



## MEMORANDUM

TO: Ocean Protection Council  
FROM: Randy Lovell, DFW Aquaculture Coordinator  
Valerie Termini, OPC Project Manager  
DATE: June 28, 2013  
RE: California Shellfish Initiative

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### SUMMARY:

Shellfish farming is a coastal marine activity regulated by multiple local, state and federal agencies. The shellfish farming community has launched an initiative in an effort to better collaborate with those agencies, and seeks to enhance the level of planning for shellfish production and native shellfish restoration as well as explore the efficiency of current permitting processes.

The DFW Aquaculture Program, through its gubernatorially-appointed Aquaculture Coordinator, provides information on compliance and regulatory guidance to applicants on aquaculture project siting and design considerations. In addition, the coordinator provides a channel to deliver feedback to all levels of government officials about regulatory challenges on the aquaculture industry. Promoting an understanding of aquaculture projects among public agencies and the general public are central to the Coordinator's duties<sup>1</sup>.

The Aquaculture Development Committee, statutorily made up of industry, university, agency, and legislative representation, is convened by the Coordinator, advises the DFW Director on all issues pertaining to aquaculture, and is to coordinate aquaculture activities among public agencies<sup>2</sup>.

The California Shellfish Initiative (CSI) is a collaborative effort to enhance shellfish resources, protect and restore nearshore ecological functions, and create sustainable jobs in vulnerable coastal communities. It builds on NOAA's National Shellfish Initiative<sup>3</sup> and their Marine Aquaculture Policy<sup>4</sup>, established to meet global seafood demand and maintain healthy ecosystems. Shellfish farmers seek a thoughtful dialogue with local, state and federal leaders to produce a visionary California shellfish program.

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<sup>1</sup> F&G Code §15100

<sup>2</sup> F&G Code §15700-15703

<sup>3</sup> NOAA Fisheries Website: [http://www.nmfs.noaa.gov/aquaculture/policy/shellfish\\_initiative\\_homepage.html](http://www.nmfs.noaa.gov/aquaculture/policy/shellfish_initiative_homepage.html)

<sup>4</sup> NOAA Fisheries Website: [http://www.noanews.noaa.gov/stories2011/20110609\\_aquaculture.html](http://www.noanews.noaa.gov/stories2011/20110609_aquaculture.html)

To initiate the dialog, OPC staff recommends partnering with the Department of Fish and Wildlife's Aquaculture program to hold a workshop to explore issues and opportunities associated with the California Shellfish Initiative. This workshop will be put together using existing staff resources.

### **BACKGROUND**

California's coastal and estuarine waters are among the most productive ecosystems on earth. As such, these areas provide a rich habitat for shellfish production. Shellfish (oysters, clams, mussels, etc.) are a type of shellfish that can also provide critical ecosystem functions that support coastal ecology. Bivalve shellfish mariculture does not require feed or fertilizer inputs, nor insecticides or antibiotics, making the activity relatively benign on the near-shore ecosystem. Native oyster restoration can help serve to restore nearshore ecosystems with the added benefit of aiding in shoreline protection from sea level rise. Restoration of oyster populations are encouraged for the ecosystem services they provide, including water quality maintenance, shoreline protection and sediment stabilization, nutrient cycling and sequestration, and habitat for other organisms.

Paradoxically, California is the third largest shellfish consuming state in the U.S., while production only meets less than half of this demand. According to industry studies, California shellfish aquaculture currently represents an economic value of ~\$25M, including direct production, government receipts from taxes, permits, fees, and payroll revenues, as well as a modest economic multiplier effect (2x) from those "Blue Jobs" and business activities in the local economies<sup>5</sup>.

With substantial intertidal and offshore ocean areas ideal for cultivation, California's shellfish industry could supply a substantial local and export market. Shellfish mariculture in California primarily takes place in; Humboldt, Tomales, and Morro Bays, as well as Agua Hediondo Lagoon in Carlsbad and offshore of Santa Barbara. Shellfish are farmed in multiple ways: on ropes, in bags or cages, or directly on (or within) the intertidal substrate. California could lead the nation to meet an ever growing shellfish demand while creating environmentally sustainable jobs along our coast. Increasing harvest, restoring habitats and improving water quality is complex, and that complexity is reflected in the regulatory processes.

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<sup>5</sup> Pacific Shellfish Institute website: <http://www.pacshell.org/economic-impacts.asp>

The California Shellfish Initiative (CSI) intends to build upon successful collaborations from other states, lessons from the recent marine planning processes and an innovative Humboldt Bay community planning project now underway. The CSI seeks to improve regional planning and permitting efficiencies for shellfish aquaculture while creating strong performance standards to:

- Provide an open process for community leaders to engage in coastal resource planning
- Enhance shellfish production and habitat restoration by developing a more comprehensive, efficient, and economical permit process with increased state and federal agency coordination
- Ensure clean and healthy estuaries to protect existing shellfish beds and access to additional acreage to shellfish farming and restoration

The benefits of this collaboration through the CSI include:

- Sustainable, healthy, and locally produced seafood
- Increased job and small business opportunities. Specifically, small business opportunities in coastal communities
- Increased and improved habitat and water quality for environmental, commercial, and recreational uses
- Shoreline protection and stabilization from climate change impacts

The primary nexus for the California Shellfish and state government is the Aquaculture Development Committee (ADC). Created in 1983 by the Aquaculture Development Act, the ADC consists of industry, academic, legislative, and state agency representatives, as well as the state Aquaculture Coordinator, housed in the DFW, who convenes this ADC on behalf of the Director (of DFW) at least twice a year.

The ADC's duty is to advise on all matters pertaining to aquaculture and to coordinate activities among public entities. It should additionally assist the Director of Fish and Wildlife in developing and implementing a state aquaculture plan, assist in development of research & development priorities, assist in the development of criteria to assure that publicly financed pilot programs are compatible with industry needs, and identify other opportunities for industrial development.

With the creation of the Ocean Protection Council, and its broader integration of cabinet-level agencies into marine issues, there is an opportunity to help bolster the role of the ADC in conjunction with NGO's and government agency collaboration.

For example, in 2005, the OPC supported native oyster restoration projects with the support of the planning efforts for native oysters in San Francisco bay. This project provided critically needed information for native oyster restoration groups regarding how to prioritize sites for restoration efforts. Native oysters are an important species in San Francisco Bay and help to improve water quality. These valuable resources have suffered degradation in San Francisco Bay due largely to the impacts of development. The Oyster restoration projects were designed to improve scientific understanding of restoration techniques for valuable shallow subtidal habitats.

The results of this project have directly fed into the San Francisco Bay Subtidal Habitat Goals Project to provide a long-term vision to restore 8,000 acres of San Francisco Bay shoreline<sup>6</sup> .

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<sup>6</sup> <http://www.sfbaysubtidal.org>