

**California Shellfish Initiative**  
**Presentation to the CA Ocean Protection Council (OPC) meeting**  
June 28, 2013

Good morning Members of the Council and staff, thank you for having us. My name is Randy Lovell, State Aquaculture Coordinator with the Dept. of Fish & Wildlife. I'm joined by Mr. John Finger, of Hog Island Oyster Company (Tomales Bay), and Ms. Diane Windham, SW Regional Aquaculture Coordinator for NOAA Fisheries (my federal counterpart) and also based here in Sacramento. We're here to introduce you to the **California Shellfish Initiative**.

Before we get started, it may be helpful to provide some orientation to the state's Aquaculture Program, and how I fit in. There is, within this program,

- A **State Aquaculture Coordinator** and
- An **Aquaculture Development Committee**

Both of which were created by the Aquaculture Development Act (1983), found in the Public Resources Code, which declares that "it is in the interest of the people of California that the practice of aquaculture be encouraged in order to augment food supplies, expand employment, promote economic activity, increase native fish stocks, enhance commercial and recreational fishing, and better use the land and water resources of the state.

The purpose was to establish a policy and program toward improving the science and practice of aquaculture as a means of expanding aquaculture industry and related economic activity in the state. I think you'll find many resonating features of the Shellfish Initiative in harmony with those directives, reinforced with some more current environmental sensitivity and collaboration.

The Aquaculture Coordinator position has the good fortune of having its duties described in statute as well (F&G Code), and it's fairly straightforward.

It's my job to:

- (a) Promote understanding of aquaculture among public agencies and the general public.
- (b) Propose methods of reducing the negative impact of public regulation at all levels of government on the aquaculture industry.
- (c) Provide information on all aspects of regulatory compliance to the various sectors of the aquaculture industry.
- (d) Provide such advice to aquaculturists on project siting and facility design that may be needed to comply with regulatory requirements.

And, recently added by Chesbro's AB1886 last year:

- (e) Coordinate with the Aquaculture Development Committee regarding the duties just described.

**The Aquaculture Development Committee** is a unique body made up of (up to 12) representatives from the aquaculture industry, two from the University, five from state agencies having involvement in aquaculture (CDFA, State Lands, CCC, SWRCB, & DPH), as well as one from the Joint Legislative Committee on Fisheries & Aquaculture.

This ADC is advisory to the Director of Fish & Wildlife on all matters pertaining to aquaculture and coordinates activities among public entities. It also is to assist the Director in

- developing & implementing a State Aquaculture Plan,
- identify the opportunities for regulatory relief,
- assist in development of R&D priorities,
- assist in developing criteria to assure that publicly-financed pilot programs are compatible with industry needs, and
- identify other opportunities for industrial development.

Part of the challenge spotlighted by the Initiative relates to improving regulatory efficiency and interagency collaboration – something this Ocean Protection Council exemplifies in its makeup in somewhat similar fashion to the Aquaculture Development Committee.

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We're here to introduce you to the California Shellfish Initiative, a collaborative effort to restore and expand California's shellfish resources. It is being conceived as a process that engages a number of stakeholders in discussions of how to increase the production of shellfish in this state on the order of at least three times its current level. In dollar terms, this represents a 25 Million dollar industry, and constitutes nearly ALL of California's current, commercial marine aquaculture, and has the potential to be a Much Larger part of the economy.

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#### HISTORY

California has a long history of culturing oysters, mussels, clams, and abalone all along our coastline, beginning with oyster cultivation dating back to the Gold Rush & Transcontinental RR. Before that, native oysters have been important to both the coastal ecology and the diet of locals for some five thousand years, evidenced by archeological shell mounds throughout the state.

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#### DEMAND > SUPPLY

Shellfish farmers in the state currently produce over 25 Million oysters, mussels, and clams, (plus an additional 300M seed produced in nursery operations). California is the third largest consumer of shellfish in the US, but our state supply lags far behind public demand, so - shortfalls are being met by imports, contributing to a state and national seafood deficit, imposing the carbon footprint of flying 50M shellfish into the state yearly from around the world AND missing a great opportunity for economic growth.

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#### CLEAN LOCAL SEAFOOD

Shellfish aquaculture in California is environmentally sustainable, and serves the public demand for clean, healthy, locally-grown seafood, cultured under the exacting environmental scrutiny of state and federal regulations. In fact, Humboldt Bay produces high health seed stock that is internationally recognized. In essence, it is a **brand** to be protected by California's growers and regulators alike.

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#### COASTAL ECONOMY

Declining historic industries on the coast have led to idle capacity. An expanded shellfish aquaculture industry offers to restore and build waterfront economies and create jobs ("blue jobs"). Based on current experience and output, we can expect another new job for every additional five acres added into production.

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### ECONOMIC MULTIPLIERS

Increased local employment drives community economic engines, contributes to public revenues, and positively impacts activities and industries beyond the boundaries of its local and regional impact. The dramatically growing consumer demand previously mentioned comes from a broad economic spectrum, from working class families to chefs and fine diners. Culinary tourism and restaurant businesses are poised to emulate the example of California's successful wine industry, and add to the wealth of farm to fork choices with which we are already blessed. Support industries that supply gear, boats, fuel, research & technical innovations, and consulting services all benefit from the increased shellfish industry activity.

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### ENVIRONMENTAL BENEFITS & NEEDS

Shellfish growers are coastal stewards and defenders of environmental protections for pristine water quality – they NEED CLEAN WATER.

In turn, the shellfish themselves provide ecosystem services that benefit and diversify the habitat, performing water filtration, nutrient cycling, and shoreline stabilization.

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### REGULATORY EFFICIENCY

Realizing a vision of a more efficient permit process requires coordinated planning among all stakeholders to attain the full environmental and economic benefits. California can learn from AND IMPROVE UPON recent, successful efforts in other state to increase the efficiency of shellfish permitting and production while retaining high environmental standards.

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### COLLABORATIONS

It turns out that many of these same needs and interests are shared across diverse stakeholder groups. Native oyster restoration efforts are underway in San Francisco Bay, Elkhorn Slough, and Southern California. They face similar regulatory and water quality challenges, and may both contribute to and benefit from the knowledge shared with commercial producers throughout the Initiative process. Tribal participation in the Initiative is sought, as are the viewpoints of local community and other environmental concerns. This is a transparent process of open discussion, with progress already demonstrated in some regions of the state.

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### OPPORTUNITIES & CHALLENGES

Although the Federal Government has articulated a National Ocean Policy and Implementation Plan, as well as a National Aquaculture Policy and a National Shellfish Initiative, California has an opportunity to step forward and be a leader in showing how to bring the various agencies and stakeholders together.

We are not alone in this; other states on both coasts have efforts along the same lines.

But we have unique challenges and opportunities in California. By customizing the approaches to specific regional needs, employing the best technologies and scientific understanding, and with the help of open dialogue and creative leadership, the California Shellfish Initiative can achieve its goals.

Speaking of science & technology, the black & white image shows a pair of 2-day old oyster larvae, the left one raised in normal CO<sub>2</sub> & favorable pH conditions, vs. the deformities shown on the right from being raised at elevated CO<sub>2</sub> and the consequent acidified pH conditions. Ocean acidification and its unfavorable water chemistry may explain severe seed shortages being experienced by the shellfish industry in recent years, and they are looking at adaptive alternatives.

We are starting the process in California with this introduction and with an August stakeholder workshop. That workshop will bring together government agency, environmental, and science leaders to discuss the science, planning, and policy questions around CA Shellfish aquaculture. That Initiative was begun by the Pacific Coast Shellfish Growers Association.

John Finger, a board member of that association and the co-founder of Hog Island Oyster Company can explain further.

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AN INVITATION

Given the Council's important role in California ocean science, and its broad and diverse leadership and constituency, can the Shellfish Initiative rely on your active participation and support ?

