

NATIONAL TRENDS IN SHELLFISH AQUACULTURE PRODUCTION, POLICY AND REGULATION – PLANNING AND REGULATORY TOOLS FOR COASTAL PLANNERS.

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SHELLFISH INDUSTRY TRENDS, PERMITTING, WATER QUALITY AND CONFLICTING USE CHALLENGES -- PERSPECTIVE FROM THE GROUND (OR BEACH)

Shellfish aquaculture has the potential to significantly contribute towards the growing demand for nutritious seafood. Shellfish also provide significant environmental benefits such habitat services, water filtration and nutrient coupling. As such, aquaculture technology is also being used to facilitate restoration of shellfish resources for ecological services. Congress, the Department of Commerce (DOC) and the National Oceanic and Atmospheric Administration (NOAA) have established laws and policies acknowledging expansion of aquaculture as a national priority.

From the growers' perspective, however, expansion of shellfish aquaculture, or even maintaining historic operations in the U.S., faces numerous challenges including use conflicts and environmental impacts associated with urbanizing shorelines, permit issues, litigation and lack of comprehensive shoreline planning to protect existing and future shellfish aquaculture opportunities. As a result, downgrades in growing area classification have been a matter of course for shellfish growers. Impacts from failing septic systems, increased stormwater runoff, hobby and commercial farm runoff are taking their toll. While there has been a recent reversal in the trend, 25% of the commercial shellfish growing areas classified as approved for direct shellfish harvest in Washington State experienced downgrades between 1985 and 2002.

Shellfish growers have been able to compensate for the loss of shellfish growing areas with advancements in culture technology. Hatchery production of seed and culture systems which exclude predators are examples of such advancements. However, these new culture systems, coupled with increased shoreline residential development, have led to more frequent complaints and greater environmental scrutiny. Environmental concerns include the environmental effects of culture and harvesting practices and complaints are typically related to debris and noise from farms and aesthetic impacts.

To address these issues, shellfish growers on the west coast have advocated, individually and collectively (through the Pacific Coast Shellfish Growers Association), for enhanced stormwater and septic laws to reverse downward trends in water quality. They also have a long history of participating in watershed planning, environmental non-governmental

organizations, conservation districts, Total Maximum Daily Load committees and other organizations addressing water quality and land-use issues. Shellfish growers are also pro-actively involved in state and local land-use planning processes to address conflicting use issues.

In spite of growers' efforts, these increasing regulatory and land challenges are taking their toll on the shellfish farming community. For example, Washington based Taylor Shellfish Company, one of the oldest and largest producers of farmed shellfish in the country, has recently begun expanding operations into Canada. Taylor has purchased five farms and a processing plant, for a total Canadian employment of approximately 100 people. These acquisitions were necessary to meet growing market demand for shellfish products.

Federal regulation of shellfish aquaculture, despite national policies to the contrary, until recently has been inconsistent and in some cases overly burdensome and expensive. Growers are encouraged by recent attention to this by Congress, NOAA and U.S. Army Corps of Engineers. There appears to be growing attention being placed on permit efficiency, coordination and consistency at both the federal and state level. This attention will need to yield expeditious results if shellfish farming is to remain a viable economic force in rural economies on the west coast.

NATIONAL MARINE AQUACULTURE POLICY AND PLANNING

In the National Aquaculture Act of 1980, Congress declared it is in the national interest, and it is the national policy, to encourage the development of aquaculture in the United States. NOAA and its parent agency, DOC, adopted aquaculture policies in the late 1990s, and are working to implement these policies in coordination with other agencies through the Joint Subcommittee on Aquaculture. More recent impetus for marine aquaculture comes from the recommendations of the U.S. Commission on Ocean Policy and implementation of the President's U.S. Ocean Action Plan.

Aquaculture is important to NOAA and DOC in terms of seafood supply, the trade deficit, jobs, resilience of coastal communities, and ecosystem management. NOAA defines aquaculture in broad terms, and the agency's mission spans onshore, nearshore and offshore production of shellfish, finfish, aquatic plants, marine ornamentals, and newer products such as biopharmaceuticals. An important part of NOAA's mission relates to hatchery production of marine species to enhance commercial and recreational fisheries and to restore marine species populations. The challenge for NOAA is to enable aquaculture to develop while continuing to meet the agency's stewardship responsibilities under multiple laws.

U.S. marine aquaculture production today takes place entirely in state waters or in onshore facilities. Nevertheless, there is an important role for Federal agencies, including NOAA, in the review of proposed projects. An application for a Section 10 permit from the U.S. Army Corps of Engineers, for example, could trigger consultations with NOAA under the Essential Fish Habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act and/or the Endangered Species Act. In addition, the

Endangered Species Act, the Marine Mammal Protection Act, and the National Marine Sanctuaries Act may require permits for certain types or locations of marine aquaculture facilities. Acknowledging the complexity of the review process for marine aquaculture projects, the NOAA Aquaculture Program is working to clarify and simplify internal processes to provide for timely permit reviews and consultations based on sound science. An agency priority is the development of internal guidance and tools to assist regional agency staff in reviewing proposed marine aquaculture projects.

Increased demand for seafood and limited wild fisheries resources dictate that more seafood supply will have to come from aquaculture production – either domestic or imported. Two current initiatives aim to boost U.S. aquaculture production:

- The Administration's National Offshore Aquaculture Act of 2007, which was introduced in Congress in April 2007, would establish the necessary framework for aquaculture to develop in Federal waters of the Exclusive Economic Zone. There is significant potential for aquaculture in these areas 3-200 miles offshore.
- A new 10-Year Plan for the NOAA Aquaculture Program addresses the full range of program responsibilities and sets four goals: 1) A comprehensive regulatory program for marine aquaculture; 2) appropriate technologies to support commercial marine aquaculture and replenishment of wild stocks; 3) public understanding of marine aquaculture and 4) increased collaboration and cooperation with international partners. Implementation of the plan will involve multiple line offices within NOAA working with partners in other agencies and institutions to develop the necessary regulatory framework, science and technology, public understanding, and international collaborations necessary to advance environmentally sound aquaculture in the United States.

RECENT CHANGES IN FEDERAL REGULATION OF SHELLFISH AQUACULTURE

To achieve NOAA's goal of increasing shellfish aquaculture production, several challenges must be addressed. First, regulatory processes can present challenges to shellfish aquaculture operations. At the federal level, as noted above, this permitting takes place through the ACOE under the Clean Water Act and the Rivers and Harbors Act.

In recognition of NOAA's policy objective of increasing the United States' aquaculture production, the ACOE has undertaken an effort to provide consistent and efficient national permitting of shellfish aquaculture. Specifically, the ACOE developed a new Nationwide Permit 48, effective March 19, 2007, to programmatically permit existing shellfish culture operations across the nation. The permit is in place for the next 5 years. During that 5 year period, the ACOE will be collecting and reviewing information on shellfish aquaculture activities and will consider modifications to that permit, including an expansion of that permit to address new operations, during the next Nationwide Permit cycle in 2012.

Nationwide Permit 48 is not fully effective until states complete their reviews under the Clean Water Act and Coastal Zone Management Act, which should be completed by

March 12, 2007. In addition, the Corps must consult with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service under the Endangered Species Act before NWP 48 is fully implemented. The ACOE must also consult with the National Marine Fisheries Service pursuant to the Magnuson-Stevens Fisheries Protection Act.

On the west coast, the ACOE is attempting to complete these consultations on a programmatic basis. That process will be unfolding over the next year. The Corps goal is to ultimately implement a regulatory process for shellfish aquaculture that is efficient for growers and effective at addressing the ACOE's environmental responsibilities.

TOOLS TO PLAN FOR AND MANAGE AQUACULTURE DEVELOPMENT

Declining coastal water quality and conflicting use issues threaten the future of historic and new commercial shellfish aquaculture operations. These problems are being exacerbated as residential development encroaches on areas with historic shellfish aquaculture, or as shellfish aquaculture expands into new areas with existing residential development. With increasing development of the west coast, particularly in waterfront areas, these conflicts will only increase. Planning is one of the more effective ways to address such conflicts.

The first planning tool that can help address these use conflict issues comes in the form of state coastal acts, like Washington's Shoreline Management Act or California's Coastal Development Act. Those acts generally prioritize different shoreline uses, with an emphasis typically given to water dependent uses like shellfish aquaculture. However, those acts, and the plans that implement them, can be vague about how uses like shellfish aquaculture are regulated. Recent legislation adopted in Washington provides an example of a cooperative process involving all stakeholders aimed at addressing some of this regulatory uncertainty.

State or local zoning laws, which are the typical means of addressing these conflicting use issues in upland areas, can also be used to address these issues in coastal areas. For example, the Washington State Growth Management Act provides statewide goals and requirements aimed at protecting natural resource based industries like timber, agricultural, mining and fisheries industries. These growth management tools translate fairly well to planning for, and protecting, shellfish aquaculture activities in appropriate areas.

Another tool that is available (if underutilized) for aquaculture planning is Section 309 of the Coastal Zone Management Act. Section 309 provides grants to states for, among other things, adoption of procedures and policies to evaluate and facilitate siting of aquaculture facilities in the coastal zone to provide a basis for strategic plans for marine aquaculture. These grant funds, if used effectively, could provide significant progress toward achieving the Department of Commerce's goal of significantly increased aquaculture production.

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