



VENTURA  
PORT DISTRICT  
*Established 1952*

**BOARD OF PORT COMMISSIONERS**

**JULY 7, 2021**

**CONSENT AGENDA ITEM F**

**RECEIVE AND FILE THE VENTURA  
SHELLFISH ENTERPRISE ANNUAL  
REPORT**

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TO: Board of Port Commissioners  
FROM: Brian D. Pendleton, General Manager  
SUBJECT: Receive and File the Ventura Shellfish Enterprise Annual Report

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**RECOMMENDATION:**

That the Board of Port Commissioners receive and file the annual report for the Ventura Shellfish Enterprise (VSE).

**SUMMARY:**

An annual report of project activities is required to be submitted to California Sea Grant. Attachment 1 provides a summary of activities related to Tasks 4-7 described below through May 31, 2021. Task 8 will be completed when the grant concludes as of August 31, 2021.

**LONG-TERM GOALS:**

- Goal 1: Safety & Navigation
  - Maintain and enhance a safe and navigable harbor
    - a: Securing funding for dredging the Harbor entrance through the Army Corps of Engineers in coordination with agencies and our elected officials
- Goal 2: Commercial & Recreational Boating & Fishing
  - Support and promote commercial and recreational boating and fishing

**5-YEAR OBJECTIVES:**

- Objective F: Commercial Fishing
  - Support current commercial fishing industry central to Ventura's premier working waterfront through: stakeholder engagement, diversification, and infrastructure improvements
    - 3: VSE Project Grant Utilization
- Objective D: Harbor Dredging
  - Ensure that annual dredging occurs at the federal Harbor entrance and as needed in the inner Harbor
    - 1: Support and advocate for congressional funding to the Army Corps of Engineers in support of the Harbor's annual dredging program

**BACKGROUND:**

For a detailed discussion of the project origins, goals, objectives, grant history, team members and volunteer partners please see the Board Report dated July 17, 2019 Ventura Shellfish Enterprise Status Report. The report can be found at the District's website at <https://venturaharbor.com/board-meetings-minutes-archive/>.

The Port District is the recipient of a NOAA 2018 California Sea Grant (2018 CA Sea Grant) sub-award of \$266,660. The 2018 CA Sea Grant is a two-year grant, with a one-year extension with the following deliverables:

- Task 4 - Permit Assignment Strategy
- Task 5 - Environmental Review
- Task 6 - Shellfish Sanitation

Task 7 - Grower/Producer Compliance Training Program and Information Dissemination  
Task 8 - Project Summary

An Annual Report of project activities during the grant year is required to be submitted to CA Sea Grant. Attachment 1 provides a summary of activities related to Tasks 4-7 through May 31, 2021 that was submitted to the CA Sea Grant. Task 8 will be completed when the grant concludes.

**FISCAL IMPACT:**

There is no fiscal impact associated with this informational report. The 2018 CA Sea Grant sub-award is \$266,660, of which \$21,151 is remaining as of June 30, 2021. The District's required cost match for the 2018 CA Sea Grant is \$272,210. This cost match is achieved through volunteer contributions of time by Ashworth Leininger Group (ALG), Coastal Marine Biolabs (CMB), The Cultured Abalone (TCA) and District staff plus direct costs incurred by the District. The accounting of these costs and volunteer hours are documented through quarterly financial reports prepared for Board consideration and approval.

**ATTACHMENTS:**

Attachment 1 - Ventura Shellfish Enterprise: Implementing an Integrative Model for New Shellfish Aquaculture Permitting and Production in Federal Waters Proximate to Ventura, California. Project: R/AQ-141; Reporting Period 06/01/2020– 05/31/2021.

**Ventura Shellfish Enterprise: Implementing an Integrative Model for New Shellfish Aquaculture Permitting and Production in Federal Waters Proximate to Ventura, California.**

**Project: R/AQ-141; Reporting Period 06/01/2020– 05/31/2021**

On September 28, 2018 the Board of Port Commissioners authorized the General Manager of the Ventura Port District (Port District) to prepare and submit a permit application to the Army Corps of Engineers (Corps) for use of 2,000 acres of sea water bottom in federal waters near Ventura Harbor in Block 664 and 665, the area generally depicted and described as CASS Report Alternative 1 for the Ventura Shellfish Enterprise (VSE) project; and, the Ventura Port District prepared and submitted all other applications to local, state and federal agencies as required for the VSE project including the Corps and California Coastal Commission (CCC); and, prepared all necessary surveys, studies, reports and federal environmental review documents as directed by local, state and federal agencies as required for the VSE project.

On March 17, 2021 the Board of Port Commissioners considered the next steps for the VSE project and approved of several actions which included (1) providing support for the establishment of a Southern California Aquaculture Opportunity Area (AOA) and (2) formally withdrawing applications for the VSE project from the Corps and CCC on August 31, 2021. As part of the actions, the Port District will provide all studies, reports, and data gathered as part of the VSE project to NOAA; complete all tasks required for completion of the Sea Grant by August 31, 2021; seek opportunities to collaborate with the aquaculture industry to establish sustainable aquaculture farms that can land product in Ventura Harbor; and vigorously advocate for the establishment of sustainable aquaculture farms in the Santa Barbara Channel proximate to the Ventura Harbor.

In May 2021, California Sea Grant received revisions to Task 7 and Task 8 consistent with the Board's policy direction. Task 7 is discussed below. Task 8 will be provided with the final grant submission.

**Task 4: Permit Assignment Strategy**

As noted above, permit applications were previously submitted to the Corps and the CCC in 2018. The Port District was engaged in discussions with agency staff regarding clarifications of the project description, proposed conditions, mitigation measures, and monitoring plans. Between 2018 and 2020 the Port District received and responded to several requests for additional project information from the agencies, including the Corps, CCC, and U.S. Coast Guard. As reported previously, in January 2020, the Corps requested two documents in order to continue processing the permit application: (1) a draft navigational risk assessment; and (2) documented resolution with the Ventura County Local Agency Formation Commission (LAFCo). Due to the time it would take to produce the requested information, the Corps withdrew the Port District application in February 2020. It was anticipated that once the Corps received these requested documents, the application review process would be re-initiated.

In November 2020, the Port District approved a Preliminary Operations Plan, which provided substantial additional detail regarding the proposed permitting strategy for the

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project and how various tasks and responsibilities would be delegated between shellfish growers, the Port District, and other regulatory agencies. The approach proposed in the Operations Plan would have expedited review by the Corps and other regulatory agencies while allowing the Port District to retain some control over the VSE project, similar to structures recently approved by the Corps as part of California habitat conservation plan and aquaculture permitting in Washington State.

Unfortunately, despite substantive efforts to work with the state legislature to resolve the jurisdictional conflict with Ventura LAFCo, the Corps application continued to remain on-hold. In the meantime, NOAA had identified Southern California as one of two proposed AOAs. Ultimately, the Port District was not able to engage in substantive discussions with the Corps regarding this proposal because it was not able to resolve its issues with LAFCo, and therefore was not able to resume permitting discussions with the Corps concerning the VSE project.

While the Port District could have considered alternatives to the recommendations, such as relocating the project to State waters to resolve the LAFCo jurisdictional conflict and some environmental NGO concerns, the California Fish and Game Commission (FGC) has indicated they face significant challenges in processing aquaculture applications, such as the VSE project, due to resource constraints. Therefore, it would likely be a lengthy time-period for the FGC to process an application for the VSE project. The Port District would also need to commission development of an environmental impact report to comply with the California Environmental Quality Act. Further, the Port District relocated the project from state to federal waters after significant opposition was received by commercial fishing interests. If successful, the AOA process could also facilitate expedited permitting for aquaculture projects in Federal waters. NOAA is considering an alternative that would identify potential aquaculture sites located in the Santa Barbara Channel, partially based upon the science and data collected for the VSE project.

Given the direction from the Port District's Board of Commissioners in March 2021 to withdraw the pending applications for the VSE project, the Port District will not continue to develop this unique permitting proposal. However, the Port District has met with the Corps to discuss the Port District's intent to continue to vigorously support shellfish aquaculture in the Santa Barbara Channel. The Port District believes that this permitting framework could be useful to port authorities and harbor districts in the future seeking to assist in permitting aquaculture operations.

### **Task 5: Environmental Review**

As noted above, during the reporting period the Port District continued to pursue studies and efforts to re-initiate the Corps permitting process as well as provide clarity on grower economic projections associated with the project. Specifically, during the reporting period the Port District, VSE volunteers, and consultants produced the following studies:

- Navigational Risk Assessment (COWI, July 2020)
- Ventura Shellfish Enterprise Preliminary Operations Plan (Dudek, November 2020)
- Engineering Evaluation of Break-away Links and Cascading Failure Risk for a Mussel Backbone System (Kelson Marine Co., November 2020)

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- Economic and Fiscal Impact Analysis (Illuminas Consulting, November 2020)
- Grower Proforma (Scott Lindell, November 2020)
- Spatial Analysis to evaluate options for siting Ventura Shellfish Enterprise in California State Waters, Santa Barbara Channel, California USA (NOAA NCCOS, September 2020)

It should be noted that the Navigational Risk Assessment is believed to be the first completed for an aquaculture project in the U.S. and can be used to help inform NOAA in siting within the Santa Barbara Channel as part of the AOA process. All of these documents have been made publicly available through the Ventura Port District Board of Port Commissioners public meetings and will be posted on the Port District website in the future. During the reporting period, a detailed grower proforma was also developed for the project to illustrate projected 10-year grower costs and revenues associated with operating a 100-acre plot in the VSE project area. This proforma was included as an attachment to an Economic and Fiscal Impact analysis, which was developed to provide a review of estimated economic impacts associated with the VSE project. This analysis considered both fiscal projections for the Port District (such as revenues from project fees and other costs) and economic projections related to job impacts throughout the region. Additionally, during the reporting period the Port District continued to explore options to site the VSE project in State Waters, including working with NOAA to produce a spatial analysis, as listed above.

The Navigational Risk Assessment and Preliminary Operations Plan (with the Engineering analyses as an attachment) were submitted to the state and federal agencies for their review and consideration in the Fall of 2020. Since that time, the Port District engaged in further discussions with environmental NGOs, state, and federal agencies to discuss project siting. In addition, on June 11, 2020 the Port District, consultants, and James Morris (NOAA) presented on the VSE project and NOAA science to support aquaculture siting and management to the Pacific Fishery Management Council Habitat Committee. Subsequent to the Board's March 2021 decision, the Port District, VSE volunteers, and consultants are in the process of planning for public outreach and presentation opportunities.

### **Task 6: Seafood Safety and Quality**

#### Implementation of Baseline Biotoxin Monitoring Program

At the time of the previous annual report, Coastal Marine Biolabs (CMB), The Cultured Abalone Farm (TCAF), and a small group of community volunteers had installed five U.S. Coast Guard (USCG)-approved sampling stations within the proposed project site. As previously noted, the detection of biotoxins in mussel sentinels grown at each station, and the enumeration of biotoxin-producing phytoplankton collected at (or adjacent to) each installation, represent the core elements of a baseline biotoxin monitoring program (B2MP) the team developed in consultation with the FDA and the NOAA Seafood Inspection Program (NOAA-SIP) during the previous reporting period. The biotoxin data obtained through this effort is intended to aid FDA representatives in the design of an area-wide Biotoxin Monitoring and Contingency Plan that will ultimately specify the control

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procedures and articulate the biotoxin testing requirements for future mussel growers who harvest product within the project area. The details associated with the B2MP, including testing locations, methodologies, frequency, etc., are outlined in the Revision to Subtask 6 document that was previously provided to NOAA Sea Grant staff for review and approval.

To detect biotoxin accumulation in mussel tissue extracts, the team suspended mussel sentinels (*Mytilus galloprovincialis*) from each sampling station during the current reporting period. The team also designed and installed a retrieval device on the vessel used for field collections to ensure the safety of our staff and volunteers during the collection of sentinels, and facilitate the routine maintenance of station gear (which includes submersible pH and temperature loggers, GPS trackers, and structural components of each sampling station). Mussel sentinels were obtained as spat from Penn Cove Shellfish (Coupeville, Washington) under a Standard Importation Permit (No. 2020 – 6011) issued by the California Department of Fish & Wildlife. The spat received from Penn Cove Shellfish was affixed to a linear segment of substrate (fuzzy rope) and allowed to grow to an appropriate size at TCAF before being transported to the field and suspended from sampling stations in accordance with USCG Private Aids to Navigation Permit NWP5. The sentinels have reached an appropriate size to initiate biotoxin screenings, which will commence in July 2021 and proceed on a monthly basis.

In accordance with the B2MP, the team also initiated monthly collections/analyses of phytoplankton samples, and recorded pH and water temperature at each sampling station between collection events. Duplicate water samples obtained from the sampling station located near the center of the project site (Station 3C) were also shipped to the California Department of Public Health (CDPH) lab in Richmond, CA for independent analyses. In addition to supporting project efforts, the data obtained from these offshore samples are also contributing to longstanding CDPH monitoring programs for shellfish toxins and associated toxin-producing phytoplankton. Beginning in July 2021, the team will begin shipping tissue from Station 3C mussel sentinels to the CDPH lab for analysis of ASP and PSP toxins. These analyses will further support the CDPH monitoring programs by providing an offshore data point for shellfish toxins.

Despite the planned withdrawal of the permit application by the Ventura Port District in August 2021 (see above), CMB is committed to continuing the B2MP program given its importance to relevant marine stakeholders and permitting efforts by future applicants. Furthermore, the program provides an excellent framework for interdisciplinary, science-based educational programming that aligns with CMB's educational mission. Accordingly, CMB is actively exploring several funding opportunities from the National Institute of Environmental Health Sciences (PAR-21-168 and RFA-ES-20-015) and other agencies to develop educational programming that utilizes key aspects of the B2MP program, including both lab and field components, to increase opportunities for hands-on research education and skills development in the environmental health sciences.

### Creation of an FDA-Approved Testing Laboratory

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The biotoxin testing protocols that are currently underway in the CMB lab involve the detection and quantification of biotoxin-producing phytoplankton in water samples (using a well-established microscopic detection and enumeration method), and the detection of ASP and PSP toxins in mussel tissue extracts (using commercially available rapid screening kits). As indicated in the prior annual report, both of these methodologies are now NSSP-approved biotoxin management strategies for mussel growers (and both were approved for inclusion in the most updated 2019 revision to the NSSP Model Ordinance). During the current reporting period, CMB finalized detailed standard operating procedures (SOPs) for the use of these methods. These SOPs will be included in a quality assurance manual that CMB will ultimately prepare as a requirement of FDA's testing lab evaluation pathway.

CMB's collaboration with FDA and NOAA-SIP on the design of a customized informatics platform for various stakeholders/end-users to organize, manage, validate transmit, review, and certify biotoxin data within a secure and shared online environment/database (see prior report for details) was unfortunately interrupted by the SARS-CoV-2 pandemic. Given the potential value of this platform to the public health safety strand of shellfish aquaculture projects more generally, CMB plans to resume our collaboration in fall 2021.

### **Task 7: Grower/Producer Compliance Training Program and Information Dissemination**

#### **Subtask 7.1: Grower/Producer Outreach and Inclusion**

To secure grower/producer tentative commitments, the Port District was undertaking three main work streams: (1) research and identify prospective local, regional, national, and international grower-producers that are suitable candidates for participation in the VSE project; (2) provide direct engagement with potential grower/producers; and (3) develop a Port District approved grower/producer application process. Work began in September 2018.

Work stream (1) is completed with the development of a database framework to input contact data for prospective grower-producers as described above and the initiation of research to identify suitable candidates. The database is comprised of contact information for approximately 750 individuals, institutions, and entities directly or indirectly associated with the production and/or distribution of sustainable seafood. The categories within the database are separated by geography for those involved in commercial operations globally, and by associations, research organizations, and fisheries academic programs. The database includes, but is not limited to, those who contacted the VSE project directly, both large and small scale domestic and international shellfish grower/producers, government and research institutions, supply and distribution entities, impact investors, industry associations and more.

Through May 31, 2021 no additional work was completed on work streams (2) and (3). Work stream (2) would have entailed more robust engagement contemplated as the project moved through the entitlement process; and work stream (3) would have been developed in consultation with the Corps, who is the permitting authority for the project.



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In May 2021, California Sea Grant received revisions to Subtask 7.1 work streams (2) and (3) and Subtasks 7.2-7.4 that are consistent with the theme and intent of this Task and that focus on outreach and education in the form of public presentations and dissemination of information; availability of aquaculture-related technical information; and the production of a fiscal and economic impact analysis. Efforts associated with revised Task 7 will be reported in the final report.