FACT SHEET

NPDES #:	FL0A00001
Permittee:	Ocean Era, Inc. PO Box 4239 Kailu-Kona, HI 96740
Facility:	Velella Epsilon
Location:	Gulf of Mexico (Approx. 27° 7.34185'N, 83° 12.02291'W)
Facility Type:	Aquatic Animal Production (Standard Industrial Classification (SIC) code 0273)
Authorization to discharge:	Wastewater from an Aquatic Animal Production Facility producing up to 80,000 pounds/year for one production cycle (SIC code 0273)
Outfall:	001
Receiving Water:	Federal Waters of the Gulf of Mexico

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1. Facility Description

The Velella Epsilon project is a "net-pen" aquatic animal production facility that is considered a new discharger.[1] The project will culture a single cohort of approximately 20,000 fish (kampachi; *Seriola rivoliana*) which will be reared for approximately 12 months. The estimated final fish size is approximately 4.4 pounds (lbs) (2 kilograms [kg]). The total annual harvest weight is estimated to be less than 80,000 lbs (39,287 kg) when using a 90% survival rate. The maximum amount of feed is estimated to be 27,268 lbs (12,369 kg) per month.

The operation consists of a supporting tender vessel and a single floating "net-pen" cage in water depth of approximately 130 feet (40 meters). The cage will be a copper alloy mesh submersible circular cage with a diameter of 17 meters and a height of 7 meters, contained within a high-density polyethylene frame. The submersible fish pen will be deployed on an engineered multi-anchor swivel (MAS) mooring system. The engineered MAS will have up to three anchors for the mooring, with a swivel and bridle system. The cage material for the proposed project is constructed with rigid and durable materials (copper mesh net). The mooring lines for the proposed project will be attached to a floating cage that will rotate in the prevailing current direction. The ocean currents will maintain the mooring rope and chain under tension during most times of operation.

The cage design is flexible and self-adjusts to suit the constantly changing wave and current conditions. As a result,

[1] In accordance with 40 CFR § 122.2, a new discharger is defined as a facility that has a discharge of pollutants commencing after August 13, 1979, is not a "new source," and has never received an effective National Pollutant Discharge Elimination System (NPDES) permit. The proposed facility is not considered a new source because the appropriate effluent standards for the aquaculture industry (concentrated aquatic animal production facilities) are not directly applicable to the proposed facility, and a "new source" is defined under the CWA as a facility that is subject to an applicable effluent limitation guideline and commenced construction after promulgation of the guideline.

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 flotation 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.

2. Industry Description

National Pollutant Discharge Elimination System (NPDES) permits protect water quality by regulating point source discharges to waters of the United States. Point sources are any discernable, confined, and discrete conveyance from which pollutants are or may be discharged (40 CFR § 122.2). Net-pen systems are a stationary, suspended, or floating system of nets, screens, or cages that are anchored offshore in open waters of the United States (40 CFR § 451.2(j)). Aquaculture facilities produce and discharge wastes (excess fish feed and fecal material) that contain pollutants, which are defined as including solid waste, biological materials, and industrial waste. (40 CFR § 122.2). Accordingly, marine finfish aquaculture operations are point sources that discharge pollutants and are required to obtain NPDES permits.

3. Receiving Water Body Description

The effluent discharges into federal waters of the Gulf of Mexico (Gulf) approximately 45 miles (72 km) southwest of Sarasota, Florida. For Clean Water Act (CWA) purposes, federal waters in the Gulf extend seaward from the three nautical mile boundary of each Gulf coastal state, to 200 miles offshore. In the vicinity of the facility, the Gulf is not considered an impaired water pursuant to CWA § 303(d) and is not subject to any total maximum daily load (TMDL).

Winter months are dominated by south-southwest currents, while spring months are dominated by a north-north east current. The overall current flow direction off the west Florida coast is predominately in the south-southwest direction. More information about the receiving water body characteristics can be found in the Ocean Discharge Criteria (ODC) Evaluation that is included in the Environmental Assessment (EA).

For marine waters off the coast of Florida, Florida's water quality standards (WQS) apply within three nautical miles off the shore. At the present there are no legally applicable WQS that apply for federal waters in the Gulf. CWA § 304 requires EPA to develop aquatic life criteria that accurately reflect the latest scientific knowledge of the impact of pollutants on human health and the environment. Aquatic life criteria are designed to protect both freshwater and saltwater organisms from short-term and long-term exposure and are the highest concentration of specific pollutants or parameters in water that are not expected to pose a significant risk to the majority of species in a given environment. EPA has established recommended marine aquatic life criteria. The CWA § 304(a) recommended criteria are not laws or regulations. They are guidance for states and tribes to use for their waters when developing WQS. The CWA § 304(a) criteria were considered in evaluating potential impacts from the facility and in developing appropriate conditions to ensure that the proposed discharges will not cause unreasonable degradation of the marine environment and will comply with ODC under Section 303 of the CWA and 40 CFR Part 125, Subpart M.

4. Outfall Description

For this permit, the net-pen effluent (outfall) is considered to be immediately downstream of the midpoint of the cage with the exact geographical location changing as the cage moves with the current. The proposed facility will be placed within an area that contains unconsolidated sediments that are 3 – 10 ft deep (see Table 1). The applicant will select the specific location within that area based on a diver-assisted assessment of the sea floor when the cage and MAS are deployed. The proposed action area is a 3,281 feet (1,000 m) radius measured from the center of the MAS.

5. Rationale for the Permit Conditions and Requirements

The permit conditions are consistent with and based on the CWA § 402, CWA § 403, and all applicable implementing regulations at 40 Code of Federal Regulations (CFR). A summary of the regulatory rationale for each part of the permit is provided in Table 2.

Permit Part I – Schedule of Submissions

The schedule of submissions is included to provide a summary of the important submittals that are included within the permit.

Permit Part II – Monitoring Requirements

The permit requires water quality, sediment, and benthic monitoring. The monitoring conditions and other prohibitions are based on the ODC (40 CFR § 125.123(a), 40 CFR § 125.123(d)(2), and 40 CFR § 125.123(d)(3)), and the EPA recommended aquatic life criteria for marine organisms (CWA § 304(a)). Additionally, the monitoring requirements from the concentrated aquatic animal production (CAAP) facility effluent limitation guidelines (ELGs) (40 CFR § 122.24 and 40 CFR Part 451 – Subpart B) are included based on best professional judgement (BPJ) in accordance with 40 CFR § 125.3. The requirement 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 is included allowed in accordance with 40 CFR § 125.123(a) and 125.123(d)(3) and the permit writers BPJ pursuant to 40 CFR § 125.3.

See Section 7 for more information on BPJ and the rational for including the CAAP ELGs. See the reasonable potential analysis (section 6), and ODC Evaluation (section 8.2) for additional information. Table 3 provides the monitoring requirements that are included in the permit.

Permit Part III – Reporting, Monitoring, and Record Requirements

The aquaculture specific reporting requirements are based on reporting that is required by the ELGs for the CAAP Point Source Category (40 CFR § 451.3) and includes requirements related to the use of drugs or other chemicals, structural failure or damage to the facility, and spills of feed, drugs, pesticides, or other chemicals. 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 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. See Section 7 for more information regarding the BPJ determination and the applicability of the CAAP requirements.

The NPDES electronic reporting requirements for monitoring records are included in the permit in accordance with the CWA and its implementing regulations at 40 CFR § 122.41(l)(4)(i) and 40 CFR Part 127. More information regarding electronic reporting requirements can be found on EPA's web-based NetDMR internet application.[2]

Permit Part IV – Best Management Practices

[2] https://netdmr.epa.gov

The permit requires the implementation of best management practices (BMPs) and a BMP plan to prevent or minimize the discharge of wastes and pollutants to the receiving water body and to ensure disposal of wastes in such a way as to minimize negative environmental impacts and comply with relevant solid waste disposal regulations. The BMPs and the BMP plan requirements included in this permit are based on the effluent limitation guidelines for the CAAP point source category (40 CFR § 122.24 and 40 CFR Part 451– Subpart B) due to the similarity of operational characteristics between the facility covered under this permit and the net-pen operations meeting criteria for CAAP facilities. The BMPs and BMP plan are included in the permit in accordance with CWA § 402(a)(1), 40 CFR § 122.44(k)(4), CWA § 403, 40 CFR § 125.123, and the BPJ of the permit writer (40 CFR § 125.3). Further information about BMPs and plans applicable to the net-pen aquaculture industry are available in the CAAP effluent limit Development Document and the CAAP Compliance Guide.[3,4]

Permit Part V – Environmental Monitoring

The permit requires environmental monitoring and implementation of an environmental monitoring plan (EMP) to meet the requirements of the CWA § 402 and CWA § 403. EPA completed an ODC Evaluation and determined that sufficient information exists to conclude that the discharge from the facility would not cause unreasonable degradation of the marine environment in accordance with 40 CFR § 125.123(a) and 40 CFR § 125.123(d). The EMP within the permit meets the requirements 40 CFR § 125.123(d)(2) which allows EPA to "specify a monitoring program, which is sufficient to assess the impact of the discharge on water, sediment, and biological quality including, where appropriate, analysis of the bioaccumulative and/or persistent impact on aquatic life of the discharge." (40 CFR § 125.123(d)(2)).

Permit Part VI – Facility Damage Prevention and Control

The permit requires implementation of Facility Damage Prevention and Control (FDPC) practices and a FDPC Plan to ensure that the facility has procedures in place for the prevention and mitigation of natural and man-made disasters. The permittee is required to develop practices and follow the FDPC Plan which prescribes the facility-specific procedures for dealing with aquatic life containment and transfer, disaster prevention practices, and disaster cleanup. The FDPC requirements within the permit are based on the reporting requirements found in 40 CFR § 451.3(b) and 40 CFR § 451.21 (c), (d), and (f). The requirement to implement the FDPC practices and plan are in accordance with CWA § 402(a)(1), 40 CFR § 122.41(e), CWA § 403, 40 CFR § 125.123(d)(3), and 40 CFR § 125.3.

Permit Part VII – Quality Assurance

The permit requires the implementation of quality assurance procedures and submittal of a quality assurance project plan (QAPP) to ensure that the water quality data collected by the permittee is reliable. The QAPP is designed to support sample collection and analysis objectives, document representative sampling conditions of all monitoring activities, and document data anomalies at the facility, in the effluent, and in the receiving water body. The implementation of quality assurance procedures and the requirement to submit a QAPP are included in the permit in accordance with CWA § 402(a)(1), 40 CFR § 122.41(e), 40 CFR § 122.41(j), 40 CFR § 125.3 (see section 6 for more information regarding EPA's BPJ determination), CWA § 403, and 40 CFR Part

[3] U.S. Environmental Protection Agency. 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. U.S. Environmental Protection Agency, Office of Water, Washington, DC
< http://water.epa.gov/scitech/wastetech/guide/aquaculture/tdd.cfm >.

[4] U.S. Environmental Protection Agency. 2006. Compliance Guide for the Concentrated Aquatic Animal Production Point Source Category. EPA-821-B-05-001. U.S. Environmental Protection Agency, Office of Water, Washington, DC.
< http://water.epa.gov/scitech/wastetech/guide/aquaculture/upload/2006_05_03_guide_aquaculture_guidance_full-final.pdf >.

125, Subpart M.

Permit Part VIII – Standard Conditions

This section of the permit contains the general conditions and definitions applicable to NPDES permits issued by EPA and are established in 40 CFR § 122.41.

6. Reasonable Potential Analysis

The NPDES implementing regulations require limitations for all pollutants or pollutant parameters that are discharged at a level that will cause, have the reasonable potential to cause, or contribute to an excursion of a WQS (40 CFR § 122.44(d)). A reasonable potential analysis is the process used to determine whether a discharge, under a certain set of facility-specific conditions, could cause or contribute to an excursion of an applicable WQS. Due to the location of the facility within federal waters of the Gulf, there are no applicable WQS that apply to marine waters seaward of the Florida state water boundary (seaward of three (3) nautical miles). However, in order to ensure that the discharge does not cause unreasonable degradation of the marine environment, the CWA § 304(a) criteria were used in a manner similar to a reasonable potential analysis for this facility as required by CWA § 402 and 40 CFR Part 125, Subpart M (Ocean Discharge Criteria).

The EPA worked with the National Oceanic and Atmospheric Administration (NOAA) to conduct environmental quantitative modeling at the proposed project site. Given that the facility is new, actual effluent and receiving water body water quality information were not available. Appropriately representative effluent feed characteristics from similar marine aquaculture facilities were used as modeling inputs as part of the analysis. Physical water characteristics from the Gulf were obtained from a previous EPA study[5] and from a NOAA buoy.[6]

A numerical production model for two cohorts of fish was constructed based upon anticipated farming parameters including configuration (net-pen volume and mooring configuration), fish production (species, biomass, size), and feed input (feed rate, formulation, content). Using aquaculture industry standard equations, daily estimates of biomass, feed rates, total ammonia nitrogen production, and solids production were developed under a production scenario to estimate the maximum biomass of 20,000 fish (88,000 lbs) throughout the production lifecycle. The maximum daily excretion of total ammonia nitrogen produced is estimated at 36 lb/d (16 kg/d) for a total of approximately 2,745 kg (6,052 lbs) of ammonia nitrogen produced during the anticipated fish production cycle. The maximum daily solids production is estimated at 140 kg (309 lbs). The report estimated that ammonia nitrogen will be undetectable within 30 meters of the cage at the typical flow regimes in the vicinity of the proposed site. In addition, the calculated flow-averaged total ammonia concentration at the cage/water interface is below EPA's published ammonia saltwater criteria of 3.5×10^{-2} milligrams per liter (mg/L) (4-day average) and 2.33×10^{-1} mg/L (1-hour average). See the ODC Evaluation in Appendix A of the draft EA for more information on these estimates and calculations.

A solids deposition model (DEPOMOD) was used to determine the environmental impact of this facility on the surrounding sea floor and benthic community. The depositional model was executed for two different production simulations that assume maximum biomass and maximum feed rate for the entire production cycle; therefore, the model predicts the worst-case scenario. The first simulation represented the maximum standing biomass for the proposed facility. The model was run for 365 days assuming a net-pen with a constant maximum biomass and a daily feed rate of 1.1 percent of biomass. The second simulation doubled the production to assess sediment

[5] U.S. EPA 2012. Ocean Current and Wave Measurements at the Tampa Ocean Dredged Material Disposal Site. Technical Memorandum. U.S. Environmental Protection Agency. Region 4. Water Protection Division. 29 pp.

[6] Current data were obtained from NOAA Buoy Station 42022 along the 50-m isobath and located 45 miles northwest of the project location (27.505 N, 83.741 W). Currents were recorded continuously from July 2015 through April 2018. Currents were measured at 1-meter intervals from 4.0 meters to 42.0 meters below the surface. Bathymetric data were obtained from the NOAA Coastal Relief Model.

related impacts at higher levels of biomass and feed rates. Under the second simulation, the model was run for 365 days assuming two net-pens each with a combined constant daily standing biomass at 72,550 kg per net-pen (a density of 28 kg/m^3 per net-pen).

The results of the first deposition model simulation predicted that net organic carbon accumulation would be at 3.0 grams per meter squared per year (g/m^2/yr) or less for 99.7 percent of the test grid area, at the estimated worst-case maximum production values. When doubling the estimated production values for the second production simulation, the net organic carbon accumulation would be 5.0 g/m^2/yr or less for 99.0 percent of the grid. Therefore, even with doubling the estimated production values, the model predicts that the net accumulation of particulate wastes following a 1-year production cycle would likely not be distinguishable from background levels through measurement of organic carbon.

A revised solid deposition model using NewDEPOMOD was performed to estimate the facility's impact if the discharge occurred for the full term of the NPDES permit (5 years). The model simulations estimated a biotic index, Infaunal Tropic Index (ITI), that is used as an indicator of organic enrichment based on expected changes in benthic macroinvertebrate community feeding responses to increases in deposited organic matter. The three model simulations resulted in ITI predictions ranging from 58.67 to 58.96. The predicted ITI close to 60 suggests that the proposed Velella project will not likely have a discernable impact on the benthic infaunal community around the site. The third modeling scenario (full production for the 5-year term) showed that "Velella 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."

To meet the "unreasonable degradation" determination requirements for the ODC, the water quality parameters listed in Table 3 are included in the Permit based on 40 CFR § 125.123(a), (d)(2), and (d)(3); however, due to the lack of demonstrated reasonable potential for the discharge to cause or contribute to an exceedance of CWA § 304(a) criteria, all environmental monitoring parameters will be required to report only.

7. Best Professional Judgement

The EPA has promulgated national standards of performance for CAAP facilities set forth at 40 CFR Part 451; however, those standards do not automatically apply to facilities producing less than 100,000 lbs of warm water aquatic animals annually (see footnote 1). Where EPA has not promulgated technology-based effluent guidelines for a particular class or category of industrial discharger, EPA must establish technology-based effluent limitations on a case-by-case basis based on BPJ. Technology-based limits constitute a minimum level of controls that must be included in a NPDES permit. EPA establishes such limitations pursuant to its authority under CWA § 402(a)(1) which authorizes EPA to include in permits "such conditions as the Administrator determines are necessary to carry out the provision of [the CWA]" in accordance with 33 USC § 1342(a)(1)(B).

The EPA used several factors in setting BPJ limitations pursuant to 40 CFR § 125.3. First, the proposed facility's maximum annual production of 80,000 lbs is relatively close to the 100,000 lbs threshold for which the CAAP effluent limit guidelines are automatically applicable for warm water aquatic species. Second, the discharge and operational characteristics of the facility covered by this permit are substantially similar to the marine aquaculture facilities covered by the CAAP effluent limit guidelines. Finally, the proposed facility will be the first marine net-pen aquaculture facility to operate and discharge in the eastern Gulf. EPA has determined that implementation of the CAAP conditions should not be overly burdensome and should pose minimal economic hardship to the permittee. Further authority for the permit conditions is provided by CWA § 403 and the ODC (40 CFR Part 125, Subpart M), because these conditions help ensure that the discharges will not cause unreasonable degradation of the marine environment.

8. Compliance with Other CWA Requirements

8.1 CWA § 401 Certification

Under CWA § 401, a federal agency cannot issue a permit or license for an activity that may result in a discharge to waters of the United States until the state or tribe where the discharge originates has granted or waived Section 401 certification. CWA § 401(a)(2) also requires EPA to notify a neighboring state when a discharge for which certification is being requested may affect the quality of waters of that state(s). Based on a review of the application and other relevant information, including the location and nature of the proposed discharge, EPA has determined that a Section 401 certification is not required as the proposed discharge will not affect the water quality of any neighboring state or tribal waters.

8.2 CWA § 403 (Ocean Discharge Criteria)

All CWA § 402 permitted discharges into the territorial sea, the waters of the contiguous zone, or the oceans must be consistent with the ODC pursuant to the CWA § 403. Consequently, NPDES permits can require any necessary limits that are consistent with EPA's ODC.[7] The implementing regulations of the ODC (40 CFR Subpart M) "establishes guidelines for issuance of NPDES permits for the discharge of pollutants from a point source into territorial sea, the contiguous zone and the oceans" to prevent unreasonable degradation of the marine environment. Unreasonable degradation of the marine environment is defined in 40 CFR § 125.121(e) as the following:

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

The EPA completed an ODC Evaluation and determined that sufficient information exists to conclude that the point source discharge from the marine aquaculture facility covered by this permit would not cause unreasonable degradation of the marine environment in accordance with 40 CFR § 125.123(a). More information can be found in the ODC Evaluation.

9. Compliance with Other Applicable Federal Laws

Additional information regarding other applicable federal laws can be found in the draft EA prepared by EPA with cooperating agency support from the U.S. Army Corps of Engineers (USACE) and the National Marine Fisheries Service (NMFS).

9.1 Coastal Zone Management Act

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

[7] The CWA § 403(a) states that a NPDES permit cannot be issued for discharges into the territorial sea, the waters of the contiguous zone, or the oceans except in compliance with the guidelines for the determination of degradation of those waters.

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 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 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 its implementing regulations.

9.2 Endangered Species Act

In accordance with the Endangered Species Act (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 the 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 biological evaluation (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 Section 7(a)(2) and ESA Section 7(a)(4). EPA and USACE reviewed the proposed activity and determined that a BE was appropriate. EPA and USACE broadly concluded that the proposed project's potential threats (disturbance, entanglement, vessel strike, water quality) to ESA-listed species and critical habitat are highly unlikely to occur or extremely minor in severity; therefore, the potential effects to ESA protected species and critical habitats are discountable or insignificant.

On August 13, 2019, EPA and USACE provided the jointly developed BE to USFWS and initiated consultation with USFWS. EPA and USACE determined that the discharges authorized by the NPDES permit will have "no effect" on any federally listed species, proposed species, or critical habitat for sea birds that are under the jurisdiction of the USFWS and within the proposed action area. On August 27, 2019, a 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 discharges authorized by the NPDES permit "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 concurred with the effect determinations made by EPA and USACE.

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 BE and consultation coordination documents are provided in the EA.

9.3 Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (FWCA) requires that Federal agencies consult with the USFWS, the NMFS, and state wildlife agencies for activities that affect, control or modify waters of any stream or bodies of water, in order to minimize the adverse impacts of such actions on fish and wildlife resources and habitat. The FWCA establishes fish and wildlife conservation as an objective of all Federally funded, permitted, or licensed water-related development projects. The FWCA states that the consultation purpose is for "preventing loss and damage to wildlife resources." Federal action agencies developing water-related projects are to include justifiable means and measures to benefit and reduce impacts to fish and wildlife, and mitigation and enhancement recommendations are to be given full and equal consideration with other project purposes. Additionally, the implementing regulations for the CWA related to the FWCA require EPA to consult with the USFWS and NMFS, and the appropriate state agency exercising jurisdiction over wildlife resources to conserve those resources, before issuing a permit proposing or authorizing the impoundment (with certain exemptions), diversion, or other control or modification of any body of water (40 CFR § 122.49(e)).

On August 13, 2019, EPA and USACE provided the jointly developed BE to USFWS and NMFS, and initiated FWCA consultation with USFWS and NMFS. EPA is not permitting any loss or damage to wildlife resources and has conducted environmental and wildlife consultations or evaluations as documented throughout this fact sheet; therefore, EPA does not anticipate any impacts resulting in substantial modifications to the receiving water body. On August 27, 2019, the USFWS provided notification that they do not object to the permit issuance for the proposed project and have no additional comments. On September 30, 2019, NMFS concluded that "any adverse effects that might occur [from the proposed project] on marine and anadromous fishery resources would be minimal" and do not object to issuance of the permit per the FWCA. Completion of the informal consultation with the USFWS and NMFS satisfies EPA's obligations under the FWCA. More information about the ESA consultation can be found in the BE.

9.4 Magnuson-Stevens Fishery Conservation and Management Act

The Essential Fish Habitat (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. 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 NMFS recommendations. EFH is defined as the water and substrate necessary for fish spawning, breeding, feeding, and growth to maturity.

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. 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 hardbottom habitat.

On March 8, 2019, EPA provided the EFH assessment to the NMFS and initiated abbreviated consultation with the NMFS. On March 12, 2019, the NMFS concurred with the EFH determination made by EPA and the 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 EFH Assessment.

9.5 National Environmental Policy Act

The EPA prepared an EA to support the NPDES permit pursuant to its authority under the Policy for Voluntary Preparation of National Environmental Policy Act (NEPA) documents (63 Federal Register 58045, 10/29/98) and consistent with the requirements at 40 CFR § 6.205(a). On April 8, 2019, the draft EA was authorized for release by the Responsible Official (Regional Administrator). 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*[8] and 40 CFR § 1501.3(b).[9] The draft EA also supports the USACE Section 10 permit.

The environmental review process, which is documented in the EA, indicates that no significant environmental impacts are anticipated from the proposed action. The NPDES permit conditions include protective measures, and these measures are described in the EA and the final NPDES permit. The issuance of the NPDES permit to the applicant will not cause a significant environmental impact to water quality or result in any other significant impacts to human health or the natural environment. Accordingly, EPA is issuing a Finding of No Significant Impact (FONSI) to document this determination. Substantive public comments received on the draft Velella Epsilon NPDES permit and EA and EPA's and USACE's responses to those comments are included in the response to comment (RTC) document which is included in the final NPDES permit package and administrative record.

9.6 National Historic Preservation Act

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

[8] 63 Federal Register 58045; October 29, 1998

[9] 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.

During the interagency permitting process for the proposed project the applicant coordinated with the Florida SHPO to ensure compliance with NHPA. On January 3, 2019, the applicant submitted a NHPA consistency determination to the Florida State Clearinghouse with the Florida Department of Environmental Protection. On February 8, 2019, the Florida SHPO found that the proposed project will not affect historic properties if the facility anchors are placed within 50 feet of the surveyed lines on the seafloor. The Florida SHPO also recommended that the permit include a "unexpected discovery protocol" condition.[10] The appropriate permitting agency with jurisdictional oversight for an unexpected discovery protocol permit provision is the USACE; the USACE will include this provision within their Section 10 permit.

9.7 Marine Mammal Protection Act

The Marine Mammal Protection Act (MMPA) prohibits the harassment, hunting, capturing or killing of marine mammals without a permit from either the Secretary of the Interior or the Secretary of Commerce. There are some exemptions to marine mammal takes which are specified in MMPA Sections 101 and 118. The MMPA delegates the NMFS as the authority responsible for the conservation and management of cetaceans (whales, dolphins, porpoises) and pinnipeds (other than walruses).

The permittee partnered with NMFS to develop a protected species monitoring plan (PSMP) to monitor marine mammals and collect valuable information about potential interactions between aquaculture operations and protected species. The data collected under the PSMP will help NMFS understand interactions between marine mammals and aquaculture facilities and will inform future risk assessments for projects of this nature. Monitoring under the PSMP will occur throughout the life of the project and represents an important minimization measure to reduce the likelihood of any unforeseen potential injury to all protected species.

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

9.8 The Wild and Scenic Rivers Act

40 CFR § 122.49(a), Section 7 of the Wild and Scenic Rivers Act prohibits EPA from assisting by license or otherwise the construction of any water resources project that would have a direct, adverse effect on the values for which a national wild and scenic river was established. The proposed project is located in federal waters of the Gulf of Mexico and will not impact any national wild and scenic rivers. Therefore, the Wild and Scenic Rivers Act is not applicable to the proposed facility or the proposed NPDES permit.

10. Effective Date of Effluent Limits, Permit Conditions, and Compliance Schedule

The permittee shall achieve compliance with all monitoring conditions and permit requirements immediately upon the effective date of the permit. A compliance schedule is not included in this permit.

11. EPA Administrative Record and Contact

[10] 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."

The public notice for this permit was published in the Sarasota Herald-Tribune and on EPA's website. The public notice for the final permit will be published on EPA's website. The final permit decision is being sent to the applicant, federal and state agencies, and all who submitted written comments and requested notice of the final permit decision in accordance with 40 CFR § 124.15.

The entire administrative record including the permit application, draft permit, fact sheet, public notice, comments received, response to comments, consultations, evaluations, modeling reports, literature cited, and other supporting information is available by contacting EPA using the below information. Some principal documents from the administrative record are being placed online on the EPA Region 4 website.[11]

U.S. Environmental Protection Agency, Region 4
Permitting and Grants Branch Chief
Water Division
61 Forsyth Street SW | Atlanta GA 30303-8960
404.562.9459 | R4NPDESPermits@epa.gov

[11] https://www.epa.gov/npdes-permits/ocean-era-inc-velella-epsilon-aquatic-animal-production-facility-national-pollutant

Appendix of Tables for Fact Sheet

Table 1: Target Facility Area with 3' to 10' of Unconsolidated Sediments

Location	Latitude	Longitude
Upper Left Corner	27° 7.70607' N	83° 12.27012' W
Upper Right Corner	27° 7.61022' N	83° 11.65678' W
Lower Right Corner	27° 6.77773' N	83° 11.75379' W
Lower Left Corner	27° 6.87631' N	83° 12.42032' W

Table 2: Rationale Summary for Permit Conditions

Permit Section	Regulatory Rationale
Part I - Schedule of Submissions	Summary of important permit requirements
Part II - Monitoring Requirements	CWA § 304(a), CWA § 402(a)(1), 40 CFR § 122.24, 40 CFR § 125.123(a), 40 CFR § 125.123(d)(2), 40 CFR § 125.123(d)(3), 40 CFR § 125.3, and 40 CFR Part 451 – Subpart B
Part III - Reporting, Monitoring, and Record Requirements	CWA § 402(a)(1), 40 CFR § 451.3, 40 CFR § 122.41(l)(4)(i), and 40 § CFR Part 127
Part IV - Best Management Practices	CWA § 402(a)(1), 40 CFR § 122.24, 40 CFR § 122.44(k)(4), 40 CFR § 125.3, 40 CFR § 125.123(d)(3), and 40 CFR Part 451 – Subpart B
Part V - Environmental Monitoring	CWA § 402(a)(1), 40 CFR § 125.123(a), 40 CFR § 125.123(d)(2)
Part VI - Facility Damage Prevention and Control	CWA § 402(a)(1), 40 CFR § 122.41(e), 40 CFR § 125.123(d)(3), 40 CFR § 125.3, 40 CFR § 451.3(b), and 40 CFR § 451.21(f)
Part VII - Quality Assurance	CWA § 402(a)(1), 40 CFR § 122.41(e), 40 CFR § 122.41(j), and 40 CFR § 125.3
Part VIII - Standard Conditions	40 CFR § 122.41

Table 3: Summary of Monitoring Requirements

Parameter	Units	Parameter Code [1]	Daily Maximum	Average Monthly	Location	Monitoring Frequency [2]	Sample Type
Water Quality Monitoring							
Current measurements	m/s		Report	Report	EF1	Continuous	Instantaneous
Fish biomass	lbs				EF1	Monthly	Measured
Feed rate	lbs/day	45603			BT1	Monthly	Measured
Feed Conversion Rate	ratio	45603			BT1	Monthly	Calculated
Medicinal products	lbs or gal				BT1	As applicable	Measured
Chlorophyll-a	mg/l	32230			UC1, EF1, EF2, DC1, DC2	Monthly	Grab
Copper, Total (as Cu)	mg/l	01042					
Nitrogen, Ammonia Total (as N)	mg/l	00610					
Nitrogen, Total (as N)	mg/l	00600					
Oxygen, Dissolved	mg/l	00300					
pH	s.u.	00400					
Phosphorus, Total (as P)	mg/l	00665					
Solids, Total Suspended	mg/l	00530					
Sulfide, Total (as S)	mg/l	00745					
Temperature	°C	00010					
Sediment Monitoring							
Carbon, Total Organic (TOC)	mg/l	00680	Report	Report	SD1, SD2, SD3	Biomass based	Grab
Hydrogen sulfide	mg/l	71875					
Sediment Oxygen Demand	mg/l	51812					
Nitrogen, Total (as N)	mg/l	00600					
Particle size distribution	-						
Phosphorus, Total (as P)	mg/l	00665					
Solids, Total	mg/l	00500					
Total volatile solids	mg/l	00505					
Benthic Monitoring							
Benthic macroinvertebrates	-		Report		SD1, SD2, SD3	Biomass based	Grab