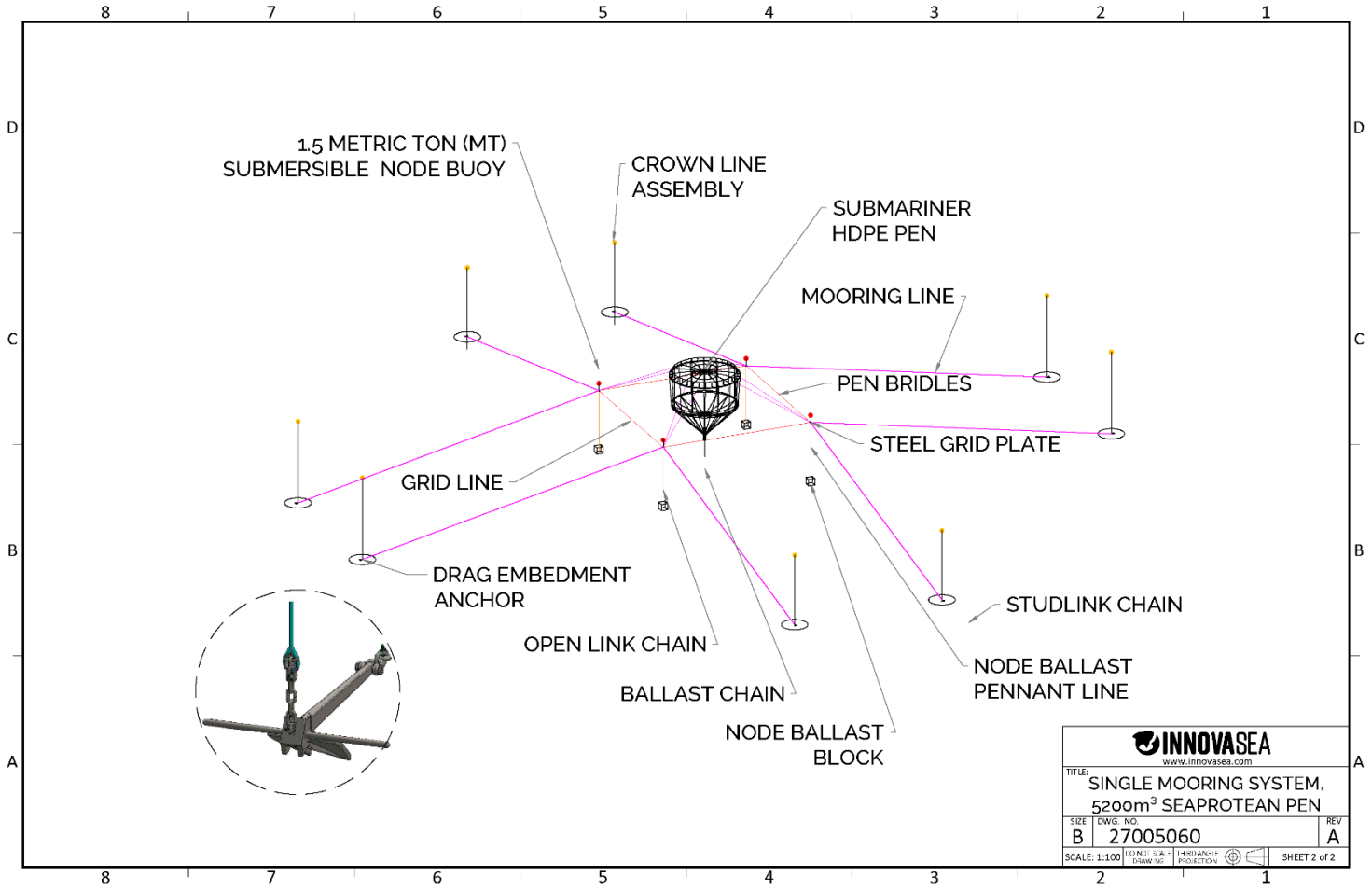
No changes are proposed for the site location or water depth.

No appreciable changes in fish production numbers are anticipated. As permitted, a total of 20,000 fingerlings would be stocked. With anticipated 85% survival, a total of 17,000 fish would be harvested in 10 to 12 months. Since red drum grow more slowly than almaco jack, fish size at harvest would be approximately 2.75 pounds (lbs) vs. the permitted size of 4.4 lbs. This smaller fish size equates to a total harvest of 46,750 lbs vs. the permitted harvest of 74,800 lbs. Red drum require a lower protein feed than almaco jack and therefore the nitrogen loading in effluent water would be markedly reduced. This means that potential scale of impacts on the surrounding environment would be lessened.

Only minor changes in the submersible net pen design are anticipated. Both the originally permitted net pen and the proposed SeaProtean Pen (**Design 1** and **Design 2**) are based on a PolarCirkel-style submersible design.



Design 1. SeaProtean Pen Elevation and Plan Views



Drawing 2. SeaProtean Pen Isometric View

Although the smallest (and proposed) commercially available SeaProtean Pen is 26.5 meters (m) in diameter vs. the permitted net pen (17 m), the total net volume would be maintained at approximately 1,600 cubic m (m^3) by reducing the depth of the SeaProtean net to approximately 3 m (10 ft) in depth.

Mooring design for the proposed SeaProtean Pen uses eight (8) embedment anchors vs. the permitted mooring design of three (3) embedment anchors). The mooring design for the proposed SeaProtean additionally uses four (4) node ballast blocks as part of the anchor system.

The permitted net mesh was a CopperNet, using UR30 copper alloy wire woven into chain-link fence mesh. The proposed net mesh material for the SeaProtean Pen is KikkoNet, made of UV stabilized, extremely strong and lightweight Polyethylene Terephthalate (PET) monofilament, woven into a double twisted hexagonal mesh. There is no functional difference between the two materials, in terms of entanglement risk or other concerns.

This response regarding potential changes to the marine aquaculture project authorized by NPDES permit number FL0A00001 also serves as our acknowledgment that we do not intend to implement the project as currently permitted (i.e., with almaco jack or a SPM net pen system).

The VE Project team estimates that it will require approximately 20 to 30 days to submit a request for a permit modification to EPA in accordance with 40 CFR Section 124.5. The VE Project team will work with EPA to ensure that the submittal for a permit modification is complete and meets the sufficiency requirements in accordance with 40 CFR Section 124.5.

Please do not hesitate to contact me directly should you have any questions concerning this response to your request.

Yours sincerely, with aloha,

Neil Anthony Sims
Founder, CEO

cc: Dennis Peters, Founder, CEO
Gulfstream Aquaculture, LLC

Appendix B

Ocean Era request for NPDES permit modification dated July 5, 2023

RE: Request for a Permit Modification; NPDES Permit FL0A00001 July 05, 2023

Kip Tyler
Environmental Engineer
U.S. EPA Region 4 | NPDES Permitting Section
61 Forsyth Street SW | Atlanta GA 30303-8960
m: 404.323.6094 **|** w: 404.562.9294
e: Tyler.Kip@epa.gov

Dear Mr. Tyler,

This letter shall serve as a formal request for a permit modification of Ocean Era's NPDES permit number FL0A00001, in accordance with 40 CFR Section 124.5. As such, Ocean Era does not intend to implement the project as currently permitted (i.e., with almaco jack or a SPM net pen system). The following Velella Epsilon (VE) Project history and progress status provides the rationale for requesting this permit modification.

Proposed Changes –

- Grid mooring system vs. FL0A00001-permitted single- or swivel-point mooring (SPM) system
- Red drum (*Sciaenops ocellatus*) vs. FL0A00001-permitted almaco jack (*Seriola rivoliana*)

Background –

Ocean Era's previous success with multiple pilot and demonstration operations culturing almaco jack was based in part on the use of the SPM system as a fundamental best management practice (BMP) for effectively eliminating the *Neobenedenia* skin fluke issue. This ectoparasite is a common fish health challenge with many marine species, particularly *Seriola* spp. The VE Project's original Chilean partner had agreed to provide the FL0A00001-permitted SPM system as an in-kind contribution for VE. However, this company met with financial difficulties, and ceased operations about 5 years ago. Since that time, the Ocean Era team has pursued numerous other U.S. and European manufacturers who might be willing and able to design, engineer, and construct a similar net pen system. None have been identified to date. Several of these companies have pointed out the challenge for manufacturers to provide the one-time financial investment needed for such non-recurring engineering costs for a demonstration-scale SPM net pen. One U.S. company (InnovaSea) has proposed a demonstration SeaProtean submersible net pen on a fixed grid mooring (but is not willing to provide this as an in-kind contribution).

Over the same timeframe, the VE Project's hatchery partner (Mote Aquaculture Park) suffered a power failure during one of the recent hurricanes causing the total loss of the conditioned almaco jack broodstock. While newly captured wild broodstock could certainly be obtained, this would then mandate a minimum of 6 to 12 months to condition new broodstock for spawning.

Justification –

The project therefore currently has no almaco broodstock available, a poor history of fingerling production, and no manufacturer who is willing and able to design, engineer, and construct a single-use, demonstration scale SPM net pen system. The VE Project team has therefore been compelled to redirect the project towards a commercially available species, and a multi-point fixed grid mooring system.

Red drum are considered highly successful candidates for offshore culture in the Gulf of Mexico. Fingerlings for this species are readily and abundantly available from several Florida hatcheries throughout the region. There is an existing pond-based aquaculture industry for red drum in Texas, and a large market and strong demand for the product.

There are no reported health issues (i.e., skin flukes) with red drum in offshore culture systems, and thus no need for a SPM net pen system as a BMP. InnovaSea and other net pen manufacturers would be willing to provide a standard grid moored net pen system.

Comparisons –

No changes are proposed for the site location or water depth.

No appreciable changes in fish production numbers are anticipated. As permitted, a total of 20,000 fingerlings would be stocked. With anticipated 85% survival, a total of 17,000 fish would be harvested in 10 to 12 months. Since red drum grow more slowly than almaco jack, fish size at harvest would be approximately 2.75 pounds (lbs) vs. the permitted size of 4.4 lbs. This smaller fish size equates to a total harvest of 46,750 lbs vs. the permitted harvest of 74,800 lbs. Red drum require a lower protein feed than almaco jack and therefore the nitrogen loading in effluent water would be markedly reduced. This means that potential scale of impacts on the surrounding environment would be lessened.

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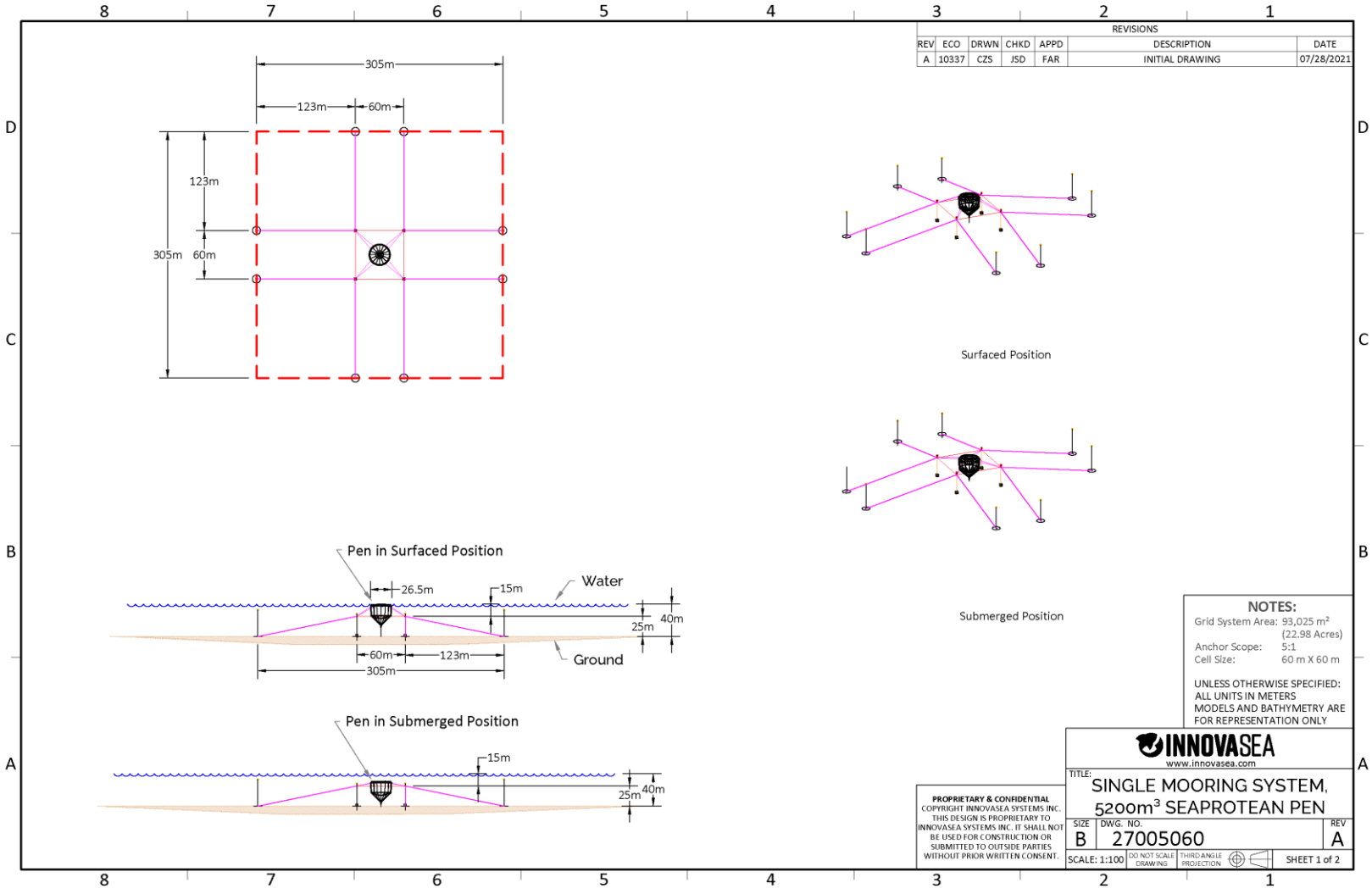
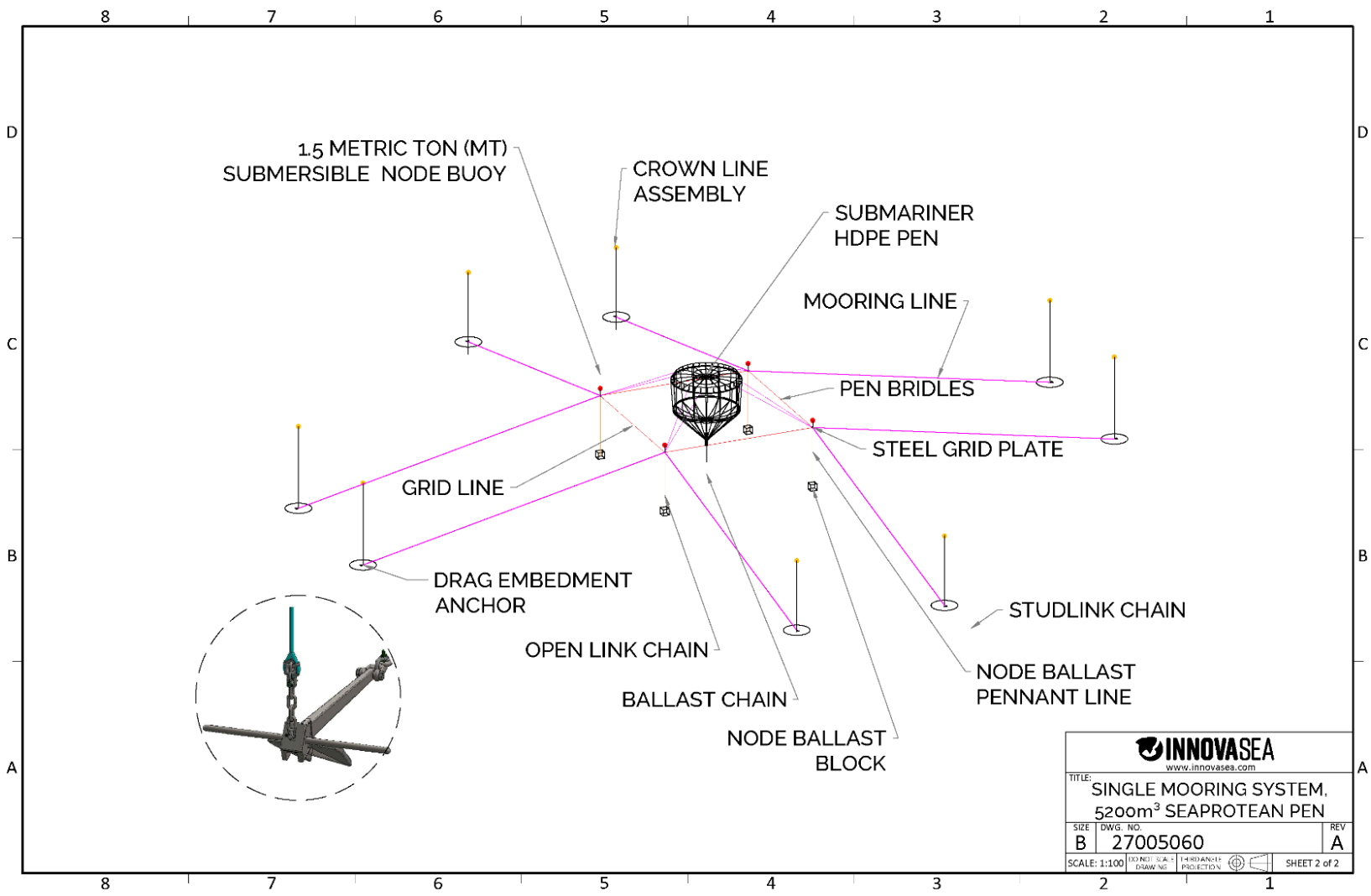


Design 1. SeaProtean Pen Elevation and Plan Views



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The permitted net mesh was a CopperNet, using UR30 copper alloy wire woven into chain-link fence mesh. The proposed net mesh material for the SeaProtean Pen is KikkoNet, made of UV stabilized, extremely strong and lightweight Polyethylene Terephthalate (PET) monofilament, woven into a double twisted hexagonal mesh. There is no functional difference between the two materials, in terms of entanglement risk or other concerns.

The VE Project team recognizes that following information is additionally required in support of this permit modification and will be provided to EPA within 10 business days:

1. Updated NPDES application forms (Form 1 and 2B) available at: www.epa.gov/npdes/npdes-applications-and-forms-epa-applications
2. Additional information:
    a. Revised feed information with nutrient content
    b. Source of bloodstock fish and fingerlings
    c. Fish filial generation
    d. Fish growth rate, beginning size, ending size, and harvest weight
    e. Net pen design; gear size; ballast block information and size; anchor type and size; cage and mooring dimensions; line dimensions, quantity, and linear feet; and detailed diagrams; including a conservative scenario of the maximum number of anchors, ballast blocks, quantity of lines, diameter of lines, etc.
    f. Other changes in the management or production of cultured fish that may impact the nature or volume of pollutant discharge.

Please do not hesitate to contact me directly should you have any questions concerning this response to your request.

Yours sincerely, with aloha,

Neil Anthony Sims
Founder, CEO

cc: Dennis Peters, Founder, CEO
Gulfstream Aquaculture, LLC

Appendix C

Ocean Era revised NPDES permit application dated July 13, 2023

Print All Pages

Print Form Only

United States Environmental Protection Agency | Office of Water Washington, D.C. | EPA Form 3510-2B Revised March 2019

Water Permits Division

Application Form 2B

Concentrated Animal Feeding Operations and Concentrated Aquatic Animal Production Facilities

NPDES Permitting Program

Note: Complete this form ***and*** Form 1 if your facility is a new or existing concentrated animal feeding operation or concentrated aquatic animal production facility.

Paperwork Reduction Act Notice

The U.S. Environmental Protection Agency (EPA) estimates the average burden for concentrated animal feeding operation respondents to collect information and complete Form 2B to be 9.2 hours (8.7 hours to complete and submit the application and 0.5 hours to complete and submit a nutrient management plan). EPA estimates the average burden for concentrated aquatic animal production respondents to collect information and complete Form 2B to be 5.5 hours. These estimates include time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and reviewing the collection of information. Send comments about the burden estimates or any other aspect of this collection of information to the Chief, Information Policy Branch (PM-223), U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW, Washington, DC 20503, marked "Attention: Desk Officer for EPA."

FORM 2B—INSTRUCTIONS

General Instructions

Who Must Complete Form 2B?

You must complete Form 2B if you answered "Yes" to Item 1.2.1 on Form 1—that is, if you are a concentrated animal feeding operation (CAFO) or a concentrated aquatic animal production (CAAP) facility.

Where to File Your Completed Form

Submit your completed application package (Forms 1 and 2B) to your National Pollutant Discharge Elimination System (NPDES) permitting authority. Consult Exhibit 1–1 of Form 1's "General Instructions" to identify your NPDES permitting authority.

Public Availability of Submitted Information

The U.S. Environmental Protection Agency (EPA) will make information from NPDES permit application forms available to the public for inspection and copying upon request. You may not claim any information on Form 2B (or related attachments) as confidential.

You may make a claim of confidentiality for any information that you submit to EPA that goes beyond the information required by Form 2B. Note that NPDES authorities will deny claims for treating any effluent data as confidential. If you do not assert a claim of confidentiality at the time you submit your information to the NPDES permitting authority, EPA may make the information available to the public without further notice to you. EPA will handle claims of confidentiality in accordance with the Agency's business confidentiality regulations at Part 2 of Title 40 of the *Code of Federal Regulations* (CFR).

Completion of Forms

Print or type in the specified areas only. If you do not have enough space on the form to answer a question, you may continue on additional sheets, as necessary, using a format consistent with the form.

Provide your EPA Identification Number from the Facility Registry Service, NPDES permit number, and facility name at the top of each page of Form 2B and any attachments. If your facility is new (i.e., not yet constructed), write or type "New Facility" in the space provided for the EPA Identification Number and NPDES permit number. If you do not know your EPA Identification Number, contact your NPDES permitting authority. See Exhibit 1–1 of the "General Instructions" of Form 1 for contact information.

Do not leave any response areas blank unless the form directs you to skip them. If the form directs you to respond to an item that does not apply to your facility or activity, enter "NA" for "not applicable" to show that you considered the item and determined a response was not necessary for your facility.

The NPDES permitting authority will consider your application complete when it and any supplementary material are received and completed according to the authority's satisfaction. The NPDES permitting authority will judge the completeness of any application independently of the status of any other permit application or permit for the same facility or activity.

Definitions

The legal definitions of all key terms used in these instructions and Form 2B are in the "Glossary" at the end of the "General Instructions" in Form 1.

Line-by-Line Instructions

Section 1. General Information

Item 1.1. Mark whether your facility/business type is a CAFO or a CAAP.

- For a CAFO, you must complete Sections 1 through 6 and Section 8.
- For a CAAP, you must complete Sections 1, 7, and 8.

Item 1.2. Indicate whether your facility is an existing or proposed facility. Mark "Proposed Facility" if your facility is presently not in operation or is expanding to meet the definition of a CAFO in accordance with the regulations at 40 CFR 122.23.

Section 2. CAFO Owner/Operator Contact Information

Item 2.1. Provide the name, title, telephone number, and email address of the owner/operator of the facility/business.

Item 2.2. Provide the complete mailing address of the owner/operator of the facility/business.

Section 3. CAFO Location and Contact Information

Item 3.1. Provide the legal name and location (complete mailing address) of the facility. Also indicate whom the NPDES permitting authority should contact about the application, including a telephone number and email address.

Item 3.2. Provide the latitude and longitude of the entrance to the production area (i.e., the part of the operation that includes the animal confinement area, the manure storage area, the raw materials storage area, and the waste containment areas). Latitude and longitude coordinates may be obtained in a variety of ways, including use of hand held devices (e.g., a GPS enabled smartphone), internet mapping tools (e.g., https://mynasadata.larc.nasa.gov/latitudelongitude-finder/), geographic information systems (e.g., ArcView), or paper maps from trusted sources (e.g., U.S. Geological Survey or USGS). For further guidance, refer to http://www.epa.gov/geospatial/latitudelongitude-data-standard.

Item 3.3. If the facility uses a contract grower, provide the name and complete mailing address of the integrator.

Section 4. CAFO Topographic Map

Item 4.1. Provide a topographic map of the geographic area in which the facility is located, showing the specific location of the production area(s). You are not required to provide the topographic map required by Section 7 of Form 1.

On each map, include the map scale, a meridian arrow showing north, and latitude and longitude to the nearest second. Latitude and longitude coordinates may be obtained in a variety of ways, including use of hand held devices (e.g., a GPS enabled smartphone), internet mapping tools (e.g., https://mynasadata.larc.nasa.gov/latitudelongitude-finder/),

geographic information systems (e.g., ArcView), or paper maps from trusted sources (e.g., USGS).

On all maps of rivers, show the direction of the current. In tidal waters, show the directions of ebb and flow tides.

You may develop your map by going to the United States USGS's National Map website at http://nationalmap.gov/. (For a map from this site, use the traditional 7.5-minute quadrangle format. If none is available, use a USGS 15-minute series map.) You may also use a plat or other appropriate map. Briefly describe land uses in the map area (e.g., residential, commercial.). Note that you have completed your topographic map and attached it to the application.

Section 5. CAFO Characteristics

Supply all information in Section 5 if you checked "Existing facility" in response to Item 1.2.

Item 5.1. Provide the maximum number of each type of animal in open confinement or housed under roof (either partially or totally) that are held at your facility for a total of 45 days or more in any 12-month period. Provide the total number of animals confined at the facility.

Item 5.2. Identify the applicable types of containment and storage for manure, litter, and process wastewater at the facility and indicate the capacity of storage in days and gallons or tons.

Item 5.3. Indicate the total number of acres that are drained and collected in the containment and storage structure(s).

Item 5.4. Specify the tons of manure or litter and the gallons of process wastewater generated at the facility on an annual basis.

Item 5.5. Indicate whether the manure, litter, and/or process wastewater is land applied. If yes, continue to Item 5.6. If no, skip to Item 5.8.

Item 5.6. Indicate the number of acres of land under the control of the applicant that are available for land application of the manure, litter, or process wastewater.

Item 5.7. Check any of the identified best management practices that are being implemented at the facility to control runoff and protect water quality.

Item 5.8. Indicate if the manure, litter, and/or process wastewater is transferred to any other persons. If yes, continue to Item 5.9. If no, skip to Item 5.10.

Item 5.9. Specify the tons of manure or litter or the gallons of process wastewater transferred annually to other people.

Item 5.10. Describe any alternative uses of manure, litter, or process wastewater, if any (e.g., composting, pelletizing, energy generation).

Section 6. CAFO Nutrient Management Plans

Item 6.1. Indicate if you have submitted a nutrient management plan that satisfies the requirements at 40 CFR 122.42(e) and, if applicable, the requirements at 40 CFR 412.4(c).

Item 6.2. If you have not yet submitted a nutrient management plan, explain why not.

Item 6.3. Indicate if a nutrient management plan is being implemented at the CAFO. If not land applying, describe the alternative uses of the manure, litter, and wastewater (e.g., composting, pelletizing, energy generation).

Item 6.4. Indicate the date of the last review or revision of the nutrient management plan.

Note: A permit application is not complete until a nutrient management plan is submitted to the NPDES permitting authority.

Section 7. CAAP Facility Characteristics

Item 7.1. Indicate if the CAAP facility is located on land. If the facility is located in water (e.g., a net pen or submerged cage system), check "No" and skip to Item 7.3. If yes, continue to Item 7.2.

Item 7.2. Provide the maximum daily and maximum average monthly discharge at the CAAP facility by outfall number. Outfall numbers should correspond with the outfall numbers provided on the map submitted in Section 7 of Form 1. Values given for flow should be representative of your normal operation. The maximum daily flow is the maximum measured flow occurring over a calendar day. The maximum average monthly flow is the average of measured daily flow over the calendar month of highest flow.

Item 7.3. Indicate the number of ponds, raceways, net pens, submerged cages, or similar structures at your facility that result in discharges to waters of the United States. Describe each type and provide the name of the associated receiving water and intake water source.

Item 7.4. List the species of fish or aquatic animals held and fed at your facility. Distinguish between cold-water and warm-water species. The names of fish species should be proper, common, or scientific names as given in Special Publication 34 of the American Fisheries Society, *Common and Scientific Names of Fishes from the United States, Canada, and Mexico*.

For each species, provide the total harvestable weight in pounds (lbs.) for a typical calendar year. Also indicate the maximum weight present at any one time at your facility.

Item 7.5. Indicate the maximum monthly pounds of food given at your facility. Also indicate the month given. The amounts should be representative of your normal operations.

Section 8. Checklist and Certification Statement

Item 8.1. Review the checklist provided. In Column 1, mark the sections of Form 2B that you have completed and are submitting with your application. For each section in Column 2, indicate whether you are submitting attachments.

Item 8.2. The Clean Water Act provides for severe penalties for submitting false information on this application form. CWA Section 309(c)(2) provides that, "Any person who knowingly makes any false statement, representation, or certification in any application, …shall upon conviction, be punished by a fine of no more than $10,000 or by imprisonment for not more than six months, or both."

FEDERAL REGULATIONS AT 40 CFR 122.22 REQUIRE THIS APPLICATION TO BE SIGNED AS FOLLOWS:

A. For a corporation, by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (1) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (2) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

B. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively.

C. For a municipality, state, federal, or other public facility, by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a federal agency includes: (1) The chief executive officer of the agency, or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

END

Submit your completed Form 1, Form 2B, and all associated attachments (and any other required NPDES application forms) to your NPDES permitting authority.

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EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
New Facility	FL0A00001	Velella Epsilon	

Form 2B NPDES

U.S. Environmental Protection Agency
Application for NPDES Permit to Discharge Wastewater

CONCENTRATED ANIMAL FEEDING OPERATIONS and CONCENTRATED AQUATIC ANIMAL PRODUCTION FACILITIES

SECTION 1. GENERAL INFORMATION (40 CFR 122.21(I)(1))

General Information

1.1 Indicate the facility/business type. (Check only one response.)

☐ CAFO ➔ Complete Sections 1 through 6 and Section 8.

☑ CAAP ➔ Complete Sections 1, 7, and 8.

1.2 Indicate the operational status of the facility. (Check one.)

☐ Existing facility ☑ Proposed facility

SECTION 2. CAFO OWNER/OPERATOR CONTACT INFORMATION (40 CFR 122.21(f)(2) and (4) and 122.21(i)(1)(i))

CAFO Owner/Operator Contact Information

2.1 **Owner/Operator Contact**

Name (first and last)	Title
Phone number	Email address

2.2 **Owner/Operator Mailing Address**

Street or P.O. box		
City or town	State	Zip code

SECTION 3. CAFO LOCATION AND CONTACT INFORMATION (40 CFR 122.21(i)(1)(ii and iii))

CAFO Location and Contact Information

3.1 **CAFO Location and Contact**

Name		
Address (street, route number, or other specific identifier)		County
City or town	State	Zip code
Facility contact name	Phone number	Email address

3.2 **Latitude/Longitude of Entrance to Production Area** (see instructions)

Latitude	Longitude
° ' "	° ' "

CAFO Location and Contact Information Continued

3.3 **Integrator Name and Address**

Name		
Street address		
City or town	State	Zip code

SECTION 4. CAFO TOPOGRAPHIC MAP (40 CFR 122.21(i)(1)(iv))

CAFO Topographic Map

4.1 Have you attached a topographic map containing all required information to this application? (See instructions for specific requirements.)

☐ Yes ➔ SKIP to Section 5. ☐ No

SECTION 5. CAFO CHARACTERISTICS (40 CFR 122.21(i)(1)(v ix))

CAFO Characteristics

5.1 Provide information on the type and number of animals in the table below.

Animal Type	Number in Open Confinement	Number Housed Under Roof	Animal Type	Number in Open Confinement	Number Housed Under Roof
☐ Mature dairy cows			☐ Sheep or lambs		
☐ Dairy heifers			☐ Chickens (broilers)		
☐ Veal calves			☐ Chickens (layers)		
☐ Cattle (not dairy or veal calves)			☐ Ducks		
☐ Swine (55 lbs. or more)			☐ Other (specify)		
☐ Swine (under 55 lbs.)			☐ Other (specify)		
☐ Horses			☐ Other (specify)		
☐ Turkeys			**Total Animals**		

5.2 Indicate the type of containment and storage, total number of days, and total capacity for manure, litter, and process wastewater storage in the table below.

Type of Containment and Storage	Total Number of Days	Total Capacity (specify gallons or tons)	Type of Containment and Storage	Total Number of Days	Total Capacity (specify gallons or tons)
☐ Anaerobic lagoon			☐ Belowground storage tanks		
☐ Evaporation			☐ Roofed storage shed		
☐ Aboveground storage tanks			☐ Concrete pad		
☐ Storage pond			☐ Impervious soil pad		
☐ Underfloor pit			☐ Other (specify)		

5.3 Indicate the total number of acres drained and collected in the containment and storage structure(s) reported under Item 5.2.

_____ acres

CAFO Characteristics Continued

Manure, Litter, and/or Process Wastewater Production and Use

5.4 How many tons of manure or litter and gallons of process wastewater are generated annually at the CAFO?

Manure	tons
Litter	tons
Process wastewater	gallons

5.5 Is manure, litter, and/or process wastewater generated at the CAFO land applied?

☐ Yes ☐ No ➔ SKIP to Item 5.8.

5.6 How many acres of land under the control of the applicant are available for applying the CAFO's manure, litter, or process wastewater?

_____ acres

5.7 Check all land application best management practices that are being implemented.

☐ Buffers ☐ Infiltration field
☐ Setbacks ☐ Grass filter
☐ Conservation tillage ☐ Terrace
☐ Constructed wetlands ☐ Other (specify)

5.8 Is manure, litter, and/or process wastewater transferred to any other persons?

☐ Yes ☐ No ➔ SKIP to Item 5.10.

5.9 How many tons of manure or litter and gallons of process wastewater, produced by the CAFO, are transferred annually to other people?

Manure	tons
Litter	tons
Process wastewater	gallons

5.10 Describe alternative use(s) of manure, litter, or process wastewater, if any.

SECTION 6. CAFO NUTRIENT MANAGEMENT PLANS (40 CFR 122.21(i)(1)(x))

CAFO Nutrient Management Plans

6.1 Has the applicant attached a nutrient management plan that satisfies the requirements at 40 CFR 122.42(e) and, if applicable, the requirements at 40 CFR 412.4(c)? **Note:** A permit application is not complete until a nutrient management plan is submitted to the NPDES permitting authority.

☐ Yes ➔ SKIP to Item 6.3. ☐ No

6.2 Explain why a nutrient management plan is not attached to the application.

6.3 Is a nutrient management plan being implemented at the CAFO?

☐ Yes ☐ No

6.4 What was the date of the last review or revision of the nutrient management plan? Date _____

SECTION 7. CAAP FACILITY CHARACTERISTICS (40 CFR 122.21(i)(2))

CAAP Facility Characteristics

7.1 Is the CAAP facility located on land?

☐ Yes ☑ No ➔ SKIP to Item 7.3.

7.2 Provide the maximum daily and maximum average monthly discharge at CAAP by outfall.

Outfall Number	Discharge	
	Maximum Daily Discharge	Maximum Average Monthly Discharge
	gpd	gpd
	gpd	gpd
	gpd	gpd

7.3 Indicate the type and number of discharge structures at the CAAP. Provide a brief description of each structure. Also note the name of the receiving water and the source of the intake water for each structure.

Structure Type	Number of Each	Description	Receiving Water Name	Source of Intake Water
Ponds				
Raceways				
Net pens				Not applicable
Submerged cages	1	25.5m (dia) x 12.7m (deep)	Gulf of Mexico	Not applicable
Similar structures (specify) _____				

7.4 List the cold-water and/or warm-water aquatic species raised/produced in the table below. For each species listed, indicate the total yearly and maximum harvestable weight (in pounds).

Cold Water Species			Warm Water Species		
Species	Harvestable Weight		Species	Harvestable Weight	
	Total Yearly	Maximum		Total Yearly	Maximum
	lbs.	lbs.	Red drum Sciaenops ocellatus	42,240 lbs.	52,800 lbs.
	lbs.	lbs.		lbs.	lbs.
	lbs.	lbs.		lbs.	lbs.
	lbs.	lbs.		lbs.	lbs.

7.5 Indicate the calendar month of maximum feeding and the total mass of food fed (in pounds) during that month.

Month of Maximum Feeding	Total Mass of Food Fed
TBD - Dependent upon project start date (i.e., December)	118,800 lbs.

EPA Identification Number	NPDES Permit Number	Facility Name	Form Approved 03/05/19 OMB No. 2040-0004
New Facility	FL0A00001	Velella Epsilon	

SECTION 8. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d))

Checklist and Certification Statement

8.1 In Column 1, below, mark the sections of Form 2B that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing to alert the permitting authority. Note that not all applicants are required to provide attachments.

Column 1	Column 2
☑ Section 1: General Information	☐ w/ attachments
☐ Section 2: CAFO Owner/Operator Contact Information	☐ w/ attachments
☐ Section 3: CAFO Location and Contact Information	☐ w/ attachments
☐ Section 4: CAFO Topographic Map	☐ w/ topographic map ☐ w/ additional attachments
☐ Section 5: CAFO Characteristics	☐ w/ attachments
☐ Section 6: CAFO Nutrient Management Plans	☐ w/ nutrient management plan ☐ w/ attachments
☑ Section 7: CAAP Facility Characteristics	☐ w/ attachments
☑ Section 8: Checklist and Certification Statement	☐ w/ attachments

8.2 **Certification Statement**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name (print or type first and last name)	Official title
Dennis Peters	Operator / Project Manager
Signature 	Date signed 07/15/2023

Click to go back to the beginning of Form

Appendix D

Letter from Eubanks and Associates on behalf of multiple Petitioners dated June 7, 2023

Eubanks & Associates, PLLC
LAW FOR THE PUBLIC INTEREST

1629 K STREET NW, SUITE 300
WASHINGTON, DC 20006
(970) 703-6060
By appointment only

June 7, 2023

Via E-mail
Craig Hesterlee, Chief
NPDES Permitting Section
EPA Region 4, Water Division
hesterlee.craig@epa.gov

Kip Tyler, Environmental Engineer
NPDES Permitting Section
EPA Region 4, Water Division
tyler.kip@epa.gov

Re: EPA's Consideration of Applicant-Proposed Modifications to NPDES Permit FL0A00001 (Ocean Era, Inc.)

Dear Mr. Hesterlee and Mr. Tyler,

I am writing on behalf of my clients—Food & Water Watch, Recirculating Farms Coalition, Center for Food Safety, Sierra Club, Healthy Gulf, Suncoast Waterkeeper, and Tampa Bay Waterkeeper—in connection with the Environmental Protection Agency's ("EPA") consideration of modifications to National Pollutant Discharge Elimination System ("NPDES") Permit FL0A00001. EPA issued this permit to Ocean Era, Inc. ("Ocean Era") in September 2020, and re-issued the permit in revised form on June 8, 2022 after a remand from EPA's Environmental Appeals Board ("EAB") on May 6, 2022 in Appeal No. 20-09. *See In re Ocean Era, Inc.,* 18 E.A.D. 678 (EAB 2022). This permit authorizes a precedent-setting offshore aquaculture facility to be constructed and operated in federal waters in the Gulf of Mexico.

My clients currently have a pending lawsuit in the U.S. Court of Appeals for the District of Columbia Circuit that challenges various actions and omissions by the EPA (and its EAB). However, we recently agreed to stay that litigation for 90 days while EPA considers how to proceed after Ocean Era proposed major modifications to key terms of the NPDES permit. In particular, on May 10, 2023, Ocean Era expressly acknowledged that it does "not intend to implement the project as currently permitted (i.e., with almaco jack or a SPM net pen system)," and instead requested to alter both the species of fish proposed to be raised by Ocean Era (changing from almaco jack to red drum), and the type of net pen system utilized for the facility (changing from a swivel-point mooring system to a grid mooring system).

Although Ocean Era self-servingly asserts that "[n]o appreciable changes in fish production numbers are anticipated" and "[o]nly minor changes in the submersible net pen design are anticipated," it is incumbent on EPA to independently scrutinize the project proponent's representations and conduct a thorough examination of any new impacts that could result from these notable changes. Indeed, under any metric, it is impossible to conclude that

these alterations to arguably the two most important variables for an offshore aquaculture facility somehow constitute "minor modifications," which are limited to truly minor alterations such as correcting typographical errors or noting a change in ownership. *See* 40 C.F.R. § 122.63.

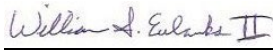
Accordingly, we hereby call upon EPA to exert its jurisdiction and authority under the Clean Water Act to revoke NPDES Permit FL0A00001 in its entirety, in light of Ocean Era's explicit admission that it will not—indeed, as a practical matter, it *cannot*—implement the project as currently permitted. *See* 40 C.F.R. §§ 122.62, 122.64, 124.5. As made clear by EPA's prior environmental review for this facility, the agency has never considered the impacts of, or alternatives to, either the use of red drum or a grid mooring system. Thus, in order to avoid an almost literal bait-and-switch, it is imperative that EPA provide the public with a transparent, new permit decisionmaking process on the basis of Ocean Era's new proposal, accompanied by compliance with the full suite of applicable laws including the Clean Water Act, the National Environmental Policy Act, and the Endangered Species Act. In the absence of such compliance, EPA's action will be highly vulnerable to additional legal challenges for failing, again, to adhere to our nation's bedrock laws for protecting the marine environment.

At minimum, EPA must reopen its permitting process with respect to the new aspects of the proposal (i.e., the shifts to red drum and a grid mooring system), and ensure that those issues are properly subjected to supplemental analysis under applicable laws and an accompanying, full public process. Of course, whether EPA revokes and considers reissuing Ocean Era's permit or whether it instead merely reopens certain aspects of the existing permit, EPA must ensure that the public (including my clients) may meaningfully participate in the permitting process. *See, e.g.*, 40 C.F.R. § 124.10.

CONCLUSION

We look forward to better understanding how EPA intends to proceed, as well as any other relevant information that you can provide about the agency's schedule or process for addressing Ocean Era's proposed permit changes. Please send any response to this letter via email to bill@eubankslegal.com. Thank you for your consideration of this matter.[1]

Respectfully submitted,



William S. Eubanks II
Owner & Managing Attorney
EUBANKS & ASSOCIATES, PLLC

CC (via email):
Lucy Brown
U.S. Department of Justice, ENRD
Lucy.E.Brown@usdoj.gov

[1] Please include this letter in EPA's formal administrative record for the new permitting decision.

Frederick Turner
U.S. Department of Justice, ENRD
Frederick.Turner@usdoj.gov

Appendix E

NMFS additional analysis dated August 26, 2022

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701-5505
https://www.fisheries.noaa.gov/region/southeast

08/26/2022

F/SER31: JJS, LEF, JLL
SERO-2019-02205; SERO-2021-02842

Christopher B. Thomas
Chief, Permitting and Grants Branch
U.S. Environmental Protection Agency
Region 4
Atlanta Federal Center
61 Forsyth Street
Atlanta, Georgia, 30303-8960

John Fellows
Acting Chief, Tampa Permits Section
Jacksonville District Corps of Engineers (USACE)
Department of the Army
10117 Princess Palm Drive, Suite 120
Tampa, FL 33610-8302

Jonathan Pennock, Ph.D.
Director
NOAA National Sea Grant College Program
1315 East West Highway
Silver Springs, MD 20910

Dear Mr. Thomas, Mr. Fellows, and Mr. Pennock:

We, the National Marine Fisheries Service (NMFS), are amending our letter of concurrence (LOC) that we provided to you pursuant to Section 7 of the Endangered Species Act (ESA) for the following action, in order to address information we considered, but did not document in the original LOC. In reviewing the existing consultation when considering the late-arriving action agency, NOAA National Sea Grant College Program, we noted that we did not fully document all of our considerations and supporting rationale for our LOC. In order to address information we considered, but did not include documentation on in the original LOC, we are now amending the consultation to include relevant additional information related to the project's potential impacts. This amended LOC does not change our determination that the Velella Epsilon project is not likely to adversely affect any listed or proposed species or designated or proposed critical habitat.

Permit Numbers	Applicant	SERO Numbers	Project Types
NPDES FL0A0000I, SAJ-20 17-03488	Kampachi Farms, LLC (now Ocean Era, Inc.	SERO-2019-02205, SERO-2021-02842	Offshore Cage Aquaculture, NPDES permit, Section 10 permit, Project Funding

Consultation History

On August 13, 2019, the EPA requested informal consultation on EPA's proposed issuance of a National Pollutant Discharge Elimination System (NPDES) permit to Kampachi Farms, LLC (now, Ocean Era, Inc.) for the point-source discharge of pollutants from their proposed Velella Epsilon marine aquaculture facility. In the same request, the USACE requested informal consultation on the proposed issuance of a Department of Army permit pursuant to Section 10 of the Rivers and Harbors Act for structures and work affecting navigable federal waters from the same aquaculture facility. The EPA included a biological evaluation with their request. On September 30, 2019, we concurred with the EPA and USACE determinations that the Velella Epsilon project is not likely to adversely affect any listed or proposed species or designated or proposed critical habitat in an LOC (SERO-2019-02205-see Appendix 1).

On October 21, 2021, NOAA's Sea Grant Program requested ESA Section 7 consultation on their proposed funding for the Velella Epsilon marine aquaculture project (Velella Epsilon) in partnership with Neil Sims of Ocean Era, Inc., University of Florida, and Dr. Daniel Benetti and the University of Miami. On July 14, 2022, we determined that NOAA Sea Grant's proposed funding was within the scope of the original action and that a separate consultation was not warranted. Instead, we issued a letter to NOAA Sea Grant as a late arriving action agency noting that their consultation obligation for funding of the Velella Epsilon project was fulfilled by the previous consultation.

Project Location

Address	Location Option	Latitude/Longitude (North American Datum 1983)	Water body
Approximately 45 mi off Sarasota, Florida	1	27.125787ºN, 83.197565ºW	Gulf of Mexico
	2	27.119580ºN, 83.197096ºW	
	3	27.115655ºN, 83.19913ºW	
	4	27.108763ºN, 83.201529ºW	

Pursuant to 50 C.F.R. § 402.02, the term action area is defined as "all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action". In the original LOC, we defined the proposed action area as a 1,000 m radius measured

from the center of the MAS, based on the result of the water quality analysis. We inadvertently omitted from our proposed action area definition the route that project vessels will take between the marina and the farm location. Therefore, we are redefining the action area in this amendment to the original LOC to include any vessel route in addition to the radius around the project location. As explained below, the expansion of the action area does not alter our determination in the original LOC issued to the EPA and USACE, that the proposed aquaculture facility is not likely to adversely affect listed species.

Existing Site Conditions
The project siting process and the site conditions can be found in the original consultation, SERO-2019-02205 (Appendix 1) which we incorporated by reference.

Project Description
The project applicant, Ocean Era, Inc. (formerly, Kampachi Farms, LLC), is proposing to operate a pilot-scale marine aquaculture facility, rearing up to 20,000 almaco jack (*Seriola rivoliana*) for approximately 12 months (with total deployment of the cage system - 18 months) in federal waters of the Gulf of Mexico, in 130 ft of water.

Specific construction and operation details of the project can be found in the original LOC, SERO-2019-02205 (Appendix 1) incorporated by reference.

Construction Conditions
Ocean Era, Inc. agreed to follow a protected species monitoring plan (PSMP), which they developed with assistance from my staff. The purpose of the PSMP is to provide monitoring procedures and data collection efforts for species protected under the MMPA or ESA that may be encountered at the proposed project. The PSMP also contains precautionary measures including suspending vessel transit and all surface activities (including stocking fish, harvesting operations, and routine maintenance operations) when a protected species comes within 100 m of the activity, until the animal(s) leave the area. Ocean Era, Inc. also committed to following vessel strike avoidance guidelines developed by the NMFS. (i.e., NMFS Southeast Region Vessel Strike Avoidance Measures; revised February 2021; https://media.fisheries.noaa.gov/2021-06/Vessel_Strike_Avoidance_Measures.pdf?null).
.

Effects Determination(s) for Species the Action Agency or NMFS Believes May Be Affected by the Proposed Action. Please note abbreviations used in the table below: E = endangered; T = threatened; NLAA = may affect, not likely to adversely affect; NE = no effect.

Species	ESA Listing Status	Action Agency Effect Determination	NMFS Effect Determination
Sea Turtles			
Green (North Atlantic [NA] distinct population segment [DPS])	T	NLAA	NLAA
Green (South Atlantic [SA] DPS)	T	NLAA	NLAA
Kemp's ridley	E	NLAA	NLAA
Leatherback	E	NLAA	NLAA
Loggerhead (Northwest Atlantic [NWA] DPS)	T	NLAA	NLAA
Hawksbill	E	NE	NE
Fish			
Smalltooth sawfish (U.S. DPS)	E	NLAA	NLAA
Nassau grouper	T	NE	NE
Giant manta ray	T	NLAA	NLAA
Oceanic whitetip shark	T	NLAA	NLAA
Invertebrates and Marine Plants			
Elkhorn coral (*Acropora palmata*)	T	NLAA	NE
Staghorn coral (*Acropora cervicornis*)	T	NLAA	NE
Boulder star coral (*Orbicella franksi*)	T	NLAA	NE
Mountainous star coral (*Orbicella faveolata*)	T	NLAA	NE
Lobed star coral (*Orbicella annularis*)	T	NLAA	NE
Rough cactus coral (*Mycetophyllia ferox*)	T	NLAA	NE
Pillar coral (*Dendrogyra cylindrus*)	T	NLAA	NE
Marine Mammals			
Rice's whale	E	NLAA	NE
Blue whale	E	NLAA	NE
Fin whale	E	NLAA	NE
Sei whale	E	NLAA	NE
Sperm whale	E	NLAA	NE

Our species determinations, including our rationale for listed species for which you made NLAA determinations for the proposed project but for which we believe there are no effects, remain unchanged from the original LOC, even after considering our revised definition of the action area, and are incorporated by reference (Appendix 1).

Critical Habitat

The project is not located in designated critical habitat, and there are no potential routes of effect to any designated critical habitat.

Analysis of Potential Routes of Effects to Species
Potential routes of effects to the listed species that may occur in the action area (see table above) and that were documented in our original LOC include: disturbance, vessel strike, entanglement, and water quality changes. Analysis of those potential routes of effects are referenced in the original LOC, SERO-2019-02205 (Appendix 1), and are incorporated herein by reference.

Due to our expanded definition of the action area, this amended consultation adds additional analysis of the potential route of effects to species from vessel strikes that may occur during the transit of project vessels between where they are docked and the project area. In addition, this amended LOC addresses the potential risk of vessel strike effects from other non-project vessels due to a potential increase in recreational and commercial fishing traffic near the facility, the potential effects of the aquaculture facility acting as a fish aggregating device (FAD) leading to feeding or behavioral changes, increased predation, and increased bycatch; and the potential risk of harmful algal blooms from the project on listed species. This additional analysis does not change our finding that the project is not likely to adversely affect any listed species. Instead we document additional support for our finding.

Vessel strike risks:
As noted in the original LOC, vessel strikes between a marine animal and a vessel can kill or injure the animal, including air-breathing whales and sea turtles as well as any other marine species, when feeding, basking or swimming close to the surface (e.g., giant manta rays and oceanic whitetip sharks). Smalltooth sawfish are primarily demersal and rarely would be at risk from moving vessels. Therefore, we expect any vessel traffic effects on smalltooth sawfish to be discountable. The oceanic whitetip is a pelagic species, and may be more vulnerable to vessel strike than demersal species. While there is anecdotal information indicating vessel strikes on pelagic shark species do occur (e.g., Barnette, pers. obs.), such as when sharks are basking or cruising near the surface, strikes on this particular shark species are anticipated to be highly unlikely due to their preference for offshore pelagic waters where vessel traffic is more diffuse.

The proposed project involves only two vessels - a support vessel and a harvest vessel. The support vessel will be present at the facility throughout the life of the project except during certain storm events or times when resupplying is necessary. The harvest vessel (expected to be a vessel already engaged in offshore fishing in the Gulf) will be used to transport the fish, once grown, to land and as such, will only be present on-site when harvesting occurs. As stated in the original LOC, we do not believe any of the listed whale species that may be present in the Gulf of Mexico will be close enough to the facility location of this project for there to be any potential routes of effects to these species. For the same reasons explained in the original LOC, we also conclude that these whales will not occur close enough to the expanded action area, which includes the route from shore to the farm location, of this project for there to be any potential routes of effects. For non-demersal ESA-listed fish and sea turtles that may occur in the expanded action area and may be affected, any adverse effects from project vessels are still extremely unlikely to occur, due to the small number of vessels associated with farm activities and the low number of trips that will take place between shore and the farm.

The original LOC omitted discussing the risk of vessel strikes due to a potential increase in recreational and commercial fishing traffic to the area due to the project acting as a fish aggregation device (FAD). The addition of one aquaculture net pen may introduce new fishing

vessels to the area around the farm but those fishing vessels would likely be the result of a shift in current fishing vessel distribution from areas where vessels may currently aggregate. While it is difficult to estimate the increase in fishing vessels near the farm, the number of vessels that will be drawn to the farm is limited due to the distance the proposed project will be from shore (45 miles). The threat that fishing vessels present to ESA-listed fish and manta rays is not constant. It is influenced by vessel type, vessel speed, and environmental conditions such as sea state and visibility. A collision between any specific vessel and marine animal is extremely unlikely to occur (Barnette 2018). For example, when using the conservative mean estimate of a sea turtle strike every 193 years (range of 135-250 years) per vessel, it would require a moderately-sized marina project (*e.g.*, ~200 new vessels introduced to an area) to potentially result in one sea turtle take in any single year (Barnette 2018). While there may be some shift in fishing effort to the farm location and an increase in fishing vessels near the farm, the effect of vessel strikes on listed species is still extremely unlikely to occur.

Other Potential Risks from the Farm Acting as a FAD:
There are several other potential risks to listed species from the farm, potentially acting as a FAD. These include changes in trophic ecosystem effects leading to feeding/behavioral changes, potential increased predation on ESA-listed species, and potential aggregation of fishing effort around the farm leading to a potential increase in bycatch of ESA-listed species.

As pointed out in Callier et al (2018), an aquaculture facility has the potential to act as a FAD and attract fish to the area to feed on the excess fish food or feces that will be discharged from the fish cage. A finfish cage acts as a fish aggregating device (FAD) by providing structure in the pelagic environment but has increased food availability compared to traditional FAD's (e.g. artificial reefs), (Dempster et al. 2002). These structures provide shade, which create shadow areas where zooplankton become more visible to feeding fish; substrate for egg laying; act as a schooling companion, providing spatial reference for fish; shelter for small fish from predators; substrate for plant and animal growth; and as potential cleaning stations for pelagic fish (Beveridge, 1984).

What species may be attracted to offshore aquaculture is dependent on the farm location and varies by season. As there are no other fish cages in the Gulf of Mexico, the only other comparable structures offshore are oil platforms. Oil platforms are known to attract clupedis, engraulids, synodontids, bennids, and pomacentrids, which is expected, as those are common species around hard bottom habitat in the Gulf of Mexico (Lindquist et al. 2005). Those species are aggregating at the oil platform to either use the structure as a habitat, refuge, or feed on organisms that settle and grow on the structure itself. The assemblage of species that will be attracted to the Velella facility may be different, as fish will be attracted to not only the structure, but to the discharge from the net pen. Oil platforms are more likely to attract herbivorous fish and benthic carnivores, while this project is more likely to also attract particulate matter feeders such as rays and pagellus fishes (Tuya et al. 2006).

The impact of the attraction of fish to the farm facility is difficult to assess, as the attraction of particulate matter feeders may lessen the amount of discharge by reducing the amount of organic material that is released into the environment (Uglem et al. 2008). Sea turtles, in particular, are not known to feed on fish or particulate matter, such as what will be discharged from the farm location, nor do they feed on any of the fishes that will be attracted to the farm. Giant manta rays

and oceanic whitetip sharks may be attracted to the farm location to feed on fish or farm discharge. Regardless, based on this proposed one-cage project, the changes in the trophic ecosystem around the farm are likely to be minimal; that is, we expect any feeding or behavioral effects to ESA-listed species that may be attracted to the area to be too small to be meaningfully measured or detected, and effects insignificant. Since this project is limited to one fish cage, there is no evidence that the cage acting as a FAD will have any significant effect on any of the listed species in the table above.

Due to the increase in fish around the fish cage, there is a possibility that the farm will attract predators such as sharks or killer whales, which could prey on listed sea turtles or manta rays. However, the Gulf of Mexico killer whale population is very small (a 2009 survey estimated the population at 28 individuals), and they are primarily found in a mean depth of 1,900m (Maze-Foley and Mullin 2006). Oil platforms in the Gulf of Mexico are known to attract tiger sharks due to them acting as artificial reefs and attracting high densities of fish (Ajemiam et al. 2020). However, there is some limited evidence that tiger sharks attracted to fish farms are transient and are not found to be permanently aggregating around open ocean aquaculture farm locations (Papastamatiou et al. 2011). As oceanic whitetip sharks are highly mobile and opportunistic predators, they may be attracted to the farm location, but there is little evidence that the addition of one fish cage will adversely impact their foraging behavior.

The attraction of sharks to the farm location may have some impact on listed sea turtles and giant manta rays. Giant manta rays and sea turtles both have been observed with shark bites. A recent study on the east coast of Florida found that only 6.8% of identifiable manta rays had shark bites and hypothesized that mantas may be exhibiting some preference for areas with low levels of predators (Pate and Marshall 2020). Generally, giant manta mortality due to shark attacks is thought to be relatively low (Bucair et al. 2021). The hard sea turtle carapace makes large sea turtles more resilient to shark predation, and Stacy et al. (2021) found that the majority (80%) of sea turtle stranding's with shark-related injuries were due to sharks preying on already deceased sea turtles. While there is a risk of sea turtle and manta ray predation by sharks attracted to the project location, due to the small size of the farm and the transient nature of sharks, we believe this is extremely unlikely to occur.

Recreational and commercial fishermen may fish near the cage facility, as they do near other structures (e.g., natural and artificial reefs) while fishing for species managed under federal fisheries management plans (FMPs) (e.g., Gulf of Mexico Reef Fish FMP, coastal migratory pelagic resources FMP). Although the facility may aggregate some fish and fishing activity, we do not expect there to be a measurable increased risk of ESA-listed species bycatch attributed to the proposed aquaculture farm relative to that considered in our biological opinions on federal fisheries. As with vessel traffic, we believe that the proposed farm would only potentially shift current fishing vessel distribution from areas where vessels may currently aggregate.

Risks from Potential Harmful Algal Blooms:
Listed species may be adversely affected indirectly if the proposed facility leads to an increase in harmful algal blooms or red tide events due to the toxic nature of red tide to marine organisms. However, the best available information on the potential effects of the proposed facility do not indicate such will occur from this offshore small one cage project. Phytoplankton blooms are primarily natural events and an important part of the annual cycle of phytoplankton growth, but

some blooms are associated with 'harmful events', ranging from ecosystem disturbance to serious threats to human health. Phytoplankton blooms can vary seasonally and are predominantly due to local environmental conditions on land. Nutrient input from land into a marine system occurs via runoff; flooding of a major river basin which re-suspends nutrients; and local wind and rainfall, which set up oceanographic conditions, such as water-column stability, that may promote or exacerbate algal growth. Although nutrient enrichment from finfish farm waste has been associated with increased phytoplankton growth and the occurrence of algal blooms, these concerns are mainly for farms located in shallow, poorly flushed sites that are sensitive to nutrient additions.

The Velella Epsilon project has stringent monitoring requirements for discharge required by the EPA to protect water quality. The overall pollutant loading of the project is expected to be minimal given the small production levels from one cage. Additionally, it is not expected that aquaculture-related pollutants will be measurable in the water within 5-10 meters from the project (US EPA 2020). There is very little evidence of aquaculture farms directly being attributable to HABs. Water quality and phytoplankton monitoring of finfish farm sites in Ireland and Chile found no evidence that salmon aquaculture caused phytoplankton blooms (Hensey, 1992; Bushmann *et al.*, 1996). A study in British Columbia demonstrated that salmon farms did not increase the food for mussels grown adjacent to the farms. Additionally, there was no evidence of direct contribution of nutrients in the form of fish feed or feces and no indirect contribution of phytoplankton from nitrogen enrichment (Taylor *et al.*, 1992). Similarly, in the Bay of Fundy, Martin *et al*. (1999) could find no connection between fish farming and the occurrence of HABs. Finally, Price et al. 2015, found that modern operating conditions have minimized impacts of individual fish farms on marine water quality and the effects on dissolved oxygen and turbidity were minimized through better management. Based on the modeling done by the EPA for this project, we believe one cage will not produce enough discharge in a concentrated area to lead to a harmful algal bloom, or exacerbate existing blooms that have been occurring along the Florida coastline. Therefore, we find the effects of potential HABs or red tide events as a result of this project on listed species to be discountable.

Conclusion

Although the action area was expanded and additional analysis on the effects to listed species was conducted, this did not change the determination of the original LOC (SERO-2019-02205–Appendix 1)**.** Because all potential project effects to listed species were found to be discountable, insignificant, or beneficial, we concur with your assessment that the proposed action is also not likely to adversely affect any listed species or designated critical habitat.

This concludes your consultation responsibilities under the ESA for species under NMFS's purview. Consultation must be reinitiated if a take occurs or new information reveals effects of the action not previously considered, or if the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat in a manner or to an extent not previously considered, or if a new species is listed or critical habitat designated that may be affected by the identified action. NMFS's findings on the project's potential effects are based on the project description in this response. Any changes to the proposed action may negate the findings of this consultation and may require reinitiation of consultation with NMFS.

We look forward to further cooperation with you on other projects to ensure the conservation of our threatened and endangered marine species and designated critical habitat. If you have any questions on this consultation, please contact Joe Shields, Marine Habitat Specialist, at joseph.shields@noaa.gov or Lindsey Feldman, Marine Habitat Specialist, at lindsey.feldman@noaa.gov.

Sincerely,

BERNHART.DAVID.M.1066125889
2022.08.26 17:39:22 -04'00'

David Bernhart
Assistant Regional Administrator
for Protected Resources

Files: 1514-22.k, 1514-22.e, 1514-22.f.4
Appendix

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APPENDIX 1: 09/30/2019 Letter of Concurrence

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701-5505
https://www.fisheries.noaa.gov/region/southeast

09/30/2019

F/SER31:JLL
SER-2019-02205

Christopher B. Thomas
Chief, Permitting and Grants Branch
U.S. Environmental Protection Agency
Region 4
Atlanta Federal Center
61 Forsyth Street
Atlanta, Georgia, 30303-8960

Dear Mr. Thomas:

This letter responds to your request for consultation with us, the National Marine Fisheries Service (NMFS), pursuant to Section 7 of the Endangered Species Act (ESA) and the Fish and Wildlife Coordination Act (FWCA) for the following action.

Project Name	**Applicant(s)**	**SER Number**	**Project Type**
Velella Epsilon Marine Aquaculture Facility	Kampachi Farms, LLC	SER0-2019-02205	Offshore Cage Aquaculture, NPDES permit, Section 10 permits

Your request is on behalf of the U.S. Environmental Protection Agency (EPA) and U.S. Army Corps of Engineers Jacksonville District (USACE), the two federal agencies responsible for permitting aquaculture operations in federal waters of the Gulf of Mexico. The EPA is proposing to issue a National Pollutant Discharge Elimination System (NPDES) permit to Kampachi Farms, LLC for the point-source discharge of pollutants from their proposed Velella Epsilon marine aquaculture facility. The USACE is proposing to issue a Department of Army permit pursuant to Section 10 of the Rivers and Harbors Act for structures and work affecting navigable federal waters from the same aquaculture facility. The EPA has elected to act as the lead action agency and the USACE is a cooperating and co-federal agency. The EPA and USACE have determined that their proposed actions are not likely to adversely affect any listed or proposed species or designated or proposed critical habitat.

Consultation History
We received your letter requesting consultation and Biological Evaluation on August 13, 2019 and initiated consultation that day.

Project Location
The proposed aquaculture facility will be located in the Gulf of Mexico in an approximate water depth of 130 feet (ft) (40 meters [m]), 45 miles (mi) southwest of Sarasota, Florida. The applicant has submitted four potential locations to place the cage and multi-anchor swivel

(MAS) mooring system. The applicant will select one of these four potential locations based on diver-assisted assessments of the sea floor when the cage and the MAS are deployed.

Proposed Potential Project Locations

Address	Location Option	Latitude/Longitude (North American Datum 1983)	Water body
Approximately 45 mi off Sarasota, Florida	1	27.125787ºN, 83.197565ºW	Gulf of Mexico
	2	27.119580ºN, 83.197096ºW	
	3	27.115655ºN, 83.19913ºW	
	4	27.108763ºN, 83.201529ºW	

Pursuant to 50 C.F.R. § 402.02, the term action area is defined as "all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action. The EPA defined the proposed action area as a 1,000 m radius measured from the center of the MAS, based on the result of their water quality analysis.

Existing Site Conditions

The proposed facility will be placed within an area that contains unconsolidated sediments that are 3-10 ft deep. The facility's potential locations were selected with assistance from NOAA's National Ocean Service National Centers for Coastal Ocean Science (NCCOS). The applicant and the NCCOS conducted a site screening process over several months to identify an appropriate project site. Some of the criteria considered during the site screening process included avoidance of corals, coral reefs, submerged aquatic vegetation, hard bottom habitats, marine protected areas, marine reserves, and habitats of particular concern. This siting assessment was conducted using the Gulf AquaMapper tool developed by NCCOS.[1]

Upon completion of the site screening process with the NCCOS, the applicant conducted a Baseline Environmental Survey (BES) in August 2018 based on guidance developed by the NMFS and EPA.[2] The BES report noted that were no physical, biological, or archaeological features that would preclude the siting of the proposed aquaculture facility at one of the four potential locations

Project Description

The project applicant, Kampachi Farms, LLC, is proposing to operate a pilot-scale marine aquaculture facility, rearing up to 20,000 almaco jack (*Seriola rivoliana*) for approximately 12 months (with total deployment of the cage system 18 months) in federal waters of the Gulf of Mexico in 130 ft of water.

A single CopperNet offshore strength (PolarCirkel-style) fully-closed submersible fish pen will be deployed on an MAS mooring system. The engineered MAS will have up to three anchors (concrete deadweight or embedment anchors) for the mooring, with a swivel and bridle system. The cage material for the proposed project is constructed with rigid and durable materials

[1] The Gulf AquaMapper tool is available at: https://coastalscience.noaa.gov/products-explorer/

[2] The BES guidance document is available at: https://www.fisheries.noaa.gov/content/fishery-management-plan-regulating-offshore-marine-aquaculture-gulf-mexico

(copper mesh net with a diameter of 4 millimeter [mm] wire and 40mm x 40 mm mesh square). The mooring lines for the proposed project will be constructed of steel chain (50 mm thick) and thick rope (36 mm) that are attached to a floating cage that will rotate in the prevailing current direction; this will maintain the mooring rope and chain under tension during most times of operation. The bridle line that connects from the swivel to the cage will be encased in a rigid pipe.

The CopperNet cage design is flexible and self-adjusts to suit the constantly changing wave and current conditions. Consequently, the system can operate floating on the ocean surface or submerged within the water column of the ocean. Normal operating condition of the cage is below the water surface. The cage will be submerged and only brought to the surface for brief periods to conduct maintenance, feeding, or harvest activities due to the high-energy open ocean environment.

When a storm approaches the area, the operating team uses a valve to flood the floatation system with water, causing the entire cage array to submerge. A buoy remains on the surface, marking the net pen's position and supporting the air hose. When the pen approaches the bottom, the system will maintain the cage several meters above the sea floor. Submerged and protected from the storm above, the system is still able to rotate around the MAS and adjust to the currents. After storm events, facility staff makes the cage system buoyant, causing the system to rise back to the surface or near surface position to resume normal operational conditions. The proposed project cage will have at least one properly functioning global positioning system device to assist in locating the system in the event it is damaged or disconnected from the mooring system.

One support vessel, expected to be a 70-ft-long Pilothouse Trawler (20 ft beam and 5 ft draft) with a single 715 horsepower engine, will be tethered to the facility. Another vessel would be used for harvest and transport of the fish. The exact harvest vessel is not known; however, it is expected to be a vessel already engaged in offshore fishing activities in the Gulf.

Construction Conditions

The applicant has agreed to follow a protected species monitoring plan (PSMP), which they developed with assistance from the NMFS Protected Resources Division. The purpose of the PSMP is to provide monitoring procedures and data collection efforts for species protected under the MMPA or ESA that may be encountered at the proposed project. The PSMP also contains precautionary measures including suspending vessel transit and all surface activities (including stocking fish, harvesting operations, and routine maintenance operations) when a protected species comes within 100 m of the activity until the animal(s) leave the area. The applicant also commits to following vessel strike avoidance guidelines developed by the NMFS. (i.e., NMFS Southeast Region Vessel Strike Avoidance Measures and Reporting for Mariners; revised February 2008).

Effects Determination(s) for Species the Action Agency or NMFS Believes May Be Affected by the Proposed Action

Species	ESA Listing Status[3]	Action Agency Effect Determination	NMFS Effect Determination
Sea Turtles			
Green (North Atlantic [NA] distinct population segment [DPS])	T	NLAA	NLAA
Green (South Atlantic [SA] DPS)	T	NLAA	NLAA
Kemp's ridley	E	NLAA	NLAA
Leatherback	E	NLAA	NLAA
Loggerhead (Northwest Atlantic [NWA] DPS)	T	NLAA	NLAA
Hawksbill	E	NLAA	NE
Fish			
Smalltooth sawfish (U.S. DPS)	E	NLAA	NLAA
Nassau grouper	T	NLAA	NE
Giant manta ray	T	NLAA	NLAA
Oceanic whitetip shark	T	NLAA	NLAA
Invertebrates and Marine Plants			
Elkhorn coral (*Acropora palmata*)	T	NLAA	NE
Staghorn coral (*Acropora cervicornis*)	T	NLAA	NE
Boulder star coral (*Orbicella franksi*)	T	NLAA	NE
Mountainous star coral (*Orbicella faveolata*)	T	NLAA	NE
Lobed star coral (*Orbicella annularis*)	T	NLAA	NE
Rough cactus coral (*Mycetophyllia ferox*)	T	NLAA	NE
Pillar coral (*Dendrogyra cylindrus*)	T	NLAA	NE
Marine Mammals			
Bryde's whales	E	NLAA	NE
Blue whale	E	NLAA	NE
Fin whale	E	NLAA	NE
Sei whale	E	NLAA	NE
Sperm whale	E	NLAA	NE

There are listed species for which you made NLAA determinations for the proposed project but for which we believe there are no effects. Our rationale for that determination for each of these species is as follows:

1. Hawksbill sea turtles have very specific life history strategies, which are not supported at the project site. Hawksbill sea turtles typically inhabit inshore reef and hard bottom areas where they forage primarily on encrusting sponges. The proposed facility is located in an offshore area that contains 3 to 10-ft deep unconsolidated sediments and not near any

[3] E = endangered; T = threatened; NLAA = may affect, not likely to adversely affect; NE = no effect; NP = not present

hardbottom habitat. Consequently, we believe that Hawksbill sea turtles will not be present, and that there are no potential rotes of effects on this this species.

2. The absence of Nassau grouper in the Gulf of Mexico (excluding around the Florida Keys and Dry Tortugas) is well-documented by the lack of records in Florida Fish and Wildlife Conservation Commission, Fisheries Independent Monitoring data as well as in various surveys conducted by NMFS, Southeast Fisheries Science Center. Nassau grouper are not found in or close enough to the action area for there to be any potential routes of effects to this species.
3. The proposed project will be placed in an area consisting of unconsolidated sediments and not near any hardbottom. In your analysis, you concluded that water quality effects are not expected to occur outside of 30 m (0.02 mi) due to the small size of the facility. You also concluded that sedimentation from the Velella Epsilon facility is not expected outside of 1,000 m (0.62 mi), and impacts resulting from the proposed facility are likely limited to within 300 to 500 m (0.12 to 0.31 mi) from the cage. Listed corals generally occur in the Gulf only near the Florida Keys and Dry Tortugas and in the Flower Banks National Marine Sanctuary, located off the coast of Texas and Louisiana. Listed corals do not occur in or close enough to the action area for there to be any potential routes of effects on these species.
4. Two strandings on the Louisiana and Texas coast comprise the only possible record of blue whales in the Gulf of Mexico and identifications for both strandings are questionable, thus we do not believe blue whales live in the Gulf of Mexico.
5. Water depth at the project site is only 40 m deep, and the site is approximately 80+ mi from Bryde's whale biological important areas, the 100-m depth contour, and the shelf break. Sperm whales are the most abundant large cetacean in the Gulf of Mexico, found year-round in waters greater than 200 m. Sei whales also typically occur in these deeper waters. Sei whales are generally found in oceans along the 100-meter depth contour with with sightings also spread over deeper water including canyons along the shelf break. Fin and sei whale do occasionally strand in the Gulf indicating they may occur, but neither is commonly observed in the waters of the Gulf of Mexico. We do not believe any of these species will occur in the action area for this project or close enough for there to be any potential routes of effects to these species.

Critical Habitat

We do not concur with your determination that the proposed action may affect hawksbill, leatherback, and loggerhead sea turtle critical habitat. The project is not located in or near designated critical habitat of these or any other species. The nearest critical habitat to the project is loggerhead nearshore nesting habitat (Units 29 and 30), more than 40 mi away from the action area.

Analysis of Potential Routes of Effects to Species

Potential routes of effects to the listed species that may occur in the action area (i.e., sea turtles [green NA and SA DPSs, loggerhead, leatherbacks, and Kemp's ridleys] and ESA-listed fish [i.e., smalltooth sawfish, giant manta rays, and oceanic whitetip sharks][4]) include disturbance, vessel strike, entanglement, and water quality changes.

[4] Hereafter, sea turtles and ESA-listed fish refer to these specific species.

Vessel strike

A vessel strike is a collision between any type of boat and a marine animal in the ocean. Collision with the hull, outboard motor, or propeller of a vessel can kill or injure marine animals including air-breathing whales and sea turtles as well as any other marine species when feeding, basking or even just swimming close to the surface (e.g., giant manta rays and oceanic whitetip sharks). Collisions may occur anywhere a vessel cross paths of a species. However, we have determined that the potential for a vessel strike on any listed species to result from this proposed action is discountable. The proposed project involves only two vessels. A support vessel will be present at the facility throughout the life of the project except during certain storm events or times when resupplying is necessary; a harvest vessel (expected to be a vessel already engaged in offshore fishing in the Gulf) will be used to transport the fish, once grown, to land. Vessels are expected to follow the vessel strike and avoidance measures that have been developed by NMFS[5]. A collision between any specific vessel and marine animal is extremely unlikely to occur. For example, when using the conservative mean estimate of a sea turtle strike every 193 years (range of 135-250 years) per vessel, it would require a moderately-sized marina project (*e.g.*, ~200 new vessels introduced to an area) to potentially result in a sea turtle take in any single year (Barnette 2018[6]). Given the limited vessel activity and duration of the project, a vessel strike is extremely unlikely.

Disturbance

ESA-listed fish and sea turtles may experience disturbance by stress via a startled reaction should they encounter the proposed facility, including the cage associated and the support vessel and/or harvest vessel or associated noise (e.g., vessel engine or barge generator), when moving through the area. A behavioral reaction could range from the animal approaching and investigating the facility to avoidance and moving away from the area. A potential source of disturbance from the proposed aquaculture facility would be vessel engine and barge generator noise. ESA-listed fish and sea turtles may also be attracted to aquaculture facilities as potential sources of food, shelter, and/or rest. However, any stress and behavioral effects on ESA-listed fish and sea turtles from disturbance are expected to be insignificant. The facility is not in an area known to be a hot spot or high-use area for any important activities (e.g., feeding, reproducing) of the sea turtle or ESA-listed fish species. Also, because this is a pilot study with only one cage in the open ocean, the proposed project site is small (each potential site <8 square kilometers) and will in no way limit movement or ability of a species to avoid the area or navigate through the area. As a result, disturbance from human activities and equipment and vessel operation resulting from the proposed action is expected to have only insignificant effects on ESA-listed fish and sea turtles.

Entanglement/Entrapment

The cage, mooring lines, and bridle line from the proposed project may pose an entanglement and an entrapment risk to ESA listed fish and sea turtles. Entanglements occur when lines, netting, or other man-made materials become wrapped around the body (e.g., flipper, fin) of the

[5] NMFS. Vessel Strike Avoidance Measures and Reporting for Mariners NOAA Fisheries Service, Southeast Region, February 2008. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southeast Regional Office, Protected Resources Division, Saint Petersburg, Florida. https://www.fisheries.noaa.gov/southeast/consultations/regulations-policies-and-guidance

[6] Barnette, M. C. 2018. Threats and Effects Analysis for Protected Resources on Vessel Traffic Associated with Dock and Marina Construction. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Saint Petersburg, Florida.

animal. Entrapment can occur when an animal becomes restrained or stuck in man-made structure and cannot escape. However, we believe the effects to sea turtles or ESA listed fish from entanglement will be discountable because of how the cage will be constructed and deployed. The risk of sea turtles and ESA listed fish being entangled or entrapped is greatly reduced by using rigid cage materials and by keeping all lines taut. The cage and moorings for the proposed project are constructed with rigid and durable materials, and the mooring lines will be constructed of steel chain and thick rope that will be maintained under tension by the ocean currents during most times of operation. For example, the lines would likely remain taut even as the currents shift because of the weight of the chain and rope creating a negative buoyancy on the facility anchorage lines. The cage, even in storm conditions, will be at least several meters from the sea floor, allowing safe passage under the cage. Additionally, the bridle line that connects from the swivel to the cage will be encased in a rigid pipe. The limited number of vertical mooring lines (3) and the duration of cage deployment (less than 18 months) will also reduce the risk of potential entanglement. Because of the proposed project operations and duration, we expect that the effects of possible entanglement to be discountable.

Water quality

Sea turtles and ESA-listed fish species may be affected by water quality/habitat degradation if it leads to reduced habitat quality. However, we believe any potential water quality effects on ESA-listed fish and sea turtles from the proposed action will be insignificant. Effluent from the proposed action can adversely affect water quality, sea floor sediment composition, and benthic fauna through the additions of uneaten feed, ammonia excretions, and fish feces from the increased fish biomass. The release of nutrients, reductions of dissolved oxygen, and the accumulation of sediments under certain aquaculture operations lead to eutrophication and degradation of benthic communities. The EPA evaluated the proposed action's potential impacts to water quality and impacts of organic enrichment to the seafloor and benthic communities. The EPA also considered the potential water quality impacts from chemical spills, drugs, cleaning, and solid wastes. The discharge of wastewater from the proposed project are expected to have a minor impact on water quality due to factors concerning the low fish biomass produced; the relatively small amounts of pollutants discharged; depth of the sea floor; and current velocities at the proposed action area. The EPA anticipates that the proposed activity would add relatively small amounts of nutrient wastes (nitrogen, phosphorus, particulate organic carbon, and solids) to the ocean in the immediate vicinity of the proposed action area. The facility's effluent is expected to undergo rapid dilution from the prevailing current; constituents will be difficult to detect within short distances from the cage. Per EPA's analysis, (1) water quality effects are not expected to occur more than 30 m (0.02 mi) away from the cage site due to the small size of the facility, and (2) sedimentation from the Velella Epsilon facility is not expected to go more than 1,000 m (0.62 mi) from the cage, and impacts resulting from the proposed facility are likely limited to within 300 to 500 m (0.12 to 0.31 mi) from the cage. The discharges authorized by the proposed NPDES permit represent a small incremental contribution of pollutants and will have an insignificant affect any on the ESA-listed fish or sea turtles in the action area.

Conclusion

Because all potential project effects to listed species were found to be discountable, insignificant, or beneficial, we conclude that the proposed action is not likely to adversely affect listed species under NMFS's purview. This concludes your consultation responsibilities under the ESA for species under NMFS's purview. Consultation must be reinitiated if a take occurs or new

information reveals effects of the action not previously considered, or if the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat in a manner or to an extent not previously considered, or if a new species is listed or critical habitat designated that may be affected by the identified action. NMFS's findings on the project's potential effects are based on the project description in this response. Any changes to the proposed action may negate the findings of this consultation and may require reinitiation of consultation with NMFS.

In your letter to us, you also initiated consultation pursuant to the Fish and Wildlife Coordination Act (FWCA). NMFS's Southeast Regional Office, Habitat Conservation Division reviewed the information in the Draft Biological Evaluation pursuant to the FWCA, and based on that review, we anticipate any adverse effects that might occur on marine and anadromous fishery resources would be minimal. Therefore, we do not object to issuance of the permit per the FWCA.

We look forward to further cooperation with you on other projects to ensure the conservation of our threatened and endangered marine species and designated critical habitat. If you have any questions on this consultation, please contact Jennifer Lee, Fishery Biologist, at (727) 551-5778 or by email at Jennifer.lee@noaa.gov.

Sincerely,

David Bernhart
Assistant Regional Administrator
for Protected Resources

cc: F/SER – J. Beck
F/SER31 – J. Lee

File: 1514-22.k

Appendix F

EFH concurrence from NMFS dated September 25, 2024

From:	Mark Sramek - NOAA Federal
To:	Tyler, Kip
Cc:	andrew.richard; Fellows, John P SAJ
Subject:	Re: EFH coordination for revisions to the Ocean Era project
Date:	Wednesday, September 25, 2024 3:49:25 PM
Attachments:	image001.png Attachment B - Ocean Era Permit Changes Notification 051023.pdf Ocean Era - Final EFH Assessment.pdf Ocean Era Permit Modification Justification V2 for EFH 09-25-24.pdf

Hi Kip,

Thank you for your email below and attached documents. NOAA's National Marine Fisheries Service (NMFS), Southeast Region, Habitat Conservation Division (HCD), has reviewed the information regarding the proposed revisions to the EPA NPDES permitting action and USACE's RHA Section 10 permit. From our evaluation of the proposed revisions, we anticipate any adverse effects that might occur on marine and anadromous fishery resources would be minimal, and the NMFS HCD does not have any EFH conservation recommendations to provide regarding the revised project activities.

Accordingly, the NMFS HCD agrees with the EPA's determination that a supplemental consultation is not required pursuant to the consultation procedures outlined in 50 CFR Section 600.920, of the regulation to implement the EFH provisions of the Magnuson-Stevens Fishery Conservation and Management Act.

Mark

---------- Forwarded message ---------
From: **Tyler, Kip** <Tyler.Kip@epa.gov>
Date: Wed, Sep 25, 2024 at 3:14 PM
Subject: EFH coordination for revisions to the Ocean Era project
To: mark.sramek <mark.sramek@noaa.gov>
Cc: andrew.richard <andrew.richard@noaa.gov>, Fellows, John P CIV USARMY CESAJ (USA) <John.P.Fellows@usace.army.mil>

Mark,

As you know, EPA issued a NPDES permit in 2022 for a small-scale marine aquaculture facility that is located about 45 miles from shore in federal waters of the Gulf of Mexico. EPA, as the lead agency, completed an EFH assessment to comply with the EFH provisions of the Magnuson-Stevens Act for the 2022 permitting action. The EFH assessment determined that the minimal short-term impacts associated with the discharge will not result in substantial adverse effects on EFH, habitats of particular concern, or managed species within the facility area. NMFS concurred with EPA's previous determination made within the EFH assessment and did not make any conservation recommendations. The EFH assessment previously conducted serves EPA's NPDES permitting action and USACE's RHA Section 10 permit. I have attached the EFH assessment that was used for the 2022 NPDES permitting action.

EPA is now considering a modified NPDES permit to reflect revised operations by the permittee. Attached is a draft document that EPA is using to justify certain decisions related to reinitiating consultations or environmental reviews for the modified action. This draft document provides a summary of the project changes (section 4.0), information about federal coordination and lead agency (section 9.1), and an analysis for not supplementing the previous EFH consultation (section 9.3). Again, EPA is operating as lead agency for EFH, and the attached draft document will be utilized for EPA and USACE permitting purposes. Also attached is document that provides the cage/grid system for the modified action.

As provided in the draft document, EPA has determined that a supplemental consultation is not required pursuant to the EFH implementing regulations at 50 CFR 600.920(l). Please let me know if NMFS is able to provide a written statement saying that reinitiation of EFH consultation for the modified project is unnecessary.

Kip Tyler

Environmental Engineer

m: 404.323.6094

w: 404.562.9294

e: Tyler.Kip@epa.gov

U.S. EPA Region 4 | NPDES Permitting Section

61 Forsyth Street SW | Atlanta GA 30303-8960

--

Mark Sramek
Fishery Biologist, Southeast Regional Office
NOAA Fisheries | U.S. Department of Commerce
Office: (727) 824-5311
www.fisheries.noaa.gov

Appendix G

ESA and FWCA documentation from USFWS dated October 2, 2024

From:	Putnam, Christopher
To:	Tyler, Kip
Subject:	Re: [EXTERNAL] RE: Interagency Review - draft justification for Ocean Era NPDES permit modification
Date:	Wednesday, October 2, 2024 1:48:20 PM
Attachments:	image001.png

Your responsibilities under the FIsh & Wildlife Coordination Act are also satisfied.

Christopher Putnam
Supervisor, Division of Environmental Review
U.S. Fish & Wildlife Service
Florida Ecological Services Office
777 37th Street, Suite D-101
Vero Beach, Florida 32960
772-226-8017 Office
772-563-3347 Mobile

"All that is gold does not glitter, not all those who wander are lost; the old that is strong does not wither, deep roots are not reached by the frost."
-- J.R.R. Tolkien

From: Tyler, Kip <Tyler.Kip@epa.gov>
Sent: Wednesday, October 2, 2024 13:46
To: Putnam, Christopher <christopher_putnam@fws.gov>
Subject: RE: [EXTERNAL] RE: Interagency Review - draft justification for Ocean Era NPDES permit modification

Thanks for providing this response. Did you consider the Fish and Wildlife Coordination Act when considering our request? If so, can you speak to that as well?

Kip Tyler
w 404.562.9294 | m 404.323.6094

> **From:** Putnam, Christopher <christopher_putnam@fws.gov>
> **Sent:** Wednesday, October 2, 2024 1:44 PM
> **To:** Tyler, Kip <Tyler.Kip@epa.gov>
> **Subject:** Re: [EXTERNAL] RE: Interagency Review - draft justification for Ocean Era NPDES permit modification
>
>
>
> Dear Mr. Tyler,

Based on the information that you provided in the original Ocean Era Biological Evaluation (BE) and the recent Permit Modification Justification (PMJ), specifically that the EPA made Endangered Species Act (ESA) no effect determinations in the BA and maintains those determinations in the PMJ, EPA has satisfied its responsibilities under the ESA. No further Action is required.

Christopher Putnam
Supervisor, Division of Environmental Review
U.S. Fish & Wildlife Service
Florida Ecological Services Office
777 37th Street, Suite D-101
Vero Beach, Florida 32960
772-226-8017 Office
772-563-3347 Mobile

"All that is gold does not glitter, not all those who wander are lost; the old that is strong does not wither, deep roots are not reached by the frost."
-- J.R.R. Tolkien

From: Tyler, Kip <Tyler.Kip@epa.gov>
Sent: Tuesday, October 1, 2024 08:52
To: Putnam, Christopher <christopher_putnam@fws.gov>
Subject: [EXTERNAL] RE: Interagency Review - draft justification for Ocean Era NPDES permit modification

Hi Christopher.

I left you a voice message last week. Please let me know if you have any questions about the information I sent. Do you think that you can provide a response today or tomorrow? Thank you for working fast on this request.

Kip Tyler
w 404.562.9294 | m 404.323.6094

From: Tyler, Kip
Sent: Tuesday, September 24, 2024 3:54 PM
To: Putnam, Christopher <christopher_putnam@fws.gov>
Subject: RE: Interagency Review - draft justification for Ocean Era NPDES permit modification

Hi Christopher.

Thanks for returning my email so quickly. As we discussed, EPA issued a NPDES permit in 2022 for a small-scale marine aquaculture facility that is located about 45 miles from shore in federal waters of the Gulf of Mexico. The biological evaluation was created to comply with ESA Section 7 for the 2022 NPDES permit evaluated two bird species (red knot and piping plover) that fell under the jurisdiction of the USFWS. EPA determined that there was "no effect" on the 2 bird species. I have attached the biological evaluations that was finalized in 2020 and was used for the 2022 NPDES permit issuance.

EPA is now considering a modified NPDES permit to reflect revised operations by the permittee. Attached is a draft document that EPA is using to justify our decisions to not reinitiate consultations or environmental reviews. See sections 4.0 (summary of project changes), 9.1 (federal coordination and lead agency), and 9.2 (ESA).

Also, I forgot to mention during our conversation that the 2020 biological evaluation also covered the Fish and Wildlife Coordination Act (FWCA) consultation. See section 9.6 regarding FWCA.

Please let me know if USFWS is able to provide a written statement saying that reinitiation of ESA Section 7 and FWCA consultations for the modified project is not necessary.

Thanks so much.

Kip Tyler
Environmental Engineer

m: 404.323.6094
w: 404.562.9294
e: Tyler.Kip@epa.gov

U.S. EPA Region 4 | NPDES Permitting Section
61 Forsyth Street SW | Atlanta GA 30303-8960

From: Putnam, Christopher <christopher_putnam@fws.gov>
Sent: Tuesday, September 24, 2024 2:00 PM
To: Tyler, Kip <Tyler.Kip@epa.gov>
Subject: RE: Interagency Review - draft justification for Ocean Era NPDES permit modification

Hi Kip,

This is a follow up email regarding our phone conversation about the Ocean Era aquaculture project and ESA compliance. My contact information is

included in this message. Let me know if you have any other questions. Thank you.

Christopher Putnam
Supervisor, Division of Environmental Review
U.S. Fish & Wildlife Service
Florida Ecological Services Office
777 37th Street, Suite D-101
Vero Beach, Florida 32960
772-226-8017 Office
772-563-3347 Mobile

"All that is gold does not glitter, not all those who wander are lost; the old that is strong does not wither, deep roots are not reached by the frost."
-- J.R.R. Tolkien

Appendix H

EPA's re-initiation of ESA and FWCA consultation with NMFS dated December 23, 2024

REGION 4
ATLANTA, GA 30303

December 23, 2024

Mr. David Bernhart
Assistant Regional Administrator for Protected Resources
National Marine Fisheries Service
Southeast Regional Office
St. Petersburg, Florida

Re: Request for Reinitiation of Expedited Informal Consultation under Endangered Species Act Section 7(a)(2) and Fish and Wildlife Coordination Act for modifications to Ocean Era's marine aquaculture facility (Velella Epsilon)

Dear Mr. Bernhart:

The U.S. Environmental Protection Agency Region 4 (EPA) issued a National Pollutant Discharge Elimination System (NPDES) permit in 2022 for Ocean Era's small-scale marine aquaculture facility (the 2022 Permit). The 2022 permit was subject to Endangered Species Act (ESA) Section 7 informal consultation with the National Marine Fisheries Service (NMFS). EPA is now considering a modified NPDES permit to reflect revised operations by Ocean Era. EPA has identified new information that may not have been previously considered in NMFS's written concurrence for the 2022 permit. EPA is acting as lead agency for the two other federal actions associated with the proposed project (U.S. Army Corps of Engineers (USACE) action under a Rivers and Harbor Act (RHA) Section 10 permit and the National Oceanic and Atmospheric Administration (NOAA) Sea Grant action of providing federal funding to Ocean Era).

On behalf of the USACE and NOAA Sea Grant, EPA requests reinitiation of the Fish and Wildlife Coordination Act (FWCA) consultation and ESA Section 7 consultation in accordance with the expedited informal provisions (ESA Section 7(a)(2)). Pursuant to our request for expedited informal consultation, the enclosures provide information about the ESA Section 7 consultation conducted for the 2022 permit; new information that is available due to Ocean Era making modifications to the facility; a description of the action and action area to be considered; a description of any listed species or critical habitat that may be affected by the action; and an analysis of the potential routes of effect on any listed species or critical habitat.

Based on the analysis presented in the enclosures, EPA has determined that the modifications to the proposed activity are "not likely to adversely affect" some species and critical habitats, and have "no effect" for other species or critical habitats that are relevant to the proposed action under ESA in the action area. EPA has used the best scientific and commercial data available to complete this analysis. EPA also requests NMFS provide written concurrence with our determinations under ESA Section 7 and FWCA.

Sincerely,

KIP TYLER
Digitally signed by KIP TYLER
Date: 2024.12.23 16:55:46 -05'00'

Kip M. Tyler, Senior Permitting Specialist
NPDES Permitting Section

cc: Mr. John Fellows, USACE (via email)
Mr. Mark Rath, NOAA Sea Grant (via email)

Enclosures:

1. Supporting Information and Analysis of Effects under ESA Section 7 and FWCA for the Draft Modified NPDES Permit, RHA Section 10 Permit, and NOAA's Sea Grant Action
2. Final Biological Evaluation for the 2022 NPDES permit dated September 30, 2020
3. NMFS response letter to the 2022 permit's ESA consultation dated September 30, 2019
4. Additional analysis conducted by NMFS after the 2022 NPDES permit was issued dated August 26, 2022
5. Ocean Era's final marine mammal, sea turtle, and seabird monitoring and data collection plan dated December 20, 2024.

Enclosure 1 - Supporting Information and Analysis of Effects under ESA Section 7 and FWCA for the Draft Modified NPDES Permit, RHA Section 10 Permit, and NOAA's Sea Grant Action

Federal Coordination and Lead Agency Determination

The implementing regulations for ESA consultations allow a lead agency when the proposed action involves more than one federal agency.[1] The usage of a lead federal agencies during environmental reviews promotes efficiency and consistency. The FWCA does not require or suggest a lead agency for consultations involving multiple agencies for the same action.

The 2022 NPDES Permit

Given that the action of authorizing the proposed project involved more than one federal agency (NPDES permit issuance by EPA, and Rivers and Harbors Act (RHA) Section 10 permit issuance by the US Army Corps of Engineers (USACE)), the EPA elected to act as the lead agency to complete the NEPA review as well as the action agencies' ESA and Essential Fish Habitat (EFH) consultation responsibilities. EPA's decision to act as the lead agency was also informed by the 2017 Memorandum of Understanding for Permitting Offshore Aquaculture Activities in Federal Waters of the Gulf of Mexico that was effective during the 2022 NPDES permit issuance for seven federal agencies with permitting or authorization responsibilities. EPA notified the National Marine Fisheries Service (NMFS) that EPA is acting as the lead agency. NMFS and USACE were cooperating or co-federal agencies for these environmental reviews.

Proposed NPDES Permit Modification

The modified NPDES permit remains subject to multiple federal actions, therefore, the EPA elected to maintain the lead federal agency roles for NEPA, ESA, and EFH.[2] On November 2, 2023, NMFS and USACE were informed by EPA that it will serve as the lead agency for any subsequent EA revisions or analysis, if necessary, due to proposed project modifications requested by Ocean Era, and requested that NMFS and USACE become a cooperating agency for NEPA if additional analysis is needed to evaluate potential effects with the proposed modification. These letters also notified the NMFS and USACE that EPA will maintain the lead agency role for ESA and EFH if re-initiating the consultations are required. On November 3, 2023, NMFS and USACE accepted EPA's lead role for NEPA, ESA, and EFH while also acknowledging that they will operate as cooperating agencies under NEPA. ESA Section 7 consultation for the modified action also includes NOAA's Sea Grant action for funding the project in partnership with Ocean Era, University of Florida, and University of Miami.

Supporting Information

Interagency consultation and coordination with the NMFS and the US Fish and Wildlife Service (USFWS) is required by ESA Section 7 to insure that any action authorized, funded, or carried out by an action agency is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of any designated critical habitat (ESA Section 7(a)(2)), and confer with the NMFS and USFWS on any agency actions that are likely to jeopardize the continued existence of any species that is proposed for listing or result in the destruction or adverse modification of any critical habitat proposed to be designated (ESA Section 7(a)(4)). Additionally, the implementing regulations for the CWA related to the ESA require EPA to ensure, in

[1] 50 CFR § 402.07 allows a lead agency: "When a particular action involves more than one Federal agency, the consultation and conference responsibilities may be fulfilled through a lead agency. Factors relevant in determining an appropriate lead agency include the time sequence in which the agencies would become involved, the magnitude of their respective involvement, and their relative expertise with respect to the environmental effects of the action. The Director shall be notified of the designation in writing by the lead agency."

[2] The NPDES permit at issue is exempt from NEPA requirements, but EPA elected to voluntarily prepare an environmental assessment of impacts and alternatives in accordance with its Policy for Voluntary Preparation of NEPA Documents, 63 FR 58045 (Oct. 29, 1998).

consultation with the NMFS and USFWS, that "any action authorized by EPA is not likely to jeopardize the continued existence of any endangered or threatened species or adversely affect its critical habitat."[3]

The 2022 NPDES Permit

A biological evaluation (BE) was prepared by EPA and USACE to jointly consider the potential direct, indirect, and cumulative effects that the proposed actions may have on listed and proposed species as well as designated and proposed critical habitat, and to assist the action agencies in carrying out their activities for the proposed action pursuant to ESA Section 7(a)(2) and ESA Section 7(a)(4). EPA and USACE reviewed the proposed activity and determined that a BE was appropriate to evaluate the scope of the proposed project. The action agencies considered the potential affects to threatened and endangered species from five groups of species: birds, fish, invertebrates, marine mammals, and reptiles. EPA and USACE concluded that the proposed project's potential threats (disturbance, entanglement, vessel strike, water quality) to ESA-listed species and critical habitat are highly unlikely to occur or extremely minor in severity; therefore, the potential effects to ESA protected species and critical habitats are discountable or insignificant.

On August 13, 2019, EPA and USACE provided the jointly developed BE to NMFS and initiated consultation with the NMFS. Regarding federally listed species, proposed species, and critical habitat under the jurisdiction of NMFS, EPA and USACE determined that the discharges authorized by the NPDES permit "may affect, but [are] not likely to adversely affect" certain fish, invertebrates, marine mammals, and reptiles within the proposed action area. On September 30, 2019, NMFS concurred with some of the "not likely to adversely affect" determinations made by the federal action agencies, and revised others to "no effect."

Additional Analysis Conducted by NMFS After the 2022 NPDES Permit was Issued

Following the final NPDES permit issuance in 2022, NMFS issued a letter of concurrence (LOC) that amended the consultation record to add a late-arriving action agency and to include additional relevant information related to the project's potential impacts. The LOC did not change NMFS's determination that the Ocean Era project is not likely to adversely affect any listed or proposed species or designated or proposed critical habitat. The LOC included an additional analysis on 1) the project-related vessel route between the marina and farm location; 2) potential route of effects to species from vessel strikes associated with the project and from non-project vessels due to a potential increase in recreational or commercial traffic near the facility; 3) potential effects of the aquaculture facility acting as a fish aggregating device that could lead to behavioral changes, increased predation, and increased bycatch; and 4) the potential risk of harmful algal blooms (HAB) from the project on listed species. Because all potential project effects to listed species were found to be extremely unlikely to occur, NMFS reaffirmed its concurrence with the EPA and USACE assessment that the proposed action is not likely to adversely affect any listed species or designated critical habitat.

Summary of Proposed Changes to the Facility

Ocean Era has indicated that it will not proceed with its aquaculture project as currently permitted in the 2022 permit because it intends to make changes to certain aspects of the operation. Specifically, Ocean Era has requested to alter: 1) the species of fish to be cultured (from almaco jack to red drum); 2) net material (copper to monofilament); and 3) the type of rearing system (from swivel point mooring system to a stationary cage attached

[3] 40 CFR § 122.49: The following is a list of Federal laws that may apply to the issuance of permits under these rules. When any of these laws is applicable, its procedures must be followed. When the applicable law requires consideration or adoption of particular permit conditions or requires the denial of a permit, those requirements also must be followed. … (c) The Endangered Species Act, 16 U.S.C. 1531 et seq. section 7 of the Act and implementing regulations (50 CFR part 402) require the Regional Administrator to ensure, in consultation with the Secretary of the Interior or Commerce, that any action authorized by EPA is not likely to jeopardize the continued existence of any endangered or threatened species or adversely affect its critical habitat.

to a grid mooring system). Other operational changes related to the discharge include a decreased fish production amount and lower nutrient load. More details for the proposed facility changes are provided below with a comparison to the currently permitted project (also see Tables 1 and 2).

- **Fish Species:** Ocean Era will raise red drum (*Sciaenops ocellatus)* rather than almaco jack (*Seriola rivoliana).* Both fish species are native to the Gulf of Mexico. The red drum brood stock will be sourced from wild fish caught in the Gulf of Mexico in the Sarasota region. Ocean Era will obtain juvenile red drum from first generation offspring of wild fish that are produced and raised at Mote Aquaculture Park, University of Miami, or Live Advantage Bait, LLC.
- **Fish Quantity:** The 2022 permit application states that 20,000 almaco jack fingerlings would be initially stocked into the cage and an estimated 17,000 fish would be harvested. Ocean Era's modification shows that 20,000 red drum fingerlings would be stocked into the cage and approximately 17,000 fish would be harvested within approximately 12 months assuming an 85% survival rate. No appreciable changes to the number of fish produced is anticipated by Ocean Era.
- **Survival Rate:** Ocean Era estimates that the survival rate (85%) for red drum will be the same as almaco jack.
- **Fish Size and Production:** The maximum production amount (without accounting for mortality) for the 2022 permit and modified permit is 88,000 lbs and 55,000 lbs, respectively. Red drum grow slower than almaco jack; therefore, the red drum harvest size will be approximately 2.75 lbs rather than 4.4 lbs for almaco jack. When accounting for the 15% mortality rate, the red drum's smaller harvestable size equates to a total estimated harvest of 46,750 lbs vs. the currently estimated harvest of 74,800 lbs, or approximately 63% of the currently estimated fish production.
- **Fish Feed:** Red drum require a different feed than almaco jack that is lower in protein and nutrients. The previous feed proposed by Ocean Era for almaco jack was EWOS Marine Juvenile (juvenile fish) and Skretting Kona Pacific (adult fish). See table 1 for certain feed characteristics. For the modified permit, Ocean Era will use Cargill Aquacell Starter 5014 (juvenile) and Cargill Triton 4413 redfish feed (adult).
- **Feed Rate:** The daily feed rate for almaco jack and red drum are approximately the same. The estimated feed rate is approximately 1% of fish body weight per day. Due to the slower growth rate and smaller harvest size, the total amount of feed used during production for the modified permit application would be approximately 49,000 lbs less than the feed amount for the 2022 permit.
- **Fish Density:** The fish density at harvest for the currently permitted and modified permit are approximately 1.3 and 1.0, respectively. The stocking density will remain at a commercial scale aquaculture density.
- **Cage Design:** Ocean Era reported that minor changes to the submersible net pen design are anticipated. The permitted net pen and the proposed cage are based on a PolarCirkel-style submersible design. The diameter of the 2022 permitted and proposed cage is 17 m and 25.5 m, respectively. The total fish rearing volume will be maintained at approximately 56,504 ft^3.
- **Cage Net Material:** The permitted net mesh material was CopperNet that uses copper alloy wire woven into chain-link fence mesh. The proposed net material is KikkoNet – a black colored, UV stabilized, and lightweight polyethylene terephthalate monofilament that is woven into a hexagonal mesh. Ocean Era reported that there is no functional difference between the two cage materials in terms of entanglement risk or other concerns. The monofilament and copper cage material have the same opening size of 40 mm. The diameter of the Kikkonet and copper net are 2.8 mm and 4 mm, respectively.
- **Mooring System:** Mooring design for the proposed cage uses eight embedment anchors compared to the permitted mooring design of three embedment anchors. The mooring design for the proposed cage also uses four ballast blocks that touch the sea floor as part of the anchoring system (which were not part of

the embedment design for the 2022 permit). The estimated size of the concrete ballast blocks is 1.7 m^3 and weigh 1,750 kg.

- **Mooring Lines:** Mooring lines will be used at multiple locations. The proposed configuration uses rope or chain to create the grid system, attach anchors to the grid system, connect ballast blocks to the grid system, and connect the grid system to the cage. Additionally, there are lines that connect from the anchor system to small buoys at the water surface to mark the location of anchors and show the grid boundary. Overall, the lines used for the proposed stationary cage system result in increased length of at least 4,750 ft. All ropes and lines are 2 inches in diameter.
- **Operational footprint:** When accounting for the mooring system, lines, and anchorages, the currently permitted swivel mooring produced a project footprint of approximately 11 acres. The proposed stationary grid system boundary area is approximately 23 acres.
- **Location and Water Depth**: No changes are proposed for the facility location and water depth. The proposed project would be placed in the Gulf at an approximate water depth of 130 ft, generally located 45 miles southwest of Sarasota, Florida.
- **Drugs:** Ocean Era is not proposing any changes to the drugs or therapeutants used during fish production. As currently permitted, Ocean Era does not intend to use therapeutants for the modified action, but use of therapeutants is authorized. Ocean Era reports that red drum are better suited to a stationary net pen and less likely to need therapeutants to control pathogens due to being naturally more tolerant to skin flukes.
- **Other:** Ocean Era did not report any other revisions to the modified operations.

Table 1 - Summary of Project Information

Item	Current NPDES Permit	Modified NPDES Permit
Fish Species	Almaco jack (*S. rivoliana)*	Red drum (*S. ocellatus*)
Fish Quantity		
@ stocking	20,000	20,000
@ harvest	17,000	17,000
Total Fish Production (lbs)		
Maximum (lbs)	88,000	55,000
Survival Rate (%)	85%	85%
Estimated (lbs)	74,800	46,750
Harvest Fish Size (lbs)	4.4	2.75
Harvest Fish Density (lbs/ft^3)	1.3	1.0
Fish Feed (juvenile)		
Manufacturer and Name	EWOS Marine Juvenile	Cargill Aquaxcel Starter 5014
Feed Rate (% fish body wt)	~1%	~1%
Protein (%)	50	50
Phosphorus (%)	1.4	1.0
Nitrogen (%)	8.0	8.0
Fish Feed (Adult)		
Manufacturer and type	Skreeting Kona Pacific	Cargill Triton 4413
Feed Rate (% fish body wt)	~1%	~1%
Protein (%)	41	44
Phosphorus (%)	1.2	1.0
Nitrogen (%)	6.56	7.04
Total Estimated Load @ Max Production		
Total Feed Amount (lbs)	175,320	126,210
Phosphorus (lbs)	2,104	1,262
Nitrogen (lbs)	14,026	10,097
Solids (lbs)	61,345	44,161
Total Ammonia Nitrogen (lbs)	6,899	5,330
Cage Information		
Cage Type	PolarCirkel-style	PolarCirkel-style
Mooring Type	swivel	stationary
Rearing Volume (ft^3)	56,504	56,504
Diameter (ft)	56	84
Net material	copper	monofilament
Operational Footprint (acres)	11	23

Table 2 - Summary of Mooring System

Item	Current Permit		Modified Permit		Difference	
	Qty	Length (ft)	Qty	Length (ft)	Qty	Length (ft)
Embedment anchors	3	-	8	-	+5	-
Concrete nodes	-	-	4	-	+4	-
Mooring chain/line	3	787	8	3,306	+5	+2,519
Mooring rope	3	394	-	-	-3	-394
Bridle lines	3	295	8	1,128	+5	+833
Node block to buoy	-	-	4	328	+4	+328
Grid line	-	-	4	787	+4	+787
Anchor to buoy line	-	-	8	656	+8	+656
Total	**12**	**1,476**	**44**	**6,205**	**35**	**+5,123**

Revisions to the Draft Modified NPDES Permit

All conditions of the 2022 permit and the draft modified permit remain the same except for the following revisions to the draft modified permit:

1. the maximum fish production level has been reduced from 88,000 lbs to 55,000 lbs on the cover page of the draft modified Permit and in Part II.B.14;
2. the cultured fish species (red drum) has been included in Part II.A of the draft modified Permit;
3. considering Ocean Era's decision to use a material other than copper for the net pen, effluent monitoring for total copper has been removed from Table 1 of draft modified Permit Part II.A.1; and
4. a prohibition on the intentional or negligent release of produced fish is included as a clarification in the draft modified Permit Part II.B.15.

Conservation Measures and Best Management Practices

A best management practices (BMPs) plan is required to be developed and implemented by the NPDES permit for the following topics: feed management; waste collection and disposal; transport of harvest discharge; carcass removal; material storage; maintenance; recordkeeping; and training (see draft modified NPDES permit for details). The NPDES permit also requires Ocean Era to implement other practices that are related to protecting ESA-listed species such as the environmental monitoring plan and a facility damage prevention and control plan. Ocean Era must implement these comprehensive plans to meet the permit conditions that are unique to their operation.

Ocean Era will use a protected species monitoring plan (PSMP) that was created in coordination with NMFS to protect and monitor for any protected species, and collect data on potential interactions between aquaculture facilities and protected species. The PSMP has been updated by Ocean Era in coordination with NMFS to include the project modifications and is enclosed in item 5. All conservation measures included in the 2022 permit action, including the SERO Protected Species Construction Conditions and Vessel Strike Mitigation Measures,[4] will be implemented for the modified project.

Description of the Action Area

The *action area* is all areas to be affected by the Federal action and not merely the immediate area involved in the action. *Effects of the action* are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. The action area is distinct from and can be larger than the project footprint because some elements of the project may affect listed species or critical habitat some distance from the project footprint. The action area, therefore, extends out to a point where no effects from the project are expected to occur.

For the modified project, the action area identified for the 2022 permit was a 1,000-meter radius measured from the facility center. The BE described the surrounding conditions, habitats, uses dominating the action area, general site conditions, water depth, substrate type, presence of any submerged aquatic vegetation, hard bottoms, etc. The 2022 action area remains unchanged for the draft modified NPDES permit. Additionally, NMFS 2022 LOC redefined and expanded the action area to include any vessel route to and from the facility in the Gulf of Mexico.

[4] NMFS conservation measures are available at: www.fisheries.noaa.gov/southeast/consultations/regulations-policies-and-guidance

Analysis of Effects Not Previously Considered for the Federal Permitting Actions

According to 50 CFR 402.16, a federal agency is required to reinitiate ESA Section 7 consultation if any one of four thresholds are triggered.[5] EPA, as the lead agency, has evaluated the triggers as described below and assessed the effects of the modified permitting action that were not previously considered under the 2022 permit:

1. **If the amount or extent of taking specified in the incidental take statement is exceeded. (50 CFR 402.16(a)(1))**
   Incidental take refers to takings of ESA species that result from, but are not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or applicant. The proposed project is not subject to an incidental take statement, and no incidental take is expected or allowed. ESA consultation reinitiation is not required based on this trigger.

2. **If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered. (50 CFR 402.16(a)(2))**
   EPA and USACE evaluated the potential impacts to listed species and critical habitat in the 2020 BE. The risks to ESA-listed species and critical habitat that were considered during the 2022 permit were water quality, disturbance, vessel strike, and entanglement. The additional analysis conducted by NMFS in 2022 further considered potential impacts relating to HABs, fish aggregation devices, and vessel strikes. The routes of effects and potential impacts to listed species and critical habitat for the modified action are presented below.

   <u>Effects to Listed Species</u>

   Water Quality
   All potential water quality risks associated with the modified permit are less when compared to the 2022 permit due to the change in fish species, decreased fish production amount, lower total feed, and reduced phosphorus and nitrogen feed contents. As shown in Table 1, the total load for nitrogen, phosphorus, and total ammonia nitrogen have decreased by 28%, 40%, 23%, respectively. EPA does not anticipate that the modified project's discharge will contribute to HABs due to the offshore location and small scale of the facility; however, any HAB effects from the project are mitigated by the reduced scale of pollutants compared to pollutants that were already evaluated in the 2022 permit record.

   Ocean Era indicated that the netting material would need more regular cleaning unlike the previous cage material proposed.[6] More frequent cleanings may temporarily increase floating biosolids or turbidity in the water surrounding the cage for a short duration directly after the cage cleaning. Because the listed species in the action area are highly mobile, and the time of increased turbidity in the water column will be very short, the effects of cage cleaning will be insignificant. The net material

[5] 50 CFR 402.16: Reinitiation of consultation: (a) Reinitiation of consultation is required and shall be requested by the Federal agency, where discretionary Federal involvement or control over the action has been retained or is authorized by law and: (1) If the amount or extent of taking specified in the incidental take statement is exceeded; (2) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (3) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion or written concurrence; or (4) If a new species is listed or critical habitat designated that may be affected by the identified action.

[6] On Oct 10, 2024, Ocean Era proposed more regular cleaning of the net pen to occur "approximately biweekly for the first 6 months, then increasing the cleaning (as needed) to potentially weekly for the last 6 months." EPA has not approved any revised BMPs that may contain updated operational practices that may be documented within the PSMP that is approved by NMFS.

allows for more efficient cleaning that allows an increased cleaning frequency which can further control biofouling.

The revised fish species (red drum) is native to the Gulf of Mexico that has historically supported commercial and recreational fisheries. Similar to the fish species that were evaluated during the 2022 permit issuance (Almaco jack), red drum will be the first-generation offspring of wild-caught red drum in the vicinity of the facility. NPDES permit conditions limiting fish escapes have been further clarified by the draft modified permit's express condition prohibiting the intentional or negligent release of cultured fish.

Other biological materials such as pathogens that are considered pollutants under the NPDES program were previously assessed. The draft modified permit maintains conditions to reduce the probability of fish contracting diseases and limit pathogen transfer such as a veterinarian certificate attesting to fish health, and best management practices to prevent and minimize the indirect transfer or discharge of aquaculture pathogens. Ocean Era reports that red drum are more tolerant to skin flukes than almaco jack and will be better suited for a stationary culture system. Additionally, the netting is a smooth non-fibrous material that minimizes the development of biofouling marine benthic fauna on its surface. By limiting the amount of biofouling on the cage, the cultured fish receive increased water flow that maintains water quality levels that are optimal for fish health. The promotion of disease prevention practices within the cage decreases the transfer risk of pathogens or diseases to native fish outside of the culture system.

The usage of certain drugs or therapeutants is allowed for freshwater and marine aquaculture under the NPDES program, and under the 2022 permit and draft modified permit. The draft modified NPDES permit contains monitoring and reporting provisions for all drugs and chemicals used because Ocean Era previously identified three drugs as potential candidates (hydrogen peroxide, oxytetracycline dihydrate, and florfenicol) should the need for drug usage arise. Drug treatment usage is mitigated or minimized by the strong open ocean currents that will constantly flush the fish culture area, the properties of the net mesh material that minimizes biofouling, and the lack of nearby aquaculture facilities that increase the risk of disease and pathogen transmission. Additionally, the operational practices mentioned previously regarding pathogen control (e.g., regular maintenance and cleaning of the cage, monitoring effluent water quality, fish health monitoring) help minimize therapeutant usage.

Vessel Strike and Disturbance

Ocean Era is not proposing more vessels or more trips to the facility for the modified action. Vessel traffic from boats not associated with Ocean Era are estimated to be similar to that previously evaluated. Ocean Era has also not reported any operational changes that bear on the previous analysis conducted for disturbance to ESA-listed species. EPA has determined that the exposure routes associated with vessel strikes and disturbance will be the same as evaluated in the 2019 BE, the NMFS 2022 LOC, and the 2022 permit record. Therefore, effects due to vessel strike and disturbance from the project modifications are extremely unlikely to occur.

Fish Aggregation

There are potential risks to ESA-listed species from the proposed project acting as a fish aggregating device. As discussed above, the proposed project modification changes the cage net material from

copper alloy mesh to Kikkomesh. Copper alloy mesh has increased anti-biofouling properties over monofilament; however, KikkoNet is known to foul less than other fiber-based monofilament due to its rigidness and smooth material.[7] KikkoNet may have increased risk of biofouling than the original copper alloy mesh net material. Due to increased biofouling that may occur, fishes and sea turtles may be attracted to the cage to feed on biofouling algae and crustaceans. In an effort to reduce biofouling, the applicant has indicated that biofouling reduction strategies will be implemented (e.g., regular inspections and maintenance, brushing, pressure washing). Therefore, the increase in biofouling from the modified netting material is likely to be negligible and the effects due to fish aggregation from the proposed project modifications are insignificant.

Entanglement

Regarding entanglement concerns, the modified project will increase the operational footprint (e.g., the total area used from the water surface to seafloor), include more lines in the water column, add more structures on the seafloor, and change the primary cage netting material from copper to monofilament. The facility footprint is being increased because a stationary grid system requires an anchoring design that is different than a swivel point system as consulted on during the 2022 permit. More details about the mooring and cage design can be found in Enclosure 5 and within the Section titled Summary of Proposed Changes to the Facility.

While the number of mooring lines is greater than the 2022 permitting action (see Table 2), EPA does not expect there to be an increase in effects to listed species beyond those that have previously been considered. As noted in the 2022 permit consultation, the risk of entanglement in mooring lines is reduced by using durable materials such as thick rope and steel chain that will be always maintained under tension. In the 2022 permit consultation, the applicant agreed to encase the bridle lines in rigid pipe to minimize entanglement risks because the mooring system was not designed to be in tension. Due to the proposed change in net pen mooring from a swivel mooring to a grid mooring system, the bridle lines will no longer be slack during the fish farming operation. A 2023 global review of aquaculture entanglements found that tensioning of mooring lines decreases risks from entanglement while also noting that there are instances of marine mammal physical interactions that result in fatal entanglements at offshore finfish farms.[8] The only time that some lines may be slack is when the cage is raised and lowered (e.g., maintenance or storm events). As the applicant has agreed to implement a protected species monitoring plan, farm workers will be able to monitor for any listed species interactions during most situations that the cage is being raised and lowered. The entanglement risks that are associated with an increased quantity of gear are mitigated by the stationary grid system that will be maintained under tension to reduce the risk of entanglement to listed species and marine mammals. Therefore, the addition of mooring lines will not increase the risk of entanglement to any listed species and the effects from entanglement due to the project gear modifications are insignificant.

Regarding entanglement risks related to the net material (KikkoNet) – it is a hard plastic chain-link material that is highly predator resistant and withstands oceanic conditions for several years. The Kikkonet material has a long history of being used in marine aquaculture internationally. Unlike

[7] Lowell, J.M.S. 2012. Effect of netting materials on fouling and parasite egg loading on offshore net pens in Hawaii. Final Report, Blue Ocean Mariculture (2012), pp. 1-5. < https://internationalcopper.org/wp-content/uploads/2017/05/Trematode-Study.pdf >

[8] Bath G.E., Price C.A., Riley K.L., Morris J.A. Jr. 2023. A global review of protected species interactions with marine aquaculture. Review in Aquaculture; 1-34. doi:10.1111/raq.12811

woven monofilament netting, Kikkonet is a UV stabilized polyethylene terephthalate monofilament. Kikkonet is kept in tension and is rigid like the previous copper alloy mesh netting considered in the 2022 permit consultation. A previous EA[9] and biological opinion[10] evaluated the usage of advanced monofilaments like Kikkonet in marine aquaculture and found that its rigidness offers lower risk of entanglement of marine mammals and helps prevent cage breaches. In open ocean environments, the net material is kept in tension which reduces the likelihood of entanglement. In addition, the KikkoNet proposed is the same mesh size as the original proposed mesh size (40mm). The risk of entanglement, particularly by sea turtles, in the mesh netting is unchanged from the 2022 permit consultation. Furthermore, Ocean Era is required to develop operational practices (e.g., net pen inspections, routine net maintenance, debris removal, and monitoring of net pen thickness material) that ensures structural integrity and limits the risk of entanglement.[11] Therefore, the permit modification associated with changing the net material will not increase the risk of entanglement to any listed species and the effects due to the project modification are insignificant.

The length of time the facility will be deployed, and the small-scale nature of the system, are additional factors that make entanglement impacts to ESA-listed species highly unlikely to occur or extremely minor in severity. The gear changes associated with the modified project will not pose any increased effects to ESA-listed species and critical habitat beyond those previously evaluated. Additionally, Ocean Era will use a PSMP throughout the permit term that was developed in coordination with NMFS to protect and monitor for any protected species, and collect data on potential interactions between aquaculture facilities and protected species.

Marine Debris

The use of Kikkonet netting material instead of copper alloy mesh may introduce plastic particles into the marine environment due to the natural wear and tear of the mesh netting over time. While the Kikkonet mesh is known to be very durable for extended periods of time, there is the potential for some amount of wear and tear which may lead to plastic leaching into the water column. However, due to the durability of the netting, regular netting inspections, and the short time span of the project (only 1 year), the effects from natural wear and tear of the KikkoNet to listed species is expected to be insignificant.

Effects to Critical Habitat

The proposed project does not overlap with any critical habitats as shown in Table 4. Therefore, the proposed project modifications will not have any effect on any critical habitats.

Based on the foregoing, there is a limited amount of new information related to the revised project cage material, increased gear, and changed fish species that was not previously considered by EPA, USACE,

[9] State of Hawaii. 2009. Final Environmental Assessment/Finding of No Significant Impact for HA-3497. State of Hawaii, Department of Land and Natural Resources. < https://files.hawaii.gov/dbedt/erp/EA_EIS_Library/2009-05-08-HA-FSEA-Kona-Blue-Water-Aquafarm.pdf >

[10] NMFS. 2022. Endangered Species Act (ESA) Section 7(a)(2) biological Opinion for authorization to install new net pens and ongoing, revised mariculture operations by Blue Ocean Mariculture, LLC. NMFS File No. PIR-2018-10334.

[11] Ocean Era is required to monitor the structural integrity of the system pursuant to NPDES permit. Ocean Era has proposed in the PSMP to regularly monitor the strength of the net pen material that includes measuring the width of the netting. When any netting is measured to be less than 1.4 mm due to degradation or material elongation, the fish will be removed and the net pen will be retired. Net pen material replacement is unlikely given the 1-year duration of cage deployment. EPA has not approved any revised BMPs that may contain updated operational practices that may be documented within the PSMP that is approved by NMFS.

NOAA Sea Grant, or NMFS. EPA has elected to reinitiate informal consultation based on new information being available that was not previously considered under 50 CFR 402.16(a)(2).

3. **If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion or written concurrence. (50 CFR 402.16(a)(3))**

   A *biological opinion* is a document that provides the opinion of the Service(s) as to whether the Federal action is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. A biological opinion was not prepared by NMFS or USFWS for the 2022 permit because a "may affect, likely to adversely affect" determination was not made. NMFS and USFWS used the 2019 BE as the basis for not preparing a biological opinion on the proposed federal actions and did not identify any reasonable and prudent measures to minimize any take incidental to otherwise lawful activities. Therefore, the changes to the project are not relevant to a biological opinion.

   Regarding the written concurrences previously by NMFS in 2019 and 2022, the concurrences did not consider the new information described in item 2 above. All routes of exposure that were analyzed in the 2019 BE and 2022 LOC remain appropriate, and the proposed modifications are not anticipated to cause an effect to listed species or critical habitat that was not considered in the previous consultation or NMFS's LOC. However, some details associated with subsequent modifications to the proposed project may not have been previously considered in evaluating potential impacts to ESA species and habitat. In order to ensure that all project revisions that were not previously evaluated in NMFS's written concurrences that may cause an effect to ESA-listed species or critical habitat are properly considered in the ESA consultation process, EPA elects to reinitiate informal consultation based on 50 CFR 402.16(a)(3).

4. **If a new species is listed or critical habitat designated that may be affected by the identified action. (50 CFR 402.16(a)(4))**

   EPA has identified and evaluated below the endangered and threatened species and critical habitats that have been listed or proposed to be listed since the 2022 permit issuance. Other than the listings identified, there are no new or proposed species listings or critical habitat designations that could be affected by the modified action. Based on the evaluation described below, EPA has determined that the modified action will have no effect on the following newly listed or proposed species or critical habitats. Given that the federal action agencies are making a "no effect" determination for the newly listed species and critical habitat listed below, EPA is not required to reinitiate ESA consultation with NMFS under 50 CFR 402.16(a)(4).

   Queen conch (*Aliger gigas*)

   On February 14, 2024, NMFS published a notice in the Federal Register (89 FR 11208) listing the queen conch as a threatened species under the ESA. The queen conch's maximum habitat depth is 30 meters; the project is located at a water depth of 40 meters. The increased quantity of anchors or ballast blocks placed on the seafloor will not have any effect on ESA-listed coral species due to the facility location being outside the conch's habitat. Additionally, the NPDES permit requires Ocean Era to stay 500 meters away from any hardbottom habitat. EPA and USACE have determined that this project would have no effect on the queen conch based on the project location being outside the queen conch's habitat range.

   Nassau grouper (*Epinephelus striatus*)

Critical habitat for the threatened Nassau grouper was designated effective February 1, 2024 (89 FR 126). The 920 miles^2 of critical habitat for the Nassau grouper was in various locations in the Atlantic Ocean and southern portions of Gulf of Mexico. The proposed project is not located near the designated critical habitat; therefore, there is no effect on the Nassau grouper critical habitat.

Rice's whale (*Balaenoptera ricei*)
NMFS proposed to designate critical habitat for the Rice's whale within the Gulf of Mexico on July 24, 2023 (88 FR 47453). The waters from the 100-meter isobath to the 400-meter isobath were identified as the core distribution area that informed the proposed critical habitat designation. The proposed project is located well-inshore of the 100-meter bathymetry boundary in approximately 40-meters of water depth. Therefore, there will not be any direct impacts such as entanglement, from the proposed project as previously considered, or the proposed project modification to the proposed Rice's whale critical habitat.

The physical and biological features that are essential to support the conservation of the critical habitat are prey, marine water quality, and sufficiently quiet conditions. As analyzed in the previous consultation, the project may adversely affect water quality due to uneaten feed, ammonia excretions, fish feces, chemicals, cleaning, etc. As noted in the previous consultation, the effluent from the project will not extend more than 30-meters (0.02 miles) away from the project location. As the amount of production from the proposed project modifications is slightly decreased from the original proposal, the effluent radius is not expected to change significantly. Thirty meters from the project location is still in approximately 40-meters of water depth. Therefore, any water quality effects from the project are not expected to extend into the proposed critical habitat for Rice's whales. In addition, as this is a one cage one year demonstration project, the water quality effects are expected to be short-lived. Therefore, there will not be any expected impacts from this proposed project, including the project modification to the water quality feature of the proposed Rice's whale critical habitat. A similar lack of effects is expected to the prey feature of the proposed critical habitat. This project also will not have any effects on the quiet conditions feature, as any sound associated with the project will be well inshore of the 100-meter bathymetry boundary of the proposed critical habitat.

Therefore, since the facility is not located near the proposed Rice's whale critical habitat and will have no effect on the proposed physical and biological features, there will be no effects from the project to the proposed Rice's whale critical habitat. EPA notes that this effects determination for proposed Rice's whale critical habitat does not change the "not likely to adversely affect" determination made for the Rice's whale (see NMFS's determination for the 2022 permit NPDES permit).

Green sea turtle (*Chelonia mydas*)
On July 19, 2023, NMFS proposed to designate new areas of critical habitat for the Green sea turtle in nearshore waters (from the mean high-water line to 20 meters depth) off the coasts of Florida, Texas, and other areas within the Atlantic and Pacific Oceans (88 FR 46572). The essential features that are needed in specific areas to support the life-history needs of the Green sea turtle are not impacted based on the modified project being outside of the 20-meter isobath. There are no expected effects from the proposed project on the proposed green sea turtle critical habitat because the newly proposed critical habitat areas are inshore of this project.

Pillar coral (*Dendrogyra cylindrus*)

NMFS proposed to change the status of pillar coral from threatened to endangered due to multiple threats to the species on August 29, 2023 (88 FR 59494). The increased quantity of anchors or ballast blocks on the ocean bottom will not have any effect on ESA-listed coral species due to the facility location being outside all known invertebrate habitat. Additionally, placement of facility related structures must stay 500 meters away from any hardbottom habitat in accordance with NPDES permit. As a result of this project not overlapping with any areas of hard bottom including pillar coral, there are no expected effects to pillar coral from this project.

Summary of Effect Determinations on Potentially Affected NMFS ESA-Listed Species and Critical Habitat

The listed species and critical habitat that may be present in the action area or overlap with the action have been assessed. The federal action agencies determination of the project's potential effects are summarized in Tables 3 and 4.

Table 3 – ESA-listed Species in the Action Area and Effect Determination(s)

Species	ESA Listing Status	Listing Rule/Date	Most Recent Recovery Plan Date	Effect Determination (Species)
Sea Turtles				
Green (North Atlantic DPS)	T	81 FR 20057 – 04/06/2016	1991	NLAA
Kemp's ridley	E	35 FR 18319 – 12/2/1970	2011	NLAA
Leatherback	E	35 FR 8491 – 06/02/1970	1992	NLAA
Loggerhead (Northwest Atlantic DPS)	T	76 FR 58868 – 09/22/2011	2008	NLAA
Hawksbill	E	35 FR 8491 – 06/02/1970	1993	NE
Fish				
Smalltooth sawfish (U.S. DPS)	E	68 FR 15674 – 04/01/2003	2009	NLAA
Nassau grouper	T	81 FR 42268 – 06/29/2016	2018	NE
Giant manta ray	T	83 FR 2916 – 01/22/2018	2019	NLAA
Oceanic whitetip shark	T	83 FR 4153 – 01/30/2018	2018	NLAA
Invertebrates				
Elkhorn coral	T	71 FR 26852 – 05/09/2006	2015	NE
Staghorn coral	T	71 FR 26852 -05/09/2006	2015	NE
Boulder star coral	T	79 FR 53852 – 09/10/2014	N/A	NE
Mountainous star coral	T	79 FR 53852 – 09/10/2014	N/A	NE
Lobed star coral	T	79 FR 53852 – 09/10/2014	N/A	NE
Rough cactus coral	T	79 FR 53852 – 09/10/2014	N/A	NE
Pillar coral	E	79 FR 53852 – 09/10/2014	N/A	NE
Queen conch	T	89 FR 11208 – 02/14/2024	N/A	NE
Marine Mammals				
Blue whale	E	35 FR 18319 – 12/02/1970	1998	NE
Fin whale	E	35 FR 12222 – 12/02/1970	2010	NE
Sei whale	E	35 FR 12222 – 12/02/1970	2011	NE
Sperm whale	E	35 FR 12222 – 12/02/1970	2010	NE
Rice's whale	E	84 FR 15446 – 04/15/2019	2020	NE

Table 3 abbreviations: E = endangered; T = threatened; NLAA = may affect, not likely to adversely affect; NE = no effect

Table 4 – Critical Habitat(s) in the Action Area and Effect Determination(s)

Species	Critical Habitat in the Action Area	Critical Habitat Rule/Date	Effect Determination (Critical Habitat)
Sea Turtles			
Green (North Atlantic DPS)	0-20 m isobath	88 FR 46572 – 07/19/2023	NE
Fish			
Nassau grouper	Southern Gulf	89 FR 126 – 02/01/2024	NE
Marine Mammals			
Rice's whale	100-400 m isobath	88 FR 47453 – 07/24/2023	NE

Table 4 abbreviations: NLAA = may affect, not likely to adversely affect; NE = no effect

Appendix I

ESA and FWCA concurrence from NMFS dated February 18, 2025

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701-5505
https://www.fisheries.noaa.gov/region/southeast

02/18/2025

F/SER31:LF
SERO-2024-02953

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Ref.: Ocean Era Marine Aquaculture Project, Sarasota, Sarasota County, FL– EXPEDITED TRACK

Dear Kip Tyler, John Fellows, and Mark Rath,

On January 21, 2025, we responded to your December 23, 2024 request for reinitiation of a previous consultation with the National Marine Fisheries Service (NMFS) on the subject action due to modifications to the project which may have affects not previously considered under 50 CFR 402.16(a)(2)with a letter of concurrence. This letter issues an amendment to add concurrence under the Fish and Wildlife Conservation Act (FWCA), per your original request, and adds additional clarification on the two points discussed in our original response. On September 30, 2019, we issued a letter of concurrence (NMFS tracking # SERO-2019-02205) for this project, and on August 26, 2022, we issued an amended letter of concurrence (NMFS tracking# SERO-2021-02842) due to the addition of a late arriving action agency and to analyze effects not previously considered.

We reviewed the action agency's consultation request document and related materials. Based on our knowledge, expertise, and the action agency's materials, we concur with the action agency's conclusions that the proposed action is not likely to adversely affect the NMFS ESA-listed

species and/or designated critical habitat. However, we would like to offer the following clarifications regarding potential entanglement effects. First, the consultation request includes the following statement: "The length of time the facility will be deployed, and the small-scale nature of the system, are additional factors that make entanglement impacts to ESA-listed species highly unlikely to occur or extremely minor in severity." We do not concur with the phrase "extremely minor in severity," as this statement is inconsistent with the conclusion that impacts are "highly unlikely to concur." As noted in your consultation document, the changes to the mooring and cage design will not increase the risk of entanglement, and we concur with your determination that entanglement impacts are "highly unlikely to occur." Second, the consultation request states that a 2023 global review of aquaculture entanglements notes "that there are instances of marine mammal physical interactions that result in fatal entanglements at offshore finfish farms." However, this information is not relevant to the current reinitiation request or our concurrence because we previously determined that there will be no effect to ESA-listed whales as a result of the proposed action. As explained in our 2019 concurrence letter, we do not believe any ESA-listed marine mammal species will occur in the action area for this project or be close enough for there to be any potential routes of effects to these species.

NMFS's Southeast Regional Office, Habitat Conservation Division reviewed the information in the Draft Biological Evaluation pursuant to the FWCA, and based on that review, we anticipate any adverse effects that might occur on marine and anadromous fishery resources would be minimal. Therefore, we do not object to issuance of the permit per the FWCA.

Updates to the regulations governing interagency consultation (50 CFR part 402) were effective on May 6, 2024 (89 Fed. Reg. 24268). We are applying the updated regulations to this consultation. The 2024 regulatory changes, like those from 2019, were intended to improve and clarify the consultation process, and, with one exception from 2024 (offsetting reasonable and prudent measures), were not intended to result in changes to the Services' existing practice in implementing section 7(a)(2) of the Act. 84 Fed. Reg. at 45015; 89 Fed. Reg. at 24268. We have considered the prior rules and affirm that the substantive analysis and conclusions articulated in this letter of concurrence would not have been any different under the 2019 regulations or pre-2019 regulations.

This concludes your consultation responsibilities under the ESA for species and/or designated critical habitat under NMFS's purview. Reinitiation of consultation is required and shall be requested by the action agency where discretionary Federal action agency involvement or control over the action has been retained or is authorized by law and: (a) take occurs; (b) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered in this consultation; (c) the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not previously considered in this consultation; or (d) if a new species is listed or critical habitat designated that may be affected by the action.

We look forward to further cooperation with you on other projects to ensure the conservation of our threatened and endangered marine species and designated critical habitat. If you have any questions on this consultation, please contact Lindsey Feldman, Consultation Biologist, at (941) 479-1370 or by email at Lindsey.Feldman@noaa.gov.

Sincerely,

KLEMM.DENNIS.LANDON.1365899572 Digitally signed by KLEMM.DENNIS.LANDON.1365899572 Date: 2025.02.18 09:18:28 -05'00'

for David Bernhart
Assistant Regional Administrator
for Protected Resources

File: 1514-22.k