

CALIFORNIA OCEAN
PROTECTION COUNCIL

Staff Recommendation
June 8, 2006

Marine Aquaculture Programmatic Environmental Impact Report

Developed By: **Christine Blackburn**

RECOMMENDED ACTION: Consideration of an Aquaculture Programmatic Environmental Impact Report and possible 1) determination that it is a high priority project and 2) authorization for the Council's Secretary to take actions necessary to provide up to \$300,000 for its planning or implementation.

OCEAN or COASTAL LOCATION: Statewide

AGENCY OR ENTITY RECOMMENDING PROJECT: California Resources Agency and Department of Fish and Game.

EXHIBITS

Exhibit 1: State Aquaculture Bill (SB 201)

Exhibit 2: Letters of Support

RESOLUTION:

"The Ocean Protection Council finds pursuant to Sections 35600, *et seq.* of the Public Resources Code that the programmatic environmental impact report for coastal aquaculture called for in California Senate Bill 201, and as herein described, is of high priority for ocean conservation and authorizes the Secretary of the Council to take actions necessary for its planning or implementation, including the allocation of up to \$300,000 for the purposes of this project."

PROJECT SUMMARY:

Staff recommends that the Ocean Protection Council (OPC) authorize funding for the completion of a programmatic environmental impact report (PEIR¹) that will identify potential environmental impacts of California marine aquaculture operations, and discuss thresholds of significance and mitigation strategies. The proposed \$300,000 would be used by the Department

¹ The California Environmental Quality Act (CEQA) provides for preparation of Program Environmental Impact Reports (PEIRs) when a series of related projects, such as coastal marine aquaculture projects, will have generally similar environmental effects that can be mitigated in similar ways.

of Fish and Game to support staff time or a contractor to complete the PEIR according to the new guidelines set forth in Senate Bill 201 (Simitian), Stats. 2006, ch. 36.

PROJECT DESCRIPTION:

Currently, over 70 percent of the seafood that Americans consume is imported from foreign countries, resulting in a net trade deficit in seafood estimated at \$7 billion. Furthermore, the annual U.S. demand for seafood is projected to increase by 3.3 billion pounds (35-50 percent) by the year 2010. At the same time, few fisheries can support a sustainable increase in total allowable catch. In 2004, 76 percent of worldwide stocks were considered to be fully exploited, over-exploited, or depleted.

To address the gap between supply and demand for seafood, many are looking for potential increases in aquaculture production. The Federal government has proposed aggressive growth in this sector—promoting a fivefold increase in U.S. aquaculture production by 2025. Currently, most aquaculture in the United States is located in inland freshwater, but much of this future growth is expected to come from fish and shellfish farms in ocean waters.

Despite aquaculture’s promise to supply seafood, generate jobs, and reduce fishing pressure on wild species, there are significant environmental and socio-economic concerns associated with its development. Preparation of the PEIR will identify potential environmental impacts, thresholds of significance, and possible mitigation strategies for both project sponsors and CEQA lead agencies.

Environmental Concerns:

The environmental impacts from aquaculture facilities stem primarily from the high concentration of fish present in aquaculture pens and cages, movement of fish to and from facilities, possible escapes, and construction impacts.

Concentrated nutrients are released into the environment from unused feed and from fish waste. These wastes flow into surrounding waters and can cause biological and chemical pollution and can create anoxic conditions.

Fish farms may release antifoulants, antibiotics, and other chemicals into the water. Raising many thousands of fish in close contact can increase the spread of disease and parasites; certain chemicals are used to combat these problems. Use of chemicals at facilities located directly on or in ocean waters must be carefully regulated to ensure against significant pollution of adjacent waters.

Diseases and non-native species can affect native populations. Aquaculture operations may introduce or amplify diseases and parasites which can threaten the health and vitality of wild stocks. Escapes of cultured species are possible and may lead to exotic organisms becoming established and threatening or competing with native species. Escaped, non-native farmed fish can also compete with wild populations for food and habitat, can transmit native or non-native diseases, and may prey on native fish, disrupting local ecosystems. Interbreeding between native and escaped species may also occur, possibly

reducing the overall fitness of the wild population.

Constructing aquaculture pens and cages can directly impact natural habitats. Some aquaculture operations require dredging, drilling, dropping large anchors and otherwise disturbing sediment and bottom habitats. These activities can displace ocean wildlife, smother bottom-dwelling animals, destroy hiding places for young fish, and cause other ecological changes to the seafloor.

Prior Laws and Authorities

Public Resources Code (PRC) Section 30411(e) requires the Department of Fish and Game (DFG) to prepare programmatic environmental impact reports (PEIRs) for both coastal and inland commercial aquaculture projects. DFG contracted for the preparation of the draft environmental documents in 2003, but subsequently concluded that these documents were inadequate. DFG lacked sufficient resources to redraft and complete these PEIRs and additional funds from the aquaculture industry were not available to improve the initial reports.

Legislation in 2003 (SB 245, Chapter 871) set some environment constraints on marine aquaculture in California. Primarily it prohibited the aquaculture of salmonids, non-native species of salmonids, and genetically altered species or other species not native to California's waters.

Aquaculture permitting authorities exist with the California Coastal Commission (California Coastal Act and Coastal Zone Management Act), the Regional Water Quality Control Boards (Clean Water Act), and Department of Fish and Game (Fish and Game Code, and state lands leases and registrations).

New Legislation:

On May 12, the California Legislature passed Senate Bill 201, and Governor Schwarzenegger signed the bill into law on May 26, 2006.

This new legislation:

- Prohibits a person from engaging in marine finfish aquaculture without a lease
- Sets standards for Fish and Game Commission leasing for marine finfish aquaculture
- Repeals the previous aquaculture PEIR requirements and creates a new section in the Fish and Game Code for developing these documents. This new section establishes criteria for the coastal aquaculture PEIR to be completed by DFG including extensive requirements to be addressed by marine finfish aquaculture applicants

As previously imagined, a certified PEIR for marine aquaculture can serve as the first tier of CEQA review for proposed aquaculture operations. Because standards are set, greater consistency of review by CEQA Lead Agencies may result. The PEIR can also serve as a guidance document for potential project sponsors in alerting them to the potential environmental impacts and the need to avoid or mitigate those impacts. The PEIR may also serve as an educational tool for interested parties that may have concerns about commercial marine aquaculture development.

Benefits resulting from preparation of the PEIR include the opportunity for a more comprehensive consideration of impacts and alternatives than is practical in review of individual applications; broader consideration of cumulative impacts, avoiding the need for continual reconsideration of recurring policy issues; and increased efficiency through the application of developed data to subsequent reviews.

Senate Bill 201 specifies criteria to be addressed for marine finfish aquaculture in the coastal PEIR. The PEIR will provide a framework for managing marine finfish aquaculture in an environmentally sustainable manner that, at a minimum, considers all of the following factors:

- Appropriate areas for siting marine finfish aquaculture operations to avoid adverse impacts, and minimize any unavoidable impacts on users groups, public trust values, and the marine environment
- The effects on sensitive ocean and coastal habitats
- The effects on marine ecosystems, commercial and recreational fishing, and other important ocean uses
- The effects on other plant and animal species, especially species protected or recovering under state or federal law
- The effects of the use of chemical and biological products and pollutants and nutrient wastes on human health and the marine environment
- The effects of interactions with marine mammals and birds
- The cumulative effects of a number of similar finfish aquaculture projects on the ability of the marine environment to support ecologically significant flora and fauna
- The effects of feed, fish meal, and fish oil on marine ecosystems
- The effects of escaped fish on wild fish stocks and the marine environment
- The design of facilities and farming practices so as to avoid adverse environmental impacts, and to minimize any unavoidable impacts

The PEIR will likely be used by the Fish and Game Commission in two ways in accordance with the legislation. First, the legislation requires the Commission set comprehensive regulations governing the leasing of State-owned submerged lands for marine finfish aquaculture. The PEIR is expected to provide the background and support for the drafting, discussion, and possible adoption of those regulations. Second, as originally envisioned, the PEIR will serve as the first tier in the CEQA review of subsequent marine aquaculture projects. It is expected that, as CEQA lead agency for State leases, the Commission will rely heavily upon the PEIR in considering individual lease sites and lease terms and conditions.

The completion of the PEIR will provide a comprehensive environmental review of the potential environmental impacts of marine aquaculture. Reliance on the PEIR in adopting regulations and implementing CEQA requirements will provide rigorous—yet fair and transparent—requirements for aquaculture development. The California model could serve as an example for other states, as well as federal regulations, as they develop.

The Department of Fish and Game currently lacks the necessary funds to complete the PEIR, necessitating the financial contribution from the Ocean Protection Council. If funding is approved by the OPC, the PEIR could be finished by summer 2007.

It is the policy of the OPC to promote sustainable practices for ocean and coastal development, ensuring no large-scale or long-term environmental impacts result from such activities. Completing the PEIR is an important step to implementing a comprehensive, forward-looking state policy on marine aquaculture development.

PROJECT FINANCING

Funding Sources:

Ocean Protection Council	<u>\$300,000</u>
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Total Project Cost	\$300,000
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Funding for the proposed project would come from the tidelands oil revenues, appropriated to the Secretary of Resources in the FY 04/05 for projects authorized pursuant to the California Ocean Protection Act. The Resources Agency has entered into an interagency agreement with the Coastal Conservancy to administer these funds on behalf of the Council and recommend projects for funding.

CONSISTENCY WITH CALIFORNIA'S OCEAN ACTION STRATEGY:

The project is consistent with Action Item 10 of the Governor's Ocean Action Plan: "Increase efforts to pursue, support, [and] implement...coordinated ecosystem management approaches at the federal, state, and local levels to guide and improve the stewardship of ocean and coastal resources."

The project is also consistent with Action Item 13 of the Governor's Ocean Action Plan: "Identify and prioritize issues that may benefit from additional coordination." More specifically, "the state should...help to determine how best to address the impacts of [marine aquaculture] operations to ensure that they can be operated safely within California waters."

CONSISTENCY WITH OCEAN PROTECTION COUNCIL'S INTERIM PROJECT SELECTION CRITERIA & GUIDELINES:

Mandatory Criteria

1. Furthers the following statutory purposes and policies of the Ocean Protection Act:
 - Improves management, conservation, and protection of coastal waters and ocean ecosystems: *The PEIR will streamline the management and permitting of new aquaculture facilities while holding all operations to the same standards and ensuring that environmental impacts are minimized.*
 - Encourages those activities and uses that are consistent with sustainable, long-term protection and conservation of ocean and coastal resources: *The PEIR will promote the sustainable development of marine aquaculture while protecting surrounding marine environments.*

- Improve monitoring, data gathering, and advances in scientific understanding of the ocean and coastal environment: *The PEIR will compile existing data on the potential environmental impacts of marine aquaculture. Evaluation of these data will assist project sponsors, permitting agencies, and the concerned public to protect against undesired environmental impacts.*
- Improves the health of fish and fosters sustainable fisheries in ocean and coastal waters: *The PEIR will allow aquaculture development to occur in a manner than does not harm natural fish populations or the surrounding ocean environment.*
- Helps to integrate and coordinate the state's laws and institutions responsible for protecting and conserving ocean and coastal resources: *As the first tier in CEQA review of individual projects, the PEIR document should help bring consistency in review of multiple projects by multiple permitting agencies.*
- Helps to coordinate the collection and sharing of scientific data: *By serving as the first tier CEQA document, individual project EIRs will build from a common base, and permitting agencies and the concerned public will have an accepted, ready reference.*
- Benefits or furthers existing state programs or legislative mandates: *The PEIR will not be completed without the OPC providing funding for this task. DFG does not currently have the funds to complete the PEIR.*
- Identify changes in federal law and policy necessary to achieve the state's goals for the coast and ocean: *The environmental guidelines set forth in SB 201 for the PEIR can provide an example for similar legislation pending in the U.S. Congress.*

2. Consistent with the purposes of the funding source: *See Project Financing Section above.*

3. Has demonstrable support from the public: *See letters of support.*

4. Relates directly to the ocean, coast, associated estuaries, and coastal-draining watersheds: *The PEIR will set guidelines that help to protect coastal and offshore environments from improper development of coastal aquaculture facilities.*

5. Has greater-than-local interest: *The standards set by the PEIR will be for permit applications coast wide.*

Additional Criteria

1. Helps implement the California Ocean and Coastal Information, Research, and Outreach Strategy and other priorities of local, state or federal advisory groups, or scientific or policy reports, adopted by the council: *This action is consistent with the priority goals of the OPC presented in the draft strategic plan.*

2. The project would not occur without Council participation: *The funds for this project are not currently available from other sources.*

3. The project has an element of urgency (there is an immediate threat to a coastal/ ocean resource from development or natural or economic conditions, a pressing need, or a fleeting opportunity): *It is essential that the PEIR be completed before permit applications are submitted so that the same rigorous standards are expected of all new facilities. Also, setting state*

guidelines based upon the best available science will allow the State to promote similar considerations for federally regulated aquaculture facilities in waters beyond California's three-mile jurisdiction

4. The project involves innovation (e.g. environmental or economic demonstration): *Very few states have taken such a proactive approach to setting environmental guidelines for marine aquaculture. The PEIR could be a blueprint for other states or the federal government in establishing guidelines elsewhere.*

5. The project is ready to implement (grantee or contractor will start and finish the project in a timely manner): *DFG has completed an earlier draft document and currently has program staff available to begin working on this new PEIR, ensuring that it will be completed in a timely manner.*