Marine Aquaculture and Fishery Management Councils

Council Member Training
October 30, 2014 – Silver Spring, MD

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Presentation Overview

- Background on NOAA Aquaculture Program and U.S. Aquaculture Industry
- Role of Fishery Management Councils with respect to aquaculture in federal waters
- Examples
  - Gulf of Mexico Council – Regional Fishery Management Plan for Aquaculture
  - Western Pacific Council – Consultation on NMFS Special Gear Type Permit and work on Omnibus Amendment to Fishery Ecosystem Plans

Definition (NOAA Aquaculture Policy 2011)

For purposes of this policy, aquaculture is defined as the **propagation and rearing** of aquatic organisms **for any commercial, recreational, or public purpose**.

This definition covers all production of **finfish, shellfish, plants, algae, and other marine organisms** for

1) food and other **commercial** products
2) wild stock **replenishment** for commercial and recreational fisheries
3) **rebuilding** populations of threatened or endangered species under species recovery and conservation plans; and
4) **restoration and conservation** of marine and Great Lakes habitat.

NOAA's Aquaculture Program

Mission: Foster U.S. marine aquaculture that

- Creates employment and business opportunities in coastal communities
- Provides safe, sustainable seafood
- Supports healthy ocean populations and ecosystems
- Supports commercial and recreational fisheries

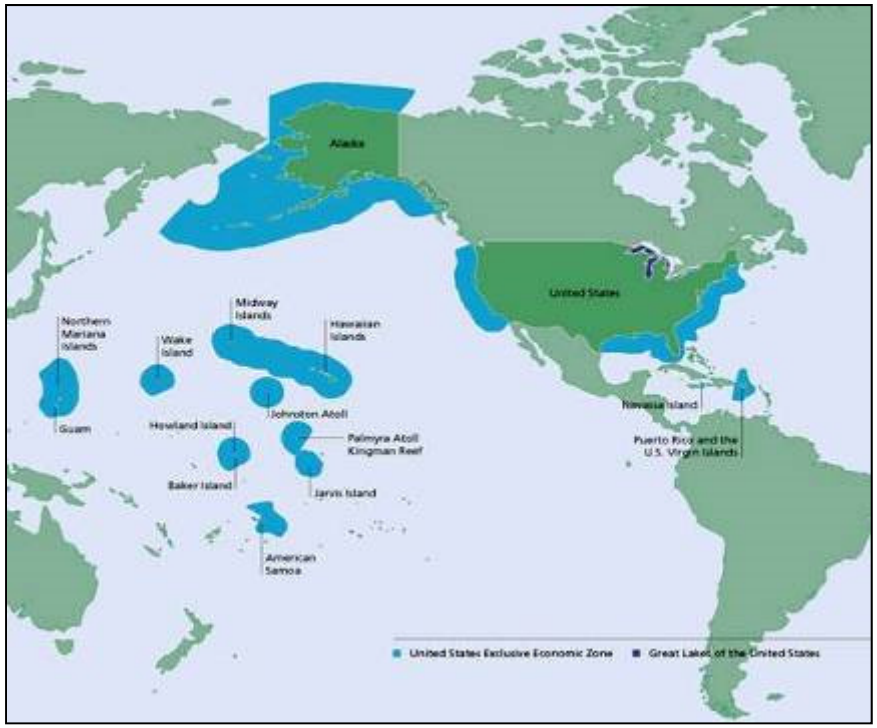
Small program

- NMFS Office of Aquaculture
- Regional aquaculture coordinators
- NMFS/NOS science center participants
- OAR/Sea Grant

Context for NOAA's Aquaculture Program

Aquaculture is the fastest growing form of food production in world

- Already provides half of all global seafood
- Projected to provide nearly 2/3 by 2030
- Domestic aquaculture industry is small but regionally critical
- United States has largest potential for offshore aquaculture development in world

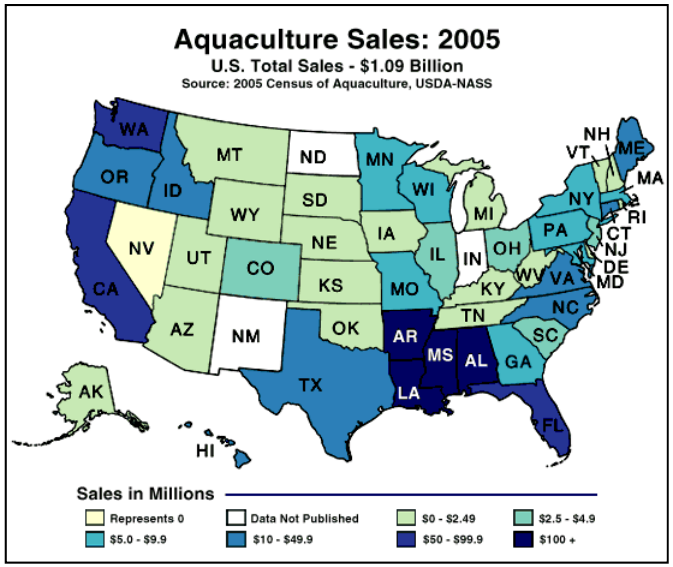


Trade and food security considerations

- U.S. imports 91% of its seafood; half from aquaculture.
- Seafood trade deficit - $11 billion and rising
- Limited capacity to meet world seafood demand through wild harvest

U.S. Aquaculture Industry

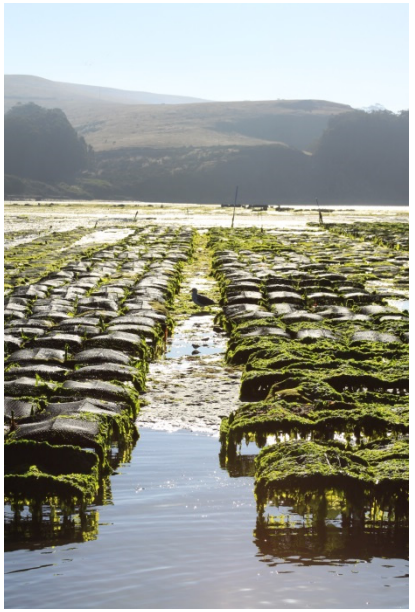
- 2/3rds freshwater
- Marine aquaculture is growing 13%/yr
  - Mostly shellfish
  - Salmon, some marine finfish



Species	2010			2011		
	Thousand pounds	Metric tons	Thousand dollars	Thousand pounds	Metric tons	Thousand dollars
Finfish:						
Catfish	478,854	217,205	375,078	348,199	157,942	390,977
Salmon	43,066	19,535	98,986	40,995	18,595	104,038
Striped bass	8,531	3,870	28,837	7,751	3,516	29,256
Tilapia	22,000	9,979	52,988	22,000	9,979	53,900
Trout	33,953	15,401	47,745	33,316	15,112	51,532
Shellfish:						
Clams	9,182	4,165	95,458	10,324	4,683	104,337
Crawfish	116,716	52,942	177,406	117,804	53,435	205,725
Mussels	886	402	6,633	880	399	7,254
Oysters	36,864	16,721	111,778	26,592	12,062	98,444
Shrimp	2,974	1,349	5,949	3,554	1,612	6,145
Miscellaneous	-	-	282,114	-	-	285,359
Totals	**753,027**	**341,568**	**1,282,972**	**611,414**	**277,335**	**1,336,967**

Source: NMFS, Fisheries of the United States, 2012

Shellfish Aquaculture: Examples



Offshore Aquaculture

Hatcheries

Federal Regulatory Authorities

- Magnuson-Stevens Act
- Endangered Species Act
- Marine Mammal Protection Act
- Coastal Zone Management Act
- National Marine Sanctuaries Act
- Rivers and Harbors Act
- Clean Water Act
- National Environmental Policy Act
- National Historic Preservation Act
- Fish and Wildlife Coordination Act

For more information, see Regulatory Fact Sheets at
http://www.nmfs.noaa.gov/aquaculture/policy/24_regulating_aquaculture.html

Magnuson Authority to Regulate Aquaculture in Federal Waters

The term "fishing" means—

(A) the catching, taking, or harvesting of fish;

(B) the attempted catching, taking, or harvesting of fish;

(C) any other activity which can reasonably be expected to result in the catching, taking, or harvesting of fish; or

(D) any operations at sea in support of, or in preparation for, any activity described in subparagraphs (A) through (C).

Such term does not include any scientific research activity which is conducted by a scientific research vessel.

NOTE: Authority with respect to aquaculture challenged in court but upheld to date.

Role of Councils

- Options councils have pursued under Magnuson Act:
  - Develop new, aquaculture-specific fishery management plans (FMPs)
  - Amend existing FMPs to include aquaculture
  - Ad hoc review of applications for NMFS exempted fishing permits or other type of exemption from fishery management plan
  - Councils may also comment on permits issued by other federal agencies (e.g., Corps permit for mussel farm in New England, which does not require a permit from NMFS)

Example: Direct Council Role in Gulf of Mexico

- Gulf Council received several requests for Exempted Fishing Permits (EFPs) to conduct aquaculture in federal waters.
- EFPs are of limited duration and are not intended for commercial aquaculture production.
- Council developed the Fishery Management Plan for Regulating Offshore Marine Aquaculture in the Gulf of Mexico (Aquaculture FMP)
  - Provides the first regional regulatory framework for commercial aquaculture production in federal waters
  - Council originally worked on a generic amendment to existing FMPs, but decided on a separate FMP specific to aquaculture in the region.

Implementation of the Aquaculture FMP

- NMFS rulemaking to implement the FMP is underway
- NMFS also working with other federal agencies on a coordinated permitting process for the region

Benefits

- Enable offshore aquaculture to develop in Gulf
- Provide a model framework for other regions
- Potential to create jobs and revenue for Gulf communities and boost U.S. seafood production

The Aquaculture FMP and implementing regulations will:

1. Establish an aquaculture permitting process.
2. Establish operational conditions and restrictions.
3. Establish permit duration of 10 years and 5-year renewal periods.
4. Allow the culture of native, non-genetically modified species managed by the Council (except shrimp and corals).
5. Provide guidelines for approval of grow-out systems allowed for culture.
6. Establish criteria for siting marine aquaculture facilities.
7. Create a restricted access zone for each aquaculture facility.
8. Establish numerous recordkeeping, reporting and operational requirements to minimize or mitigate potential environmental impacts.
9. Establish biological reference points and status determination criteria.
10. Specify framework procedures for modifying biological reference points and management measures.

For details, see http://www.nmfs.noaa.gov/aquaculture

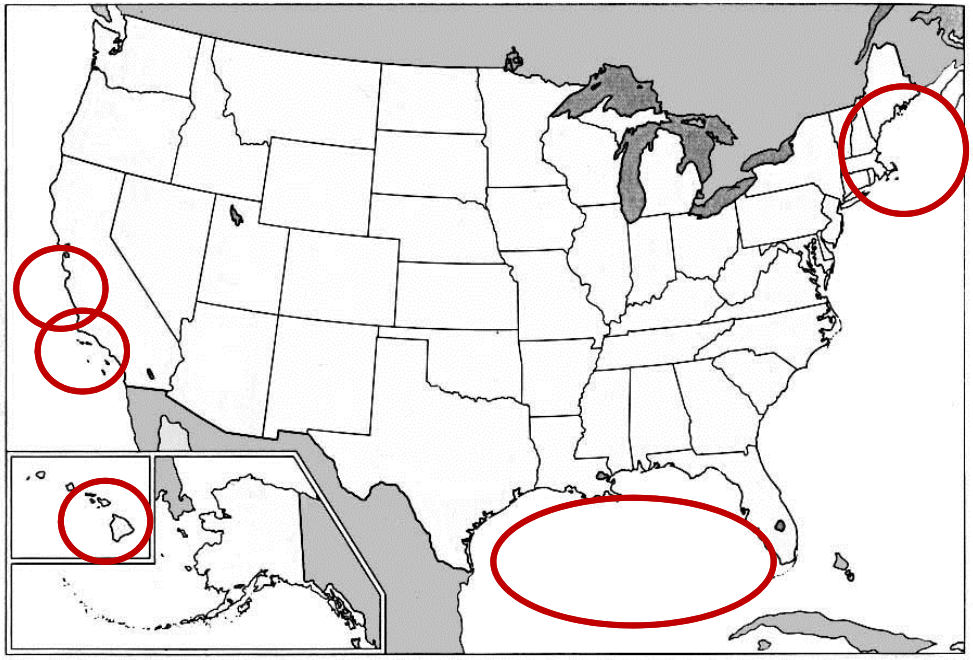
Timeline for Rulemaking

Date	Action
January 2009	The Council approved the final Aquaculture FMP and proposed rule.
September 2009	The Aquaculture FMP entered into effect by operation of law. On that same date, NOAA announced that the agency would develop a Marine Aquaculture Policy which would provide context for the Aquaculture FMP (rulemaking put on hold).
June 2011	NOAA released the final Marine Aquaculture Policy and intentions to move forward with rulemaking for the Aquaculture FMP.
February 2013	The Council reconfirmed their approval of the proposed rule, which included new language authorizing aquaculture gear types and defining several terms and details pertaining to requirements in the Aquaculture FMP.
August 2014	Proposed rule published in *Federal Register* for 60-day public comment
2015 (TBD)	Final rule

Example of Ad Hoc and Evolving Approach

- Western Pacific Council
  - NMFS consulted with Council on use of Special Coral Reef Ecosystem Fishing Permits for “Velella Project” application in federal waters off Hawaii
  - Meanwhile, Council is drafting an Omnibus Amendment to its Fishery Ecosystem Plans
  - NMFS NEPA/EIS analysis for potential Western Pacific Council action

Aquaculture in Federal Waters



Take-Away Points

- Councils have role to play in aquaculture under Magnuson
- The FMP approach has benefits over ad hoc review:
  - Allows for longer permit duration needed for commercial-scale aquaculture operation to be successful
  - Allows for a more comprehensive, programmatic approach in identifying and addressing region-specific issues (e.g., potential conflicts with commercial or recreational fishing, impacts on wild fish stocks)
  - Provides opportunities for coordination with other federal permitting agencies
- NOAA's Aquaculture Policy (2011) provides guidance for Councils interested in developing FMPs for aquaculture.

For more information

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Office of Aquaculture Web site

www.nmfs.noaa.gov/aquaculture

THANK YOU!