

Informational Meeting on Federal Agency Roles in Aquaculture in Coral Reef Ecosystems

U.S. Coral Reef Task Force (CRTF)

EPA West, 1301 Constitution Avenue, Wash. DC

September 12, 2006; 2-4:00pm

Aquaculture Resolution (1999)

As outlined in the 1999 Aquaculture Resolution, the CRTF agreed to explore and develop guidelines and monitoring protocols for aquaculture as they relate to coral reef ecosystems, and to coordinate its efforts with the work of other relevant interagency groups (eg. The Aquatic Nuisance Species Task Force, the Invasive Species Council, the Ocean Task Force and the Joint Subcommittee on Aquaculture).

Purpose of Meeting

In May, 2006 the Steering Committee of the U.S. CRTF completed a survey to determine what guidelines currently exist and the issues related to aquaculture in U.S. coral reef jurisdictions. The results of the survey are summarized in the Survey Summary and Aquaculture Potential Threats Table documents.

One of the recommendations from the survey was for the CRTF to foster an information exchange among CRTF member organizations and others on the various roles (e.g., permitting, monitoring, research etc) of Federal agencies in monitoring, regulating, managing and researching aquaculture as it relates to coral reef ecosystems in the United States and its territories. The purpose of this meeting was to identify the key roles that Federal agencies play in research, monitoring and/or management of aquaculture in the United States, identify any needs for fulfilling these roles, and evaluate the next steps for the CRTF's Aquaculture Working Group. The meeting that was held on September 12, 2006 in DC was attended by representatives from five Federal agencies including the National Oceanic and Atmospheric Administration (NOAA), Environmental Protection Agency (EPA), Fish and Wildlife Service (FWS), U.S. Department of Agriculture (USDA) and the Army Corps of Engineers (ACE).

Meeting Attendees

EPA

Hazel Groman
Kawana Cohen
Brian Frazer
Chris Hunter
Richard Witt
Janet Goodwin
Wendy Wiltse

NOAA

Gabrielle Dorr
Beth Dieveney
Jeff Smith
David O'Brien
Susan Bunsick
Kate Naughten

FWS

Andrew Gude
Jason Miller

USDA

Gary Jensen

ACE

Jon Soderberg
Joseph Wilson

General Meeting Summary

The meeting attendees listened to presentations by EPA, NOAA, USDA and ACE. The presentations focused on regulatory authorities of the different agencies as well as specialized research, legislation and permitting procedures for aquaculture. Discussions and questions were held throughout the meeting and a gap in one of the Federal regulatory authorities was identified and noted below. The next steps for the CRTF Aquaculture Working Group are to begin discussions with regional folks from U.S. coral reef jurisdictions on a variety of issues/concerns with aquaculture and how the CRTF can assist in addressing them.

EPA Presentation and Discussion

The EPA presented their current regulations for the National Pollutant Discharge Elimination System (NPDES) which is administered under section 402 of the Clean Water Act. The EPA can issue NPDES permits to Concentrated Aquatic Animal Production (CAAP) facilities for the discharge of pollutants into waters of the U.S. The EPA can also require certain facilities to follow Effluent Limitation Guidelines, which are regulations issued by EPA and applied through the NPDES permit. The Effluent Limitation Guidelines apply to facilities that produce 100,000 pounds or more of aquatic animals per year. For offshore net pens the guidelines include reporting requirements for use of drugs, structural pen damage, and spill of drugs or feed. Other activities such as feed management, minimizing discharge during transport and harvest, carcass removal, regular inspection and maintenance of structure, recordkeeping and staff training are regulated as part of a best management practices plan that is developed by the facility and approved by EPA.

EPA Discussion Notes

- When other Federal permits are required to site an aquaculture facility in marine waters, generally the aquaculture permitting process begins with the Army Corps first but other Federal permits can be applied for concurrently. NOAA is consulted for protection of habitat and species under regulations pertaining to the Endangered Species Act and essential fish habitat (EFH) in the Magnuson-Stevens Act (MSA).
- The aquaculture facilities in Hawaii and Puerto Rico fall below the 100,000-lb threshold for the EPA's Effluent Limitation Guidelines because these are smaller-scale projects.
- For aquaculture facilities in state waters, the state's authority can meet or exceed the NPDES and Effluent Limitation Guidelines.
- EPA does not get involved with aquaculture pen siting issues (location of pens in water).
- The Joint Subcommittee on Aquaculture's [Aquaculture Effluents Task Force](http://aquanics.org/jsa/effluents/index.html), which was formed in 1999, assisted EPA in the development of national effluent limitations guidelines and standards for aquaculture facilities in the United States. URL: <http://aquanics.org/jsa/effluents/index.html>

Additional EPA Background Information

- Overview of Effluent Limitation Guidelines - <http://www.epa.gov/guide/aquaculture/>
- Compliance Guide for the CAAP Point Source Category - <http://www.epa.gov/waterscience/guide/aquaculture/guidance/full-final.pdf>

ACE Presentation and Discussion

The ACE presented their current regulations under section 10 of the Rivers and Harbors Act (1899) and section 404 of the Clean Water Act. Section 10 requires a permit for any structure that affects the course, location, condition or capacity of navigable waters. Over time section 10 has evolved to include impacts to the environment with a public interest review that may involve avoidance, minimization of impacts, and compensatory mitigation for impacts. The Outer Continental Shelves Land Act extended the ACE section 10 authority to specifically regulate aquaculture production facilities. Section 404 gives the ACE and EPA, who co-administers the program with the ACE, authority to regulate discharges of dredged or fill material to waters of the U.S.

ACE Discussion Notes

- Jurisdiction for territorial waters is different depending on the territory. For example in Puerto Rico territorial jurisdiction is 9 miles and it is 3 miles or less for the U.S. Virgin Islands. Currently regulation lists a 3 nm territorial sea limit on jurisdiction and was not updated when territorial seas were extended to the 12 nm mark in the late 80's. Treaties come into effect on some of the activities that ACE regulates but aquaculture has been regulated by ACE in these areas so far.

NOAA Presentation and Discussion

The NOAA Aquaculture Program presented an overview of the agency's role in aquaculture which is focused on creating domestic seafood supply to meet the [growing demand](#) for seafood within the context of NOAA's marine stewardship responsibilities. NOAA noted potential synergies between aquaculture and coral reef ecosystems, namely the potential to create jobs for coastal communities and provide an alternative to overfishing of reefs. For aquaculture conducted onshore and in state waters, NOAA has regulatory authority under the MSA, ESA the Marine Mammal Protection Act, and the Marine Protection Research and Sanctuary Act. NOAA is planning to develop agency guidelines for aquaculture permit reviews under these authorities. Currently, U.S. law does not provide a clear mechanism to allow for aquaculture in Federal waters. The proposed National Offshore Aquaculture Act of 2005 would give NOAA authority to create a regulatory framework for aquaculture in Federal waters.

NOAA Discussion Notes

- The participants were interested in more in-depth information on the current state of aquaculture in the U.S., including more information on the extent of onshore, coastal and open ocean aquaculture in the U.S.
- Participants were interested in more background on the history and extent of the marine aquaculture research being funded through NOAA and USDA, including more information on the monitoring and management of the current open ocean operations in the U.S., especially those in Puerto Rico and Hawaii.
- NOAA Sea Grant has played a major role in the funding of research and technology development for aquaculture in the U.S. What research relates to coral reef ecosystems?
- NOAA Sea Grant extension agents are on the ground in Puerto Rico and Hawaii. What can CRTF learn from their experience and knowledge?
- A participant noted that there are some studies of coral reef ecosystems outside of the U.S. that document some detrimental effects of aquaculture operations on coral reefs. These studies should be collected and considered as the CRTF carries out its charge.

- Aquaculture is an important component of NOAA's Ecosystem Goal Team's Coral Reef Initiative for FY07.
- NOAA is an active partner in the Joint Subcommittee on Aquaculture, a formal Federal interagency committee that operates under the National Science and Technology Council of the Office of Science and Technology Policy in the Office of the Science Advisor to the President.

Additional NOAA Background Information

- Overview of NOAA Program - www.aquaculture.noaa.gov
- Overview of NOAA- Funded Aquaculture Research 2006 - - www.aquaculture.noaa.gov
- Overview of Sea Grant Aquaculture priorities - <http://www.seagrant.noaa.gov/themesnpa/aquaculture.html>
- Overview of NOAA- Funded Aquaculture Research 1999-2004 - <http://www.lib.noaa.gov/docaquado/research.html>
- Recently published document, [Guidelines for Ecological Risk Assessment of Marine Aquaculture](http://www.nwfsc.noaa.gov/assets/25/6450_01302006_155445_NashFAOFinalTM71.pdf) - http://www.nwfsc.noaa.gov/assets/25/6450_01302006_155445_NashFAOFinalTM71.pdf

USDA Presentation and Discussion

The USDA discussed their role in research, education and extension relating to aquaculture in the context of their Cooperative State Research, Education and Extension Service (CSREES) program. The CSREES program works with many academic, private and agency partners to support research relating to various types of aquaculture. Some examples of research that CSREES supports in coral reef ecosystems includes cultivating live coral and reef fish for aquarium trade, understanding effects of aquaculture effluent discharges on the environment and developing water quality monitoring protocols.

USDA Discussion Notes

- USDA encouraged the Aquaculture Working Group of the U.S. Coral Reef Task Force to update the Joint Subcommittee on Aquaculture about what we are hoping to accomplish in terms of aquaculture and protection of coral reefs.
- USDA will be a key contact along with SEA Grant to mobilize expertise, research and science in support of creating guidelines/standards for aquaculture practices.
- USDA-CSREES has played a major role in the funding of research and technology development for aquaculture in the U.S. What's been funded in the past and how does that translate to or include coral reef ecosystems?

Additional USDA Background Information

- Overview of CSREES program - <http://www.csrees.usda.gov/>
- Overview of CSREES Aquaculture program - <http://www.csrees.usda.gov/ProgView.cfm?prnum=5785>