

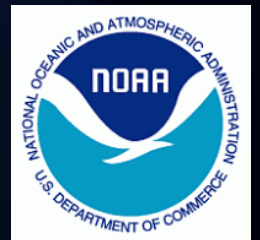


Tab S, No. 2(a)

**Exempted Fishing Permit (EFP)  
Application for the**

**Velella Epsilon Project –  
Pioneering Offshore Aquaculture  
in the  
Southeastern Gulf of Mexico**

**April 19, 2018  
GMFMC Meeting**





# Velella Epsilon Project

## Purposes :

1. Validate the feasibility of a temporary, small-scale, demonstration net pen array to stock, culture, and harvest a Federally managed species under the GOM FMP (Almaco jack; *Seriola rivoliana*);





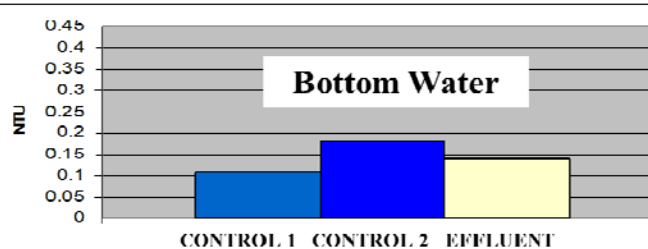
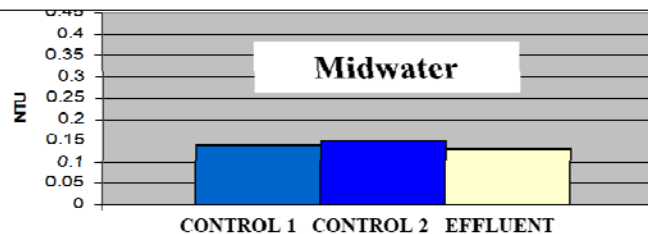
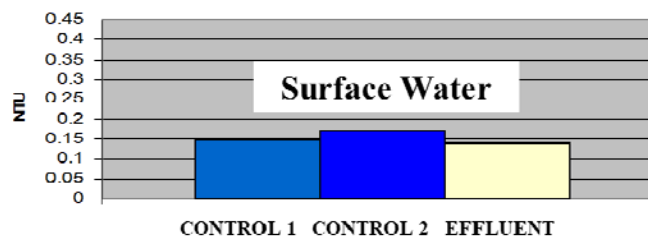
# Velella Epsilon Project

## Purposes :

2. Conduct environmental monitoring – water quality and benthic analyses per EPA requirements; and

### Kona Blue: commercial offshore

**TURBIDITY  
(NTUs)**





# Velella Epsilon Project

## Purposes :

3. Address public concerns of open ocean aquaculture in the GOM:  
... by demonstrating FAD effects to  
GOM fishing communities

### Velella Gamma Test



### Velella Beta Test



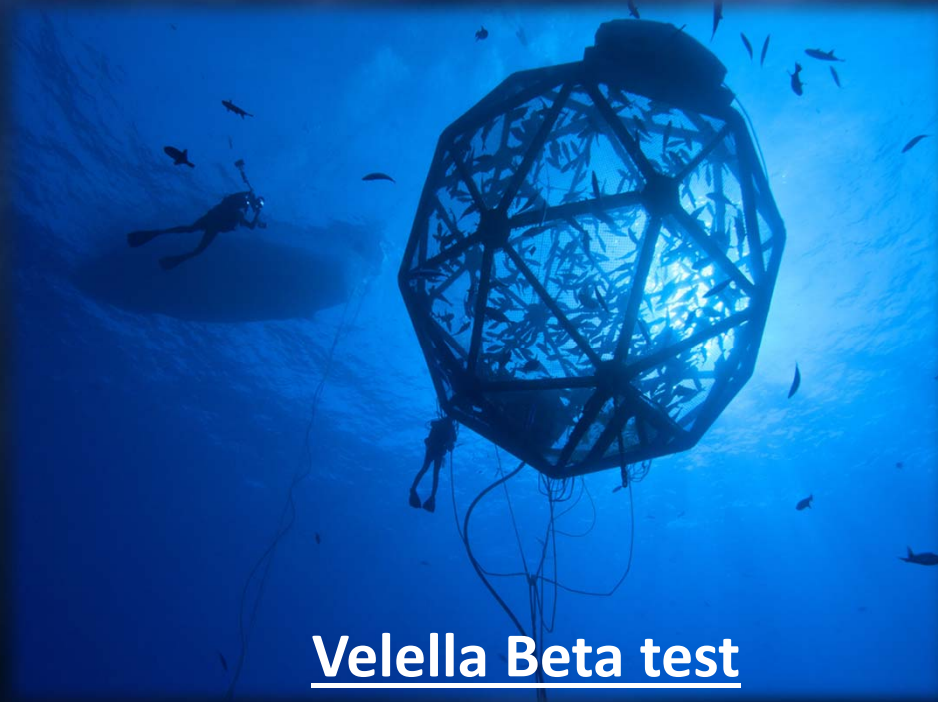




# Velella Epsilon Project

## Purposes :

3. Address public concerns of open ocean aquaculture in the GOM:  
... by encouraging the public and tourists to visit the  
demonstration site



Velella Beta test



# Velella Epsilon Project

## Description:

- Deployment location is approximately 45 miles southwest of Sarasota, Florida;
- In approximately 130 to 135 ft water depth;
- Using a net pen array of two SUBflex submersible, 53 ft x 53 ft x 17 ft(deep) offshore-strength cages;
- On a single-point mooring (SPM);
- Using a flipper delta-type embedment anchor; and serviced by a
- Tender vessel/feed barge tethered to side of array



Changes from Original Application: New Location & 2 Net Pens



# Veleva Epsilon Project

## Production:

- 18 Months Growout; EFP = 2 Years from Net Pen Deployment
- Rearing two (2) cohorts, in back-to-back (9 months/cohort)
- 20,000 fish/cohort stocked x 85% survival rate = 17,000 fish
- 2 cohorts x 17,000 fish/cohort = 34,000 fish
- 4.0 lbs/fish at harvest x 34,000 fish = 136,000 lbs Total Harvest





# Velella Epsilon Project

January 2018 GMFMC Meeting



Based on the January GMFMC Discussions & the follow-on Council Letter, the VE Project Team Identified the following Primary Items of Discussion Requiring Further Information & Data:

1. Greater Cooperation & Coordination with State of Florida
2. Siting Analysis
3. Environmental Assessment
4. Genetic Testing of Broodstock
5. Mooring System & Engineering Design
6. Emergency/Contingency Plan for Severe Storms





# Velella Epsilon Project

January 2018 GMFMC Meeting



## Council Letter Item #:

### 1. Greater Cooperation & Coordination with State of Florida:

#### ☐ FWC:

- Center for Spatial Analysis – data acquisition
- CZMA Collaboration – compliance discussions
- Genetics & Aquatic Animal Health Issues – reporting guidance

#### ☐ FDAC:

- Aquaculture BMPs: Shipment, Transportation, and Sale
- Aquaculture Certificate

#### ☐ FDEP:

- Coastal Office/Outer Continental Shelf Coordinator - CZMA
- State Clearinghouse – Coordination

#### ☐ Florida State CZMA Teleconference



# Velella Epsilon Project

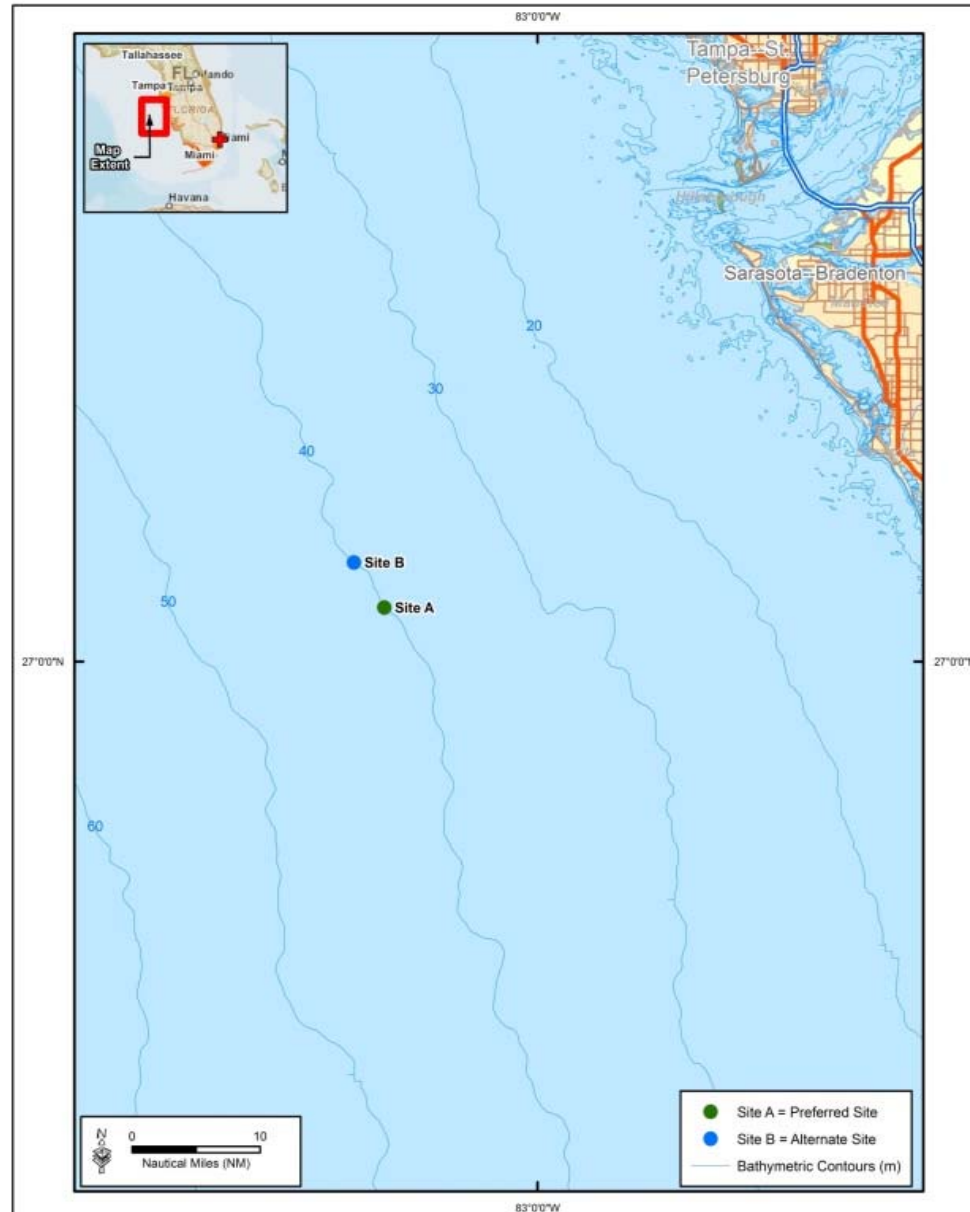
January 2018 GMFMC Meeting



## Council Letter Item #:

### 2. Siting Analysis:

- ☐ See EFP Section 4.1.4: Siting Analysis Process
- ☐ VE Project is Compliant All Requirements Identified in GAP Rule:
  - 50 C.F.R. Subpart F 622.103 (a)
- ☐ NOAA's National Centers for Coastal Ocean Science (NCCOS):
  - Comprehensive Three (3) Tier Alternative Siting Analysis
    - Determined Farming Parameters / Area of Interest
    - Identified Major Constraints within Area of Interest
    - Developed Multiple Alternatives
    - Ranked Alternatives: 18 Sites to 6 Sites to 2 Sites
- ☐ Southern Shrimp Alliance (SSA):
  - 4 Months of Coordination & Collaboration
  - Site Selection Partnership – Selected 2 Agreeable Sites



Proposed SPM Sites for the VE Project Net Pen Array





# Velella Epsilon Project

January 2018 GMFMC Meeting



## Council Letter Item #:

### 3. Environmental Assessment:

- ☐ NEPA Documentation
  - NOAA Fisheries/EPA/Army Corp Collaboration
- ☐ Baseline Environmental Survey – May 2018
- ☐ EPA NPDES Permit - Guided Environmental Analyses:
  - Monitoring Plan to be Finalized with Discharge Permit (NPDES)
  - To Include Routine Water Column & Benthic Quality Monitoring
- ☐ Detailed Information and Analysis:
  - Feed – NOAA's NCCOS Model to Estimate Effluent Discharge
  - Data Used by EPA for NPDES Permit and Monitoring Plan
  - Drug/Antibiotic Use – None Anticipated/FDA Approved Only
    - However; No Anticipated Antibiotic Use Offshore in Net Pens





# Velella Epsilon Project

January 2018 GMFMC Meeting



## Council Letter Item #:

### 4. Genetic Testing of Broodstock:

- ☐ See EFP Section 6.4.1 Fisheries
- ☐ Following the “Guidance and Procedures for Genetic Requirements”; GAPs
- ☐ F1 Generation Only:
  - Verified Broodstock Source – i.e. Mote Aquaculture Research Park
  - Locally Caught Broodstock - GOM Waters off Madeira Beach, FL
  - No Genetically Engineered or Transgenic Broodstock
  - Discusses with FWC -
    - Compliant with Genetics & Aquatic Animal Health Guidance
- ☐ Fin Clip Samples will be Preserved & Made Publically Available
- ☐ Developing an Aquatic Animal Health Plan
  - Collaboration with NOAA Fisheries, USDA, & FWC



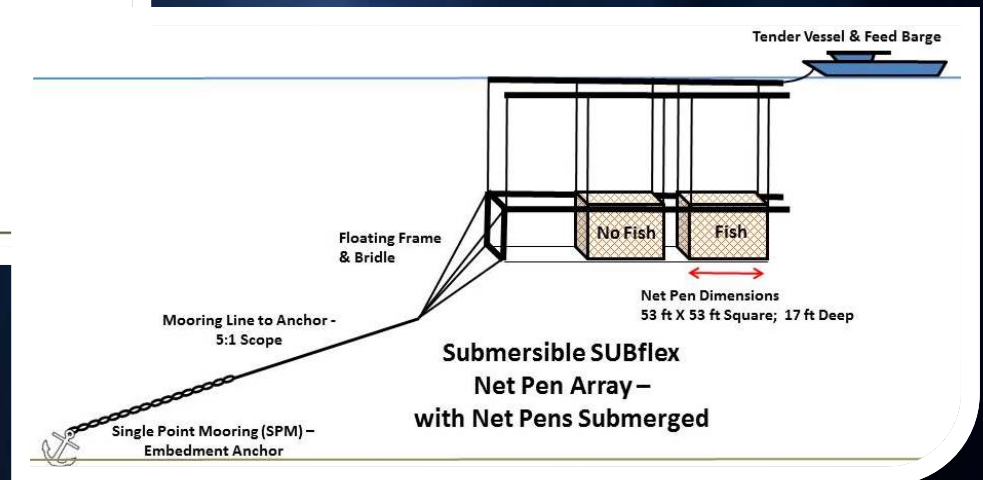
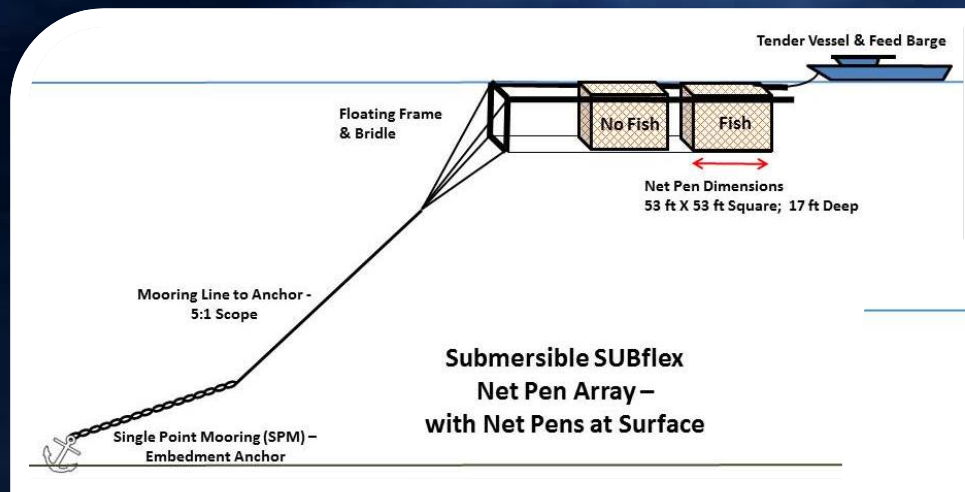
# Velella Epsilon Project

January 2018 GMFMC Meeting

## Council Letter Item #:

### 5. Mooring System & Engineering Design:

- ❑ See EFP Appendix E – SUBflex Engineering Designs





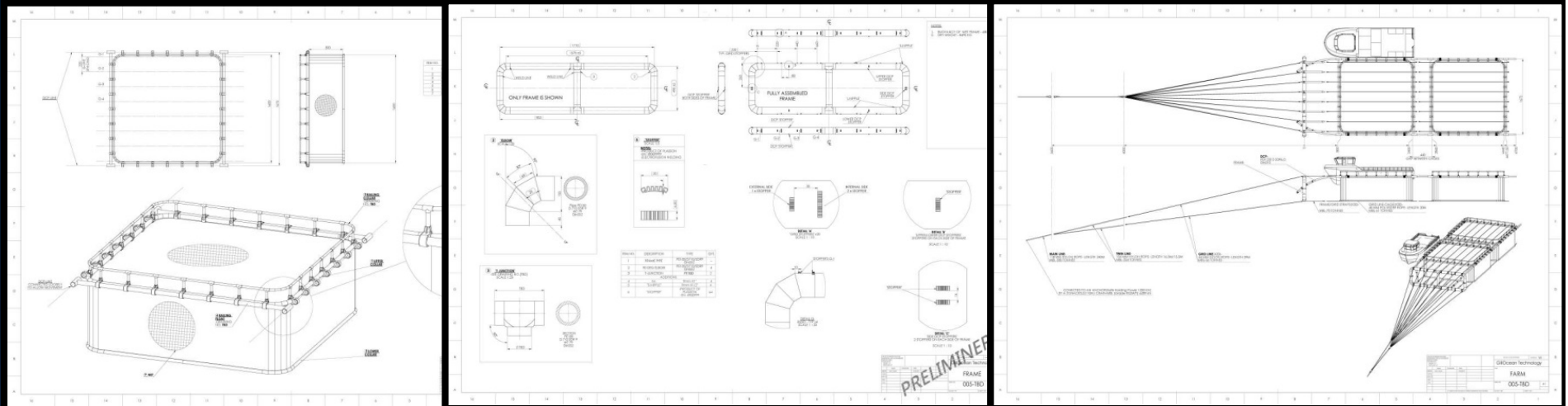
# Velella Epsilon Project

January 2018 GMFMC Meeting

## Council Letter Item #:

### 5. Mooring System & Engineering Design:

- ❑ See EFP Appendix E – SUBflex Engineering Designs
- ❑ Structural Integrity Highlights:
  - Withstand 200-Year Storm Submerged 40 Feet Below Surface
  - Flipper Delta-type Embedment Anchor Designed Not to Disengage
    - SPM ensures Net Pen Array can Pivot in Watch-circle
    - Swivel Ring Shackle & Single Mooring Line (4.6" diameter)





# Velella Epsilon Project

January 2018 GMFMC Meeting



## Council Letter Item #:

### 5. Mooring System & Engineering Design:

- ☐ See Section 4.1.2 Purpose #2 (EFP for VE Project)
- ☐ Tender Vessel
  - 80-foot Steel-hulled Schooner
  - USCG-Inspected/Documented (No. 289053)
  - Commercial Fishing Endorsement
  - Space for 24 Passengers
  - Modern Communications & Navigation Technology
- ☐ Scientific Field Technicians
  - Water Quality and Benthic Sampling
  - Feeding Fish/Monitoring Fish Health
  - Protected Species Interactions
  - Commercial & Recreational Fishing Activity Observations





# Velella Epsilon Project

January 2018 GMFMC Meeting



## Council Letter Item #:

### 6. Emergency/Contingency Plan for Severe Storms:

- ☐ See EFP Section 6.3 Expected Disposition of Species
- ☐ Routine & Contingency Operations
  - Properly Functioning Locating Devices (GPS) on the Net Pen Array
    - 40-foot Submergence during Storm Activity
  - No Permanent Aids to Navigation (ATON) are Required
    - ATON Officer - USCG, Sector St. Petersburg, FL
    - Not an Obstruction to Navigation = Commercial Fishing Gear
    - Mark with Buoys & High Flyers (poles) per
    - USCG & NOAA Fisheries regulations
- ☐ Emergency Contingency Plan may be Required
  - NOAA Fisheries and/or the USACE



# Velella Epsilon Project

## Supplemental/Extra - Ongoing Efforts:

- ☐ **Draft-Final Protected Species Monitoring Plan with NOAA Fisheries**
    - University Graduate Student Participation
  - ☐ **Draft CZMA Coastal Consistency Determination**
    - Close Coordination with FWC, FDAC, & FDEP
  - ☐ **Discussions with NOAA Fisheries & USDA - Animal & Plant Health Inspection Service**
    - Aquatic Animal Health Expert
  - ☐ **NOAA's NCCOS/EPA Coordination for Water Quality Effluent Estimates**
  - ☐ **USCG Coordination with Aids to Navigation, Notice to Mariners**
- 
- ☐ **VE Project Team Commitment:**
    - Upon Receiving All State & Federal Permits
      - Commitment to Comply with All Requirements
    - Continue Close Coordination with All State & Federal Agencies, & Stakeholders
    - Set an Example for Other Aquaculture Practices to Follow in the Future



# Velella Epsilon Project

## Thank you!

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# Velella Epsilon Project

**THE END**