Final
Response to Significant Comments

Ocean Era, Inc. - Velella Epsilon
Net Pen Aquaculture Facility
Outer Continental Shelf
Federal Waters of the Gulf

National Pollutant Discharge Elimination System Permit Number
FL0A00001

NEPA Environmental Assessment Identification Number
904-P-19-001

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U.S. Environmental Protection Agency
Region 4
Water Division
61 Forsyth Street SW
Atlanta Georgia 30303

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List of Acronyms

AADAP	Aquatic Animal Drug Approval Partnership
BE	Biological Evaluation
BO	Biological Opinion
BPJ	Best Professional Judgement
CEQ	Council on Environmental Quality
CAAP	Concentrated Aquatic Animal Production
CFR	Code of Federal Regulations
CHLA	Chlorophyll-a
CMP	Coastal Management Plan
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
DA	Department of the Army
EA	Environmental Assessment
EFH	Essential Fish Habitat
EFP	Exempt Fishing Permit
EIS	Environmental Impact Statement
ELG	Effluent Limitation Guideline
EPA	Environmental Protection Agency Region 4
ESA	Endangered Species Act
EFP	Exempted Fishing Permit
FDA	Food and Drug Administration
FDACS	Florida Department of Agriculture and Community Services
FDPC	Facility Damage Prevention and Control
FDEP	Florida Department of Environmental Protection
FAD	Fish Attraction Device
FMP	Gulf Aquaculture Fisheries Management Plan
FONSI	Finding of No Significant Impact
FWC	Florida Fish and Wildlife Conservation Commission
FWCA	Fish and Wildlife Conservation Act
Gulf	Gulf of Mexico
GAP	Gulf Aquaculture Permit
HAB	Harmful Algae Bloom
INAD	Investigational New Animal Drug
LNM	Local Notice to Mariners
LOP	Letter of Permission
MMPA	Marine Mammal Policy Act
MPRSA	Marine Protection, Research, and Sanctuaries Act
MSA	Magnuson-Stevens Fishery Conservation and Management Act
NEPA	National Environmental Protection Act
NMFS	National Marine Fisheries Service
NHPA	National Historic Preservation Act
NOAA	National Oceanic and Atmospheric Administration

NOS	National Ocean Service
NPDES	National Pollutant Discharge Elimination System
NLAA	Not Likely to Adversely Affect
ODC	Ocean Discharge Criteria
ODCE	Ocean Discharge Criteria Evaluation
ODMDS	Ocean Dredge Material Disposal Site
OFW	Outstanding Florida Water
QAPP	Quality Assurance Project Plan
RAS	Recirculating Aquaculture System
RHA	Rivers and Harbors Act
RTC	Response to Comments
SHPO	State Historic Preservation Officer
USACE	United States Army Corps of Engineers
USCG	United States Coast Guard
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
VE	Velella Epsilon
WOTUS	Waters of the United States
WQS	Water Quality Standards

1 Introduction, Federal Coordination, and Permit Decision

1.1 Introduction

On November 9, 2018, the U.S. Environmental Protection Agency Region 4 (EPA) received a complete application for a National Pollutant Discharge Elimination System (NPDES) permit from Kampachi Farms, LLC (now called Ocean Era, Inc.) for the point-source discharge of pollutants from a marine aquaculture facility in federal waters of the Gulf of Mexico (Gulf). The facility includes a supporting vessel and a single floating cage in a water depth of 130 feet. The project proposes to culture a single cohort of approximately 20,000 almaco jack that will produce a maximum annual harvest of 80,000 lbs. The draft NPDES permit establishes criteria on the effluent discharge and was drafted in accordance with the provisions of the Clean Water Act (CWA) and other lawful standards and regulations. The draft NPDES permit authorizes the discharge of wastewater from a marine net-pen aquaculture facility located in federal waters of the Gulf at approximately 45 miles southwest of Sarasota, Florida.

On August 30, 2019, EPA released for public notice and comment a draft NPDES permit, a draft Environmental Assessment (EA) to comply with the National Environmental Policy Act (NEPA), and other associated documents for the proposed project.[1] The first public comment period lasted for 30-days and ended on September 30, 2019. On December 12, 2019, EPA released a public notice of public hearing and extended the public comment period regarding the proposed issuance of a NPDES permit and supporting documents. On January 18, 2020, EPA published another public notice as a reminder of the public hearing.

On January 28, 2020, a public hearing was held at Mote Marine Laboratory and Aquarium in Sarasota, Florida. The public hearing location was selected due to its proximity to the proposed project. The public comment period ended on February 4, 2020. The public comment period lasted for 158 days. The public was able to submit comments orally or in writing at the public hearing or by submitting written comments to EPA.

1.2 Response to Comment Summary

In accordance with 40 Code of Federal Regulations (CFR) § 124.17, EPA must issue a response to comment (RTC) document at the time of the final permit decision. The RTC is required to have certain information: 1) specify any provisions of the draft permit that have been changed in the final permit and the reason for the change; and 2) briefly describe and respond to all significant comments on the draft permit raised during the public comment period including the public hearing. Additionally, the implementing regulations for NEPA require EPA to respond to all substantive comments received on the preliminary finding of no significant impact (FONSI) (40 CFR § 6.206(f)).

EPA received approximately 44,500 comments from various interested individuals and parties during the public comment period. In addition to written comments, EPA received 50 verbal comments during the public hearing. Comments were provided by national, regional, and local non-governmental organizations;[2] university and

[1] In accordance with 40 CFR § 124.10, the public notices were published on EPA's website and in the Sarasota Herald-Tribune, and sent to the applicant, federal and state agencies, and various interested parties.

[2] Non-government organizations included: C.A. Goudey & Associates, Center for Biological Diversity, Center for Food Safety, Citizens of Sarasota County, Clean Water Tribe, Community Alliance for Global Justice, Cuna Del Mar, Environmental Confederation of Southwest Florida, Farmworker Association of Florida, Friends of Animals, Friends of the Earth, Food and Water Watch, Green Justice Legal, Gulf Fisheries Management Council, Hands Along the Water, Healthy Gulf, Mansoatta-88, National Family Farm Coalition, Northwest Atlantic Marine Alliance, Ocean Conservation Research, Paradise Cove Association, Potesta & Associates, Sierra Club, Siesta Key Association, Sarasota County Council of Neighborhood Associations, Solutions to Avoid Redtide, Stocking Savvy Environmental Consulting, Suncoast Waterkeeper, and Wildlife Law Center.

research organizations;[3] aquaculture associated organizations;[4] fishing groups;[5] and federal, state, and local governments.[6]

Where multiple comments were received on similar topics, the comments are grouped together and summarized. Excerpts from some comments have been included to provide context. All comments are part of the administrative record.

1.3 Federal Coordination

The proposed federal actions are the issuance of permits to operate the facility under the respective authorities of EPA and the United States Army Corps of Engineers (USACE). EPA's proposed action is the issuance of a NPDES permit that authorizes the discharge of pollutants from an aquatic animal production facility into federal waters of the United States (WOTUS). USACE's proposed action is the issuance of a DA permit pursuant to Section 10 of the Rivers and Harbors Act (RHA) that authorizes anchorage to the sea floor and structures affecting navigable waters.[7]

Given that the action of permitting or authorizing the proposed project involved more than one federal agency, EPA coordinated with multiple federal agencies throughout the permit development process as summarized below.

- The National Marine Fisheries Services (NMFS) and USACE were cooperating agencies to comply with all applicable environmental requirements required by the NEPA. The NEPA regulations provide for the participation of "cooperating agencies" that have jurisdiction by law or special expertise with respect to any environmental impact involved in a proposed project.[8] Both agencies provided scientific expertise and support in their areas of expertise and jurisdiction, and were involved in the EA development.[9]

[3] Universities and research organizations included: Coonamessett Farm Foundation, Mote Marine Laboratory, University of Miami, and University of South Florida.

[4] Aquaculture associated groups: Aquaculture Consulting Services, Aquarium of the Pacific, Florida Aquaculture Association, Live Advantage Bait, Manna Fish Farms, National Aquaculture Association, Recirculating Farms Coalition, and Sanibel-Captiva Conservation Foundation Marine Laboratory.

[5] Fishing associated groups: Bonefish and Tarpon Trust, Fish for America USA, and Kirk Fishing Company.

[6] Government entities included: City of Naples, City of Sarasota, City of Sanibel, Florida Department of State, Lee County Natural Resources, Mississippi-Alabama Sea Grant Consortium, and Siesta Key Chamber of Commerce.

[7] The proposed action requires the issuance of a USACE Department of the Army (DA) permit pursuant to the RHA Section 10 (33 U.S.C. 403). Pursuant to 33 CFR § 320.2(b), Section 10 prohibits the unauthorized obstruction or alteration of any navigable WOTUS. The construction of any structure in or over any navigable WOTUS, the excavating from or depositing of material in such waters, or the accomplishment of any other work affecting the course, location, condition, or capacity of such waters is unlawful unless the work has been authorized by the Secretary of the Army. The authority of the Secretary of the Army to prevent obstructions to navigation in navigable WOTUS was extended to construction of artificial islands, installations, and other devices located on the seabed, to the seaward limit of the outer continental shelf, by the Outer Continental Shelf Lands Act (43 U.S.C. 1333(e)).

[8] 40 CFR § 1508.5: "Cooperating agency means any Federal agency other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) for legislation or other major Federal action significantly affecting the quality of the human environment. The selection and responsibilities of a cooperating agency are described in § 1501.6. A State or local agency of similar qualifications or, when the effects are on a reservation, an Indian Tribe, may by agreement with the lead agency become a cooperating agency."

[9] As a cooperating agency, USACE partnered with the EPA to develop the EA. USACE is evaluating this project under a Letter of Permission (LOP) pursuant to 33 CFR § 325.2(b)(2) and (e)(1). As allowed under 33 CFR § 325, Appendix B (6), all applications which qualify for an LOP are categorical excluded from NEPA as they are not considered to be major Federal actions significantly affecting the quality of the human environment. However, USACE agreed to offer expertise and be cooperating agency to assist EPA with the preparation of required NEPA documents to enhance and facilitate an analysis of environmental impacts because the proposed facility would be the first aquaculture facility to operate and discharge in federal waters of the eastern Gulf.

- EPA acted as the lead agency to fulfill the Endangered Species Act (ESA) and Essential Fish Habitat (EFH) consultation responsibilities pursuant to the implementing regulations of ESA[10] and EFH.[11] USACE was a co-federal agency for each consultation process and jointly developed the consultation documents to satisfy EPA's and USACE's authorization obligations. This consultation coordination allowed the permitting agencies to create one consultation record for the entire proposed project, rather than submitting separate consultation requests to NMFS and USFWS, thereby streamlining the process for the federal action and consultation agencies.
- EPA coordinated extensively with NMFS and USACE to comply with the interagency permitting process as required by the Memorandum of Understanding (MOU) for Permitting Offshore Aquaculture Activities in Federal Waters of the Gulf. On February 6, 2017, the *Memorandum of Understanding (MOU) for Permitting Offshore Aquaculture Activities in Federal Waters of the Gulf of Mexico* became effective for seven federal agencies with permitting or authorization responsibilities.

1.4 Permit Decisions

NMFS and USACE were provided the opportunity to respond to comments specific to their agency and permitting processes. This RTC document presents EPA's and USACE's responses to significant public comments received on the proposed draft NPDES permit, draft EA and FONSI, and all supporting documents. The permitting agencies have addressed all significant issues raised during the public comment period. After consideration of all comments, and the requirements and policies in the CWA, RHA, and NEPA, and other appropriate regulations, EPA made a final decision to issue the NPDES permit. USACE is evaluating this project pursuant to its Letter of Permission (LOP) authority pursuant to 33 CFR § 325.2(b)(2) and (e)(1).

[10] 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."

[11] 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."

2 Revisions Made to the Draft NPDES Permit and Supporting Documents

2.1 Changes to the Draft Permit and Fact Sheet

In accordance with 40 CFR § 124.17(a)(1), EPA is required to specify any revised provisions in the draft permit. No substantial revisions were made to the draft permit based on the comments received during the public notice period. Below is a summary of provisions changed in the draft permit or fact sheet:

- The permittee name was revised to reflect that the applicant changed names from Kampachi Farms, LLC to Ocean Era, Inc.[12]
- The permit was revised to prohibit the discharge from seafood processing activities.
- The permit and fact sheet were revised to clarify that the discharge from the facility is only covered for one production cycle to produce approximately 80,000 lbs.
- The fact sheet updated information related to NEPA compliance.
- The fact sheet updated the EFH and ESA consultation dates and determinations.
- Information within the fact sheet was clarified to state that the CWA § 401(a)(2) also does not apply because EPA determined that the proposed discharge will not impact any state waters.[13]
- The permit was revised to say that the four plans required to be developed by the permittee must be developed and submitted to EPA within 90 days of permit issuance, and that approval of the plans is required by EPA prior to discharging. The permit was also revised to state that the Facility Damage Prevention and Control (FDPC) plan shall be subject to review and approval by EPA like all other plans required in the permit.
- The permit was altered to state that any modifications to the four plans require immediate implementation of the modified plan upon submittal to EPA.[14] Additionally, when determined to be necessary, EPA has the authority to require modifications to any plan approved by EPA.
- Information related to the Marine Mammal Protection Act (MMPA) was revised in the fact sheet.
- As allowed by 40 CFR § 125.123(d)(3), two requirements were added to the permit relating to finfish health management and the transfer of pathogens. First, all stocking of live aquatic organisms must be accompanied by an Official Certificate of Veterinary Inspection signed by a licensed and accredited veterinarian attesting to the health of the organisms to be stocked. Second, the permittee shall create and implement procedures within the BMP plan to prevent and minimize the indirect transfer or discharge of aquaculture pathogens. The fact sheet was revised to provide the justification for these condition.
- A condition to include training for drug administration was added to the training requirements of the BMP plan within the permit.
- Minor typographical errors were corrected and certain insignificant topics were clarified within the fact sheet and permit. These changes did not change the requirements in the permit.

2.2 Changes to the Ocean Discharge Criteria Evaluation

The significant changes to the Ocean Discharge Criteria (ODC) Evaluation include the following:

- The depositional modeling analysis was increased from 1 year to 5 years.
- Clarifications were added about the project's nutrient contribution and potential impacts to red tide.
- A Certificate of Veterinary Inspection was added to the NPDES permit as allowed for by ODC implementing regulations in 40 CFR § 125.123(d)(3). The NPDES permit will include a requirement that all stocking of

[12] Kampachi Farms and Ocean Era are used interchangeably throughout this document.

[13] CWA § 401(a)(2) requires the 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).

[14] The four plans required by the NPDES permit are: 1) Environmental Monitoring Plan; 2) Best Management Practices Plan; 3) Facility Damage Prevention and Control Plan; 4) Quality Assurance Project Plan.

live aquatic organisms, regardless of life stage, must be accompanied by an Official Certificate of Veterinary Inspection signed by a licensed and accredited veterinarian attesting to the health of the organisms to be stocked.

- The rationale for including the permit prohibition that "The discharge from the facility shall not cause unreasonable degradation of the marine environment underneath the facility and in the surrounding area" was clarified as 40 CFR § 125.123(d)(3).
- Some sections were clarified and corrected without changing the analysis or the unreasonable degradation determination.

2.3 Changes to the Draft EA

The following list of revisions were made to the EA in response to substantive public and agency comments. An errata table is provided in the EA that outlines a more comprehensive list of revisions.

- Updated the cumulative impacts discussion within the EA to reflect how EPA evaluates each operation separately and collectively.
- Information was added to the EA about potential impacts on genetics from fish escapes to wild fish.
- Information was added to the EA related to impacts from parasites and pathogens.
- Updated the water quality impacts discussion on modeling to reflect the 5-year permit term.
- Updated the ESA language to reflect current status of consultations.
- Updated the language in the EA to reflect changes in the ODC Evaluation regarding certain impacts.
- Clarified debris, domestic waste generation, and cage catastrophic failure.
- Updated language regarding air quality impacts to include details relating to support vessels.
- Updated language regarding impacts to commercial fishing.
- Updated MMPA language to reflect recent court decision.
- Corrected minor typographical errors and clarified certain topics that did not change any analysis of impacts.

2.4 Changes to the Consultation Documents

There are supporting documents that were created during the process of issuing the NPDES permit to comply with EPA's implementing regulations and other statutory obligations. The following information summarizes any revisions to the consultation records (see the NPDES fact sheet for more information):

- Endangered Species Act (ESA): Minor editorial changes to the Biological Evaluation (BE) that did not change any EPA or USACE determinations.
- Essential Fish Habitat (EFH): Minor edits to the EFH assessment that did not alter any impact findings.
- Fish and Wildlife Coordination Act (FWCA): No revisions to the FWCA consultation documents.
- National Historic Preservation Act (NHPA): The NHPA consistency record was not revised.
- Coastal Zone Management Act (CZMA): No changes were made to the applicant's CZMA consistency determination and resulting consultation.

3 Responses to Comments on the NPDES Permit Application and Permit Conditions

3.1 Monitoring plans

Comment: Many comments were received about the monitoring plans. One commenter stated that the monitoring plan was extensive and more than sufficient for determining the impacts of the operation. Other commenters had concerns that the monitoring plan was not adequate. One commenter stated that monitoring is only required for the immediate area of the fish cage and that there is no requirement for monitoring downstream of the cage, or for cumulative nutrient load, which can have impacts on food webs and community structure. One commenter stated that an EA of the area below the proposed aquaculture pen be conducted, and that the area should be routinely monitored as long as the facility is in place. Another commenter was concerned that the environmental monitoring plan (EMP) was not comprehensive and that the plan does not sufficiently monitor down-current levels.

Response: EPA assessed how to sufficiently evaluate the discharges from the operation in order to protect the receiving water body. The environmental monitoring requirements and plans were developed in accordance with the Ocean Discharge Criteria (ODC) and NPDES regulations, EPA's technical guidance, and best professional judgement. The NPDES permit contains environmental monitoring for water quality, sediment, and benthic organisms.

The permit requires water quality sampling for 15 parameters that includes medicinal products, chlorophyll-a, nitrogen, total ammonia nitrogen, dissolved oxygen, pH, phosphorus, total suspended solids, and sulfide. The water quality parameters are monitored at three locations: up-current of the facility, at the facility (effluent), and downstream of the facility (5 meters). Some water quality parameters are only monitored at the facility since these parameters can only be measured at the facility (i.e., feed rate, fish biomass, feed conversion rate, and medicinal products). Monitoring frequencies for water quality parameters are either continuous, monthly, or as applicable. Due to the high-water current rate at the proposed facility, the water quality sampling locations were selected where the parameters may be quantifiable.

Sediment sampling for eight parameters is monitored up-current of the facility, at the facility, and downstream of the facility. Sediment monitoring is required at two periods associated with the amount of fish produced at the facility – once when production reaches a 50% biomass and another occurrence at the maximum biomass prior to harvesting. Benthic monitoring is also required and is performed at the same location and same frequency as the sediment monitoring.

The permittee is also required to develop, implement, and obtain EPA approval for an environmental monitoring plan (EMP) in order to provide project-specific details for the water quality, sediment, and benthic infauna monitoring requirements contained in the NPDES permit. In addition, the permittee must ensure that all collected monitoring data is reliable through the implementation of quality assurance (QA) procedures and development of a QA Project Plan (QAPP). See the NPDES permit and fact sheet for more detailed information about the monitoring requirements and the rationale for monitoring. The EPA determined that the monitoring requirements within the permit to be appropriate and adequate because the monitoring has been designed to measure activities and pollutants of concerns at locations and at times that they will be most discernible.

3.2 Environmental monitoring requirements for the application process

Comment: Commenters were concerned about the environmental requirements for the application process and monitoring being inadequate. Some commenters said that the required pre-permit environmental data are mostly physical (e.g., is there natural reef) or basic water quality data (e.g., dissolved oxygen). Comments were received about there being no requirements for biological data (e.g., plankton community, fish community) or more

extensive water quality data (e.g., nutrients). Other commenters were alarmed that only a single survey was conducted prior to the permit application, which doesn't take into account seasonal or other time-based changes.

Response: See section 3.1 for more information about monitoring required by the permit. The EPA understands the concern that the information required in the application (EPA Form 1 and 2B) for aquaculture operations is minimal. The EPA used its authority to request more information from the applicant under the NPDES regulations (40 CFR § 122.21(e)), the ODC regulations (40 CFR § 125.124), and NEPA regulations (40 CFR § 6.301). Additionally, EPA requested that the applicant provide more information, as appropriate, to comply with the consultation provisions of ESA Section 7, and the EFH requirements of the Magnuson-Stevens Fishery Conservation and Management Act (MSA).

The applicant participated in an interagency permitting process that was partially designed for all appropriate federal permitting and authorization agencies to obtain comprehensive information during the application process. In addition to the NPDES application forms, EPA requested that the applicant provide a siting analysis, baseline environmental survey (BES), and supplemental information. The supplemental information document includes many project details such as the siting analysis process, fish harvest and transport information, protected species monitoring plans, contingency plans, vessel information, and engineering designs. Additionally, the NPDES permit requires the permittee to collect certain environmental information at a background (up-current) location that will provide information about the site that is not impacted by the facility's aquaculture discharges. The EPA finds that data and information provided by the applicant is sufficient to make a permitting determination.

3.3 Assurances for compliance with applicable state and federal water quality standards

Comment: EPA received comments that the applicant had not provided reasonable assurances that the applicable state and federal water quality standards will not be violated, and that the applicant has not provided reasonable assurances of compliance with Outstanding Florida Water (OFW) water quality standards for the direct, secondary, and cumulative impacts of the proposed activities. These include, but are not limited to, the water quality standards for nutrients, turbidity transparency, biological integrity, nuisance conditions, heavy metals and other contaminants, dissolved oxygen, and including anti-degradation and public interest provisions.

Response: The proposed discharge is not located in waters within the jurisdiction of any state for purposes of the CWA; it is located in federal waters approximately 45 miles from the coast of Florida. As a result, no state WQS are applicable at the location of discharge. Water quality concerns are addressed through application of the ODC promulgated pursuant to CWA § 403. The ODC are published at 40 CFR Part 125, Subpart M, and prohibit the issuance of a NPDES permit that will result in unreasonable degradation of the marine environment. EPA has conducted an ODC Evaluation and has determined that the proposed discharge will not result in unreasonable degradation of the marine environment. The antidegradation policy of the CWA does not apply to federal waters where WQS have not been developed. See the ODC Evaluation, permit, and fact sheet for more information.

3.4 Buoy data not adequate

Comment: Commenters questioned the water current data that was used to inform modeling stating that NOAA buoy 42022 is almost due west of Tampa Bay, while NOAA buoy 42023 is very near the proposed site. Commenters stated it would be more accurate to use the data from buoy 42023.

Response: Water current data from buoy 42022 was used in the applicant's BES report and the environmental monitoring report. Buoy station 42022 is west of Bradenton and approximately 39 miles northwest of the VE project site. Station 42023 is approximately 77 miles south-southeast of the proposed project site. The buoys at both locations measure current data from the 50-meter isobath. Current data at various depth profiles were

similar between the two stations. The water current data from station 42022 was used because it is much closer to the proposed project site.

3.5 Representative water quality data

Comment: Comments were received about the water quality data and the gulf floor sediment samples that were taken from a Tampa Ocean dredged material disposal site just 1-2 miles west of Tampa Bay. Commenters questioned how can this site compare to a site 40 miles offshore and considerably south of that location?

Response: There is limited water quality and seafloor data available in the open ocean near the proposed aquaculture facility. Within the ODC evaluation, EPA used current and habitat data collected by EPA at the Tampa Ocean Dredge Material Disposal Site (ODMDS) that is 18 miles due west of Tampa, FL. In addition, a Baseline Environmental Survey (BES) was completed on the project site providing comprehensive coverage of habitat and screening for archeological resources. The EPA used this information as appropriately representative information to estimate some of the conditions at the proposed site.

3.6 Antibiotics usage

Comment: Many commenters were concerned about the effects of antibiotics on the farmed fish, surrounding environment, and surrounding wildlife. Several comments noted concerns that the use of antibiotics at the facility could lead to antibiotic resistance in the farmed and native wildlife. One commenter specifically mentioned the fact that food pellets, which could contain antibiotics are able to pass through the net pen. One commenter stated a concern about antibiotics washing up on shorelines and about contact recreation in waters where antibiotics were used. One commenter stated that a permit for discharging chemicals and antibiotics is not required and is symptomatic of unhealthy fish and overstocking. One commenter stated that pharmaceutical contamination has been shown to affect fish behavior, migrations, and reproduction and is a concern for them as it relates to the tarpon. Several commenters discussed the noted impacts when using a specific chemical, emamectin benzoate, at aquaculture facilities. Other commenters noted that EPA should require full qualitative and temporal records of all antibiotics used and that simply requiring type and total volume will not suffice, and that EPA must include further reporting that discloses the specific type and rate of discharge for each pollutant.

Response: EPA understands that there are concerns involving the use of antibiotics. The need for drugs is minimized at the proposed facility by the strong currents in the open ocean, the low fish culture density, the cage material being used, and the constant movement of the cage. The applicant has indicated that FDA-approved antibiotics or other therapeutants will likely not be used (within any feed or dosing the rearing area) during the proposed project. However, in the unlikely circumstance that therapeutant treatment is needed, three drugs were provided to EPA as potential candidates (hydrogen peroxide, oxytetracycline dihydrate, and florfenicol).

EPA has included all of the aquaculture specific reporting requirements that is required by the ELGs for the Concentrated Aquatic Animal Production (CAAP) Point Source Category (40 CFR § 451.3) which includes requirements related to the use of drugs or other chemicals, and spills of drugs, pesticides, or other chemicals.[15] In accordance with the NPDES permit, all drugs, pesticides and other chemicals must be applied in accordance with label directions. The permittee must maintain records of all drug, pesticide, and other chemical applications including date and time of application and the quality of the drug or chemical used. Further, by nature of the species of fish being cultured, if any pharmaceuticals are needed, it will be used under an Investigational New Animal Drug (INAD) exemption. Using an INAD will likely require enrollment with a USFWS aquatic animal drug approval partnership (AADAP) INAD study. Any information regarding the amount of drug used will be reported

[15] While this facility is not automatically covered under the CAAP requirements, it is the permit writer's BPJ (40 CFR § 125.3) that the aquaculture specific reporting requirements should be implemented due to the similarity of operational characteristics between the facility covered by this Permit and net-pen facilities that are considered CAAP operations.

to the USFWS, FDA, and EPA as part of the permit conditions. If antibiotics are needed, their use requires veterinary oversight.

3.7 Copper net pens

Comment: Some comments were received about whether the copper cages would create an issue for the ocean water/sea life.

Response: Copper alloy nets used in marine environments have strong structural, hydrodynamic, and corrosion-resistant properties. Copper reduces biofouling of the net pen which can reduce water and oxygen flow through the net, decrease waste removal, increase the risk of disease to the farmed animals, and damage the nets. Copper is not expected to be at a measurable concentration in the facility effluent; however, given the unique nature of this project and limited water quality data regarding the use of copper in marine aquaculture operations, EPA has elected to include water quality monitoring for copper in the permit at multiple locations in the water column.

3.8 Use of old information

Comment: Comments were received about the draft ODC Evaluation containing more studies published in the 1970s than in the 2010s. More than two-thirds of the studies that EPA cites in the Draft ODC were published before 1990 and are not directly applicable to the impacts of this new VE project.

Response: EPA is required to ensure the scientific integrity when interpreting and presenting results and using scientific information and data. As long as documents relied on and cited in the ODC evaluation and supporting documents meet these criteria, regardless of when these studies were published, EPA has fulfilled this duty.

3.9 Potential impact from the facility to the surrounding environment

Comment: EPA received many comments expressing concern over the potential impacts from the facility to the surrounding environment. Concerns of spills/releases of feed, drugs, pesticides, antifoulants, PCBs, fish wastes, and other chemicals were noted. Many commenters felt that the release of excess nutrients could negatively impact water quality surrounding the farm and threaten the surrounding plants and animals. They also stated concerns that the farms could physically impact the seafloor by creating dead zones.

A few commenters noted that they did not feel as though the environmental impact and safety was adequately vetted. One commenter was concerned about antibiotics washing up on shore. One commenter stated that the Gulf suffered from too much nitrogen and they were concerned about the introduction of fish waste into the system. A few commenters wrote about a concern that this project would risk Florida's biologically sensitive areas and coastlines. A few commenters felt as though the concentrated fish wastes would not necessarily be dispersed by the prevalent Gulf currents. One commenter stated that they have dived near a fish farm and noted mounds of sediment under the cages. One commenter asked if applicant could assure EPA that the project would not negatively impact the water quality or water clarity. One commenter stated that the Gulf Council has a plan that would allow up to 64 million pounds of fish to be farmed and up to 20 farms which would double the seafood production in the Gulf.

Response: EPA believes that the single cage demonstration project will not contribute significantly to nutrient availability, red tides, or other environmental impacts due to the small proposed fish biomass, high current velocity, distance of the project from the coast and sensitive areas, and sea floor depths at the proposed site. Feed is controlled in the permit through BMPs designed to minimize overfeeding and reduce nutrient impacts. The permittee has made an operational decision not to use pesticides and antifoulants. Drug monitoring is a permit requirement and is strictly administered under the orders of veterinarians; however, the use of antibiotics is not expected during the production period due to operational and environmental factors. The permit conditions have

been developed to ensure that pollution is properly controlled and that discharges do not cause unreasonable degradation of the marine environment. The permit does not authorize any future projects of larger scale that might have greater impact.

Moreover, coordination with the State of Florida occurred to ensure consistency with the Coastal Zone Management Act (CZMA) and consistency with the Florida Coastal Management Program (FCMP). Based on the information submitted to the State of Florida and minimal project impacts, the state had no objections to the subject project and determined that the project is consistent with the FCMP.

3.10 Discharge impacts noted in other countries

Comment: Commenters provided information about the perceived negative effects of aquaculture in many countries and states including Canada, Norway, Denmark and Washington. Some commenters pointed out that Demark is no longer permitting new farms and that they have found major challenges with oxygen deficiencies and that the nitrogen emissions from fish excrement are not dissipating as anticipated.[16] Some commenters discussed the collapse at the Cook Aquaculture facility in the State of Washington where over 263,000 farmed Atlantic salmon were released into the Puget Sound and how that is leading Washington State to phase out marine finfish aquaculture for non-native species. The commenters stated that the threats to the wild fish are still unknown. One commenter stated that British Columbia will decommission salmon farming over the next four years. One commenter shared an article regarding a fish farm in Newfoundland that experienced a mass die-off of their farmed fish. They stated that the cause of the die-off was the fact that there were several days of warm water (around 20-21 C). The same commenter mentioned that Norway is flushing out coves and rocky inlets where fish farming is occurring and that many of the fish escaped. One commenter stated that they read that farmed salmon in Scotland showed signs of physical mutations and depression from overcrowding. One commenter mentioned recent news of fish die-off at a farm in Canada.

Response: Significant impacts due to net-pen culture in other areas result from commercial scale fish farms located in areas with shallower waters and slower water currents that are less conducive to rapid dispersal of fish feces, metabolic wastes, and unconsumed fish feed. The proposed project is small (single cage) and located approximately 45 miles from the coast in 40 meters water depth. The facility will be subject to strong and constant currents capable of assimilating and dispersing nutrients without adverse effects. Due to these factors, and the modeling that was used to evaluate potential impacts near the facility, EPA does not expect that the proposed facility will result in impacts like those described by the commenters.

3.11 Concerns about impacts to hard bottom

Comment: Commenters stated that the applicant has not provided reasonable assurances that hard bottom areas located offshore of Siesta Key and Casey Key will not be impacted. Other general comments stated that hard-bottom habitats provide important cover and feeding areas for many fish and invertebrates, including threatened and endangered aquatic species.

Response: The NPDES permit has a provision that requires the applicant to stay 500 meters away from any hard bottom habitat. Modeling indicated that a 500-meter buffer area from the proposed facility was sufficient to protect hard bottom habitat. Further, the BES demonstrated that the site does not contain any hardbottom habitat.

[16] PHYS.ORG, Denmark halts aquaculture development over environmental concerns (Aug. 27, 2019), *available at* https://phys.org.news/2019-08-denmark -halts-aquaculture-environment.html.

3.12 Identification of adverse impacts

Comment: Comments were received that expressed concern that the initial EPA review of the project has identified adverse environmental impacts that are of sufficient magnitude that the proposed action must not proceed as proposed.

Response: EPA's environmental modeling, and consultations and evaluations with other federal agencies, did not show significant adverse impacts.

3.13 Substances used to prevent equipment corrosion

Comment: One commenter expressed concern about substances that might be used to prevent corrosion of equipment, and the effects such substances might have on the immediate environment and downstream.

Response: The proposed facility is expected to discharge for approximately 12 months and have a total deployment period of about 18 months. EPA does not expect that a short deployment period will lend itself to intensive equipment corrosion. The permit requires that the facility must be properly operated and maintained at all times. The use of toxic chemicals is prohibited. The applicant does not anticipate the need to clean the cage for the short duration of the proposed project. For example, should the cage system need cleaning, divers would manually scrub the cage surfaces with cleaning brushes.

3.14 Fish escapes

Comment: Many commenters expressed concerns about the possibility of fish escapes. Several commenters referenced an aquaculture facility located in the State of Washington where more than 263,000 farmed Atlantic Salmon escaped into Puget Sound. Some commenters stated that these escaped salmon were documented as far away as 100 miles from the farm. Specific concerns about escaped fish focused on the fact that escaped fish could dilute the genetic pool of native fish, that the escaped fish could outcompete the native fish species for food, habitat, and spawning areas, and that escaped fish could spread parasites and diseases to the wild stocks.

Response: The farmed species, almaco jack, is native and common to the Gulf. The fingerlings will be sourced from brood stock that are located at Mote Marine Aquaculture Research Park and were caught in the Gulf near Madeira Beach, Florida. As such, only F1 (first filial generation) progeny from those wild caught brood stock will be stocked into the net-pen for the proposed project. Neither the brood stock, as they are native and wild caught, or the first-generation fingerlings from that brood stock, have undergone any genetic modification or selective breeding, and would not likely pose a competitive risk to wild stock. It's also not likely that there would be any genetic contamination or weakening if any fugitive fish spawned with wild individuals. Therefore, there is limited to no risk for non-indigenous stock establishment.

Furthermore, the risks that escaped farm fish pose to wild populations are a function of the probability of escape, and the magnitude of the event that could cause an escape event. The copper mesh cage to be used is impact resistant and designed to survive storm events while being completely submerged. EPA believes that the cage design will result in a low probability of escape.

3.15 Impacts from hurricanes

Comment: Several commenters were concerned that the cages could become marine debris from human error or as the result of a hurricane. One commenter was concerned that the cage design is currently being used in an area with very different oceanic conditions and there was uncertainty as to if the mooring system would be able to withstand a hurricane. The same commenter was concerned about the plan in place in the event of a hurricane. Specifically, the idea that submerging the pen in the water did not seem a feasible solution for ameliorating the

effects of a hurricane on the aquaculture pen, and they stressed that a much more robust analysis regarding hurricane contingency plans than what has been proposed should be done.

One commenter stated that the eastern Gulf is too shallow. The proposed fish aquaculture cage will be anchored in 100 feet depth. The Ekman Depth (depth to which wind-induced currents are felt) for Hurricane Florence (a Category 4 hurricane in 2018) was 250 ft. Since 1852, there have been 77 tropical storms or hurricanes that have passed within 65 miles of the proposed site. A cage at the proposed site would not be able to withstand hurricane-force waves and currents. Given that the region is a high-frequency hurricane region, this makes the area unsuitable for offshore operations.

Response: EPA notes that some concerns related to facility design (anchorage system, depth of cage submergence, depth of water, wave and current forces) are outside the scope of this CWA permitting action. Issues of structural integrity and anchoring of the cage system pertain to the USACE authorization under the RHA Section 10.

However, EPA acknowledges some of these concerns do fall within the scope of the CWA. EPA has included a Facility Damage Prevention and Control requirements in Part VI of the permit (requirements to address *discharges* from the operation in the event of a disaster such as a hurricane, to the extent that these requirements are consistent with NPDES regulations. These requirements include a notable number of preventive operation and maintenance measures (Part VI.A.1.a-j) as well as disaster response measures (Part VI.A.2.a-e). The permittee is required to submit their Facility Damage Prevention and Control Plan to EPA prior to stocking fish, and must update the plan whenever there is a change in the facility or in the operation of the facility that increases the risk of damage to the site.

The EA considered the potential impacts of the proposed project on climate and how extreme weather and hurricanes could impact the project (see EA section 5.4.6). As referenced by the commenter, the NPDES permit requires a facility-specific plan that minimizes the potential for the facility to be damaged during a storm-event and cause significant impact to the environment. Requiring mitigations in the permit is an appropriate way to lower the level of significance of the action due to extreme weather events.

In addition to EPA's FDPC plan, the USACE Section 10 permit authorization will include permit conditions to provide for adherence to a facility specific BMP Plan to ensure the facility is being operated and maintained to mitigate environmental impacts during any disaster. In this BMP plan, the applicant has noted that the cage design is flexible and self-adjusts to suit the constantly changing wave, wind, and current conditions. As a result, the system can operate floating on the ocean surface or submerged within the water column of the ocean. When a storm approaches the area, the entire cage array can be submerged by using a valve to flood the floatation system with water. 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 can be maintained several meters above the sea floor. The cage system is still able to rotate around the MAS and adjust to the currents while it is submerged.

After storm events, the cage system is made buoyant to resume normal operational conditions. The DA permit will also be conditioned to require proper visible markers and posting of required Local Notice to Mariners (LNM) per United States Coast Guard (USCG) requirements and to require that the net pen is equipped with a radio transmitter/radar reflector buoy(s) and/or an approved gear tracking system (e.g., satellite tracking, global positioning system). If any gear is lost during the activities authorized (including deployment, maintenance period, and retrieval), a report will be made within 24 hours to the Corps. Every effort must be made to retrieve the lost gear immediately from the time of discovery. Finally, at the end of the proposed 18-month deployment cycle, the entire aquaculture system must be removed from the project site.

3.16 Analysis of discharge is inadequate for pathogens and parasites

Comment: Several commenters expressed concern that the fish in the net-pen could become diseased and impact the wild fisheries. Some commenters were concerned that the free flow of water through the cage would allow parasites and other diseases to impact native fish. One commenter cited the fact that there have been problems with diseased fish in Chile, Norway, and Canada and that some of these diseases have spread to wild fish.

Several commenters stated that they did not feel as though EPA properly analyzed the discharge of significant pollutants from the facility under the ODC required for NPDES aquaculture permits, resulting in violation of the CWA. Commenters noted that the CWA broadly defines "pollutant" to include a range of substances, such as "solid waste … sewage, garbage, … chemical wastes, biological materials, … wrecked or discarded equipment, … and industrial, … and agricultural waste." Commenters assert that the only discharges that EPA evaluated under the "ocean discharge criteria" are fish food pellets and fish wastes while elsewhere in the accompanying EA, EPA acknowledged that the proposed facility will consist of copper mesh, and recognized the risks of fish escape, pollution from pharmaceutical and chemical inputs, and the development of pathogens and parasites.

Response: EPA agrees that the CWA broadly defines "pollutants." The indirect discharges from marine finfish aquaculture operations such as fish escapes, pathogens, and parasites fall within the scope of the NPDES permit. There is limited to no information about finfish disease transfer from cultured fish to wild fish in the Gulf. There is also little quantitative data demonstrating that wild species near aquaculture operations suffer more from infectious diseases than those in other areas. While farmed fish species often receive infectious diseases from wild species and can transmit infectious pathogens to wild species, it can be challenging to accurately estimate disease impacts on wild populations, especially considering pelagic species.

EPA evaluated the direct and indirect potential impacts from pathogens and parasites in multiple documents when developing effluent limitation guidelines (ELGs) and performance standards for the CAAP industry.[17] The available literature regarding the potential for finfish disease transfer in marine waters is mainly from the salmon farming industry because it is the dominant form of marine finfish aquaculture production in the United States. EPA provided the following information to support the limited risk of disease transmission from farmed fish to wild fish: [18]

> "It has also been suggested that aquaculture operations may be a source of disease to wild populations. Nash (2003) discusses the low risk that escaped Atlantic salmon would be vectors for the introduction of new, exotic pathogens into the Puget Sound area of Washington State. No new stocks of Atlantic salmon have been transferred into Washington since 1991, and any stocks transferred within the state must have a certification that they are disease-free, so it is not possible that Atlantic salmon already in the state would be vectors for exotic disease (Nash, 2003). Because all farmed salmon in Washington State are inspected annually for disease, they do not present a high risk for infection of wild stocks (Nash, 2003). While fish hatcheries may potentially be reservoirs of infectious agents (due to higher rearing densities and stress), little evidence suggests that disease transmission to wild stocks from hatcheries occurs routinely (Strom et al., n.d.)."

The NMFS published a review of the impacts that Atlantic salmon net-pen aquaculture would pose to other salmon in Puget Sound.[19] The NMFS concluded there were no serious or moderate risks posed by the Atlantic salmon net pen industry to wild salmon indigenous to the Pacific Ocean. The findings documented by NMFS include: "The

[17] USEPA. 2004. Technical Development Document for the Final Effluent Limitations Guidelines and New Source Performance Standards for the Concentrated Aquatic Animal Production Point Source Category (Revised August 2004). EPA-821-R-04-012

[18] USEPA. 2004. Economic and Environmental Benefits Analysis of the Final Effluent Limitations Guidelines and New Source Performance Standards for the Concentrated Aquatic Animal Production Industry Point Source Category. EPA-821-R-04-013

[19] Waknitz, F.W., T.J. Tynan, C.E. Nash, R.N. Iwamoto, and L.G. Rutter. 2002. Review of potential impacts of Atlantic salmon culture on Puget Sound chinook salmon and Hood Canal summer-run chum salmon evolutionarily significant units. U.S. Department of Commerce, NOAA Tech. Memo. NMFS-NWFSC-53, 83 p.

expectation that Atlantic salmon will increase current disease incidence in wild and hatchery salmon is low;" "there was low risk that Atlantic salmon will increase disease incidence in wild fish;" and "there was little risk that existing stocks of Atlantic salmon will be a vector for the introduction of an exotic pathogen into Washington State."

EPA's CAAP regulations, and the permit for the proposed operation, address a number of these concerns through non-numeric effluent limits in the form of BMPs. For example, the permittee will be required to create fish health management conditions to minimize pathogen transfer as part of developing a facility-specific BMP plans in accordance with ODC regulations. The NPDES permit also includes a condition "that all stocking of live aquatic organisms, regardless of life stage, must be accompanied by an Official Certificate of Veterinary Inspection signed by a licensed and accredited veterinarian attesting to the health of the organisms to be stocked." These requirements will ensure that all fish used to stock the facility will be disease free prior to arriving in the Gulf and minimize any pathogen transfer to wild fish.

The EA and evaluations accompanying the NPDES permit for the proposed project addressed concerns regarding potential impacts to native fish populations, including the potential for disease transmission and genetic commingling between culture and wild populations. While warmwater of the Gulf may promote higher pathogen proliferation and transmission rate of disease, EPA maintains that there is little evidence that the proposed operation poses a threat to native fish stocks in the Gulf.

3.17 Use of BMPs to control the discharge of pollutants

Comment: Commenters expressed concern about the discharge of nutrients into the open ocean and suggested that the permit should require numeric effluent limitations, along with downstream water monitoring. The commenter was also concerned with EPA's use of BMPs to control the discharge of pollutants because they are difficult to monitor, are at the discretion of the permittee, and are wholly ineffective for a brand-new industry that does not have a clear set of practices to follow.

Response: The NPDES permit contains water quality monitoring for nutrient related parameters at an up-current and down-current location, as well as the effluent (see other responses within Section 3). The use of BMPs to control the effluent from net-pen operations is supported by the promulgated national ELGs for the CAAP industry (40 CFR Part 451 Subpart B). EPA considered the discharges of pollutants from net-pen operations when developing the ELGs and determined that establishing BMP requirements (non-numeric limits) is an effective tool to control the discharge of pollutants from CAAP facilities. BMPs for net pen systems address feed management, waste collection and disposal, discharges associated with transport and harvest, carcass removal, material storage, structural maintenance, record keeping, and training.

EPA is aware that BMPs are often difficult to monitor without appropriate permit provisions to ensure that permittees implement and follow facility-specific BMPs. In order to increase the enforceability and oversight of the BMPs developed for this operation, the EPA has required the permittee to develop, implement, and obtain EPA approval for the BMP plan, and also obtain EPA approval if the BMP plan is modified.

3.18 Discharge equivalent to untreated sewage

Comment: Comments were received citing a study showing that an industrial ocean fish farm operation of 20,000 fish would release fecal matter equivalent of 6,300 people.

Response: EPA notes that the referenced report cites a 2001 Pew Oceans report, which in turn cites a scientific paper published in 2000 that summarizes aquaculture practices that are more than 20 years old. [20] Hardy (2000) estimated the amount of wastes produced by a single average salmon farm and compared it with the dissolved nutrients in human waste. This study calculated that a salmon farm producing 200,000 fish (weighing 5 kg each) discharges about 396 kg of nitrogen/day, or the equivalent of about 20,000 people; 40 kg of phosphorus/day, or the equivalent of about 27,000 people; and 2,500 kg of fecal solids/day, or the equivalent of about 62,500 people.

The calculations and modeling used for the Ocean Era operation were based on fish production (species, biomass, size) and feed input (rate, amount, formulation, content). The maximum grow-out size for the fish produced is estimated to be 1.8-2.0 kg, which is a much lower fish mass than the referenced study. It is estimated that 80,000 fish from the proposed action would produce 53 kg of fecal solids/day (assuming 90% survival and the largest fish size of 1.8 kg/fish). It was also estimated that the ammonia nitrogen will be undetectable within 5 meters of the cage using the estimated water flow regimes at the proposed site. Additionally, the calculated flow-averaged total ammonia concentration at the cage/water interface is below EPA's published ammonia saltwater criteria.

Furthermore, the results of deposition modeling, even when doubling fish production amounts, conclude that net accumulation of wastes following a 1-year production cycle would likely not be distinguishable from background levels of organic carbon. Even when the period of discharge is increased to the full 5-year permit term, 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."

[20] Hardy, R.W. 2000. Fish feeds and nutrition: urban legends and fish nutrition. Aquaculture Magazine 26(6):47-50.

4 Response to Comments Related to Harmful Algal Blooms

4.1 General concerns about HABs

Comment: Some commenters indicated that they did not believe the proposal would contribute to occurrences of red tide or HABs because of the 45-mile distance from the shore where the facility would be located. Many commenters expressed concerns that the discharge from the proposed facility would contribute to HABs such as red tide. Such commenters frequently cited the potential for nutrient discharges from the facility to contribute to the occurrence of such HABs. These commenters noted the devastating impacts of HABs on the west coast of Florida in recent years and opposed the permitting of additional nutrient discharges that could increase the likelihood of red tide or HABs in the future. Some commenters opposed the project based on their view that the Gulf was just recovering from impacts from the Deepwater Horizon disaster, and from recent devastating algal blooms and red tide, and the commenters were concerned that the Gulf could not withstand still more pollution contributions to worsen these recent problems or create new problems.

One commenter was concerned that the Gulf was already in a fragile state due to the BP spill, red tide, and blue green algae issues. The commenter expressed concern that, with introduction of a new pollution source, red tide could flare up quickly in great volume and wreak havoc on the Gulf environment and health. One commenter warned that feeding an artificial and stationary population of finfish at the facility may attract more of the red tide *K. brevis* algae to that location to flourish, further concentrating waste nutrients that feed such algae blooms. One commenter stated that the anticipated increase in sea temperatures will heighten the risk that discharges from the facility will contribute to toxic algae blooms/red tide occurrences.

One commenter characterized the location of the proposed project as an epicenter of nascent algae bloom incubation, possessing red tide factors that readily may be fed to bloom with the introduction of more nutrients in what already is a delicate balance. Commenters expressed concerns that the project is being placed in one of the most affected areas in Florida. The commenters noted that the "HABs caused Florida to suffer losses of almost $150 million from fish deaths, marine animal deaths, and the resulting loss of tourism." Commenters provided several citations showing the regional and local impacts from HABs, including shellfish consumption warnings. Commenters also noted that some areas impacted by HABs are of special concern to EPA - on EPA's website discussing the entirety of the Gulf, EPA singles out just two specific areas of concern. One of those areas is the North Water Tower Project (NWTP) in North Sarasota, FL.

Response: HABs occur when colonies of algae, the simple plants that live in the ocean and freshwater, grow uncontrollably while producing toxic or harmful effects. Not all algal blooms are harmful as most blooms are beneficial because the tiny plants are a major food source for animals in the ocean. A small percentage of algae produces powerful toxins that can kill fish, shellfish, mammals, and birds, and may directly or indirectly cause illness in people.

Identifying nutrient sources that can be related to the start, growth, and maintenance of *K. brevis* blooms is challenging. Many hypotheses about nutrient sources for growth and maintenance are related to atmospheric deposition through rainfall, riverine or benthic flux, water column hydrodynamics, N-fixation, and zooplankton excretion to decaying fish killed by the toxic dinoflagellate.[21] In Maine and Washington, factors other than nutrients, such as light availability and water temperature, often control natural variability in primary productivity.[22] Naturally occurring nutrient fluxes from coastal ocean upwelling, or from land and ocean-based sources, are often high relative to loads from aquaculture. Causal linkages have not been established between

[21] Vargo, G.A. 2009. A brief summary of the physiology and ecology of Karenia brevis Davis (G. Hansen and Moestrup comb. nov.) red tides on the West Florida Shelf and of hypotheses posed for their initiation, growth, maintenance, and termination. Harmful Algae 8:573-584

[22] Michael B. Rust, Kevin H. Amos, April L. Bagwill, Walton W. Dickhoff, Lorenzo M. Juarez, Carol S. Price, James A. Morris Jr. & Michael C. Rubino. 2014. Environmental Performance of Marine Net-Pen Aquaculture in the United States, Fisheries, 39:11, 508-524.

fish farming and phytoplankton blooms. There is no single source that can explain the prolonged blooms of *K. brevis* along the west coast of Florida.

EPA evaluated whether the proposed project would cause "unreasonable degradation" of the marine environment in the ODC Evaluation. 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. Due to the relatively small fish biomass production estimated for this demonstration and the limited discharges other than fish food and fecal matter, the volume and constituents of the discharged material are not considered sufficient to pose a significant environmental threat. EPA has found that no "unreasonable degradation" will likely occur as a result of the discharges from this project based on the available scientific information concerning open ocean fish farming, the results predicted by deposition and dilution modeling, and the conditions within the NPDES permit.

Comments regarding NWTP are not associated with this proposed project.

4.2 International experience with offshore fisheries and algae blooms

Comment: Comments were received about HAB impacts in other countries. For example, evidence has accumulated in Scotland, especially in the last few years, that increases in nutrients from the offshore fisheries, and the distortion of nutrient ratios, result in an increased risk from toxic blooms, both in their frequency of occurrence and their geographic extent. Commenters also provided information that the Danish Government has announced that it is to put a halt to the development of fish farming at sea in a bid to protect the environment. Levels of pollution associated with aquaculture have been the cause of significant criticism in the past. The resulting concentration of waste from the sector and its impact on the marine environment has been widely questioned. Commenters also stated that China suffered its largest recorded algal event in July of 2013, when a bloom of algae swelled to cover almost 30,000-km^2 which impacted tourism, fishing industries, property markets, local economies were all affected.

Comments were received about the primary nutrients of interest in relation to open ocean aquaculture, which are nitrogen and phosphorus. One commenter used a statement within the EA to link the impacts of the project to red tide – noting that nitrogen and phosphorus "may cause excess growth of phytoplankton and lead to aesthetic and water quality problems." (Draft EA, page 16.) Commenters expressed as a plausible hypothesis that the increased frequency and intensity of HABs may be occurring alongside the growth of the aquaculture industry in other countries, and that increased utilization of coastal waters for aquaculture is likely to be a major driving force for algal bloom

Response: EPA understands the draft EA contains general information about the cause of HABs and that nutrients such as nitrogen and phosphorus have shown HAB impacts in certain situations. NOAA comprehensively reviewed the available scientific literature related to the impacts from marine aquaculture on primary production and HABs around the world.[23] NOAA found that only a few studies indicate that effluents from aquaculture may contribute to an occurrence of HABs in the marine environment. NOAA concluded that "there is evidence that effluent from fish farms may result in increased primary productivity, but most studies have failed to demonstrate a clear effect. When effects are found, hydrological conditions or farm management practices may contribute. Siting farms in deep, well flushed waters will help disperse dissolved nutrients, and siting projects away from areas where effluent will be washed onshore will also help avoid eutrophication."

[23] Price, C.S. and J.A. Morris, Jr. 2013. Marine Cage Culture and the Environment: Twenty-first Century Science Informing a Sustainable Industry. NOAA Technical Memorandum NOS NCCOS 164. 158 pp.

EPA is permitting the discharge from a pilot-scale operation (approximately 80,000 lbs). Generally, the salmon industry in some of the countries cited is not an appropriate comparison in terms of scale of a single operation, the scale of industry in each country, or siting conditions (coastal vs open ocean). The aquaculture production of salmon in European countries is disproportionately larger than the proposed project. EPA believes it is inaccurate to draw definitive conclusions from the international salmon industry and apply it to a single cage that will be located 45 miles from shore in a high energy environment and discharging for approximately one year.

The NPDES permit will contain BMPs, a type of non-numeric effluent limitation, to control the discharge of feed and nutrients. In addition, the permit also has robust environmental monitoring requirements up-current, down-current, and at the facility.

4.3 ODC analysis of red tide

Comment: One commenter who was concerned about the potential for the facility to contribute to red tides and HABs specifically criticized the following passage from EPA's ODC Evaluation:

> "Immediately downstream of most net pens (6-30 m) the concentration of ammonia diminishes greatly. This decrease is probably due to the natural microbial process of nitrification (oxidation of ammonia to nitrites and nitrates). Rapid rates of nitrification are expected in any well-oxygenated aquatic environment (Harris, 1986). The effects of these factors on phytoplankton near fish farms are variable and no good scientific evidence is available to suggest that macronutrients and micronutrients from fish farming is related to the occurrence of red tides."

The commenter, noting that the passage from EPA's ODC Evaluation cites work by Professor Graham Harris contacted Professor Harris for his views on EPA's analysis. Professor Harris indicated in an email provided by the commenter, that he disagreed with EPA's statement that there is "no good scientific evidence available to suggest that macronutrients and micronutrients from fish farming is related to the occurrence of red tides." To the contrary, Professor Graham, a noted expert on the issue, has found that "there is an extensive international literature on the stimulation, growth and harmful effects of what are called HABs - Harmful Algal Blooms - many of them, like the dinoflagellate Red Tides are toxic. All are stimulated by increased nutrient loads."

Response: EPA agrees that the ODC Evaluation statement cited by the commenter could be misleading and it has been revised. EPA's revisions are meant to clarify that there is not enough quantitative evidence to conclude that marine aquaculture, or the proposed fish farm, can be directly linked to the occurrence of *K. brevis*. The Florida Fish and Wildlife Conservation Commission (FWC) provides the following information about coastal nutrient pollution causing *K. brevis* that is supportive of the EPA's position:

> "Red tides in Florida develop 10-40 miles offshore, away from man-made nutrient sources. In contrast to the many red tide species that are fueled by nutrient pollution associated with urban and agriculture runoff, there is no direct link between nutrient pollution and the frequency or initiation of red tides caused by Karenia brevis. However, once red tides are transported inshore, they are capable of using man-made nutrients for their growth. Red tides occurred in Florida long before human settlement, and severe red tides were observed in the mid-1900's before the state's coastlines were heavily developed. No single factor causes blooms of *K. brevis*. Blooms form as a result of the interactions between biology, chemistry, and ocean currents that unite nutrients with light and carry red tide to the beach."[24]

[24] https://myfwc.com/research/redtide/faq/

4.4 EPA did not thoroughly consider the potential for physical transport of nutrients

Comment: Some comments expressed concern that EPA must more thoroughly consider the potential for physical transport of nutrients under 40 CFR § 125.122. Some commenters asserted that the facility has a significant and unaddressed potential to transport waste streams with the predominant current direction. Some of these comments relied on statements from EPA evaluations that the "physical transport of these waste streams is considered to be the most significant source for dispersion of the wastes." Some commenters noted that ocean currents that carry nutrients such as phosphorus or nitrogen in the form of fish feces or food travel much further than five meters, and contended that EPA has ignored the possibility for transport more than five meters away. Commenters specifically noted the following:

> "While excess nitrogen and phosphorous sources (stormwater runoff, fertilizer runoff, faulty wastewater systems, etc.) may not cause the formation of HABs, scientists believe those excess nutrients worsen the severity and duration of HABs. *K. brevis* blooms originate 10-40 miles offshore in the Gulf. They require nitrogen and phosphorous to grow and survive. It may be "impossible to link a red tide bloom to one particular source of nitrogen or phosphorus," but it is undeniable that these two elements contribute to and amplify HABs."

Another commenter expressed concern that *K. brevis* populations already naturally exist off Florida's west coast, and present a dangerous mix of possibilities. This commenter was alarmed that *K. brevis* has the potential to start feeding, and blooming, from nutrients much further out in the ocean near the proposed project. It was noted that EPA did not discuss *K. brevis* populations near the proposed operation and the possibility in the Draft EA, and "instead heavily relied on dispersion to discount these potential impacts." This commenter further added that:

> "Dispersing sediment to the bottom of the ocean floor does not help either. The upwelling of dense, nutrient-rich water to the ocean surface remains a necessary condition for *K. brevis* along the west Florida coastline." Because the ocean circulation determines the water properties in which the Kampachi Fish Farm will reside and the transport of materials that may issue from it. Yet, the ocean circulation is either ignored, or misrepresented in the documents. Under certain, and not uncommon conditions, materials issuing from the proposed Fish Farm can arrive on Captiva-Sanibel beaches within only a few days. This was determined via particle tracking simulations, an example of which I am about to show. I will add that this transport pathway is the same way that the region receives its red tide in most year."

Response: EPA did not perform an analysis of whether particles will arrive near the west Florida shore. It is challenging to determine if far-field primary production is being affected over large ocean areas and at longer time intervals. Any larger scale analysis is more complicated when considering the occurrence of nutrients that are anthropogenically derived in coastal marine waters, which can make it complicated to attribute nutrification or HABs to any particular source, including aquaculture.

EPA used depositional models to determine the impacts to the local area near the project using a 4 km^2 boundary. The modeling report indicated that there was a wide depositional field of carbon over the 4 km^2 "with small accumulations and no areas of excessive concentrations." While the modeling report noted that the majority of fecal and feed solids are transported out of the local area used by the simulation, the high seafloor velocities will likely resuspend the material and it will be difficult to differentiate carbon from aquaculture vs natural infaunal carbon. It is important to note that the model simulations calculated the worst-case scenario by assuming that the final harvest weight (approximately 80,000 lbs) was present during the entire production periods of 1 year and 5 years; therefore, the modeling performed is a conservative estimate with safety factors built in.

In regard to the specific simulation provided by one commenter showing particle transport from the proposed project to the west Florida coast, EPA does not have enough information to make a determination if the analysis is relevant to the proposed facility. It is also unknown if the period used for the simulation was appropriate because, as stated by the commenter, the two-month duration from 2010 "was a period of anomalous upwelling caused by the Gulf Loop Current interacting with the west Florida shelf slope." More detailed information is needed to understand the significance of the particle simulation that was provided and whether this analysis shows strong evidence that the proposed project could impact *K. brevis* concentrations in the coastal environment of Florida.

4.5 Additional sampling for *K. brevis*

Comment: Comments were received requesting additional monitoring within the NPDES permit. The geographical position of the proposed net pen is situated in a known historic hot spot for the initiation of *K. brevis*, the red tide forming organism. While *K. brevis* is a naturally occurring, organism found in waters of the Gulf, bi-monthly (twice a month) sampling along a transect would help to determine if the facility is impacting the production of *K. brevis* by being a point source of increased nutrients that fuel the dinoflagellate. The monitoring of *K. brevis* could provide additional information to support the determination that the point source discharge from the marine aquaculture facility covered by this permit would not cause unreasonable degradation of the marine environment. The commenter specifically stated that:

> "Testing should include: (among others): Nutrient (primarily N) concentration gradients (not just at one or two points close to the cages) in waters around the cages. Phytoplankton monitoring within any affected waters (plumes) – in order to determine any possible effects of initiating or sustaining red tide blooms, especially as our waters have been inundated with horrific bloom events. Nutrient concentrations/changes in sediments. Full quantitative and temporal records of all biocides, antibiotics used, and measurements of them in waters and sediments (including arrayed monitoring benthic stations to determine accumulation rates.) For example, the permit is only required to report type and total volume per use period. This would not detect mass application followed by a period of very low application and would make the application appear unrealistically small. Lastly, there undoubtedly are many more issues and needs for assessment and monitoring. EPA should include a process in which ALL needs monitoring and analysis of ALL potential impacts are developed by credible independent scientists."

Response: Please see other responses in Section 3 regarding the use of biocides and the monitoring of nutrient related parameters and antibiotics in the water column and seafloor at and near the facility. The impacts of nutrient discharge from aquaculture on the intensity and/or frequency of HABs is not well understood, especially when nutrient discharge levels are low as is the case for this project. Though there is some evidence that effluent from fish farms may result in increased primary productivity, it is more often the case that no direct causal relationship has been demonstrated. When effects are found, unfavorable hydrological conditions or poor farm management practices may contribute.

EPA does not believe that it is necessary to monitor for *K. brevis* near the facility. The nutrient loading from the pilot-scale facility into the Gulf is extremely low. That said, EPA included monitoring for chlorophyll-a (CHLA) in the permit as an indicator pollutant. CHLA is considered the principal variable to use as a trophic state indicator and there is generally good agreement between plankton primary production and algal biomass. Also, CHLA is relatively easy to measure in comparison to *K. brevis*.[25]an understanding of any local impacts that the facility discharge may have on algal productivity. TN and TP may not be measurable in the effluent or down-current due to the high current flows and low fish biomass at the facility. Note that NOAA does implement the Harmful Algal

BloomS Observation System (HABSOS) that is a data collection and distribution system for HAB information in the Gulf.[26]

[26] The goal of HABSOS is to provide environmental managers, scientists, and the public with a data driven resource for HAB events. Cell counts and environmental information are combined into a single product and distributed on a map powered by ArcGIS. HABSOS strives to provide the most accurate picture of harmful algal bloom location and quantity by using the latest sample data available. The HABSOS website can be found at: https://habsos.noaa.gov/.

5 Response to Comments Related to NEPA

5.1 Environmental Impact Statement vs Environmental Assessment

Comment: Several commenters questioned the development of an EA to meet NEPA requirements rather than developing an Environmental Impact Statement (EIS). One commenter formally requested that EPA require an EIS for the proposed project.

Response: EPA disagrees that an EIS must be prepared for the proposed action. EPA exceeded the requirements of complying with the NEPA for the issuance of this permit since the EPA's NEPA implementing regulations were not automatically applicable to the proposed project. A NEPA review is required when EPA issues a NPDES permit for a "new source" under the CWA. The proposed facility does not meet the definition of "new source," which includes facilities subject to and commencing construction after the promulgation of national standards of performance under CWA § 306 (40 CFR § 122.2). The proposed facility will commence construction after promulgation of national standards of performance for CAAP facilities set forth at 40 CFR Part 451; however, those standards do not apply to facilities producing less than 100,000 pounds of aquatic animals annually (the proposed facility will produce approximately 80,000 pounds of aquatic animals per year). Thus, the obligation to conduct NEPA review for issuance of "new source" permits does not directly apply to the proposed permit (see 40 CFR § 6.101(a))

While the NEPA regulations are not automatically applicable to the proposed facility, and EPA was not required by law to prepare any NEPA document, EPA found that a NEPA analysis would be beneficial. In certain circumstances it is appropriate to perform a NEPA review based on facility-specific circumstances surrounding the issuance of the NPDES permit in accordance with EPA's *Policy for Voluntary Preparation of NEPA Documents*[27] and 40 CFR § 1501.3(b).[28] EPA recognizes that a NEPA evaluation enhances and facilitates an analysis of environmental impacts that are not well known because the proposed facility would be the first aquaculture facility to operate and discharge in federal waters of the eastern Gulf (as supported by 40 CFR § 6.205(a).[29] In addition, the EA allows for improved coordination and efficiencies with other federal agencies because some agencies may be required to prepare NEPA documentation for related permitting actions, and other federal agencies may possess subject matter expertise that will assist EPA in its review of potential impacts from the proposed facility.

EPA found no evidence in our NEPA analysis, or information submitted during the public comment period, that leads the agency to determine that the impacts of the proposed action are significant. Therefore, EPA's preparation of an EA is appropriate and in accordance with 40 CFR § 6.205(a).

5.2 Proposed action meets the level of significance that triggers preparation of EIS

Comment: Comments were submitted about how the approval of a NPDES permit could result in major environmental impacts and warrants preparation of an EIS. Other commenters stated that the intensity of the proposed action indicates that the action necessitates further review under an EIS. Specific significance criteria cited by commenters included definitions of "intensity" in 40 CFR § 1508.27(b)(4), 40 CFR § 1508.27(b)(5), 40 CFR

[27] 63 Federal Register 58045; October 29, 1998

[28] 40 CFR § 1501.3 - When to prepare an environmental assessment. (a) Agencies shall prepare an environmental assessment (§1508.9) when necessary under the procedures adopted by individual agencies to supplement these regulations as described in §1507.3. An assessment is not necessary if the agency has decided to prepare an environmental impact statement. (b) Agencies may prepare an environmental assessment on any action at any time in order to assist agency planning and decision making.

[29] 40 CFR § 6.205 Environmental assessments. (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. (See 40 CFR 1501.3.)

§ 1508.27(b)(6), 40 CFR § 1508.27(b)(7)), and 40 CFR § 1508.27(b)(9). These "intensity" factors range from issues relating to high controversy of the proposed action to impacts on threatened and endangered species.

Response: In response to comments relating to development of an EIS see our response in section 5.1. EPA considered findings outlined in the EA, Council on Environmental Quality (CEQ) significance triggers, and EPA significance triggers and concluded that the proposed action will not cause or contribute to significant impacts to the environment.

5.3 FONSI not adequately supported

Comment: Several commenters suggested that the EA is insufficient to support the agency's FONSI. They state that a FONSI following an EA is only appropriate when an agency's "hard look" at the potential consequences of its proposed action fails to reveal even the possibility of significant effects. A FONSI must be supported by a "convincing case for its finding."

Response: The FONSI has been revised and reflects the decision of the agency. The EA and supporting NPDES permitting documents provide a robust analysis of the potential impacts associated with the proposed action. This permitting process including the NEPA analysis has supported reasoned decision making. EPA considered the information and findings outlined in the EA, CEQ significance triggers, and EPA significance triggers and concluded that the proposed action will not cause or contribute to significant impacts to the environment.

5.4 Level of Supporting Documentation

Comment: Some commenters stated that the proposed permit and supporting documentation fail to fully acknowledge the breadth of socio-economic, public health, and environmental problems associated with marine finfish aquaculture.

Response: The EA and supporting NPDES permitting documents provide a robust analysis of the potential impacts associated with the proposed action. The permitting process including the NEPA analysis has supported reasoned decision making. The EA provides specific discussions on impacts to socio-economic, public health, and environmental impacts from the proposed action.

5.5 Draft EA does not look at foreseeable and cumulative Impacts

Comment: Commenters stated that NEPA demands that an agency consider impacts from connected, similar, and cumulative actions, and to take into account the significance of the proposed action at the local level, considering both short- and long-term effects, in assessing the scope and significance of the proposed action. Other commenters stated that there is no indication that Kampachi Farms sees this as a one-off experiment. To the contrary, Kampachi Farms has described this as "pioneering" and a "demonstration." Co-founder Neil Sims stated that he wants to "engage [local communities] in the discussions about how this industry might move forward. Other commenters stated that the applicant has not provided reasonable assurances that the cumulative impacts of the proposed project, including applicable past, present and foreseeable cumulative impacts, will not cause violations of any state or federal standard.

Response: The EPA understands that it is reasonably foreseeable that the marine aquaculture industry may expand in the Gulf, and therefore we considered expansion of the industry as a possibility in our cumulative impacts analysis. When evaluating cumulative impacts, EPA must consider past, present, and reasonably foreseeable future actions that can result in incremental impact of the proposed action (See 40 CFR § 1508.7). EPA determined that one reasonably foreseeable action that could have an incremental impact on the environment was other offshore aquaculture operations in the Gulf (in the vicinity of the project). The EPA determined that it was not reasonable to consider future projects that are speculative. Based on information EPA

had when drafting the EA, the owner/operators of the VE pilot-scale project had not committed to a location of a commercial operation and had not submitted a NPDES permit application for such an operation. Without a draft NPDES permit application for a commercial scale VE project, it would be unreasonable for EPA to consider impacts from such a facility. The EPA is confident that the pilot-scale VE project will not result in incremental impacts that could become significant. We base this determination on our impact analysis supporting the NPDES permitting process. In addition, the closest commercial scale aquaculture project that is not speculative is more than 300 miles from the VE-pilot scale project. Because of small scale of this project, it is not precedent setting or predicative of decision making for commercial scale aquaculture projects. In addition, the effects of the proposed action will be monitored through submission of periodic reports to EPA.

5.6 Harmful algal blooms

Comment: One commenter stated that the Draft EA mentions concerns regarding nutrient loading, but then fails to fully discuss recent issues off Florida including HABs (often called a "red tide"), coral die off and, more recently, the persistent accumulation of sargassum seaweed. In addition, a commenter stated it is unwise to add any increased nutrients to the waters off Florida and noted an increase in sargassum seaweed.

Response: EPA provides detailed responses relating to the proposed action and the impact on HABs in section 4 of this document. HAB related discussions in the EA have been updated to reflect any revisions to supporting documents such as the ODC Evaluation.

5.7 Air quality impacts

Comment: One commenter claimed that the Draft EA failed to discuss in detail air quality impacts from the tender vessel that is planned to be used at the project site for support operations. The commenter stated that the boat is of significant size and will have notable impacts associated with it, more than just "a small source of emissions." Concerns were also noted relating to the 18-month operation period and the 5-year permit cycle and how impacts were being accounted for over the full permit period.

Response: The tender vessel is an 80-foot ocean going Staysail Schooner, the SV Machias, a U.S. Coast Guard inspected and documented (Document No. 289053) sailing vessel with a commercial fishing endorsement, outfitted and approved for open ocean, blue water cruising that includes space for 24 passengers. The vessel will maintain position at the site via mooring to the array. All marine engines on the vessel meet IMO/EPA air quality standards. Hoteling emissions are expected while the vessel is moored at the project site. The vessel is equipped with two generators on-board (25KW and 15KW units). EPA has reviewed detailed information regarding the support vessel and confirmed that the emission associated with the tender vessel will not be a significant source of air emissions. Revisions have been made to Sections 4.2.3 and 5.4.3 of the DRAFT EA to reflect this additional tender vessel information. EPA is limiting the permitted discharge from the facility to one production cycle, therefore there is no need to account for air quality impacts for a full 5-year permit cycle (see revised NPDES permit for discharge duration information).

5.8 Concerns about impacts to ESA-listed species

Comment: Several commenters expressed concerns about the proposed project impacting ESA-listed species such as marine mammals, seabirds, sea turtles, whales, and others.

Response: EPA and USACE prepared a BE and determined that the issuance of the NPDES permit for the proposed project is not likely to adversely affect (NLAA) any listed species or critical habitat as defined under ESA within the action area considered. The EPA concluded the required consultations with the USFWS on August 27, 2019 and NMFS on September 30, 2019. See Sections 4.3, 5.5, and 6.5 of the RTC for a more detailed discussion on potential

impacts to ESA-listed listed species and consultations. Furthermore, the RHA Section 10 permit issued by USACE will also address requirements under ESA and final permit authorizations will include ESA conditions to ensure adequate protection to ESA-listed species.

5.9 Concerns about non-listed species

Comment: Several commenters expressed concerns about the proposed project impacting non-listed species such as marine mammals, seabirds, sea turtles, whales, and others.

Response: The EA provides a robust discussion of potential impacts to non-listed species in the biological resources sections of the document (sections 4.3 and 5.5 of the EA). EPA has concluded that there will be no significant impacts from the proposed action, including to biological resources.

5.10 Economic and community impacts

Comment: Many commenters expressed concerns that the project could have a negative economic impact. Several commenters expressed concern that the project could have an impact on tourism by causing additional instances of red tide, impact recreational fishing, or impact the beaches in general. One commenter was concerned that the currents could carry the contamination and waste to the beach which could add to taxpayer burden and harm the local economies.

A few commenters were concerned that if the facility was located on or nearby popular fishing grounds then those fishing grounds could be lost or that these areas could become closed off from other commercial purposes including fishing, tourism, recreation, shipping, and navigation. Some commenters mentioned the fact that members of the wild-capture fishing industry have collectively voiced concerns of displacement due to an expanded marine finfish aquaculture industry, stating that "this emerging industrial practice is incompatible with the sustainable commercial fishing practices embraced by our nation for generations and contravenes our vision for environmentally sound management of our oceans." Some commenters identified themselves as local business owners whose livelihoods depended on the maintenance of a healthy and pristine beach environment that would be jeopardized by permitting additional pollution in the Gulf.

Response: EPA finds that this is a relatively small, short-term project, for which the location was determined through a thorough spatial analysis process that considered interactions with natural resources, infrastructure, navigation, commercial and recreational fisheries, and other marine activities (see Section 1.6 of the EA). The site selection process coupled with the NEPA evaluation indicates that these industries and other users are unlikely to be adversely affected. For comments relating to red tides and currents, see Section 4 of the RTC.

5.11 Impacts on commercial fishing industry

Comment: Some commenters are concerned about the potential impact to local fisheries, food producers, and other marine-reliant and support industries. Many comments focused on the fact that the farmed fish could create competition for limited marine space and could drive down fishing prices. Others were concerned that marine finfish aquaculture could push out responsible, smaller-scale seafood producers and other marine-related and support businesses. One commenter (a commercial fishing organization) stated that it and its members will be substantially and adversely affected by the conditions and activity which will result if this permit is issued. One commenter discussed Individual Fishing Quotas (IFQ) and stated that they could become less valuable when fish under the IFQ system were farmed.

Response: The permit applicant worked with the National Marine Fisheries Service and local commercial fisheries groups to site the project in an area that would not conflict with commercial fishing activity occurring offshore

Florida. EPA does not believe that the proposed project will negatively impact the commercial fishing industry. An evaluation of impacts on commercial fishing is provided in the EA in section 4.4.2. In general, almaco jack is not a targeted commercial fish. It is only harvested incidentally. Consequently, production of farmed almaco jack from the proposed VE project is not expected to have an adverse economic impact on commercial fishing businesses that land almaco jack. EPA has no evidence that the proposed VE project would have a negative impact on any established IFQs. Additionally, the proposed site was selected to minimize potential conflicts with shrimping and other commercial fishing activities in the area. Also, see related topics within Sections 8, 9, and 10 of this RTC.

5.12 EPA should thoroughly analyze the impacts of the proposed action

Comment: Comments were received requesting that EPA take a closer look at the potential impacts of an action prior to making an irreversible and irretrievable commitment of resources. The commenters noted that NEPA requires EPA to adequately evaluate all potential environmental impacts of proposed actions and that EPA must identify and disclose to the public all foreseeable impacts of the proposed action (including direct, indirect, and cumulative impacts). Commenters requested EPA perform additional NEPA analysis on the following: (1) the potential for the proposed project to contribute to an ongoing red tide crisis on the Southwest coast of Florida; (2) the amount and type of pharmaceuticals; and (3) the effects of increased pollution in the Gulf on marine life and humans.

Response: EPA considers the irreversible and irretrievable commitments of resources in section 6.5 of the EA. The EA considers the timeframe of the permit, the red tide issue, pharmaceuticals, and the effects on marine life and humans. Each of these issues are discussed in more detail (e.g., red tides are discussed in section 4, pharmaceuticals in 3.6 and 5.17 ,and marine life impact issues are discussed in section 6 of RTC), and additional supporting information is provided in the NPDES permit fact sheet and ODC Evaluation document.

5.13 Climate change and extreme weather events

Comment: Commenters expressed concern about the potential impacts from climate change. Commenters noted that the Draft EA admits to the potential for extreme weather events. Commenters also noted that the potential will likely grow as climate change continues to impact the Gulf. Comments also noted that EPA relies on mitigation measures in the NPDES to completely discount any potential for harm and that EPA has not made any actual considerations as to how to prepare for the inevitable powerful hurricane in the Gulf.

Response: The EA considered the potential impacts of the proposed project on climate and how extreme weather and hurricanes could impact the project (see EA section 5.4.6). As correctly referenced by the commenter, the NPDES permit requires a facility-specific plan that minimizes the potential for the facility to be damaged during a storm-event and cause significant impact to the environment. Specifically, the permittee will be required to create facility specific BMPs, and a FDPC plan, to ensure the facility is being operated and maintained to mitigate environmental impacts during any disaster and prevent the release of commercial aquatic animals. Requiring mitigation in the permit is an appropriate way to lower the level of significance of the action due to extreme weather events. EPA is acting on a NPDES permit application, and including appropriate permit conditions, in accordance with applicable CWA requirements and implementing regulations. The USACE, a cooperating agency on the draft EA, may also require RHA Section 10 permit conditions that may mitigate climate change impacts from the proposed operation.

5.14 Consider recirculating aquaculture systems

Comment: Several commenters suggested that EPA should consider recirculating aquaculture systems (RAS) as alternatives within the EA. Commenters expressed support for RAS because they are often self-contained, mostly closed-loop, and land-based. RAS can be combined with growing plants, known as aquaponics, which absorb the nutrients to grow, thereby cleaning the water for the fish to reuse. Comments were also received about RAS

growing a variety of fish – in particular those that do not compete with what local fisherman catch, and they avoid space conflicts in the ocean.

Response: As a matter of compliance with NEPA, EPA does not consider onshore aquaculture to be within the reasonable range of alternatives that need to be considered in the EA. The EA discusses an extensive screening process that was undertaken by the applicant to evaluate several alternative sites for this particular project. One of the purposes of the proposed action is to better understand the impact of the proposed project on the offshore environment. Considering an alternative looking at an onshore aquaculture operation would not meet the stated purpose. Also see related topics within Sections 8, 9, and 10 of this RTC.

5.15 The draft EA uses NOAA's documents that are no longer applicable

Comment: A recent case out of the U.S. District Court for the Eastern District of Louisiana has held that Congress did not grant NMFS the authority to extend their oversight to aquaculture. The court in *Gulf Fisherman's Association* found that NMFS may not stretch the definition of "harvesting," one of the statutory definitions of fishing, to include aquaculture. Despite this ruling being handed down in late 2016, the Draft EA incorporates NMFS' documents that were created as part of the NMFS permit action relating to aquaculture: the 2008 PEIS for proposed aquaculture regulations in the Gulf EEZ, and NMFS' 2016 final rule for regulating offshore aquaculture in the Gulf.

Response: EPA is acting on a NPDES permit application in accordance with applicable CWA requirements. EPA does not review or oversee the actions of NMFS/NOAA in implementing their responsibilities under other laws. Whether or not NOAA/NMFS has the authority to regulate aquaculture, EPA is the NPDES permitting authority to issue NPDES permits in federal waters for facilities that discharge pollutants from a point source into a WOTUS. The information and analyses in the NMFS' EIS referenced by EPA was not invalidated by that ruling, and it is appropriate to incorporate by reference as long as it is still the best scientific information available.

5.16 Impacts to Cortez Village

Comment: Commenters voiced concern about ensuring that the local commercial and recreational fishing community was able to consider the proposed permit. Of particular concern is the historic Cortez Village and its commercial fishing community. The commenters stated that Cortez Village community leaders were either unaware or have not had adequate opportunity to learn enough to provide comments.

Response: On December 12, 2019, EPA released a notice of public hearing and extended the public comment period regarding the proposed issuance of a NPDES permit and supporting documents. On January 18, 2020, EPA published a public notice as a reminder of the public hearing. A public hearing was held at the Mote Marine Laboratory in close proximity of the Cortez Village on January 28, 2020. The second public comment period ended on February 4, 2020. The public comment period lasted for 158 days. The public was able to submit comments orally or in writing at the public hearing or by submitting written comments to EPA. EPA believes that ample opportunity has been provided for the public to weigh in on the proposed action.

5.17 Antibiotic use documented in the EA

Comment: Comments were received about EPA's dispersion analysis and discounting the possibility of any adverse effect from the use of pharmaceuticals. The Draft EA states that Ocean Era (formerly Kampachi Farms) has indicated that pharmaceuticals "will likely not be used." Commenters say that not using antibiotics represents an ideal situation for a first-of-its-kind facility and ignores a staple of aquaculture: antibiotics. The Draft EA indicates that Ocean Era will have free reign to dose the water with as much therapeutics, antibiotics, drugs, and other treatments as they see fit. EPA only requires that these be reported after the fact. EPA's subsequent approval or disapproval will do nothing to ameliorate potential harm from streams of antibiotics reaching Florida's west coast.

Commenters also remarked that EPA states no suggested limit, or even guidelines, as to what kind of loading rates Ocean Era should ideally achieve when pharmaceuticals become necessary. Commenters stated that the Draft EA does fully disclose what kind of therapeutics, antibiotics, drugs, or other treatment should be used or avoided. Another commenter expressed concern that the Draft EA looks at studies concerning only one antibiotic, Oxytetracycline (OTC), and buries that in the appendices, not the Draft EA itself.

Response: The applicant has indicated that they do not intend on using antibiotics. However, in the event that they are used, EPA has conditions in the NPDES permit that address the use of antibiotics. In accordance with the NPDES permit, all drugs, pesticides and other chemicals must be applied in accordance with label directions. The permittee must maintain records of all drug, pesticide, and other chemical applications including date and time of application and the quantity of the drug or chemical used. Additional information on antibiotic use can be found in Section 3.6. It is appropriate for EPA to summarize findings and information in the body of the EA and reference studies and or include relevant information in the appendices of the EA. EPA determined that the use of antibiotics would not cause a significant impact based on conditions outlined in the NPDES permit, the size of the facility, the distance offshore, and other factors.

5.18 Use of old references

Comment: Commenters expressed concern that EPA cites studies from more than thirty years ago, suggesting that the Draft EA relies on stale data.

Response: EPA is required to ensure the professional integrity, including scientific integrity, of the discussions and analyses in NEPA documents (see 40 CFR § 1502.24). As long as documents relied on and cited in the EA meet these criteria, regardless of when the study was published, the EPA has met this criterion. The EA incorporates the best scientific information available and meets the criteria outlined in 40 CFR § 1502.24.

5.19 Failure to evaluate certain pollutants

Comment: Commenters stated that EPA failed to sufficiently analyze copper, escaped fish, pharmaceuticals, and pathogens/parasites as potential pollutants in violation of the CWA's anti-degradation policy. Commenters state that the EA repeats the industry assertion that "dilution is the solution to pollution," with no meaningful basis for assuming this would be so for this specific project. Commenters further state that the project will be about 500-m from hard habitat – and that water flows, and pollution and debris move, thus the dismissal of concerns and the failure to analyze these foreseeable pollution risks is also arbitrary and capricious, in violation of NEPA.

Response: The impacts of copper, escaped fish, pharmaceuticals, and pathogens/parasites have been fully considered in the permitting/NEPA process. Specific responses to concerns raised about these subjects are in section 3 of the RTC. The NPDES permit contains a prohibition that states "The facility and anchoring system shall be placed at least 500 meters from any hardbottom habitat on the seafloor."

5.20 EA analysis of ocean circulation impacts on red tide

Comment: Some commenters were concerned that ocean currents would cause nutrients, pharmaceuticals, and other waste to be dispersed on inshore areas and areas most affected by *K. brevis* in the last two years. Concerns were also raised relating to the analysis in the EA in relation to EPA's determination of how the proposed project will impact water quality. Commenters suggested that these currents would exacerbate the harmful algal blooms experienced recently along the west coast of Florida.

Response: The physical transport of nutrients and the impact on harmful algal blooms is discussed in section 4 of this RTC.

5.21 Comments regarding the facility acting as a fish aggregating device

Comment: Several commenters remarked on the possibility of the facility acting as a fish aggregating device (FAD). One commenter felt this could have a positive impact because in the open ocean, species seek shade, shelter, or something to attach to or hang around. The commenter stated that the facility had the possibility to act as a nursery. Other commenters were concerned that the facility could act like a FAD and have a negative impact. A few commenters stated that they were concerned that there would be an increased capture rate of wild fish, including mammals, that would be attracted to the food source and lights of the cage. Another commenter was concerned that the cages would act as FADS and could increase the catch rate and harvest rate of species that are already overfished (e.g. cobia, amberjack). Other commenters were concerned that the cages would attract various species (e.g. tarpon) and could impede or disrupt their swimming patterns or migration.

Response: Note that the question whether the proposed facility acts or does not act as a FAD is outside the scope of the NPDES and USACE's permitting actions. In addition, the USACE Section 10 permit does not authorize the use of the proposed mooring system as a FAD and the installation will be limited to an 18-month maximum deployment cycle.

Interactions with marine mammals, birds, and other wildlife are considered and discussed in the EA. Based on literature reviewed relating to aquaculture operations and FADs, the majority of the research has focused on listed species and marine mammals. It is reasonable to assume that native fish will be attracted to the pen system, however, EPA has received no evidence though our analysis, consultations, and public input that leads us to conclude that the VE project will have a significant impact on native fish.

5.22 Almaco Jack is not consumed in the U.S.

Comment: Several commenters questioned why almaco jacks are being raised because the commenters believe that all species of jacks are not fish being eaten by US citizens (the vast majority are exported to foreign countries). One commenter stated that the amount of fish produced during this project (nearly 75,000 pounds) is more than the entire annual landings of almaco jack in the Gulf.

Response: In a NPDES permitting action, EPA's review is focused on the pollutant discharge associated with the facility. EPA does not regulate the type of fish selected by the applicant/permittee for raising in the aquaculture facility. A comparison between the pounds of fish that will be produced by the facility with the amount of wild fish of the same species annually caught in the Gulf is not relevant to an analysis of the permit application and determination of appropriate permit conditions. EPA's review is focused on the nature of the proposed discharge and its potential impact on the aquatic environment. These comments are outside the scope of the NPDES permitting action.

However, the EA provides information on the current landings of almaco jack and the marketability of the fish in the US (see chapter 4). Based on supplemental information provided by the applicant, fish harvested from the VE project will be sold to multiple state and Federally licensed dealers in an effort to test the marketability of almaco jack.

6 Response to Comments Related to Consultation and Coordination with Federal and State Agencies

6.1 EPA cannot approve the proposed permit without a completed ESA consultation with NMFS

Comment: Some commenters were concerned that EPA may not issue the NPDES permit until EPA and NMFS complete consultation pursuant to ESA § 7(d), and NMFS concurs with EPA's findings in the BE. The comment specifically stated that:

> "Section 7(d) of the ESA provides that once a federal agency initiates consultation on an action under the ESA, the agency, as well as any applicant for a federal permit, "shall not make any irreversible or irretrievable commitment of resources with respect to the agency action which has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures which would not violate subsection (a)(2) of this section." Since the purpose of Section 7(d) is to maintain the environmental status quo pending the completion of consultation, Section 7(d) prohibitions remain in effect while NMFS determines whether it will concur with EPA's findings. These prohibitions must also remain in effect throughout the consultation period and until the federal agency has satisfied its duty under Section 7(a)(2) to ensure that the action will not result in jeopardy to listed species or adverse modification of critical habitat. Hence, EPA may not approve the proposed permit until it has complied with the statutory mandates of the ESA."

Response: In accordance with the ESA § 7, interagency consultation and coordination with the NMFS and the U.S. Fish and Wildlife Service (USFWS) is required 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 § 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 § 7(a)(4)). Additionally, the implementing regulations for the CWA related to ESA require EPA to ensure, in 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" (40 CFR § 122.49(c)).

A BE was prepared by the EPA and the 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 § 7(a)(2) and ESA § 7(a)(4). The EPA and the USACE reviewed the proposed activity and determined that a BE was appropriate. The EPA and USACE broadly concluded that the proposed project's potential routes of effects (disturbance, entanglement, vessel strike, water quality impacts) 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 USFWS and initiated consultation with USFWS. EPA and USACE determined that the discharges and structures authorized by the NPDES or RHA Section 10 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, USFWS provided notification that the USFWS does 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, or critical habitat under the jurisdiction of the NMFS, EPA and USACE determined that the proposed project "may affect, but not likely to adversely affect"

certain fish, invertebrates, marine mammals, and reptiles within the proposed action area. On September 30, 2019, NMFS concluded "that the proposed action is not likely to adversely affect listed species under NMFS's purview."

Completion of the informal consultation with the USFWS and NMFS satisfies EPA's obligations under ESA § 7(a)(2). More information about the ESA consultation including the draft BE and consultation coordination documents are provided in the draft EA.

6.2 The BE is inadequate

Comment: Several commenters stated that the BE is arbitrary and capricious. One commenter stated that EPA failed to consider the effects on endangered species from releasing fish feed into the water, nutrient pollution, potential disturbances caused by light pollution and noise, vessel strikes from increased traffic, genetic impacts to wild fish from escaped cultured fish, and the potential spread of disease from cultured to wild fish. Other comments about the inadequacy of the BE relate to relying on reporting from previous Ocean Era projects that were not located in the Gulf to conclude that this project will not adversely impact threatened or endangered species. A few commenters stated they felt as though the cage and mooring system would pose a threat to migratory birds and marine mammals, such as the endangered Bryde's whale. Other comments suggested that the BE includes conflicting statements about how far out the water quality effects are expected to occur and fails to include any scientific information or analysis to support its finding that this will not adversely impact threatened and endangered species. Comments were also received that disagreed with EPA's conclusions that Velella Epsilon's potential threats are "highly unlikely to occur or extremely minor in severity" and that the proposed project is not likely to adversely affect listed species and critical habitat or designated critical habitat.

Response: Supplementary information regarding the ESA consultations conducted with NMFS and USFWS can be found in Sections 6.1 and 6.3, as well as certain sections of the EA that provides more information. A BE was prepared by the EPA and the USACE to jointly consider the potential direct, indirect, and cumulative effects that the proposed actions may have on ESA-listed species, proposed species, and designated and proposed critical habitat. The BE evaluated four general potential impacts (disturbance, entanglement, vessel strike, and water quality) to 24 threatened or endangered species and any applicable critical habitat that could be impacted and within the proposed action area. The following explanations specifically address the commenters concerns:

- **Disturbance:** The potential impacts from noise and physical disturbances were evaluated for the fish, coral, whales, and sea turtle species considered within the BE. For ESA-listed fish, the permitting agencies found that disturbance is not expected because the facility is small and the deployment period is short. Impacts to coral from physical disturbance was considered minimal and extremely unlikely due to habitat preferences and the cage mooring system being required to be located away from hardbottom habitat. EPA and USACE determined that limited amount of noise from the proposed project would have negligible effect on marine mammals and reptiles. NMFS determined in the consultation response that "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" and "no effect" on whales and coral.

- **Entanglement:** The possible impacts from entanglement were considered within the BE for certain fish, marine mammals (including Bryde's whale), and reptiles. Due to the proposed project operations and location of habitat for the species considered, the action agencies expect that the effects of entanglement interaction are anticipated to be highly unlikely. In addition, the applicant worked with the NMFS to create a protected species monitoring plan (PSMP) to protect all marine mammals, reptiles, sea birds, and other protected species.

- **Vessel Strikes:** EPA considered vessel strikes within the BE for marine mammals, reptiles, and critical habitat. The probability that collisions between the marine mammals considered in the BE with the vessel associated with the proposed project was determined to be low given there is only one vessel and it will be following NMFS guidelines on how to reduce vessel strikes with marine mammals. Vessel strike impacts are discountable.

- **Water Quality:** Water quality impacts, including fish feed and nutrient pollution, were evaluated as a potential impact within the BE (as well as in other supporting documents). For all marine species and critical habitat evaluated, EPA found that the potential effect was discountable and insignificant for a variety of reasons applicable to each species (see BE for further information). EPA made a "may affect, but not likely to adversely affect" (NLAA) determination for all aquatic species considered within the BE for the potential impacts from water quality. The NMFS concluded that "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."

- **Migratory Birds:** EPA evaluated the potential impacts from the proposed facility to two migratory birds. While the two species of birds considered are migratory shorebirds, they are not expected to interact with the proposed project due to the distance between the proposed project from shore (approximately 45 miles) to their onshore habitat preferences. Both birds primarily inhabit coastal sandy beaches and mudflats of the Gulf; migration and wintering habitat are in intertidal marine habitats such as coastal inlets, estuaries, and bays. Additionally, the normal operating condition of the cage is expected to be below the water surface which will further decrease the likelihood of any bird interaction with the proposed project. The permitting agencies determined that there would be "no effect" to the two species of birds considered.

- **Light:** Artificial light impacts were not evaluated in the BE. Light disturbance is not expected to be a relevant environmental stressor because the facility will not be using lights during the night for surveillance or video purposes. Additionally, the navigational light from the mooring vessel or buoys are not anticipated to be significant or provide increased light exposures in comparison to other industries in the Gulf.

- **Genetic Impacts:** Genetic impacts to wild fish from fish escaping at the proposed operation were not evaluated for several reasons. First, the mixing of genetics between cultured fish and wild fish is not a concern for this proposed operation because the fish to be cultured are the first generation of wild stock caught in the Gulf. Any fish that escape from the proposed operation would be genetically the same to any wild almaco jack within the Gulf. Second, almaco jack are not considered endangered or threatened by the ESA; therefore, an evaluation of genetic impacts to almaco jack are not required under ESA § 7. Finally, the permittee will be required to create BMPs to ensure the facility is being properly operated and maintained at all times, and implement a FDPC plan to mitigate environmental impacts during any disaster and prevent the release of aquatic animals.

- **Parasites and Pathogens:** The transfer of fish parasites and pathogens to wild ESA-listed species was not specifically considered in the BE; however, it is considered an indirect discharge when considering impacts from water quality. The BE is limited in scope and only considers certain species that may be within the proposed action area. The NMFS determined that there would be "no effect" to coral and whales because they are highly unlikely to be in the action area due to their habitat preferences. Even though sea turtles could come into the action area, the transmission of fish related pathogens to reptiles is unlikely. Only three fish (smalltooth sawfish, giant manta ray, and oceanic white tip) of the four fish considered within the BE are likely to be within the action area (Nassau grouper aren't found in the action area for there to be any potential routes of effects).

Pathogen transfer is considered in the NPDES permit through the following conditions:

1) The permittee will be required to create and implement health management strategies for marine aquaculture organisms in the BMP plan. Effective disease prevention programs may include routine health exams and inspections, accurate record-keeping by the permittee, biosecurity measures, and preventative actions like vaccines.
2) The permittee will be required to certify that the fish were examined prior to going offshore to ensure they are healthy, so any pathogens that affect them would come from the surrounding environment.

Also see relevant information in Section 3.17 regarding pathogen transfer, certification requirements, and BMP implementation to control disease transmission.

- **Previous Information:** EPA does not believe it is inconsistent to use information from previous marine aquaculture projects by Ocean Era. There is a limited amount of information regarding interactions of certain species with marine aquaculture operations within federal waters and within the open ocean (not coastal environments). The information used by EPA from previous projects was also evaluated by the NMFS during the permitting and consultation process.

The NMFS evaluated the BE prepared by EPA and USACE, and determined that the BE adequately considered the potential impacts. NMFS concluded that "all potential project effects to listed species were found to be discountable, insignificant, or beneficial." NMFS determined that there would be no effect to all ESA-listed marine mammals and coral. NMFS also determined that there would be no effect to the Nassau grouper and Hawksbill sea turtle. The permitting agencies believe that the BE was an appropriate assessment of the proposed project's potential impacts. Completion of the informal consultation with the USFWS and NMFS satisfies EPA's obligations under ESA § 7(a)(2).

6.3 ESA requires formal consultation and preparation of a biological opinion

Comment: Commenters expressed concern that a formal consultation and biological opinion (bi-op) with an incidental take statement was required because the activities are likely to result in incidental takes of members of listed species. Accordingly, it is unlawful for anyone who undertakes such activities, or who authorizes such activities, and are subject to criminal and civil federal enforcement actions, as well as civil actions by citizens for declaratory and injunctive relief.

Response: Please refer to the supplementary ESA-related information provided in Section 6.1 and 6.2. Formal consultation is not required in accordance with the ESA implementing regulations (50 CFR Part 402) and the Memorandum of Agreement (MOA) between the EPA, NMFS, and USFWS.[30]

As provided by 50 CFR § 402.14(b)(1), EPA was not required to initiate formal consultation, and EPA conducted informal consultation pursuant to 50 CFR § 402.13.[31] The informal consultation procedures state that "with the written concurrence of the Service, that the action is not likely to adversely affect listed species or critical habitat,

[30] U.S. Environmental Protection Agency. 2001. Memorandum of Agreement between the Environmental Protection Agency, Fish and Wildlife Service, and National Marine Fisheries Service Regarding Enhanced Coordination under the Clean Water Act and Endangered Species Act. EPA-823-F01-002. U.S. Environmental Protection Agency, Office of Water, Washington, DC.
< http://www.nmfs.noaa.gov/pr/pdfs/fr/fr66-11202.pdf >.

[31] 50 CFR § 402.14(b)(1) states that "A Federal agency need not initiate formal consultation if, as a result of the preparation of a biological assessment under § 402.12 or as a result of informal consultation with the Service under § 402.13, the Federal agency determines, with the written concurrence of the Director, that the proposed action is not likely to adversely affect any listed species or critical habitat."

the consultation process is terminated, and no further action is necessary" (50 CFR § 402.13(c)).[32] Therefore, a biological opinion and incidental take statement are not required.

Additionally, as directed in the MOA, "A biological evaluation can be used for decision-making prior to and throughout section 7 consultation and for a possible conference on proposed species or critical habitat. The evaluation can be used to make a "may effect" or "no effect" determination, or to support a judgment that the proposed action is or is not likely to adversely affect listed species or their critical habitat." EPA determined the proposed action would NLAA any listed species or critical habitat that were considered and within the proposed action area. Pursuant to the MOA, EPA is allowed to initiate either informal or formal consultation if EPA determines that the permitted action may affect federally-listed species or critical habitat (MOA Section IX.B.3).

6.4 BE failed to analyze the indirect or cumulative impact to ESA-listed species

Comment: A commenter was concerned that EPA did not include in the ESA consultation "any process regarding the indirect or cumulative impacts to listed species that will occur should this project fulfill its intended purpose and incentivize the expansion of commercial aquaculture in the Gulf. See 50 CFR § 402.02 (defining "indirect effect" as one that is (1) "caused by the proposed action," (2) occurs later in time than the action, and (3) is reasonably certain to occur"); id. § 402.14(g) (requiring a Bi-Op to evaluate the "effects of the action," which include the action's "indirect effects"); see also San Luis & Delta-Mendota Water Auth. v. Locke, 776 F.3d 971, 1009 (9th Cir. 2014)."

Response: Sections 6.1 – 6.3 provide more information regarding the ESA consultations performed with NMFS and USFWS. Within the BE and the EA, the permitting agencies jointly evaluated the potential direct, indirect, and cumulative effects that the proposed actions may have on ESA-listed and proposed species as well as designated and proposed critical habitat pursuant to ESA Section 7(a)(2) and ESA Section 7(a)(4).

EPA understands that the Ocean Era demonstration project may encourage other commercial scale projects in the future; however, each applicant will have to go through the same extensive pre-application and permitting process. Before a decision is made, applicants will be required to provide a complete application and any other data needed to support the application and permitting process. Additionally, prior to receiving a permit, future projects will undergo consultations and/or evaluations in order to comply with other statutory requirements under the CZMA, ESA, EFH, FWCA, NHPA, and NEPA. The small scale of the Ocean Era project limits the precedential impact of a decision to authorize this project on future, commercial scale projects which would have greater impacts that would have to be evaluated. There is no guarantee that these projects will be permitted by EPA or allowed by other federal agencies with permitting or authorization responsibilities.

6.5 Impacts to EFH and federally managed fisheries

Comment: The proposed project will have a substantial adverse impact on Essential Fish Habitat and Federally managed fisheries of the Gulf. The project will impact the Florida manatee, loggerhead and green sea turtle migration and will impact Essential Fish Habitat including the penaeid shrimp, red drum, snapper, reef fish, and migratory pelagic fish.

[32] 50 CFR § 402.13(c): If during informal consultation it is determined by the Federal agency, with the written concurrence of the Service, that the action is not likely to adversely affect listed species or critical habitat, the consultation process is terminated, and no further action is necessary. (1) A written request for concurrence with a Federal agency's not likely to adversely affect determination shall include information similar to the types of information described for formal consultation at § 402.14(c)(1) sufficient for the Service to determine if it concurs. (2) Upon receipt of a written request consistent with paragraph (c)(1) of this section, the Service shall provide written concurrence or non-concurrence with the Federal agency's determination within 60 days. The 60-day timeframe may be extended upon mutual consent of the Service, the Federal agency, and the applicant (if involved), but shall not exceed 120 days total from the date of receipt of the Federal agency's written request consistent with paragraph (c)(1) of this section.

Response: EFH is defined as the water and substrate necessary for fish spawning, breeding, feeding, and growth to maturity. The EFH provisions of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) sets forth a mandate to identify and protect important marine habitat. Pursuant to the MSA § 305(b), federal agencies are required to consult with NMFS on any action that may result in adverse effects to EFH or habitats of particular concern. Additionally, the implementing regulations for the CWA related to the ESA require EPA to ensure, in consultation with NMFS, 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" (40 CFR § 122.49(c)). Federal action agencies which fund, permit, or carry out 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 any NMFS recommendations.

An EFH assessment was prepared by EPA and USACE. 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. Within the EFH assessment, EPA evaluated impacts from the proposed project to shrimp, red drum, snapper, reef fish, and coastal migratory pelagic fish.

Based on the EFH assessment, EPA will require mitigation measures to be incorporated into 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 hard bottom habitat.

On March 8, 2019, EPA provided the EFH assessment to NMFS and initiated abbreviated consultation with the NMFS. On March 12, 2019, NMFS concurred with the EFH determination made by EPA and USACE. After completion and concurrence of the assessment, minor changes were made to the EFH document, though the updates did not change the findings of the 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 EPA-required 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.

Completion of the abbreviated consultation with NMFS satisfies EPA's obligations under MSA § 305(b)(2). More information about the EFH consultation including the assessment and consultation coordination documents are provided in the EA.

6.6 Assurances for compliance with Coastal Zone Management Program

Comment: The applicant has not provided reasonable assurances that the proposed project is consistent with Florida's Coastal Zone Management Program.

Response: Under the Coastal Zone Management Act (CZMA), federal agency activities that have coastal effects must be consistent to the maximum extent practicable with federally approved enforceable policies of a state's coastal management program (CMP). The CZMA's implementing regulations in 15 CFR Part 930 require that any federally permitted activity affecting the coastal zone of a state that has an approved CMP be reviewed by that state for consistency with the state's program. 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 determination (40 CFR § 122.49(d)).

On January 3, 2019, the permit applicant submitted a CZMA consistency determination to the Florida State Clearinghouse with the Florida Department of Environmental Protection. 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 (FWC) found that the applicant's coastal consistency determination was consistent with Florida's CMP. Therefore, EPA has determined that the action covered by this permit is consistent with the CZMA and Florida's CMP.

6.7 NOAA/NMFS conflict of interest

Comment: Comments were raised about conflict of interest existing because NMFS/NOAA have been pushing for ocean aquaculture generally and this pilot project specifically. Several comments were received that discussed the involvement of NOAA on this project. They state that NOAA has declared itself the lead federal agency for policy formation and regulation for domestic marine fin fish aquaculture while having the explicit goal of promoting and expanding marine finfish aquaculture in the United States which results in a conflict-of-interest. The commenters also questioned why NOAA continued to work on aquaculture despite the opinion out of the Eastern District of Louisiana that stated that NOAA did not have authority to regulate marine finfish aquaculture under the MSA. Other commenters have concerns about the fact that NOAA was significantly involved in this permit process (e.g., gathering and providing buoy data, conducting preliminary siting analysis and environmental quantitative modeling and joining in the Draft EA document). Additionally, certain commenters stated that EPA and USACE are collaborating with NOAA without exercising independent due diligence. Questions were received about how NMFS/NOAA can provide support to the aquaculture industry, and EPA, while also protecting the conservation and management of ocean resources, fish, and fishing.

Response: EPA does not review or oversee the actions of NOAA/NMFS in implementing their responsibilities under other laws. EPA is acting on a NPDES permit application in accordance with applicable CWA requirements. As required by the NPDES implementing regulations (40 CFR § 122.49), EPA is required to either coordinate or consult with the NOAA/NMFS for a variety of federal laws applicable to the proposed project including: CZMA, EFH, ESA, FWCA, MMPA, and NEPA.

The NMFS, as well as other federal agencies, participated as cooperating agencies for the development of the EA. The NEPA regulations allow a cooperating agency "that has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposed project" (40 CFR § 1508.5).[33] Cooperating agencies have a high degree of authority, responsibility, and involvement in the environmental review process. A distinctive feature of a cooperating agency is that the NEPA regulations (40 CFR § 1501.6) allow a cooperating agency to "assume on request of the lead agency responsibility for developing information and preparing environmental analyses including portions of the environmental impact statement concerning which the cooperating agency has special expertise." The NOAA/NMFS and NOS provided scientific expertise and support in the areas of site selection, environmental modeling, fisheries science, ESA-listed species and critical habitat, marine mammal protection, and essential fish habitat.

Additionally, EPA and USACE worked closely with NOAA/NMFS and NOS while coordinating the interagency review process in accordance with the interagency *Memorandum of Understanding (MOU) for Permitting Offshore*

[33] 40 CFR § 1508.5: Cooperating agency means any Federal agency other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) for legislation or other major Federal action significantly affecting the quality of the human environment. The selection and responsibilities of a cooperating agency are described in § 1501.6. A State or local agency of similar qualifications or, when the effects are on a reservation, an Indian Tribe, may by agreement with the lead agency become a cooperating agency.

Aquaculture Activities in Federal Waters of the Gulf.[34] Given the extent of knowledge that NOAA/NMFS has in the coastal and open ocean environment, and its role in overseeing multiple federal laws governing fisheries resources, EPA determined that it is appropriate to engage with and use NOAA's expertise.

6.8 Unexpected discovery protocol

Comment: Comments from the Florida SHPO 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. The Florida SHPO concluded that the proposed project will have no effect on historic properties; however, unexpected findings may occur during ground-disturbing activities. The Florida SHPO recommended that the permit, if issued, should include a "Unexpected Discovery Protocol" provision.[35]

Response: The unexpected discovery protocol would address the anchoring and installation of the facility, which is more appropriately addressed under the USACE Section 10 permit than the NPDES permit. The appropriate permitting agency with jurisdictional oversight for an unexpected discovery protocol permit provision is the USACE. The USACE will include the "unexpected discovery protocol" provision within the Section 10 permit.

6.9 Monitoring requirements for the Exempt Fishing Permit

Comment: Commenters asked that the Exempt Fishing Permit (EFP) should be revised to reflect environmental monitoring on the benthos and more detailed information of feed and use of antibiotics, as well as monitoring the effects of the facility on the surrounding environment should any type of mitigation to the benthos be necessary.

Response: EPA is issuing a NPDES permit, not an EFP. The NMFS administers the EFPs and an EFP is not required for this project. Monitoring conditions considered under another agency's authorization responsibilities are not considered within the scope of EPA's action. Also see responses relating to monitoring within Section 3 and NMFS.

6.10 Site assessment process regarding recreational fisheries, fish migrations, and spawning

Comment: Comments were received that questioned the site assessment process due to the permit application not including information on recreational fisheries. The criteria used to determine sites for offshore aquaculture don't adequately address the impacts of these operations on fish migrations and spawning.

Response: Please see the supporting information regarding this topic in Section 3 and Section 6.4. The site assessment process considered impacts to EFH which include spawning and nursery habitat interactions. The location of the project is sited away from hard bottom, artificial reefs, and areas known to support recreational fisheries in the ocean environment. The small project size would not be expected to impact pelagic species targeted by some recreational fishermen. The marking and aids to navigation requirements would ensure that recreational fishermen are aware of the project location and can navigate around the farm operations.

[34] On February 6, 2017, the MOU became effective for seven federal agencies with permitting or authorization responsibilities for marine aquaculture.

[35] 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."

6.11 Lack of coordination with the State of Florida

Comment: Some commenters were concerned that coordination with the State of Florida has been lacking given that the proposed location of the aquaculture facility is off the west coast of Florida. It was recommended that more cooperation and coordination with the State of Florida should happen regarding the siting of the aquaculture facility.

Response: The Florida Department of Environmental Protection (FDEP) issues NPDES permits in state waters that are less than three nautical miles from the Gulf shore. The Florida Department of Agriculture and Community Services (FDACS) is the state agency responsible for non-NPDES aquaculture management from 0-9 miles offshore in the Gulf. EPA coordinated with FDACS as appropriate throughout the development of this project. Elements of FDACS marine aquaculture requirements were considered by the applicant throughout the pre-application stage and were considered by EPA during the permitting development phase.

Additionally, several State of Florida agencies were involved with consultations regarding the proposed project. EPA coordinated with FWC and FDACS to comply with the CZMA and Florida's CMP. EPA also coordinated with FDEP, Florida State Clearinghouse, and Florida's State Historic Preservation Office (SHPO) to ensure compliance with the NHPA. Furthermore, State of Florida agencies were given the opportunity to comment during the public comment period.

7 Response to Other Comments

7.1 General support and opposition of the project

Comment: Some commenters provided general support for the proposed project without articulating any specific reasons for their support. Many commenters stated their general opposition to the project with and without articulating any specific reasons for their support.

Response: EPA has no response to comments of this nature except to note there is a mix of commenters who oppose the project and commenters who support the project, and that a substantial majority of commenters, including those who did include more detailed reasons for their opposition or support, opposed the project. To the extent that opponents and supporters of the project made more detailed comments, those comments are addressed in other portions of this RTC.

7.2 Timeframe of the permit action

Comment: Commenters stated that the draft EA and other documents were confusing and misleading as to its scope and timeline. Commenters noted that the proposed project is described as having a deployment period of eighteen months; however, the Draft EA acknowledges that the NPDES permit is valid for five years. Commenters asserted that the permittee will have the legal authority to continue using the net pen system for five years – meaning that the proposed operation could be duplicated up to two more times within the five-year span. Commenters asserted that by narrowly confining the effects of the VE project to eighteen months, EPA has failed to take an accurate assessment of the full, five-year scope of the proposed action. Additionally, commenters stated that EPA should not allow the VE project to deploy additional cycles of the facility until a review with clear evidence of no impacts has occurred.

Response: The applicant provided supplemental information with the NPDES application that stated "Fish will be stocked as a single cohort of 20,000 fish, reared for approximately 12 months." It is EPA's understanding that fish production and the discharge of pollutants will not proceed beyond one production cycle that lasts approximately 12 months. EPA revised the permit to specifically limit the discharge to one production cycle (approximately 80,000 lbs and a 12-month discharge duration) during the 5-year permit term. The five year permit term does not allow additional production cycles but does allow flexibility for the operator to determine when operations are initiated and concluded within the term.

In addition, given that NPDES permits are typically issued for five years, EPA revised the depositional modeling and calculations for 5 production cycles over the 5-year permit period to evaluate the potential water quality impacts. Based on this additional model and calculations, EPA maintains that the proposed project will not have a significant impact on water quality even if the proposed project was allowed to continue beyond the anticipated production period.

7.3 Lack of impact to the surrounding environment

Comment: Several commenters expressed that the facility would have minimal impact with proper siting. One commenter stated that locating projects offshore in deeper water and more energetic currents and waves, the surrounding ecosystem is not put at risk. Others stated that research has shown that such facilities when properly sited and operated can be a net benefit to the ecosystem. Another commenter stated that there is some science that shows that there is no atrophic seafloor and a minimal waste stream that has the potential to support wild fish. Other commenters felt that the small size of the facility would not have much of an impact on the surrounding ecosystem.

Response: EPA agrees that proper facility siting is an important consideration in the planning and permitting process. EPA evaluated the depositional impacts from the proposed facility using operational information (fish production, feed type, feed amount) and ocean data (depth, average current magnitude, and current direction). Please see other sections of this document and the supporting documents for more information about the results of EPA's evaluation of the impacts to the environment.

7.4 Knowledge generated by the proposed project

Comment: Several commenters stated that the facility would provide needed information and data on the impacts of marine aquaculture, site location issues, and information regarding the cultured species.

Response: EPA agrees that this project could generate knowledge that may be used for planning or evaluating future projects; however, this is not why EPA is permitting this project under the NPDES program.

7.5 Commercial scale operations

Comment: Some commenters expressed concern that this project would lead to a commercial scale project.

Response: EPA has not received permit applications for a commercial scale marine aquaculture facility from Ocean Era or any company in the Gulf. EPA agrees that if the Ocean Era demonstration project is successful, it may encourage other commercial scale projects in the future; however, each applicant will have to go through the same extensive pre-application and permitting process. Before a decision is made, applicants will be required to provide a complete application and any other data needed to support the application and permitting process. Additionally, prior to receiving a permit, future projects will undergo consultations and/or evaluations in order to comply with other statutory requirements under the ESA, EFH, CZMA, NHPA, and NEPA.

7.6 Impacts to human health

Comment: One commenter was concerned about swimming in water where antibiotics could be present. One commenter was concerned that the facility could result in increased bacteria counts at public beaches.

Response: The facility is approximately 45 miles offshore and it is not expected that this pilot scale facility would substantially increase the bacteria count or incident rate of red tide near the facility or in coastal waters. The applicant indicated that FDA-approved antibiotics or other therapeutants will not likely be used during the proposed project due to the strong currents expected at the proposed action area, the low fish culture density, and the cage material being used. In the unlikely event that drugs/therapeutants are used, administration of drugs will be performed under the control of a licensed veterinarian and only FDA-approved therapeutants for aquaculture would be used as required by federal law. In addition, the NPDES permit will require that the use of any medicinal products be reported to EPA, including therapeutics, antibiotics, and other treatments. The report will include types and amounts of medicinal product used and the duration they were used.

7.7 Questions regarding the applicant

Comment: One commenter had a question regarding the applicant and why the company name and leadership had changed.

Response: EPA does not question why companies change names as part of the NPDES permitting process. EPA used the company information received in the NPDES application. EPA received notification that the company changed names from Kampachi Farms, LLC to Ocean Era, LLC on January 17, 2020 and then to Ocean Era, Inc. on August 31, 2020.

7.8 Wild raised fish

Comment: One comment stated "Nowhere in the design of fish farms do they come anywhere close to mirroring their wild raised counterparts."

Response: EPA is uncertain of the underlying concern related to this comment, and therefore is uncertain how to respond. EPA does note, however, that almaco jack (*Seriola rivoliana*) are native to the Gulf and also a federally managed Gulf fish. Fingerlings for this operation will be sourced from brood stock caught in the Gulf.

7.9 Information provided

Comment: Several commenters provided detailed information in literature reviews and professional journal papers that may be relevant to marine aquaculture discharges.

Response: EPA thanks reviewers who provided additional information pertaining to the assessments undertaken in the agency's permit development process. The additional scientific literature was helpful, but it did not result in changes to permit conditions.

7.10 Additional permit requirement

Comment: Comments were received regarding fish processing. There is a reference in the draft permit that alludes to possible fish processing: "permittee must minimize discharge associated with the transport or harvesting of aquatic animals including blood, viscera, aquatic animal carcasses, or transport water containing blood". Because of potential complications meeting this condition under an offshore processing scenario, we recommend the permit be conditioned to clearly state that fish will be landed in whole condition and not processed offshore.

Response: In addition to BMPs required for other operational aspects at the facility, BMPs are specifically required in the permit for "transport and harvest discharge." These BMPs apply when the permittee is preparing fish to be harvested or transported. For example, these BMPs may apply when the permittee is transferring the fish from the rearing cage to the vessel that will be used to move the fish to shore for processing. Processing activities for this action will take place in a shore-based facility. Discharges from seafood processing activities are not authorized under the NPDES permit. The permit has been revised to clarify that seafood processing discharges are excluded from permit coverage.

7.11 Concern that Almaco Jack will become an invasive species

Comment: Some commenters were concerned about the fish species being raised becoming invasive species in the Gulf.

Response: Almaco jack are native to the Gulf and are also federally managed Gulf reef fish. Fingerlings for this operation will be sourced from brood stock caught in the Gulf. There is no risk of an invasive species scenario for the proposed action.

7.12 Proposed operation needs more study

Comment: Comments were received stating that more research needs to be done that looks at the negative elements of these projects before proceeding. Commenters were concerned that the impacts deserve a full EPA study by independent scientists because aquaculture in the open ocean represents a sufficiently unknown threat and more scientific data is needed before approving any permit. Any study should be disclosed to the public for additional comments.

Response: As part of the NPDES permitting process and NEPA evaluation process, EPA conducted a comprehensive environmental analysis. Additionally, EPA coordinated and consulted with other federal and state agencies regarding other federal authorizations (e.g., ESA, EFH, CZMA, FWCA, NHPA, NEPA). The permitting action and supporting documents for this project took into account existing relevant scientific literature. While EPA welcomes additional studies, EPA bases permitting decisions on information available at the time an application is received and information developed during the permit review process.

7.13 Facility expansion

Comment: One commenter inquired whether the facility that would be authorized to discharge under the permit as a small, pilot scale facility would be able to expand in size after the permit was issued. The commenter wanted to know what limits would be imposed by the permit to prevent expansion.

Response: The NPDES permit only allows the discharge from the facility for one fish production cycle. The permittee is limited to the production amounts indicated in the NPDES application due to the permit conditions and environmental analyses developed using the information submitted to the EPA as part of the application process. In accordance with 40 CFR § 122.62, any facility expansion to increase fish production would be considered a major modification that would result in additional analysis, potentially different or more stringent permit conditions, another public notice and comment period, and potentially a revised NEPA evaluation.

7.14 Monitoring data during next permit cycle

Comment: Commenters stated that the EPA should require that the monitoring of all discharges will be used in determining whether to renew or expand the permit in the future, to the extent that such requests are sought.

Response: All monitoring data collected under the NPDES permit will be considered during any future renewal or expansion. Also, the environmental data collected may be relevant to other future marine aquaculture discharges in the Gulf.

7.15 Farmed fish health and operational procedures

Comment: Some commenters expressed concern that the farmed fish would be more susceptible to disease. Several comments suggested concern that warm water and red tide in the gulf could kill the fish in the pen. One commenter stated that the facility should be required to operate with low-stocking. Some commenters questioned if lowering the fish cage during a red tide event could be sufficient to protect the fish. One commenter questioned what operational conditions will be used in the event of a red tide outbreak at the facility. Other members of the public were concerned about what happens when a red tide kills the 20,000 fish in offshore fish cages?

Response: EPA relies on the applicant to understand the factors that could impact fish health and choose species appropriate to the location selected. Fish diseases are more prevalent in culture operations where animals are contained in high densities and are a major concern for fish farm managers; however, such diseases are not readily epidemic in wild fish populations. The impacts of red tide and other potential harms to the cultured fish are the responsibility of the permittee. EPA is focused on the nature of the pollutants proposed for discharge, the adequacy of controls on that discharge, and the potential impacts of the proposed discharge on the aquatic environment. Fish health within the rearing cages of an aquaculture operation is not within the scope of EPA's review.

8 Response to Legal, Administrative, and Procedural Issues

8.1 Compliance with CWA § 404(b) and MPRSA

Comment: Commenters stated that the applicant has not provided reasonable assurance that the proposed activity is not contrary to the public interest as set forth in CWA § 404(b) and the Marine, Protection, Research, and Sanctuaries Act (MPRSA) § 102(a) and the rules promulgated thereunder. Other comments were received about the applicant not providing reasonable assurances that the proposed industrial fish farming discharges are in compliance with EPA approved water quality standards with regards to CWA § 404.

Response: EPA is issuing a NPDES permit pursuant to the CWA § 402. The CWA § 404(b)(1) Guidelines are applicable to the issuance of Section 404 permits for discharges of dredged and/or fill material into waters of the United States. Section 404 permits are issued by the COE or, in some cases, by states authorized to issue Section 404 permits. No Section 404 permit is required for the Kampachi project. The Section 404(b)(1) Guidelines are not applicable to Section 402 NPDES permits.

The commenter also expressed concern that the proposed discharges would not be in compliance with water quality standards approved by EPA. The proposed discharge is not located in waters within the jurisdiction of any state for purposes of the CWA; it is located in federal waters approximately 45 miles from the coast of Florida. As a result, no state WQS are applicable at the location of discharge. Water quality concerns are addressed through application of the ODC promulgated pursuant to CWA § 403. The ODC are published at 40 CFR Part 125, Subpart M, and prohibit the issuance of a NPDES permit that will result in unreasonable degradation of the marine environment. EPA has conducted an ODC Evaluation and has determined that the proposed discharge will not result in unreasonable degradation of the marine environment. See the ODC Evaluation for more information.

With respect to MPRSA, that statute does not apply to discharges from structures regulated under the CWA.

8.2 Potential new laws authorizing and regulating marine aquaculture

Comment: One commenter stated that this project is really about trying to get people to push for a federal law to regulate/allow ocean finfish aquaculture – using EPA and USACE to issue permits and ask for more regulation from NMFS through a federal law.

Response: EPA reviews and acts on NPDES permit applications in accordance with the requirements of the CWA. Under the relevant regulations, speculation about the underlying motives of persons associated with a proposed project are not relevant to EPA's evaluation of a NPDES permit application or to EPA's determination of whether a permit can be issued, or to the development of appropriate permit conditions to include in the permit.

8.3 Comments regarding regulatory authority

Comment: Some comments were received about EPA's regulatory authority to issue NDPES permits to aquaculture facilities. One commenter stated EPA should not issue a permit until Congress established clear authority and guidance for EPA or other agencies to issue such permits. Another commenter stated that clarification was needed on who has regulatory authority and enforcement over the facility's operations. A few commenters stated that there are currently not sufficient regulations to address the significant damage that fish farming may be creating.

Response: EPA's statutory authority under the CWA, §§ 402 and 403, regarding offshore aquaculture, is limited to the issuance of permits for wastewater discharges under the NPDES program. The CWA provides EPA with the authority to place limits and conditions on the permitted discharges and has full authority under the statute to enforce the permit. EPA has no statutory authority to regulate other aspects of farm operations not related to

discharges. Having received a permit application to discharge pollutants into waters that are regulated under the CWA, EPA has a duty to review and act on the permit application in accordance with the CWA and regulations promulgated under the CWA.

8.4 Lack of authority over project area

Comment: Some commenters were concerned about giving authority over an area in Federal waters to a private company.

Response: A NPDES permit issued by EPA authorizes discharge of pollutants to waters that are regulated under the CWA. A NPDES permit does not convey any ownership or property rights over an area of waters of the United States. There is nothing in the CWA that would allow EPA to deny a permit because the applicant is a private company. Rather, EPA must act on the permit application in accordance with the applicable CWA regulations. EPA develops permit condition in an effort to ensure that discharges of pollutants are properly controlled and do not result in unreasonable degradation of the marine environment.

Under Section 10 of the Rivers and Harbors Act, the USACE regulates the construction and placement of a facility in waters that could interfere with navigation in navigable waters. EPA does not have a role in consideration or issuance of Section 10 Rivers and Harbors Act permits. USACE will be evaluating and may authorize the installation of the proposed mooring system under a separate Section 10 permit.

8.5 Public resources and "no take" zone

Comment: A few commenters expressed concern that parts of the ocean were being closed off for private use. One commenter stated that the oceans are public resources and should not be allowed to be used for aquaculture facilities. Some commenters who opposed the permit objected to allowing private companies to use or exploit public resources for profit. One commenter expressed that the fish farm creates a "no take" zone.

Response: EPA's permit only authorizes the wastewater discharge, and EPA's review is focused on whether the discharge of wastewater is adequately controlled and protective of the marine environment. To the extent the facility will also involve the placement of a structure in the Gulf that would close off any area at or near the proposed facility from public access, that is a function of the permit issued by the USACE under the RHA Section 10.

The proposed action requires the issuance of a DA permit pursuant to Section 10 of the RHA which prohibits the unauthorized obstruction or alteration of any navigable WOTUS. However, this permit will not grant any property rights or exclusive privileges and the proposed mooring system shall not interfere with the public's right to free navigation on the Gulf.

8.6 Short comment period

Comment: One commenter stated that a story on the facility was not published in the paper until 09/27/2019 and, therefore, there was a deadline of only two days to respond.

Response: On August 30, 2019, the EPA released for public notice and comment a draft NPDES permit (FL0A00001) and associated documents for the Kampachi Farms, Inc. – Velella Epsilon project. The first public comment period lasted for 30-days and ended on September 30, 2019.

On December 12, 2019, EPA released a notice of public hearing and extended the public comment period regarding the proposed issuance of a NPDES permit and supporting documents. On January 18, 2020, EPA

published a public notice as a reminder of the public hearing. A public hearing was held on January 28, 2020. The second public comment period ended on February 4, 2020 and lasted for 54 days.

The public notices were published on EPA's website and Sarasota Herald-Tribune, and sent to the applicant, federal and state agencies, and various interested parties in accordance with 40 CFR § 124.10. The public was able to submit comments orally or in writing at the public hearing or by submitting written comments to EPA.

8.7 Conflict of interest with applicant collecting data

Comment: One commenter questioned the reliability of studies and data that would be produced by the permittee, a private entity, under the permit. One commenter asked what experts and scientists would be consulted as the aquaculture project moves forward and how would they be paid.

Response: NPDES permits include conditions requiring monitoring of discharges and reporting of monitoring results. Under these permit conditions, the permittee is the entity responsible for meeting those monitoring and reporting requirements. The permit also includes conditions requiring the permittee to certify the accuracy of information submitted and requires the use of EPA-approved analytical methods for determining the level of pollutants in a sampled effluent. Civil and criminal liability attaches to false reporting by a permittee. This system of self-reporting permit-related information has been an effective and efficient way to collect information regarding facility operations and the composition of a pollutant discharge. In addition, EPA may conduct inspections of any permitted facility and use its enforcement authorities to address a violation of permit conditions.

8.8 Conflicts of interest with Mote Marine Laboratory

Comment: Several commenters were concerned about a conflict of interest with Mote Marine Laboratory because they will be supplying the fish for the Ocean Era project. Concerns were raised about how Mote Marine will be objective if they are supplying the fish and benefiting financially.

Response: Mote Marine Laboratory is currently scheduled to provide approximately 20,000 fish for the proposed action. The claim that Mote Marine Laboratory has a conflict of interest because it's supplying the fingerlings are not relevant to the EPA's evaluation of the NPDES application. While Mote Marine laboratory did rent space to EPA for the Public Hearing on the draft NPDES permit and on EPA's consideration of environmental impacts under NEPA, Mote Marine Laboratory does not have any role in EPA's decision-making on the NPDES permit.

8.9 Gulf aquaculture fishery management plan requirements

Comment: Comments were received requesting the applicant abide by all reporting and recordkeeping requirements in the Gulf Aquaculture Fishery Management Plan (FMP) regarding feed and antibiotics. Additionally, the commenter asked that the annual reporting for antibiotics should include type of medication, amount, date, and rationale for use, and be sent to the NMFS.

Commenters also asked that the applicant be obligated to report and record breeding information as outlined in the Gulf Aquaculture FMP. The commenters wanted information regarding the techniques that would be used in selective spawning programs (if applicable), genetic material from the brood stock, and a fish genetic sample from each generation. Additionally, commenters requested that the genetic information be provided to a public institution for processing or made publicly available.

Response: The Gulf Aquaculture FMP is no longer legally applicable based on a recent court opinion issued on August 4, 2020, by the US Court of Appeals for the 5th Circuit, in the case of Gulf Fishermens Association vs. National Marine Fisheries Service. EPA does not have the authority to regulate or include permit conditions that

are outside of the CWA and its implementing regulations. While the provisions of the vacated Gulf Aquaculture FMP are outside the scope of the NPDES permit, EPA reviewed the non-breeding information requirements of the Gulf Aquaculture FMP.[36] EPA determined that the FMP requirements for habitat, feed, and antibiotic reporting were already taken into account within the NPDES permit as noted below:

- **Habitat:** The Gulf Aquaculture FMP requests that marine aquaculture activities are environmentally responsible using the following habitat related considerations: "existing inland and offshore habitats important to marine fisheries should be protected from physical alterations or degradation; (2) a baseline assessment should be conducted as part of the permitting process; and (3) sensitive areas, including habitat areas of particular concern, should be avoided." As noted elsewhere within this RTC, EPA has ensured that habitat will be protected through multiple permit provisions, during ESA and EFH consultations, and the requirement of the permittee to submit a BES as part of the application.

- **Water Quality:** Many of the water quality provisions within the Gulf Aquaculture FMP (cited below) are similar to requirements already included in the NPDES permit.

  > "Marine aquaculture facilities should be designed, maintained, and operated in such a manner that avoids impacts to the local environment by utilizing water conservation practices and discharging effluent that protects existing designated use of receiving water and meets applicable state and federal water quality guidelines. Marine aquaculture facilities should develop, implement, and monitor best management practices to conserve water and improve effluent water quality. Comprehensive marine aquaculture facility waste management practices should be required to minimize negative impacts of discharge from the facility."

- **Health Management and Disease Control:** The NPDES permit includes fish health and disease control conditions that are comparable to the Gulf Aquaculture FMP requirements referenced below.

  > "Marine aquaculture activities should: (1) Minimize impacts of disease outbreaks if they occur; (2) Create and implement health evaluation programs and policies that prevent the importation or release of disease pathogens or parasites of regulatory concern. These policies should support development and utilization of technologies to identify and control disease organisms; (3) Develop effective disease control, quarantine, and inventory destruction procedures to prevent the spread of disease to public waterways, native species, and other marine aquaculture facilities; (4) Create and implement health management strategies for marine aquaculture organisms in cooperation with states, federal agencies, industry, veterinarians, and scientists; and (5) Use only FDA approved therapeutic and chemical treatments as part of best management practices."

Additionally, all NPDES monitoring and reporting information is available to the public and can be obtained by using EPA's Enforcement and Compliance History Online (ECHO) database.[37]

8.10 No appropriate regulations exist for marine aquaculture

Comment: Comments were received about a recent case out of the U.S. District Court for the Eastern District of Louisiana which has demonstrated that Congress did not grant NMFS the authority to extend their oversight to aquaculture. The court in *Gulf Fisherman's Association* found that NMFS may not stretch the definition of "harvesting," one of the statutory definitions of fishing, to include aquaculture. Commenters expressed concern about how no valid or appropriate regulations exist for marine aquaculture now that NMFS' regulations have been

[36] The Gulf Aquaculture FMP is located at: https://gulfcouncil.org/wp-content/uploads/Aquaculture-FMP-PEIS-Final-02-24-09.pdf

[37] EPA's ECHO database is available at: https://echo.epa.gov/

vacated. Some commenters asked EPA to factor in the absence of regulations when considering the potential impacts of the proposed project and to help prevent environmental catastrophe.

Response: It is false that no valid or appropriate regulations exist for marine aquaculture. EPA is required to issue NPDES permits in federal waters for facilities that discharge pollutants from a point source into a WOTUS. EPA promulgated effluent limitations and standards for the CAAP industry in 2004 that regulates the discharge of pollutants from flow-through, recirculating, or net pen aquaculture operations. Additionally, the USACE authorizes the anchorage of marine aquaculture facilities to the sea floor and any structures affecting navigable waters under the RHA Section 10. EPA notes that the court case referenced by the commenter regarding NMFS permit authority has been affirmed on August 4, 2020, by the US Court of Appeals for the 5th Circuit, in the case of Gulf Fishermens Association vs. National Marine Fisheries Service.

9 Response to Comments Outside the Scope of the Proposed Action

Each of the below topics were deemed outside the scope of the proposed action (NPDES and NEPA) and do not warrant a response. The permit under review is a CWA § 402 permit, which would authorize the discharge of pollutants from an aquaculture facility into the Gulf. EPA's focus in its review of the proposed action is on the nature and composition of the discharge, and the potential impacts of the discharge on the marine environment. As more completely described below, many comments were made with respect to issues that are unrelated to the proposed discharge of pollutants and the potential impacts to the environment.

9.1 Comments regarding bonds, damages, and financial assurance

Comment: Several commenters expressed concerns regarding payment if damages were to occur as the result of this project. One commenter stated they thought that clear payment for any liability arising from the operations needed to be established in legal documents in order to take the burden away from taxpayers. Another commenter stated that there is no structure that requires aquaculture companies to post bonds or insurance to cover negative impacts, facility clean up from damage caused by hurricanes, or if the permittee goes bankrupt.

Response: EPA has determined that the proposed discharge, as conditioned in the permit, will not cause unreasonable degradation of the marine environment. In the event that the permittee fails to comply with permit conditions in a way that causes harm to the environment, EPA has authority to bring an enforcement action to assess penalties and obtain appropriate injunctive relief.

NPDES permits do not include any bond or insurance requirements. EPA has authority to bring an enforcement action in the event there is a violation of permit conditions. In addition to appropriate injunctive relief, EPA enforcement actions can include the assessment of significant financial penalties. The permit conditions have been developed to ensure that pollution is properly controlled and that discharges do not cause unreasonable degradation of the marine environment. However, EPA acknowledges that there are legitimate concerns regarding hurricane impacts and has included in Part VI of the permit (Facility Damage Prevention and Control) requirements to reduce the risk of, and address, discharges from the operation in the event of a disaster such as a hurricane. These requirements include a notable number of preventive operation and maintenance measures (Part VI.A.1.a-j) as well as disaster response measures (Part VI.A.2.a-e). The permittee is required to submit their Facility Damage Prevention and Control Plan to the EPA prior to stocking fish, and must update the plan whenever there is a change in the facility or in the operation of the facility that increases the risk of damage to the site.

The USACE Section 10 permit authorization does not include any bond or insurance requirements, but USACE has authority to bring an enforcement action in the event there is a violation of permit conditions. Permit conditions have been developed to ensure the safety and stability of the proposed mooring system. However, USACE notes that impacts from storm events and hurricanes are unknown but is confident that the applicant will take every precaution to secure the system in the event of a storm event per the permit conditions. Any enforcement procedures provide for the issuance of an administrative order requiring the applicant to comply with the terms and conditions of the permit, and for the initiation of legal action where appropriate. The applicant will be required to pay for any corrective measures ordered by USACE, and if they fail to comply with such directive, USACE may in certain situations (such as those specified in 33 CFR § 209.170) accomplish the corrective measures by contract or otherwise, and bill the applicant for the cost.

9.2 Shellfish aquaculture advantages

Comment: One commenter stated that if aquaculture was going to be pursued in the Gulf, it should be done with shellfish instead of finfish. The commenter indicated that shellfish have the advantage of not requiring feeding

and would provide the extra advantage of being a means to restoring the waters to healthy conditions through their natural filtering activities in the environment.

Response: This comment is outside the scope of the NPDES permitting action. EPA does not select the species to be raised by a permit applicant for an aquaculture facility. EPA must act on the permit application that is submitted and leaves decisions regarding the type of products that an applicant will produce to the permit applicant and the facility's owner/operator.

9.3 Land-based aquaculture project

Comment: One commenter expressed a strong preference for land-based aquaculture projects in order to avoid the problems the commenter believed were associated with net-pen aquaculture. The commenter described many advantages of certain land-based aquaculture facilities in terms of polluting impacts.

Response: This comment is outside the scope of this permitting action. EPA must act on the permit application that was submitted, which is for an offshore aquaculture facility. EPA does not dictate the location of proposed facilities; rather the location is selected by the applicant and EPA conducts its review based on the proposed facility described by the applicant.

9.4 Exploitation of animals in cages and concerns about number of fish raised in pen

Comment: One commenter expressed concern for the fact that the farmed fish species would be kept in a cage rather than swimming in the open ocean. Another comment was received about salmon in Scotland showing signs of physical mutations and depression from overcrowding.

Response: The EPA does not regulate the wellbeing of animals raised within cages. This comment is outside the scope of the NPDES permitting action.

9.5 Farmed fish are less healthy

Comment: One commenter stated that fish produced at factory fish farms can have higher levels of contaminants than wild fish, which may lead to health risks for consumers. Other commenters were concerned about eating fish raised in net pens. Some concerns presented about eating fish raised in net pens focused on the fact that the net pens let parasites in while having the fish swim in their own wastes, or that the waters of the Gulf are already contaminated.

Response: EPA's review is focused on the pollutants that are proposed to be discharged and the potential impacts of that discharge on the aquatic environment. The healthfulness of consuming the fish that would be produced at the facility is beyond the scope of EPA's review.

9.6 Project would relieve pressure on wild fish

Comment: Some of the commenters who supported the permit cited the value of the proposed project as a first step in developing aquaculture as an economically and environmentally sustainable industry, with significant economic benefits that would be important to national food security by providing a source of seafood. Such commenters often noted that, by providing a supply of healthy seafood, aquaculture facilities would relieve pressure on the wild fish population from overfishing.

Response: The comment is outside the scope of the NPDES permitting action, which is focused on the nature of the proposed discharge and its potential effects on the aquatic environment.

9.7 Aquaculture imports

Comment: Some commenters who supported the permit noted that the United States has become increasingly reliant on imports of fish from aquaculture operations in other countries, and that developing a domestic aquaculture industry would serve an important interest by increasing our autonomy and decreasing our dependence on foreign imports.

Response: The issue of reliance on foreign imports is outside the scope of the NPDES permitting action, which is focused on the nature of the proposed discharge and its potential effects on the aquatic environment.

9.8 Opposition to using natural resources for corporate animal meat farms

Comment: One commenter stated that fish farms are an example of our national and global tendency to sacrifice natural resources for the purpose of creating corporate animal meat farms with their reliance on corn and soy farming to supply feed. The commenters expressed misgivings about the chemical and nutrient pollution associated with such farms and stated that our environment and the Gulf would be better protected if we stopped eating meat. The commenters stated that our reliance on such farms is contributing to the dead zone in the Gulf, and that organic land/plant-based farms with better nutrient control would be better for the environment.

Response: EPA acknowledges the comment, but notes that the issue of vegan vs carnivorous diets is outside the scope of this permitting action. The EPA also notes that all analyses for this permit conclude that the nutrient discharges are negligible and thus not likely to contribute to the Gulf "dead zone."

9.9 Recommend use of polyculture operations and bio-filter species to offset nutrient impacts

Comment: Commenters suggested that the applicant should be required to utilize bio-filter species to minimize the impact of nutrient waste. Others encouraged the use of integrated multitrophic aquaculture as a more sustainable and cost-effective solution to mitigate effluent impacts from fish cages.

Response: EPA does not have any role in whether integrated multitrophic aquaculture will be used in future marine aquaculture operations. EPA acknowledges the suggestion and understands that polyculture operations can mitigate certain fish effluents; however, it is not within the scope of EPA's authorities to recommend polyculture operations to applicants.

9.10 Salmon aquaculture and Clean Air Act

Comment: EPA received several comments that were not relevant to this permit. For example, some comments supported eliminating commercial salmon netting off the Coast of Washington. One commenter stated that they did not agree with EPA pulling California's waiver from the Clean Air Act.

Response: These comments are not within the scope of the NPDES permit because the proposed action does not deal with the Clean Air Act, the harvesting or fishing of wild salmon, or any action related to state and federal waters of the Pacific Ocean. Similarly, the NPDES permit is unrelated to EPA action relating to California's waiver from certain Clean Air Act requirements.

9.11 Human respiratory impacts from red tide

Comment: Some commenters submitted concerns regarding impacts on the human respiratory system due to the effects of red tide caused by the project.

Response: EPA acknowledges the comment; however, the discharge of air materials is outside the scope of the NPDES permitting action. NPDES permits broadly cover the point source discharge of pollutants into waters of the U.S. EPA has addressed concerns relating to whether to proposed facility would increase the potential for red tides in Section 4 of the RTC.

9.12 Fish feed ingredients and increased need for fish within feed

Comment: Several comments were made regarding the fact that industrial scale farming of finfish requires a large amount of fish feed. Some commenters mentioned that some aquaculture facilities are relying on genetically engineered ingredients such as corn, soy, and algae as a substitute to protein sources and that these other ingredients do not naturally exist in a fish's diet. Commenters expressed concerns that this could lead to widespread environmental degradation, create disruptions in the natural environment as these are not sea-based ingredients, create a heightened demand on natural resources, or cause other ecological concerns associated with their production and processing, and result in a less nutritious fish for consumers.

Other concerns about the need for fish food focused on the fact that most industrially farmed finfish are carnivorous and need protein in their feed, which often comes in the form of lower trophic level "forage fish". The commenters expressed concern that these forage fish are at a risk of collapse, and the introduction of marine aquaculture facilities would add increased pressure to the system. They state that, in the Gulf, there is a long history of concern about the menhaden fishery where the fish are pressed into fishmeal and fish oils. The fish in this industry are at the base of the food chain and are an important prey for marine life. One commenter discussed further the practices of the menhaden fishery and noted that spotter airplanes are used to locate large schools of menhaden which are then captured using purse seine nets to encircle the entire school fish. They note that anything feeding on those fish are captured as well and that the industry admits it has a bycatch rate of up to 2.8%. They further state that recent annual catches are over 1 billion pounds of fish which could result in between 10 to over 28.4 million pounds of bycatch.

The commenters state that there are very few requirements for the industry to include traceability of ingredients or sourcing methods in fish feed. One of the primary reasons often cited for developing a marine finfish aquaculture industry in the U.S. is to control for better health, safety and labor standards in production. If this is in fact a motivating factor for U.S. marine finfish aquaculture, standards for feed related to health, safety and labor concerns should be firmly in place before any agency considers moving forward with permits for marine finfish aquaculture in the U.S. Concerns were also noted about the fish feed industry itself.

Response: Many of these comments do not pertain to this specific operation and are broadly discussing alleged issues with the aquaculture industry. NPDES authority extends only to the water quality impacts resulting from discharges from this particular operation. EPA has considered the effects of feed (both excess feed deposition and excretion/fecal waste) from this operation. The permit imposes the necessary feed managment restrictions and controls (see Permit Part IV.A.1) as well as requirements to monitor both the water and underlying sediments (see Permit Part II) to ensure that feeding activities are appropriately managed and environmental impacts are controlled and minimized. While certain fish feed ingredients are considered in the water quality context (e.g., nutrient content within the feed), most of the comments (e.g., consumer and fish nutrition; the ecological effects of the production of feed ingredients; forage fish population), are outside the scope of this permitting action.

9.13 Tainted fish and baby food

Comment: Commenters were concerned that uncontrolled fish food could lead to tainted baby food and dog food from foreign sources.

Response: When issuing a NPDES permit, EPA's focus is on the nature of the proposed discharge and the potential impacts of the proposed discharge in the receiving waters. The comment raises issues beyond the scope of EPA's review and authority.

9.14 Concerned about use of oil/petro

Comment: Comments were received about not using petrol or fossil fuel products, and recommended that we transition to sustainable, non-polluting sources of energy.

Response: This comment is outside the scope of the NPDES permitting action.

9.15 Impacts on forest from growing soy used to make fish food

Comment: It's likely that soy will be fed to the fish which means large areas of land will need to be deforested to grow the soy. This is not a sustainable process.

Response: The EPA does not regulate the choice of fish feed or the amount of soy that fish feed contains. In an NPDES permitting action, EPA's review is focused on the pollutant discharge associated with the facility and not the sourcing of food for the farmed fish or the agricultural methods of producing that food. This comment is outside the scope of the NPDES permitting action.

9.16 Antibiotic residue in fish

Comment: Commenters noted concerns that the antibiotics used to treat fish diseases could leave harmful residues in the seafood.

Response: The Food and Drug Administration (FDA) and the U.S. Department of Agriculture (USDA) are the appropriate federal agencies that regulate the safety of aquaculture seafood for consumption.

9.17 Design of the mooring system

Comment: Commenters expressed a concern with the design of the proposed facility because the design is currently used in an area with very different oceanic conditions. In particular, the mooring system was a serious concern, as it is unclear if this system would be robust enough to withstand a hurricane. Commenters requested the engineering drawings of both the net pen and the mooring system and more information on the vessel specifications (vessel type, tonnage, average and maximum speed, construction material, fuel and water capacity, draft, etc).

Response: The design of the mooring system is outside the scope of the NPDES permit issued by EPA. EPA's focus is on the effluent conditions required to properly control the discharge and to maintain the marine environment under the regulations to carry out the ODC. However, it is important to note that the NPDES permit does require provisions that relate to operation, maintenance, and design in order to control discharges of pollutants from the facility. For example, the permittee must properly operate and maintain the facility at all times, as well as implement BMPs that include inspection, maintenance and repair of the production system. Additionally, the permittee is required to develop and implement a facility-specific FDPC plan for dealing with fish containment and disaster prevention practices.

The USACE Section 10 permit will authorize the installation of the proposed mooring system. The proposed mooring system has been designed by the applicant and issuance of the DA permit is made in reliance on the information provided by the applicant. 33 CFR Part 325.1(d) states, "the application must include a complete description of the proposed activity including necessary drawings, sketches, or plans sufficient for public notice

(detailed engineering plans and specifications are not required)." The drawings are used for informational purposes to aid in the identification of jurisdiction and impacts. Therefore, a DA permit does not certify that a structure is sound or built up to state, regional, or city codes. That responsibility falls upon the applicant and/or engineer certifying any drawing, the state, the county, or city regulations. The USACE has assumed that the mooring system has been designed to withstand environmental conditions in the Gulf, as this is in the applicant's best interest and ensures a successful project. The limits of federal liability in the DA permit states that the federal government does not assume any liability for the design or construction deficiencies associated with the permitted work. The Section 10 permit will be conditioned for the continued maintenance and inspection of the site.