



January 16, 2007

**SHELLFISH FARMING IN WASHINGTON:
A RECOMMENDED REGULATORY APPROACH**

I. Executive Summary

Shellfish farming provides significant environmental benefits to Washington's estuaries. Shellfish farmers are strong advocates for clean water, and the shellfish that they farm provide water purification and habitat benefits that are well-recognized in existing scientific literature. In addition, shellfish farming provides much needed family-wage jobs in several of Washington's rural counties.

Washington's shellfish farmers are facing a number of regulatory issues that have the potential to cause costs and delays that could dramatically curtail shellfish farming in the State of Washington. Such a result would cause significant harm to both the economic and the environmental health of Washington's coastal communities.

The Pacific Coast Shellfish Growers Association ("PCSGA"), an association representing many of Washington's shellfish growers, is working with state and federal regulatory agencies to develop an efficient, comprehensive regulatory system that will ensure protection of the marine environment while allowing shellfish farmers to thrive in the State of Washington. The federal government has already taken the first step toward such a system by proposing a programmatic, nationwide permit that will cover many current shellfish farms.

PCSGA is requesting that the Department of Ecology establish a stakeholder group, to be facilitated by the Governor's Office of Regulatory Assistance, that includes representatives of interested Native American tribes, regulatory agencies, environmental groups and shellfish farmers to work toward a comprehensive shellfish regulatory system. PCSGA believes that federal permits being developed for shellfish farming activities, together with the state approvals that are necessary before those permits can become effective, provide a vehicle for addressing all federal, state and local regulatory issues related to shellfish farming, so long as the process for issuing the state approvals allow for stakeholder participation in formulating appropriate and feasible regulatory conditions.

PCSGA requests your support for this proposal.

II. Introduction

Shellfish farming has been a vital part of Washington's rural economies for well over a century. Shellfish farming is unique in that it not only creates family wage jobs in rural areas, it also protects and improves the quality of the State's marine waters. Shellfish farmers have been vocal advocates for clean water, and the shellfish that they farm perform a number of functions that significantly benefit critical marine ecosystems.

Over the past ten years, shellfish farming has come under increasing regulatory scrutiny, both nationally and in the State of Washington. At the federal level, the U.S. Army Corps of Engineers permits shellfish farms under section 404 of the Clean Water Act and under Section 10 of the federal Rivers and Harbors Act. Shellfish Farmers are currently working with the Corps on developing a programmatic permitting system that will include a Nationwide Permit, Regional General Permits and, potentially, Individual Permits.

In the State of Washington, concerns about geoduck farming have recently triggered questions about the applicability of several state environmental statutes to shellfish farms, including the Shoreline Management Act ("SMA"). The Washington Attorney General recently found, in a formal Attorney General Opinion, that some geoduck farms may be subject to regulation under the SMA.

Shellfish farmers recognize that these developments are an indication that their farms are likely subject to regulatory processes that have not historically been required. However, the growers are extremely concerned that without a well-thought out, consistent regulatory process, these new regulatory requirements will make their operations financially infeasible, particularly for the family-held farms that, historically, make up the bulk of the shellfish farming community.

The Pacific Coast Shellfish Growers Association ("PCSGA") is focused on developing a regulatory approach that uses the ongoing Corps permitting process and attendant state approvals as a vehicle for involving all stakeholders in developing a logical, comprehensive regulatory approach to shellfish farming. Those stakeholders include Native American Tribes, regulatory agencies, environmental organizations and shellfish farmers. The purpose of this paper is to describe PCSGA's proposed regulatory approach.

III. Background

A. Shellfish Farming in Washington State

Shellfish farming in the State of Washington began in the mid-1800's. Today, Washington State is the largest producer of farmed molluscan shellfish in the United States, with an estimated annual crop value of over \$100 million. Shellfish farms are part of the heritage of Western Washington's coastal communities, contributing significantly to these rural economies. Shellfish farming constitutes the largest private employer in Pacific County, and the second largest private employer in Mason County. Collectively, the annual shellfish payroll in these two counties is estimated at \$27 million.

Today, historic shellfish farming operations are increasingly threatened by encroaching development along shorelines. An unprecedented number of shellfish growing areas are on the Washington State Department of Health's threatened list because of non-point pollution. In addition, shellfish farmers are increasingly faced with nuisance complaints from new waterfront homeowners that object to working waterfronts. Yet many of the tidelands on which shellfish farming takes place have been in commercial production since the mid-1800's. And many of those tidelands were purchased from the territorial government under the Bush and Callow Acts, which limit allowed uses and, in some cases, actually require that the tidelands be used for shellfish cultivation.

While geoduck farming has garnered significant media attention of late, geoduck farming actually represents only a small portion of Washington's shellfish farming community. Oyster farmers make up the vast majority of the industry, followed by clam farmers and mussel farmers. At present, geoduck farming occurs on an estimated total of 150 acres, or .1/1000th of Washington's tidelands. By comparison, one of the 4,000 plus crop circles in Eastern Washington's Columbia Basin project is 130 acres. Potential locations for shellfish farms, and geoduck farms in particular, are restricted due to specific requirements for water quality, temperature, oxygen content, appropriate substrate, tidal elevation, adjacent land uses, fresh water influences, wind protection, commercial navigation, and salinity. In addition, limitations in seed production technology and capacity will limit expansion of the geoduck farming into the foreseeable future.

Farming of shellfish, whether oysters, clams, mussels or geoducks, includes essentially the same three steps:

- 1) **Seeding: The placement of immature shellfish into intertidal areas.**
Sometimes the shellfish seed is broadcast into intertidal areas, sometimes it is attached to an object (like a mature oyster shell, in the case of some oyster cultivation, or a neoprene sleeve in the case of mussel cultivation).
- 2) **Cultivation: Growth from shellfish seed to harvestable mollusks.**
Some form of predator control may be necessary (for example, netting may be used in clam or mussel culture and PVC tubes may be used in geoduck culture).
- 3) **Harvest: Collecting mature shellfish for market.**
Harvest occurs in a variety of ways. It can be by hand, as is the case with some oyster, clam and mussel farms. It can be conducted with a mechanical harvest bag operated from a boat that scoops mature shellfish from the intertidal bottom during high tide. It can be done with mechanical means, such as a mechanical harvester for clam cultivation, or the use of a low pressure, high volume hose to extract geoducks.

B. Environmental Benefits of Shellfish Farming.

Bivalve shellfish provide critical ecological services in the marine environment. In particular, the ability of shellfish to filter significant amounts of water is critical to the health of marine ecosystems. To illustrate this filtering capacity, consider if Safeco Field were filled with water, which would require a total of 1,885,146,000 gallons of water. If the currently cultivated 150 acres of geoduck farms were all mature, they could filter that volume of water in just six days (66,000 geoducks per acre each filtering 150 liters/day.)

Shellfish cultivation helps mitigate nutrient pollution. The ability of shellfish to mitigate nutrient pollution is well documented in scientific literature. According to the National Research Council, the principal operating agency of both the National Academy of Sciences and the National Academy of Engineering, “Nutrient over –enrichment is a significant problem for the coastal regions of the United States.” Nutrients fuel blooms of microalgae, which shellfish feed on. These nutrients are converted into shellfish biomass, which is then removed from the marine ecosystem when the shellfish are harvested. The uptake and recycling of organic matter by shellfish helps control phytoplankton levels, improves water clarity, supplies nutrients to bottom sediments and allows greater light penetration for the growth of seagrasses and other bottom vegetation.

Besides playing this important role in the uptake and recycling of energy and nutrients, shellfish also provide three-dimensional structure and habitat for plant and animal life of all kinds.

The Chesapeake Bay provides a cautionary tale about the importance of shellfish in maintaining estuarine health. Before disease, over-harvest and pollution decimated the Chesapeake Bay oyster population, the existing population of oysters could filter the bay’s entire volume of water in approximately 1-3 days. Now, scientists estimate that it takes the remaining shellfish over a year to filter the volume of the Bay. This phenomenal filtration/nutrient mitigation capacity is one of the main reasons that the federal, state and local governments are investing millions of public dollars to restore shellfish populations in impaired estuaries like the Chesapeake Bay, New York Harbor, and San Francisco Bay.

Environmental and public policy organizations embrace shellfish culture because of these recognized ecological services. Environmental Defense states that shellfish “can clarify the water by consuming plankton, significantly improving water quality,” and that “[m]ussel farms can remove nitrogen from water at a 70 percent higher rate than occurs in surrounding waters.” The Pew Oceans Commission acknowledged the same and further notes that: “Moreover, shellfish farmers are often among the loudest advocates for clean water.” Other examples of environmental organizations embracing shellfish as a means of restoring estuarine health abound, including the Nature Conservancy, the Chesapeake Bay Foundation, and, locally, the Puget Sound Restoration Fund.

As the Governor’s Puget Sound Partnership and the Department of Ecology have affirmed, Hood Canal and Southern Puget Sound are plagued by low dissolved oxygen, which

is indicative of excess nutrients. As policy makers and scientists search for solutions, the scientific literature suggests increased cultivation and harvesting of shellfish is a cost-effective means of nutrient mitigation. For example, Washington's oyster farms remove an estimated 255,736 pounds of nitrogen annually. In Connecticut eutrophication of Long Island Sound has required nitrogen removal through sewage treatment technologies. The average cost per pound in 2005 was \$2.11 per pound. Assuming the cost would be similar in Washington oyster farmers alone could be saving taxpayers \$539,603 annually. This number increases significantly when you include the farming of geoduck clams, Manila clams and mussels. Commercial shellfish farms provide this service at no cost to the public, at the same time that they provide jobs and stimulate otherwise depressed rural economies.

C. Regulatory Issues

The U.S. Army Corps of Engineers is in the process of establishing a regulatory program that is intended to assure shellfish farms are properly permitted under the Rivers and Harbors and Clean Water Acts. On September 26, 2006, the Corps proposed a new Nationwide Permit, NWP D, to cover existing shellfish farms. The comment period on that proposal closed on November 27, 2006, and the Corps intends to publish a final NWP in February of 2007, to become effective in March of 2007. The Northwest Division of the Army Corps has been charged by Army Corps Headquarters to develop a Regional General Permit ("RGP") that is intended to cover shellfish activities not covered by the NWP D.

The Corps' NWP and the RGP will require consultation with the National Marine Fisheries Service and U.S. Fish and Wildlife Service, under both the Endangered Species Act and the Magnuson Stevens Fishery Conservation and Management Act. The Corps has retained an independent consulting firm to develop a Biological Assessment to review the potential biological impacts of the shellfish cultivation activities that are permitted under the NWP and RGP. Once that Biological Assessment is completed, the Corps will begin its formal consultation with the Services.

The Corps' Nationwide and Regional permits for shellfish cultivation require state approval before they become effective in the State of Washington. First, the permits must obtain a water quality certification from the Washington Department of Ecology, in accordance with Section 401 of the Clean Water Act. In order to issue that certification, the Department of Ecology must find that the permitted activities are consistent with state water quality standards.

Secondly, the Corps' permits will also be subject to a consistency review by the Department of Ecology pursuant to the Coastal Zone Management Act ("CZMA"). To issue its response to the Corps' consistency certification, the Department of Ecology must find that the activities covered by the Corps permits are consistent with the enforceable policies within the following six state laws:

1. The Shoreline Management Act
2. The State Environmental Policy Act ("SEPA")
3. The Clean Water Act
4. The Clean Air Act

5. The Energy Facility Site Evaluation Council and
6. The Ocean Resource Management Act.

Significantly, Corps permits will not go into effect in Washington State until the Department of Ecology issues a water quality certification and concurs with the Corps' CZMA consistency certification.

In addition to these regulatory approvals, the Washington Attorney General recently opined that some geoduck farms may be considered "development" under the SMA at the discretion of local governments. In some cases these activities may trigger the requirement for growers to obtain Shoreline Substantial Development Permits for their farms. At the same time, new draft legislation has been developed that is aimed at instituting state regulatory controls on geoduck farming.

It should be understood that each new regulatory process that shellfish farmers must navigate to continue their historic operations, or to bring new areas under cultivation, represents a significant investment of time and money. Shellfish farmers are extremely concerned that the increasing myriad of overlapping regulatory programs has the potential to, quite literally, regulate them out of existence.

IV. A Proposal for a Consolidated Regulatory System

PCSGA offers a proposed regulatory process that could provide regulatory oversight in a programmatic, comprehensive manner, thereby limiting the financial impacts of increased regulation on individual shellfish farmers. The key to this regulatory approach is the use of Ecology's 401 Water Quality Certification process and CZMA Consistency Review on the proposed Corps NWP and RGP to consider the environmental impacts of shellfish cultivation activities under state environmental laws. As noted above, Ecology's review of the Corps' permits, particularly its CZMA consistency review, already requires that Ecology consider various state and federal environmental statutes.

PCSGA proposes that the state establish a stakeholder group made up of a representative of each of the following: the Washington Department of Agriculture, the Washington Department of Ecology, the Washington Department of Fish and Wildlife, the Washington Department of Natural Resources, Native American tribes, local governments, interested environmental groups and shellfish farmers. The purpose of the group would be to work cooperatively toward an efficient regulatory approach that meets local, state, and federal requirements, while keeping shellfish farming economically viable in Washington State.

It is PCSGA's hope that, working with this stakeholder group, Ecology's final water quality certification and CZMA consistency response for shellfish farming activities will contain comprehensive conditions that provide a model for any other required regulatory approvals. For example, to the extent a Shoreline Substantial Development Permit is required for some geoduck farms, Ecology could incorporate the conditions from its certifications into a guidance document to local governments indicating that, if proposed shellfish farms comply

with those conditions, the activities are consistent with Ecology's Shoreline Guidelines and the State Coastal Zone Management Program.

While this stakeholder group meets and attempts to resolve these issues, PCSGA proposes that other regulatory avenues currently being pursued be held in abeyance. For example, legislation adding new regulatory controls on the shellfish industry would not move forward. This would also allow the interested parties to focus their efforts on working together to establish acceptable regulatory conditions for shellfish farms.

PCSGA has brought this proposal to the Director of the Department of Ecology, who voiced support for such a solution. PCSGA is also proposing the involvement of the Governor's Office of Regulatory Assistance, which was established to assist in the regulatory hurdles presented by overlapping, and sometimes inconsistent, regulatory approvals. PCSGA is also bringing this proposal forward to the Departments of Fish and Wildlife, Natural Resources and Agriculture, key legislators and stakeholders.

To better serve the State's long-term aquaculture interests, PCSGA recommends that funding for a State Aquaculture Coordinator be provided under 15.85 RCW. This position was in place until 1993, serving to coordinate the states aquaculture interests, and to foster the growth of Aquaculture for the state. Some of the responsibilities of this position could include working with the stakeholder committee to develop an efficient regulatory process, coordinating and administering federal, state and local regulatory processes, coordinating aquaculture development projects and seeking federal funding for aquaculture research.

In offering this proposal, PCSGA is endeavoring to work toward a regulatory approach that allows for a single, consistent, programmatic process that provides necessary regulatory oversight while keeping shellfish farming a vital part of Washington's economy and environment.

V. Policy Support for Coordinated Regulatory Approach

A number of state and federal policies support the coordinated regulatory approach proposed by PCSGA. The National Aquaculture Act, adopted in 1980, establishes a national policy of encouraging the development of aquaculture in the United States. The Act also includes congressional findings, noting that one of the significant impediments to aquaculture in this country is "diffused legal jurisdiction" and "land use or water management policies that do not adequately consider the potential for aquaculture." 16 U.S.C. Section 2801(a).

Similarly, in 1985, the State of Washington adopted the Aquaculture Marketing Act. That Act was adopted, in part, in response to aquatic farmers concerns that development of aquaculture in the State of Washington was hindered by conflicting regulations. The purpose of the Act was to encourage the development and expansion of aquaculture in the State. RCW 15.85.010.

More recently, Governor Gregoire formed the Ocean Policy Working Group to consider recommendations from the U.S. Commission on Ocean Policy and President Bush's Ocean Action Plan. Governor Gregoire's Ocean Policy Working Group included an

Aquaculture Subcommittee that produced a report in November of 2005 finding that Washington's aquaculture regulatory system was "a complicated system which is in need of consolidation and coordination." The report also finds that "there is a need for a comprehensive state plan equipped to deal with multiple technologies, species and locations."

Finally, Governor Gregoire has promoted the Office of Regulatory Assistance for the precise purpose of addressing such complicated, overlapping regulatory regimes. As Governor Gregoire noted in Executive Order 06-02 on regulatory improvement: "Citizens and businesses deserve state agencies that will be innovative and creative in simplifying their procedures for permits, licenses, regulatory compliance and all other business operations." To achieve this objective:

The Director of the Office of Regulatory Assistance will work with state, local and federal agencies to make on-going improvements that will make the permitting, licensing, and regulatory processes easier and more effective. To do this, the Office of Regulatory Assistance will:

- Consult regularly with stakeholders;
- Develop and implement innovative regulatory best practices;
- Work with local and federal governments to develop coordinated permitting, licensing and related regulatory systems;
- Utilize the latest technology to ensure all the work of businesses and citizens with the state is as efficient and user-friendly as possible; and
- Report annually to the Governor on the status of regulatory improvement work plans.

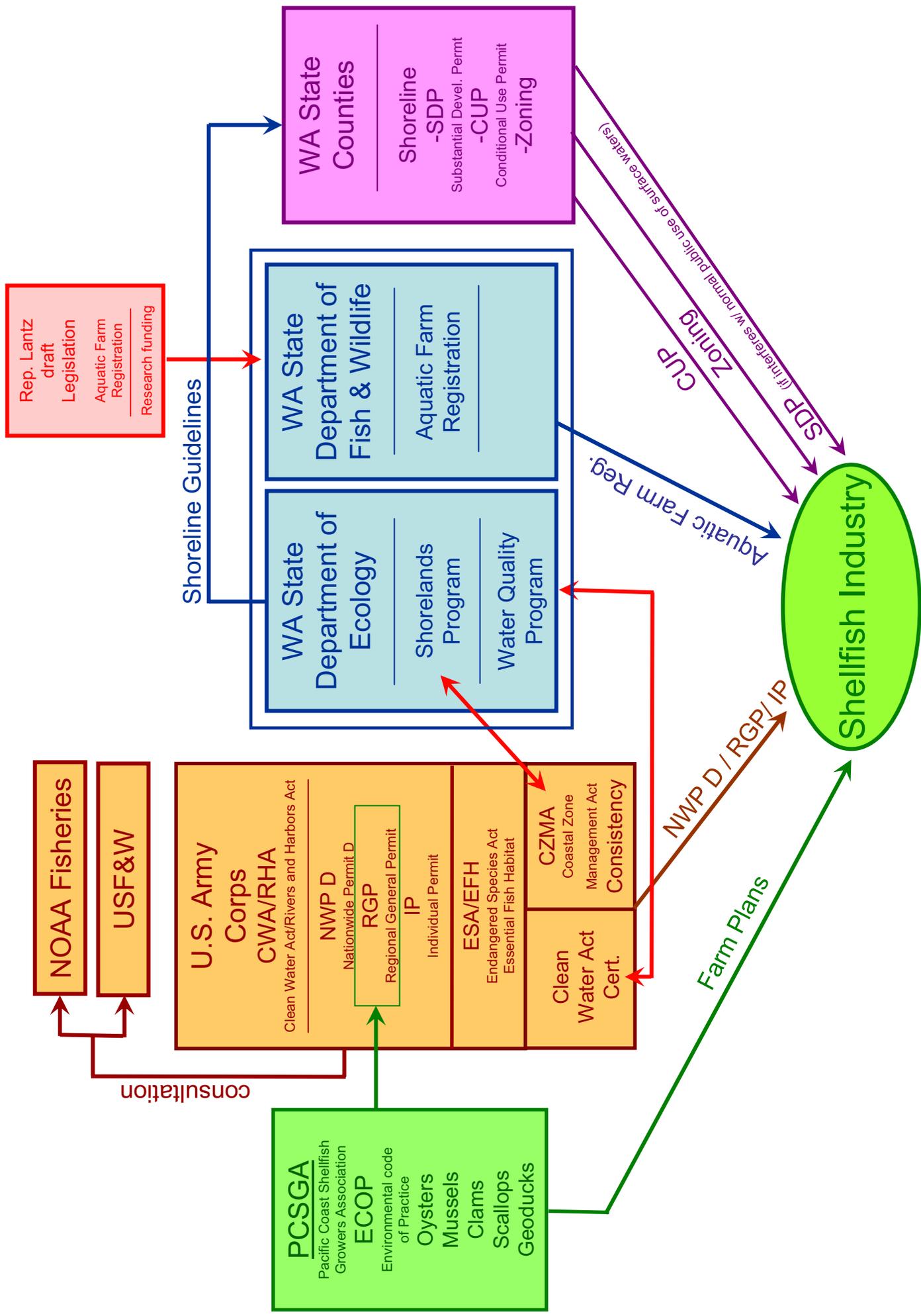
PCSGA believes that its proposed approach to shellfish regulation is both consistent with, and actually called for, by the Executive Order establishing the Office of Regulatory Assistance.

VI. Conclusion

PCSGA would like your support for a coordinated state regulatory process for shellfish aquaculture. Working together, regulators, environmentalists, tribal members and shellfish farmers can develop a regulatory process that is efficient and comprehensive and that addresses all federal, state and local regulatory issues. While this state regulatory process is moving forward, other efforts that could lead to further conflicting regulatory processes should be held in abeyance.



Shellfish Aquaculture Regulations Under Development or Consideration



PCSGA Preferred Approach

