Ventura Shellfish Enterprise

Ventura Port District Board of Port Commissioners

September 2, 2020

Agenda

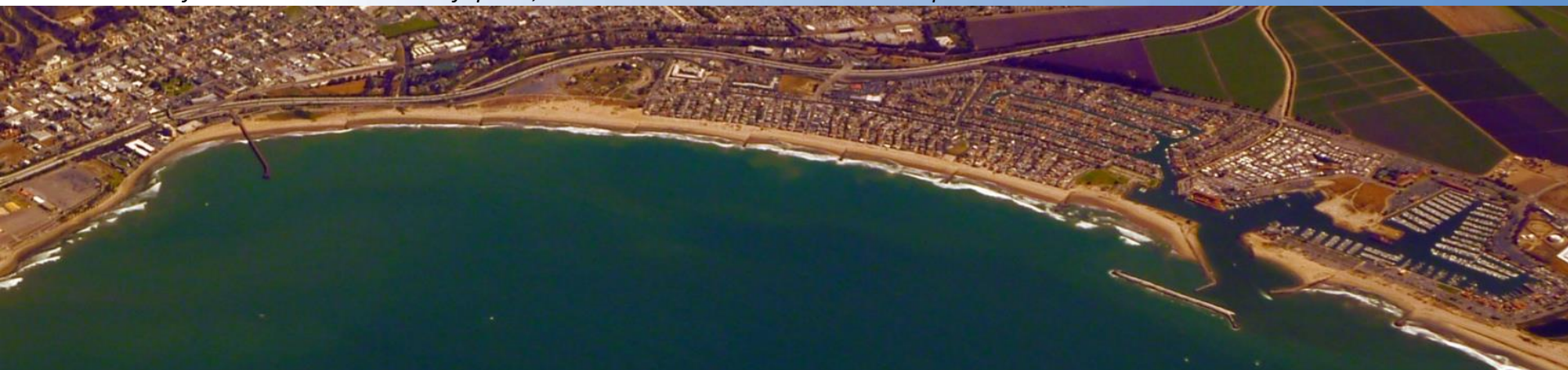
PROJECT DESCRIPTION
Laurie Monarres (Dudek)

PRELIMINARY OPERATIONS PLAN
Robert Smith (K&L Gates); Laurie Monarres, John Davis IV, Andrea Dransfield (Dudek); Brian Pendleton (VPD); Ralph Imondi, Linda Santschi (Coastal Marine Biolabs); Doug Bush (The Cultured Abalone Farm)

VSE ECONOMIC AND FISCAL IMPACTS
Michael Wright (Illuminas Consulting)

VSE SHELLFISH GROWER 10-YEAR PROFORMA EXAMPLE
Scott Lindell (Woods Hole Oceanographic Institution)

Note: Current information is based on draft plans; cost estimations are based on assumptions.



PROJECT DESCRIPTION

Laurie Monarres

Project Description

Project Size:	Twenty 100-acre growing sites, 2,000 acres total
Shellfish Species:	Mediterranean mussel (*Mytilus galloprovincialis*)
Growing Location:	Santa Barbara Channel in federal waters
Landing Location:	Ventura Harbor
Phasing:	500 acres phased approach (1 phase each year over a 4-year period)
Permitting Goals:	Economies of scale, pre-approved permitted areas

Project Description

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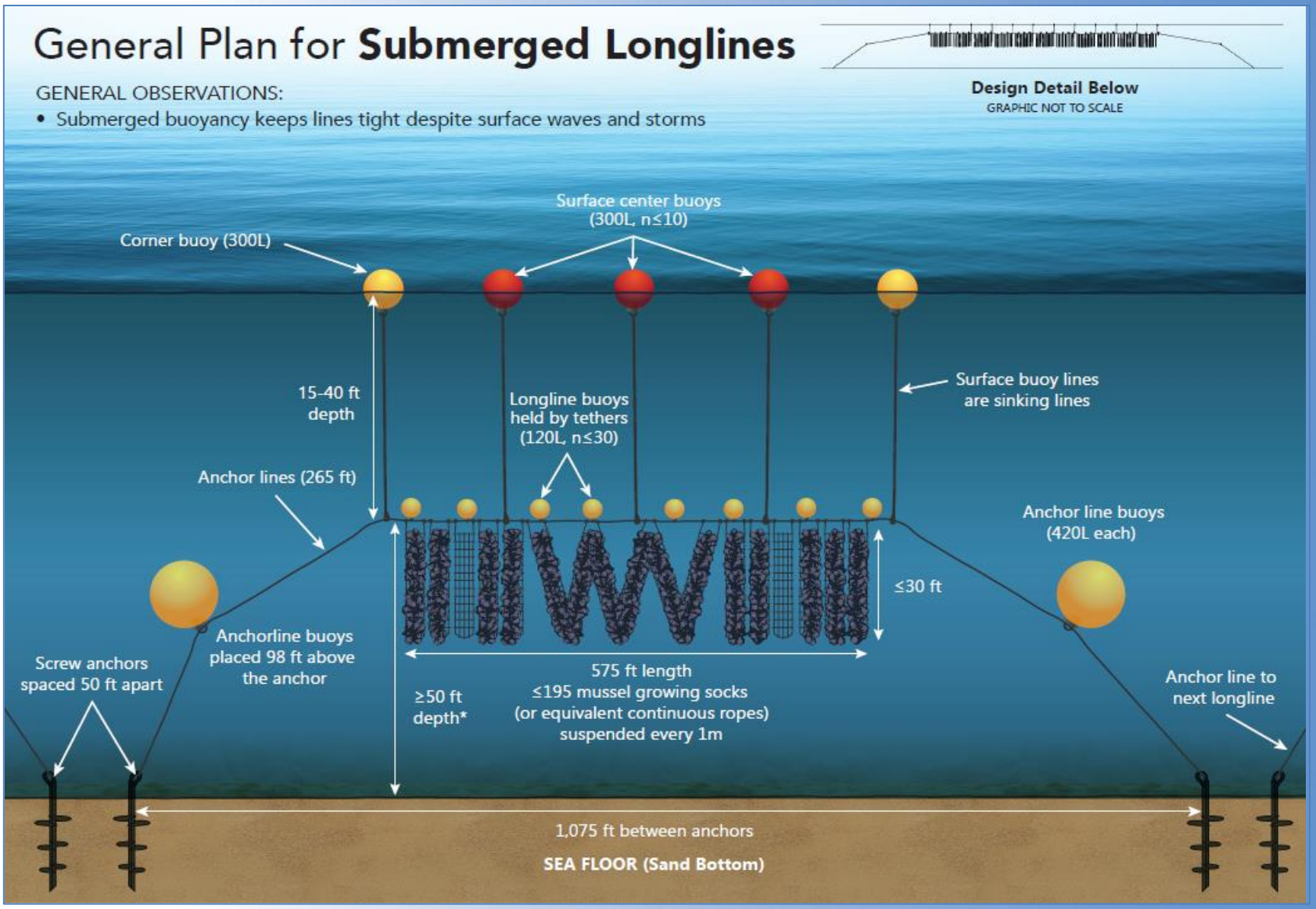
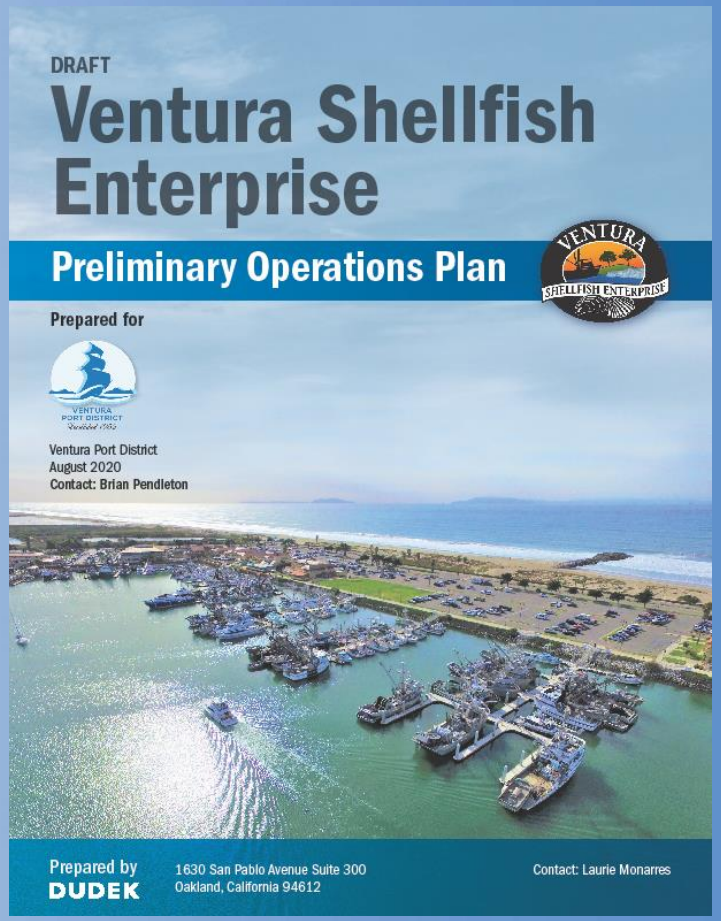


PRELIMINARY OPERATIONS PLAN

Robert Smith, Andrea Dransfield,
Brian Pendleton, Laurie Monarres,
John Davis IV, Ralph Imondi, Linda Santschi,
Doug Bush

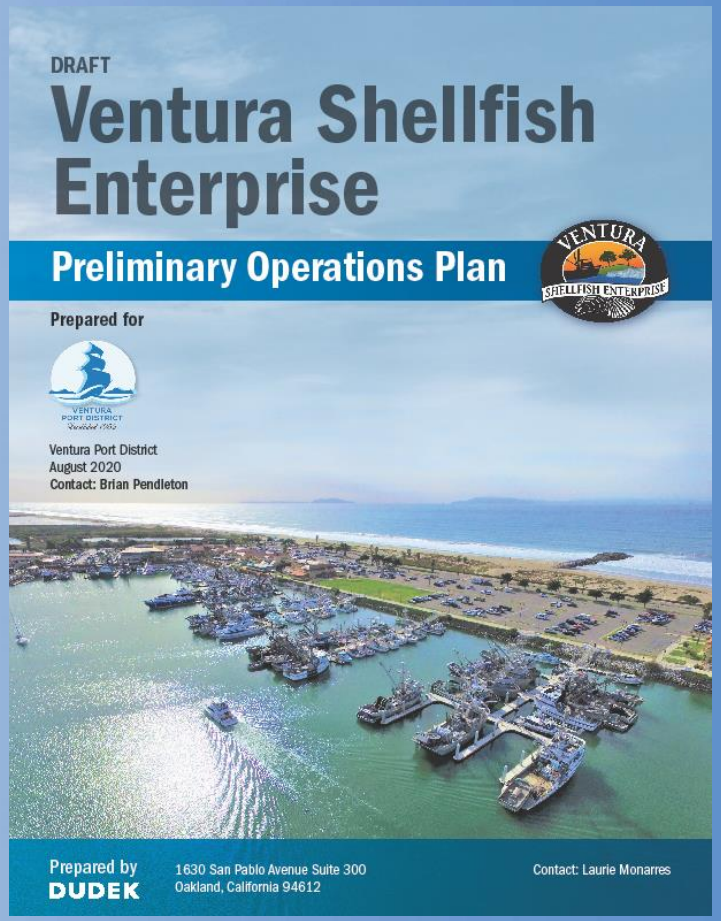
Purpose

- Describe the roles and responsibilities of Growers, VPD, and regulatory agencies
- Provide a clear plan for ensuring project compliance
- Provide a summary of the proposed terms, conditions, and other information needed to ensure compliance
- Serve as a consolidated resource for Growers
- Living document



Outline

1. Introduction
2. Project Location and Description
3. Grower Selection Process
4. Summary of Agreements: VPD and Growers
5. Grower Trainings
6. Overview of Project Permits and Conditions
7. Monitoring and Reporting Responsibilities
8. Compliance Monitoring and Enforcement Protocol
9. VPD Project Administration and Management
10. Refinement and Adaptive Management
11. Process for Permit Amendments



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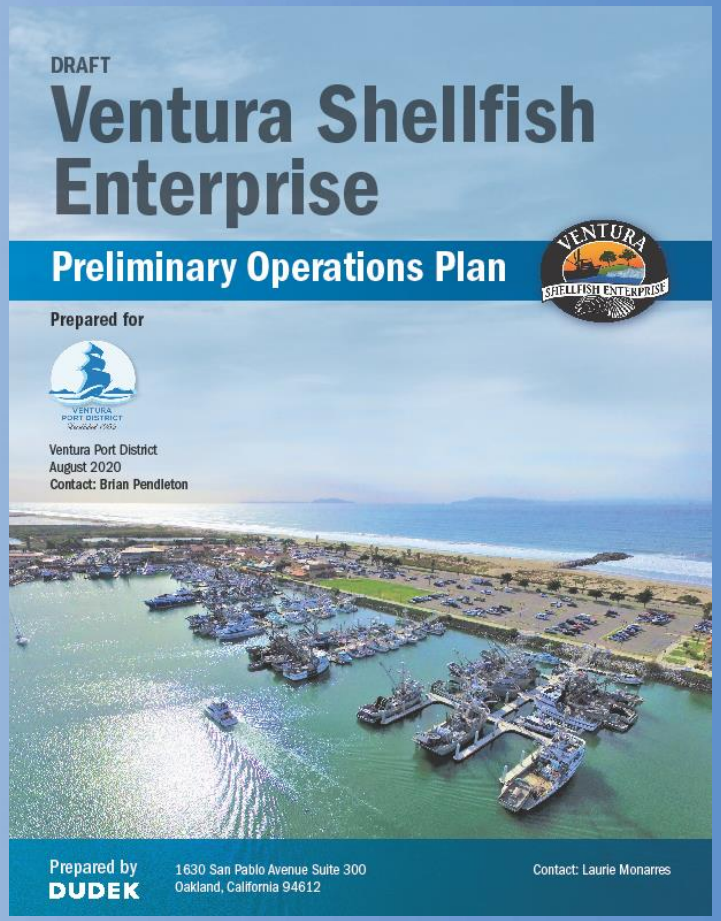


Process Overview

RS

Project Approvals Acquired

- Section 10 RHA Permit (Corps)
- CCC Consistency Certification
- Management Plans (Corps, CCC)
- FDA & NOAA National Shellfish Sanitation Certification
- USCG PATON Approval

Grower Selection Process

- VPD posts RFQ / RFP
- Prospective Growers submit applications
- VPD staff reviews applications, conducts interviews, and ranks
- VPD staff recommends applications to the Board of Port Commissioners
- VPD issues individual permits/authorizations

Baseline Sediment Sampling

- VPD Bid Posting
- VPD Staff Recommends to Board
- Consultant Selected
- Phased Baseline Sampling

VPD and Grower Agreements

- Growers enter into agreements with VPD
- Growers submit decommissioning plans and surety bond

Grower Training Provided

- Voluntary – targeted for new mussel Growers
- Mandatory – covers project conditions

Project Permits and Conditions

RS

Mitigation, Monitoring, and Reporting Program (Example)

- **Baseline and Annual Substrate Sampling**
- **On-Going Education**
  - Mandatory Annual Trainings - Permit Conditions, Predator Control, Marine Wildlife, Invasive Species, Spill Prevention and Response, etc.
- **Communication**
  - Update NOAA Charts, Notice to Mariners (Construction)
- **Wildlife / Entanglement / Vessel Collision**
  - Equipment Identification
  - Regular Gear Inspections (Growers and VPD Harbor Patrol)
  - Marine Wildlife Observers (Construction)
  - Vessel Speed Restrictions
  - Lighting
  - Decommissioning Plan
  - Reporting Requirements

Marine Mammal Entanglement

- **Impact Analysis**
- **Project Design**
  - Low-breaking strength twine
  - Breakaway links
  - Sinking ropes
  - Spat collector lines prohibited
  - Engineered to maintain taut lines
- **Mitigation Measures in Various Management Plans**
  - Aquaculture Gear Monitoring & Marine Debris, and Wildlife Entanglement Plan
  - Gear Removal Plan
  - Adaptive Management
  - Biological Assessment - Conclusion
    - No take of marine mammal or turtle species expected through implementation of avoidance measures and best management practices
- **NOAA Whale Entanglement Simulator**

Monitoring and Reporting

LM

Growers Required to Submit Compliance Reports

- Immediately (spills, wildlife entanglement)
- Monthly (construction)
- Annually (operations)

↓

VPD Reviews, Requests Clarification, Compiles, and Sends to Agencies

Electronic Reporting Database and Forms

- Fast and Easy to Use
- Auto Generated Reports
- Improves Transparency
- Efficiently Track Compliance

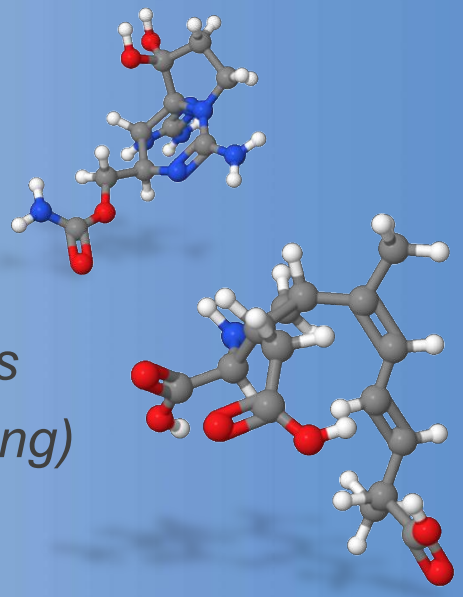
Shellfish Sanitation

RI

Growers are required to comply with the Biotoxin Management and Contingency Plan developed for the growing area (underway)

Developed in consultation with the FDA, the Plan establishes the policies/ procedures that growers must implement to address (avoidable) health threats posed by marine biotoxins in the growing area

- *Sample and test product for biotoxins*
- *Close farming areas/embargo harvested mussels when necessary*
- *Prevent the harvesting of contaminated mussels*
- *Disseminate biotoxin threats (inferred from testing) to the relevant agencies/authorities*
- *Execute product recalls …*



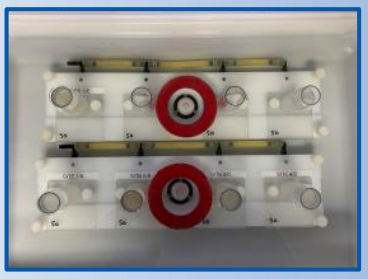
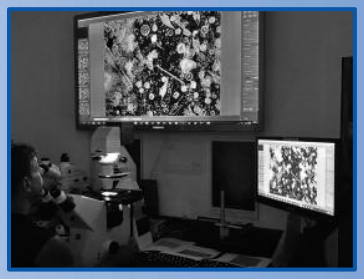
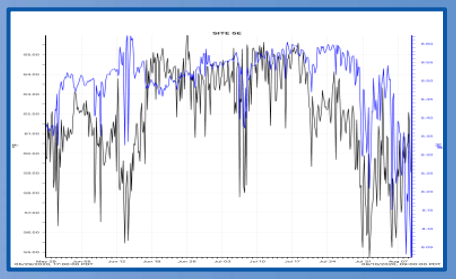
Shellfish Sanitation

RI

The VSE is currently collecting the baseline data necessary to develop a growing area-wide Biotoxin Management and Contingency Plan

- *Enumeration of biotoxin-producing phytoplankton in seawater samples collected at 5 sampling stations distributed within the growing area*
- *Screening for biotoxins in mussel sentinels grown at each station*
- *Collection of physical data*



Shellfish Sanitation

RI

The VSE is also collaborating with the FDA on a customized, multi-user data management and reporting system

- *Assist growers in complying with reporting requirements to FDA and NOAA-SIP*
- *Streamline the review of product testing data by regulatory authorities*
- *Establish a pathway for the rapid dissemination of biotoxin threats to the entire system user network (incl. designated data managers or growers, regulated testing lab personnel, regulatory agencies, water treatment authorities and other public agencies, etc.)*
- *Simplify and streamline the evaluation of biotoxin data by the FDA for revisions to the area-wide Biotoxin Monitoring and Contingency Plan*

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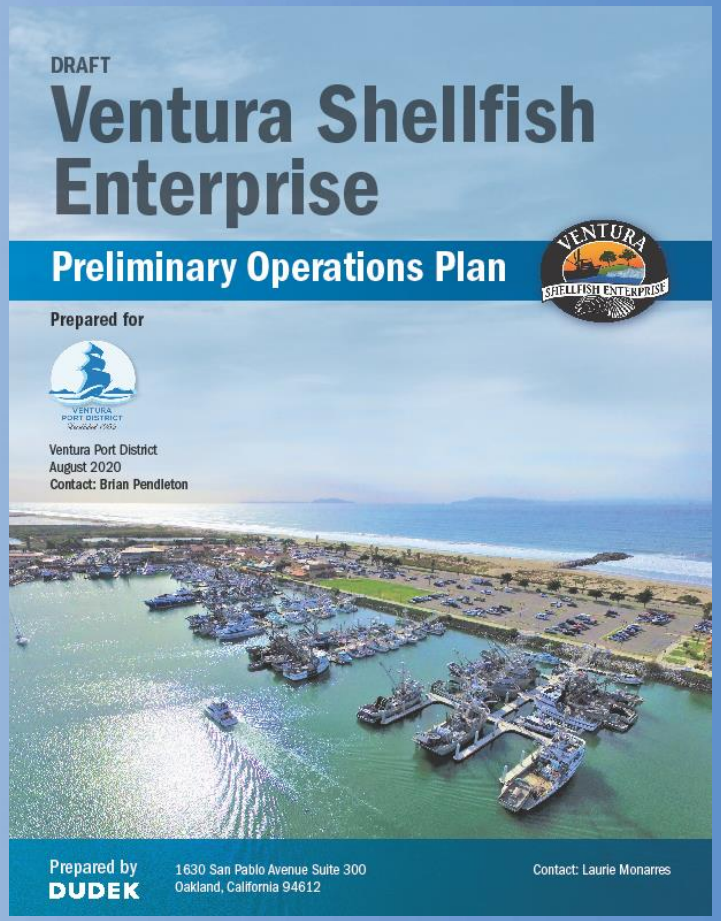

Compliance and Enforcement

BP

VPD Harbor Patrol

- Provide support for the VSE project
- Inspections
- Patrolling
- Responding to Issues
- Emergency Response

Violations and Non-Compliance

1. Grower receives notice from VPD; Regulatory agencies also notified
2. Third-party monitoring may be necessary (costs paid by Growers)
3. For severe or frequent violations or issues of non-compliance, individual permit or agreement with VPD terminated

VPD Admin. and Management

- Summary of VPD Responsibilities and Anticipated Labor (range of hours)
- Project Administration Categories
  - Administrative Management
  - Enforcement Management
  - Contract Management
  - Accounting Management
  - Dockside Management
- Existing Staff, New Staff, Outside Consultants, or a Combination

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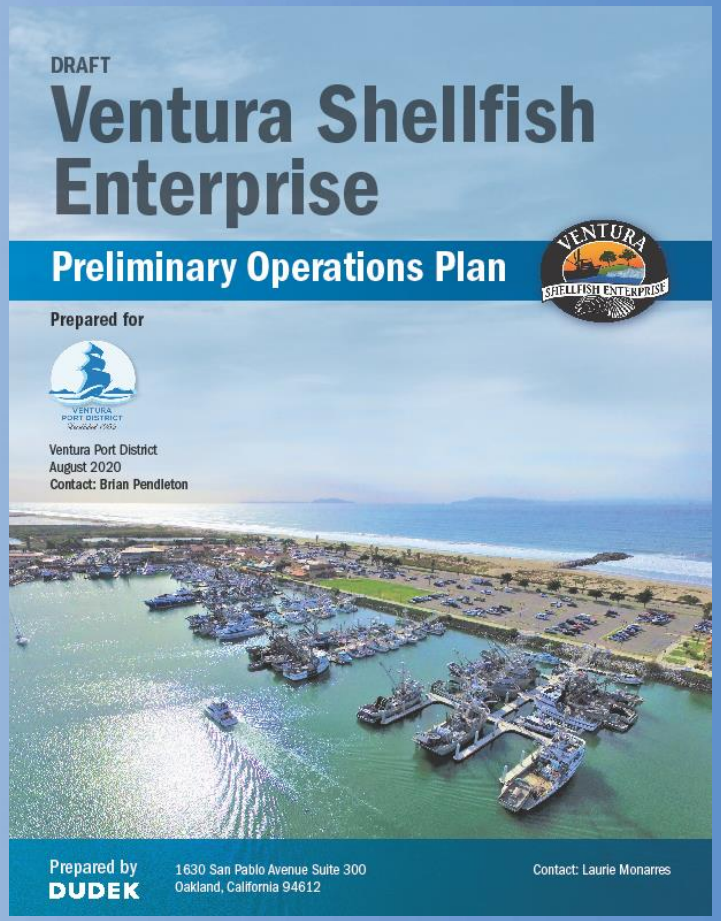


Refinement and Adaptive Management

JD

- Operations Plan is a living document
- Unforeseen Issues
  - VPD Consults with Regulatory Agencies to identify and implement adaptive measures
  - Consider the results of monitoring and subsequent adjustments to monitoring efforts
- Sediment, Benthic, Water Quality Monitoring – 3 years at 80% capacity
- Derelict Gear Adaptive Management Triggers

Trigger No.	Trigger Description	Grower Actions
1	Derelict fishing gear collects on project structures; no wildlife entanglement	Remove gear as soon as feasible, notify VPD, collect lost gear*
2	Live non-listed species entangled or impinged	Remove gear as soon as feasible, photo/video of entanglement, notify VPD, submit report to VPD*
3	Marine mammals alive but appears debilitated	Record sighting*
4	Live protected species entangled	Immediately contact NOAA Fisheries. With VPD, consult with agencies.

* If necessary, consult with agencies in order to modify the project/plan.

Process for Permit Amendments

RS

- VPD processes all entitlements
- Growers operation must be consistent with the approved project
- Grower may seek permit amendments
  1. First, obtain VPD approval
  2. Second, seek approval from Corps and CCC

- Examples of design modification that **do not require** a permit amendment
  - Increasing or decreasing the number of buoys
  - Changing brands
  - Changing the depth of the backbone (provided that it is not shallower than 15 ft.)

- Examples of design modifications **requiring** a permit amendment
  - Modifications to species cultivated
  - Significant differences in cultivation technique
  - Modifications to reduce spacing or increase the density and/or weight of longlines
  - Modifications of permit conditions

ECONOMIC AND FISCAL IMPACTS

Michael Wright

Illuminas Consulting

Objectives

- Estimate the quantitative impacts that the VSE program will have on the local economy
- At full operations, how will it stimulate the County's economy?
- Support for local jobs and businesses
- Generate net revenues for the Port District
- Generate tax revenue for surrounding cities.

Economic and Fiscal Impact – What Is Measured?

Economic Impacts - Based on Farming Operations (upstream effects)

- VSE grower purchases (vendor and services spending)
- VSE employee consumer purchases
- One-time capital purchases by growers for start-up equipment and vessels

Economic Impacts - Based on Potential for Capture of Downstream Activity

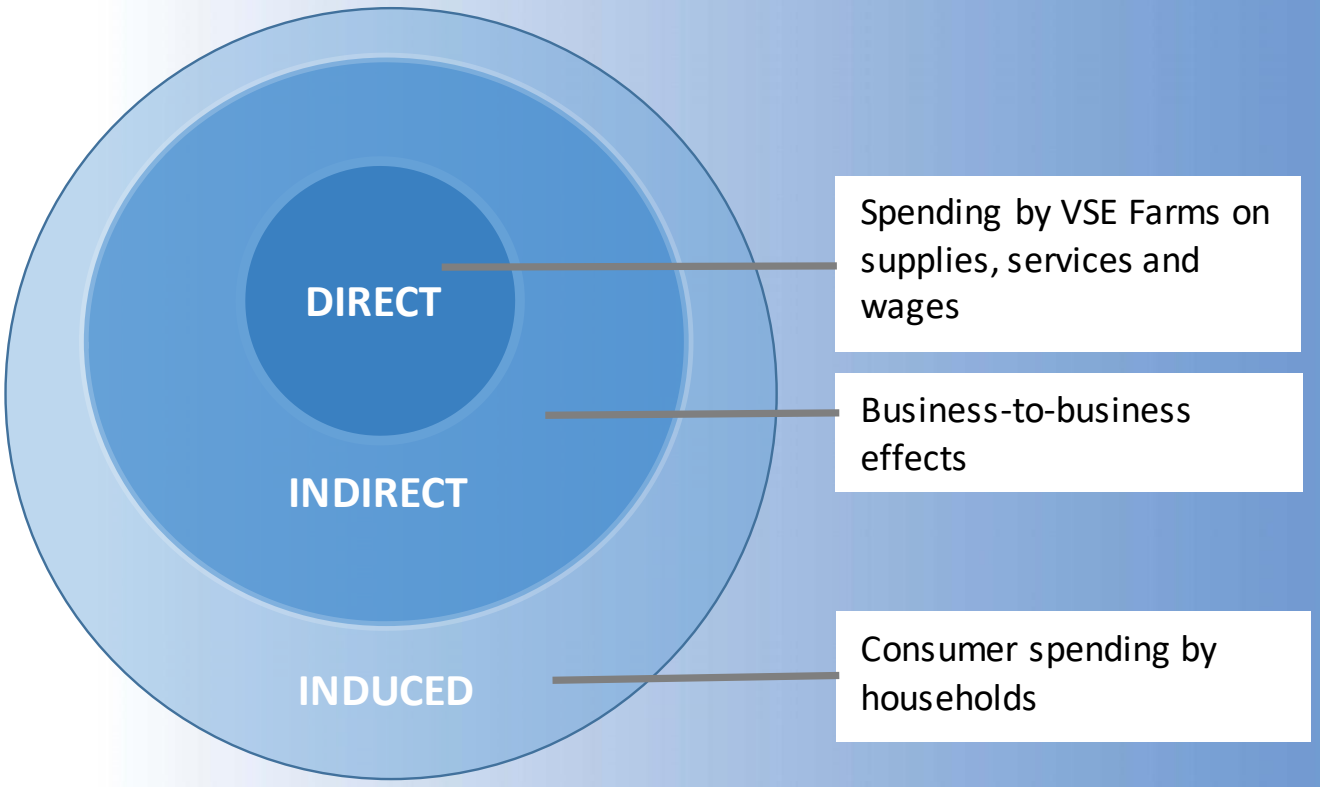
- Aspirational projection based on concerted effort to expand areas' capacity for processing and wholesaling operations of shellfish product once it leaves the port.
- What is possible if we keep it a portion of this process local?

Fiscal Impact to Port and Local Cities

- Port District revenues from growers
- Port District costs related to running the VSE program
- Revenues to cities from sales tax and UUT
- Sales tax and UUT

What Is Economic Impact?

- **Direct spending** - supplies, services and wages by VSE farmers
- **Local purchases** made by farmers and their employees support local business and the other businesses that supply them.
- This is the multiplier effect:



Source Material

- *The Economic Impact of Shellfish Aquaculture in Washington, Oregon, and California* – Pacific Shellfish Institute - multipliers for ongoing farmer operations
- Scott Lindell's example growers' proforma - used to estimate direct vendor spending, wages and farmer revenues.
- IMPLAN multipliers used for capital purchases and illustrative downstream impacts.
- VSE Cost information from the Port District - used for fiscal impact
- The VSE Draft Operations Plan - used for Port District staffing cost estimates


The Economic Impact of Shellfish Aquaculture in Washington, Oregon and California

Prepared for

Pacific Shellfish Institute

April 2013

Prepared by

Northern Economics

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Impacts of VSE Farm Operations (20 Farms)

$17.9M

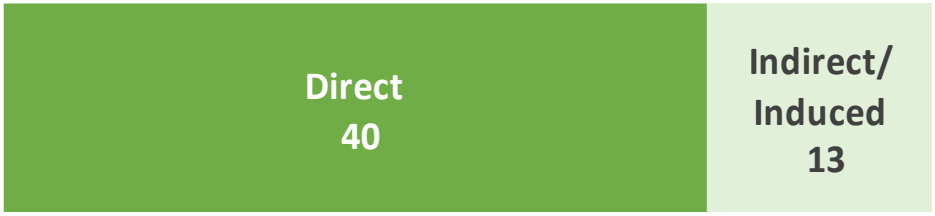
Total Economic Output Generated

$4.2M

Total Compensation Generated

53

Total Jobs Supported



Impacts of One-Time Start Up Spending for Capital Investment Farms

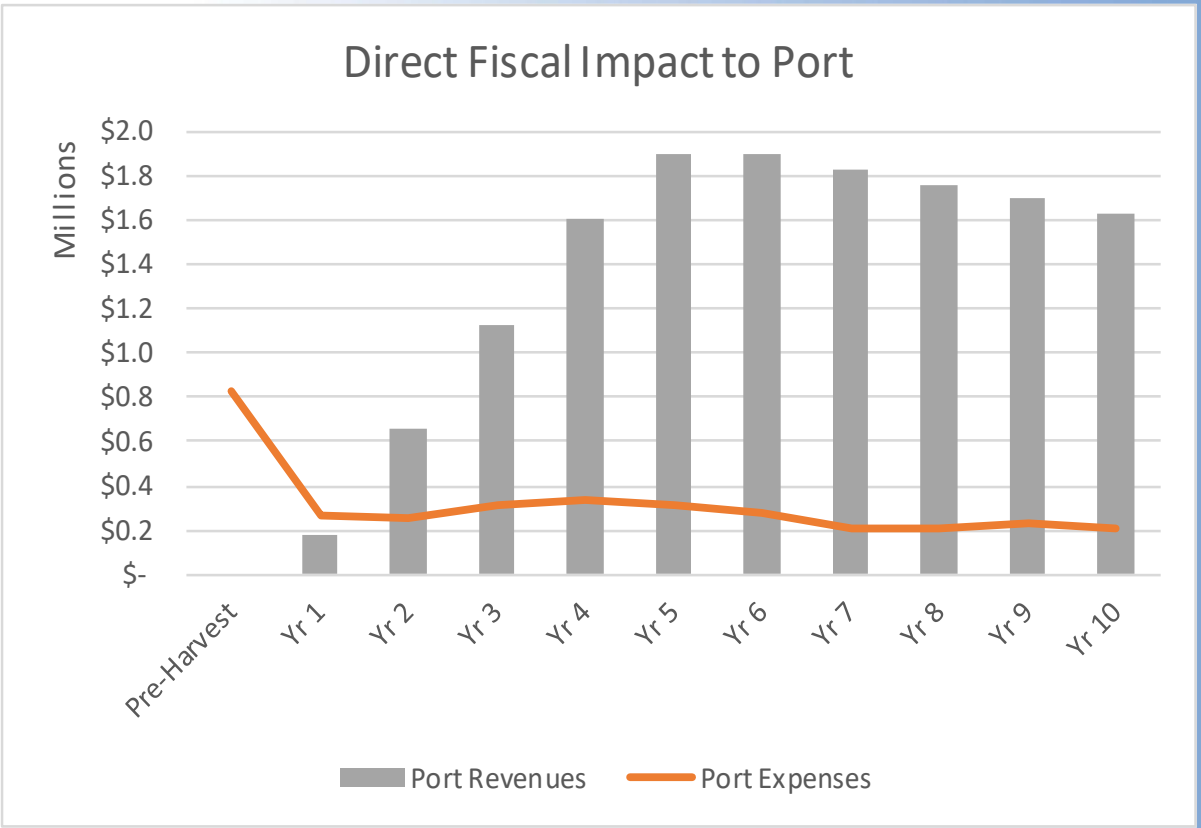
	Phase 1	Phase 2	Phase 3	Phase 4
Capital Purchases By Phase	$5.9M	$5.9M	$5.9M	$5.9M

Impact of Startup Spending

$23.6M + $13.3M = $36.9M

One-Time Spending for Startup Equipment	Indirect and Induced Output in Ventura County	Total Impact in Ventura County

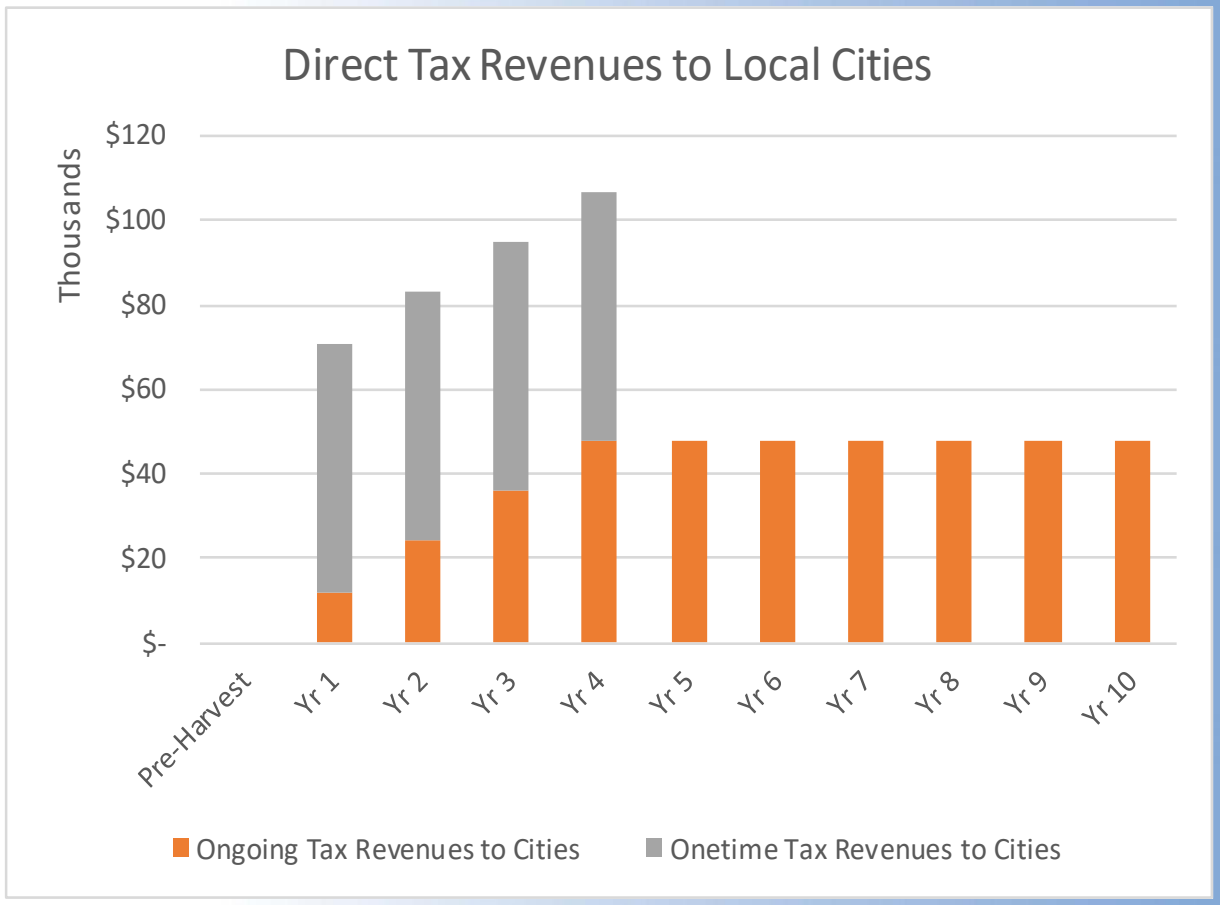
Fiscal Impact to Port District



$10.8M

Net Impact to Port Over Ten Years

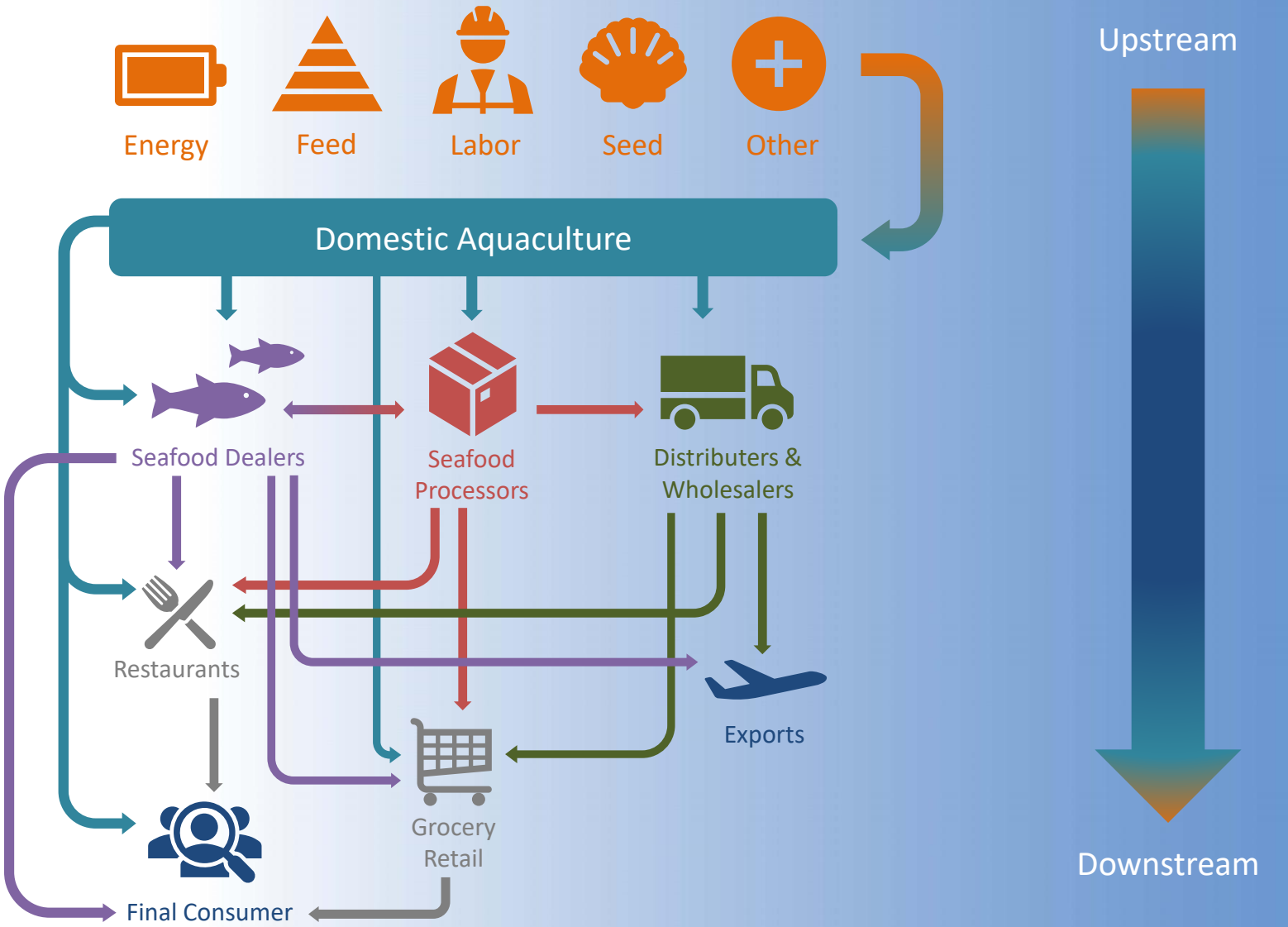
Fiscal Impact to Local Cities



$643,000

Tax Revenue to Local Cities Over Ten Years

Illustration of Downstream Economic Effects



Potential Downstream Economic Impacts

Direct Grower Jobs	**40**	*Jobs associated with 20 farms by build out*
Up/Downstream Jobs	**57**	*Projected upstream and downstream jobs not including grower jobs*
Total Job Impact	**97**	*Direct VSE Jobs + all additional direct, indirect and induced jobs*
MULTIPLIER	**2.4**	*For every direct grower job, 1.4 additional jobs would be supported.*

GROWER 10-YEAR PROFORMA EXAMPLE

Scott Lindell

Woods Hole Oceanographic Institution

GROWER 10-YEAR PROFORMA EXAMPLE

Scott Lindell

Woods Hole Oceanographic Institution

Review of Key Assumptions for VSE's 100-acre Mussel Farm

Description	Year 1	Year 2
Key Assumptions		
Number of Market Longlines harvested	0	20
Number of Nursery Longlines cycles	4.0	4.0
Total Long Lines installed	24	24
Annual Production (lbs.)	-	585,000
Wholesale price ($ /lbs.)	$ 2.50	$ 2.50
Initial Loan Amount at 5% interest	$ 1,100,000.00	

Assumes about 15 % of initial investment (about $160K) is made personally

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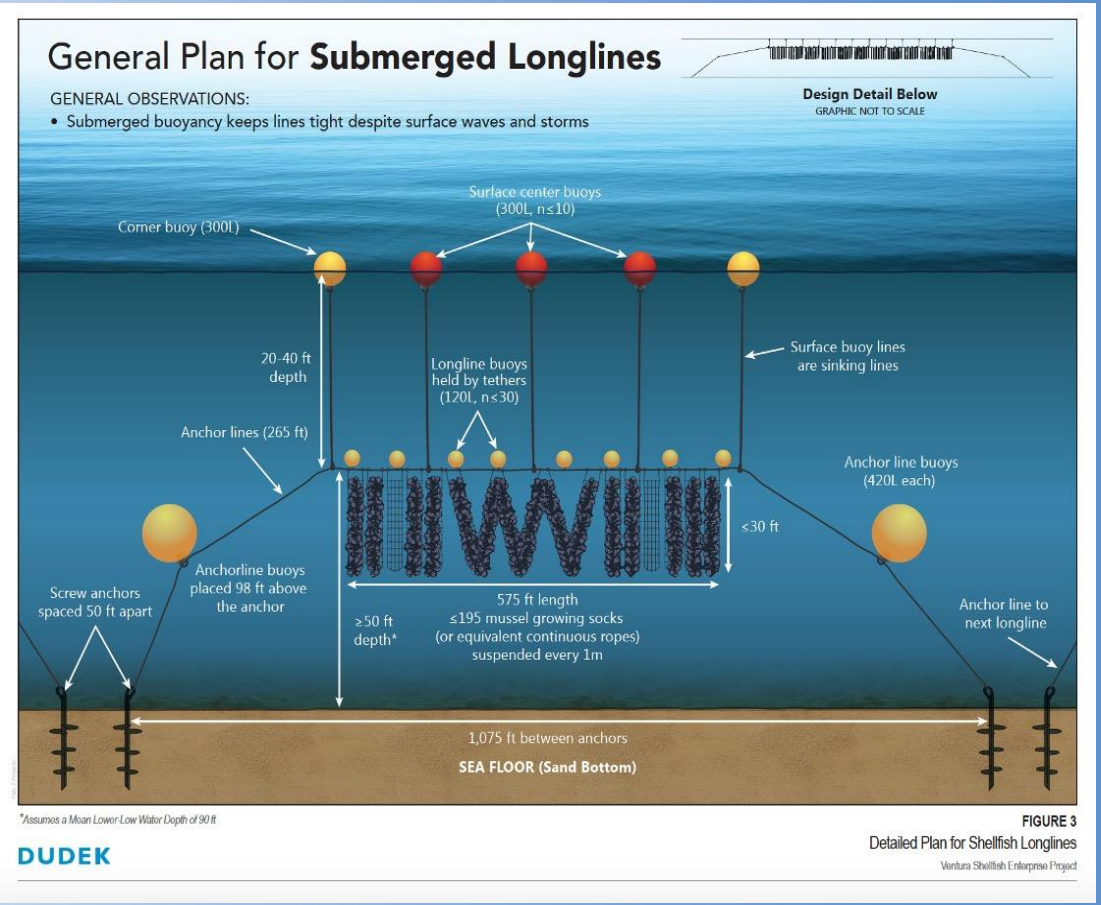
Grower Startup Costs

One Longline = $17K

24 lines = $408K

Decommissioning
Escrow - $80K



Vessel & Equipment Investments

$300,000 (Y1) + $20,000*

Photo credit – Scott Lindell

40’ Service Boat for **100 acres**

$1.5 Million (Y2) + $150,000**

Photo credit – John Holmyard, Offshore Shellfish

80’ Harvest Boat **for 500 acres**

*Specialized seeding and **harvesting equipment

Start-up Investments

Startup Investment	Year 1	Year 2
Longlines	-$ 407,808.00	$ -
Specialized Seeding (Y1) and Harvesting (Y2) Eqpt.	-$ 20,000.00	-$ 150,000.00
Service vessel (Y1), 1/5th of Harvest vessel (Y2)	-$ 300,000.00	-$ 300,000.00
Decommissioning Escrow account	-$ 80,000.00	$ -
Total Startup Investment	**-$ 807,808.00**	**-$ 450,000.00**

Annual Operational Farming Cycle

- Seeded ropes for a farm are purchased between Nov. and Feb.
- These occupy 4 of the 24 Longlines.
- After growing for 3 to 6 months **each** seeded rope is stripped and transferred at lower density to occupy 5 of the growing lines at staggered intervals of every month or two.
- By November (a year later) growing lines are harvested steadily (approximately 2 lines per month) leaving room for new seed to be ”sown” on the newly emptied longlines.

Operational Expenses

Operational Expenses	Year 2	Year 3	Year 4
Farming costs			
Wages, salaries, benefits	-$ 126,750.00	-$ 126,750.00	-$ 126,750.00
Administration	-$ 15,000.00	-$ 15,000.00	-$ 15,000.00
Seed costs	-$ 92,160.00	-$ 92,160.00	-$ 92,160.00
Property insurance - stock mortality	-$ 73,125.00	-$ 73,125.00	-$ 73,125.00
Property insurance - land based equipment	tbd	tbd	tbd
Vessel insurance (Hull & Machinery, + $1M of P & I)	-$ 24,700.00	-$ 22,336.00	-$ 21,830.98
Utilities	-$ 18,250.00	-$ 18,250.00	-$ 18,250.00
Fuel	-$ 72,000.00	-$ 72,000.00	-$ 72,000.00
Repairs & maintenance	-$ 56,546.56	-$ 88,046.56	-$ 88,046.56
Marketing	tbd	tbd	tbd
Slip Fees	-$ 8,355.80	-$ 8,355.80	-$ 8,355.80
VPD Landing Fees	-$ 73,125.00	-$ 73,125.00	-$ 73,125.00
Sub-Total Farming costs	**-$ 560,012.36**	**-$ 589,148.36**	**-$ 588,643.34**

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Monitoring and Compliance

Monitoring & Compliance	Year 1	Year 2
Start-up Education and Training (1)	-$ 615.00	$ -
Start-up Construction Wildlife Monitoring (2)	-$ 10,500.00	$ -
Baseline Substrate Sampling (plus coordination and reporting) (3a + 4)	-$ 5,517.00	$ -
Laboratory testing (water and sediment quality, shellfish bio-toxin*) (4)	-$ 9,636.00	-$ 9,636.00
Monitoring (Benthic and WQ sample collection, Gear Inspections^) (3b)	-$ 2,548.00	-$ 2,548.00
Project Coordination, Analysis and Reporting (3c)	-$ 1,240.00	-$ 1,240.00
Sub-Total Monitoring & Compliance	**-$ 30,056.00**	**-$ 13,424.00**

Numbers 1, 2, 3, 4 correspond to details in Operations Plan

Current Proforma assumes monitoring burden is relaxed after 6 years of low/no impact

Expenses and Revenue Summary

Debt Repayment	Year 1	Year 5	Year 10
Yearly Payments	-$ 140,006.48	-$ 140,006.48	-$ 140,006.48
Total Operational Expenses	-$ 451,392.48	-$ 742,480.55	-$ 721,947.75
Total Revenue	$ -	$ 1,462,500.00	$ 1,462,500.00
Pretax Profit	-$ 1,259,200.48	$ 720,019.45	$ 740,552.25
Pretax Cumulative Profit	*-$ 1,259,200.48*	*$ 1,196,494.47*	*$ 4,870,454.72*

Last debt payment is made in Year 10 thus lowering expenses and increasing profitability in Year 11

PRESENTERS

Brian Pendleton
Ventura Port District

Robert Smith
K&L Gates

Laurie Monarres, John Davis IV, Andrea Dransfield
Dudek

Michael Wright
Illuminas Consulting

Scott Lindell
Woods Hole Oceanographic Institution

Ralph Imondi, Linda Santschi
Coastal Marine Biolabs

Doug Bush
The Cultured Abalone Farm