



Gulf of Mexico Fishery Management Council

Aquaculture Fishery Management Plan

Frequently Asked Questions

What is offshore aquaculture?

Offshore aquaculture is the rearing of aquatic organisms in controlled environments (e.g., cages or net pens) in federally managed areas of the ocean. Federally managed areas of the Gulf of Mexico begin where state jurisdiction ends and extend 200 miles offshore, to the outer limit of the U.S. Exclusive Economic Zone (EEZ).

Why conduct aquaculture offshore?

Offshore aquaculture is desirable for several reasons. First, there are fewer competing uses (e.g., fishing and recreation) farther from shore. Second, the deeper water makes it a desirable location with more stable water quality characteristics for rearing fish and shellfish. The stronger waterflows offshore also mitigate environmental effects such as nutrient and organic loading.

Are there currently any offshore aquaculture operations in federal waters of the United States?

Currently there are no commercial finfish offshore aquaculture operations in U.S. federal waters. There are currently 25 permit holders for live rock aquaculture in the EEZ. There are also several aquaculture operations conducting research and commercial production in state waters, off the coasts of California, New Hampshire, Hawaii, Washington, Maine, and Florida.

Why did the Gulf of Mexico Fishery Management Council develop a Fishery Management Plan (FMP) for regulating offshore marine aquaculture in the Gulf of Mexico?

The current Federal permitting process for offshore aquaculture is of limited duration and is not intended for the large-scale production of fish, making commercial aquaculture in federal waters impracticable at this time. Offshore aquaculture could help meet consumers' growing demand for seafood with high quality local supply, create jobs in coastal communities, help maintain working waterfronts, and reduce the nation's dependence on seafood imports.

What is the primary purpose of the Gulf Council's FMP?

Its purpose is to maximize benefits to the Nation by establishing a regional permitting process to manage the development of an environmentally sound and economically sustainable aquaculture industry in federal waters of the Gulf of Mexico. The primary goal of the Gulf Council's FMP is to increase maximum sustainable yield (MSY) and optimum yield (OY) of federal fisheries in the Gulf of Mexico by supplementing the supply of wild caught species with cultured product.

What are the primary objectives of the Gulf Council's FMP?

The objectives of the Aquaculture FMP are: 1) to provide for the development of environmentally sound and economically sustainable aquaculture fishery to increase the potential yields of the fishery, consistent with the goals and objectives of the Magnuson-Stevens Fishery Conservation Management Act (MSFCMA); 2) to achieve OY, without adversely affecting wild stocks, protected resources, and essential fish habitat; 3) to conserve and protect essential fish habitat through proper aquaculture facility siting; 4) to obtain necessary data and information for issuing aquaculture permits and monitoring potential impacts of aquaculture operations; 5) to minimize user conflicts among aquaculture permit operations, commercial fishermen, and recreational anglers; 6) to prevent or mitigate to the extent practicable adverse impacts to

wild stocks, protected resources, and essential fish habitat resulting from aquaculture activities; 7) to reduce the nation's dependence on imports by supplementing the harvest of domestic fisheries with cultured products to meet growing U.S. consumer demand; and, 8) to promote and facilitate effective enforcement of the aquaculture management program.

Does the Council have the authority to regulate offshore aquaculture?

Yes. The Council regulates fisheries in the U.S. Gulf of Mexico Exclusive Economic Zone (EEZ), which extends from state waters to 200 miles offshore. Landings or possession of species managed under an FMP for purposes of commercial marine aquaculture production in the EEZ constitutes "fishing" as defined in the MSFCMA. Fishing includes activities and operations related to the taking, catching, or harvesting of fish.

Does the Aquaculture FMP include requirements to evaluate and monitor environmental impacts?

Yes. The Aquaculture FMP includes monitoring, recordkeeping and reporting requirements to assist NOAA Fisheries Service in administering and reviewing aquaculture permits and evaluating environmental impacts.

Permit applicants would be required to conduct a baseline environmental assessment of the proposed site prior to permit review by NOAA Fisheries Service. If a permit is authorized, permittees would have to conduct routine monitoring of a site based on NOAA Fisheries Service protocols and procedures developed in coordination with other federal agencies. Aquaculture operations would also be required to report to NOAA Fisheries Service within 24 hours of discovery: major escapement; entanglements or interactions with marine mammals, endangered species and migratory birds; and findings or suspected findings of pathogens.

Recordkeeping requirements for monitoring environmental impacts include, but are not limited to, maintaining and making available feed invoices and daily records of cultured animals introduced or removed from allowable growing systems. Permittees would also have to comply with reporting requirements specified in their valid Army Corps of Engineers and Environmental Protection Agency permits.

Does the Aquaculture FMP consider potential environmental issues?

Yes. The Council prepared a Programmatic Environmental Impact Statement (PEIS), which evaluates the potential environmental impacts of a range of alternatives and describes potential impacts to water quality, wild stocks, and fishing communities. Potential impacts resulting from offshore aquaculture may include increased nutrient loading, habitat degradation, fish escapement, competition with wild stocks, entanglement of endangered or threatened species and migratory birds, spread of pathogens, user conflicts, economic and social impacts on domestic fisheries, and navigational hazards. The preferred alternatives selected by the Gulf Council are intended to prevent or mitigate to the extent practicable these potential adverse environmental impacts.

Does the Aquaculture FMP include recordkeeping, reporting, and operational requirements to assist law enforcement?

Yes, the Aquaculture FMP includes numerous recordkeeping, reporting, and operational requirements to assist law enforcement. Requirements directly assisting with enforcement of aquaculture activities include:

- Prohibiting possession of wild fish or invertebrates at or within the boundaries of an aquaculture facility's restricted access zone, with the exception of authorized broodstock;
- Prohibiting possession of wild fish or invertebrates aboard an aquaculture operation's transport and service vessels, vehicles, and aircraft, except when authorized by NOAA Fisheries Service to harvest broodstock;

- Providing current valid copies of state and federal permits pertaining to operation of the aquaculture facility, as well as hatchery permits for fingerlings;
- Notifying NOAA Fisheries Service at least 30 days prior to changes in hatcheries;
- Notifying NOAA Fisheries Service at least 72 hours prior to harvest and landing;
- Providing applicable bill of lading for any cultured organisms transported for sale;
- Gear stowage requirements for vessels transporting cultured organisms to or from an offshore aquaculture facility;
- Submitting a request to NOAA Fisheries Service for broodstock collection at least 30 days prior to the proposed date of broodstock harvest;
- Providing NOAA Fisheries Service with information on hatchery personnel, vessels, and aircraft involved in aquaculture operations;
- Landing of cultured species at non-U.S. ports would be prohibited, unless first landed at a U.S. port;
- Cultured fish must be maintained with heads and fins intact until landing; and,
- Species cultured at an aquaculture facility in the Gulf EEZ can only be landed ashore between 6 a.m. and 6 p.m., local time.

Are there criteria for determining where an offshore aquaculture operation can be located? Do these criteria protect essential fish habitat (EFH) and traditional fishing grounds?

Yes, marine aquaculture would be prohibited in Gulf of Mexico EEZ habitat areas of particular concern, marine reserves, marine protected areas, Special Management Zones, permitted artificial reef areas, and coral reef areas. Additionally, prior to permit review applicants would have to conduct a baseline environmental assessment at the proposed site in accordance with NOAA Fisheries Service protocols and procedures. These procedures will be developed in consultation with Army Corp of Engineers (ACOE), Environmental Protection Agency (EPA), and other federal agencies. Additional criteria for siting an aquaculture facility (e.g., depth, current speeds, substrate, etc.) would also be evaluated on a case-by-case basis by NOAA Fisheries Service.

Does the Aquaculture FMP prohibit the use of drugs, pesticides, and biologics?

No. The Council does not have authority to regulate the use of drugs, pesticides, and biologics. Such authority falls under the following U.S. agencies: Food and Drug Administration (FDA), Environmental Protection Agency (EPA), and Department of Agriculture (USDA). However, the FMP requires permittees to comply with all applicable federal regulations for using drugs, pesticides, and biologics. The FDA evaluates drug effectiveness and safety for humans and the environment. A list of FDA drugs approved for use in aquaculture can be downloaded at: <http://www.fda.gov/cvm/drugsuseaqua.htm>.

What types of permits would be required to conduct offshore marine aquaculture?

The Aquaculture FMP would provide NOAA Fisheries Service authority to issue a Gulf Aquaculture Permit that authorizes the deployment and operation of an offshore aquaculture facility in the Gulf of Mexico EEZ; and the sale of allowable aquaculture species cultured at an offshore aquaculture facility in the Gulf of Mexico EEZ. In addition, persons issued a Gulf Aquaculture Permit would also be authorized to: 1) harvest (or designate hatchery personnel or other entities to harvest) wild broodstock of an allowable aquaculture species native to the Gulf of Mexico for aquaculture purposes; and 2) possess or transport allowable aquaculture species in, to, or from an offshore aquaculture facility in the EEZ.

Before an aquaculture permit is approved by NOAA Fisheries Service, will there be an opportunity for public comment?

Yes, if the NOAA Fisheries Service Regional Administrator (RA) determines that an application warrants further consideration, notification of receipt of the application will be published in the *Federal Register* with a brief description of the proposal, and the intent of NOAA Fisheries Service to issue a Gulf Aquaculture Permit. Interested persons will be given a 15- to 45-day opportunity to comment. An application for a Gulf Aquaculture Permit would also be considered at a Gulf Council meeting, with an opportunity for the

applicant to appear in support of the application. After the opportunity for public comment ends, the RA will notify the applicant in writing of the decision to grant or deny the Gulf Aquaculture Permit, and, if denied, the reasons for the denial. The RA would also publish a notice in the *Federal Register* upon approval or denial of a permit.

What species would be allowed for offshore aquaculture in the Gulf of Mexico?

The Aquaculture FMP would allow all species native to the Gulf of Mexico that are managed by the Council to be used for offshore aquaculture, except shrimp and corals. Examples of allowable species include: snappers, groupers, jacks, cobia, and red drum.

Would non-native, genetically modified, or transgenic species be allowed for offshore aquaculture?

No. The Aquaculture FMP would prohibit the culture of non-native, genetically modified, and transgenic species from being used for offshore aquaculture in the Gulf of Mexico.

Would endangered or threatened species or Species of Concern be allowed for offshore aquaculture?

Section 9 of the Endangered Species Act (ESA) makes it unlawful for any person to take any endangered species of fish or wildlife. Under Section 4 of the ESA, the take prohibition may be extended to species listed as threatened if deemed necessary and advisable for the conservation of the species. NOAA Fisheries has issued regulations extending the prohibition of take, with limited exceptions, for all threatened species listed in the Southeast Region. None of the take exceptions allow for the commercial culture of any Southeast Region endangered or threatened species. Species of Concern are not listed under or protected by the ESA, therefore no specific protections would be afforded.

Why is the Gulf Council not prohibiting aquaculture in national marine sanctuaries?

The Council considered prohibiting offshore marine aquaculture in national marine sanctuaries, but decided not to so that each marine sanctuary can evaluate whether offshore aquaculture is compatible with each sanctuary's management plan. Regulations implementing the National Marine Sanctuaries Act serve to safeguard resources within sanctuary boundaries and include prohibitions or limitations on some activities, such as discharge and disturbance of the seabed. These regulations also provide the National Marine Sanctuary Program with authority to issue permits to allow certain activities beneficial to sanctuaries that would otherwise be prohibited.

Does the Aquaculture FMP include measures for regulating the use of baitfish in aquaculture feeds?

No. The Aquaculture FMP does not include specific regulatory measures for use of baitfish in aquaculture for feed. Baitfish are caught worldwide and used in part to produce fish meal and oil for use in aquaculture, poultry, and hog feeds and for industrial uses such as baiting lobster traps and fish hooks, as well as direct human consumption. Fish meal and fish oil are a source of essential protein and oil required for growth of cultured species, including carp, salmon, tilapia, trout, catfish, shrimp, and others. Fish meal and oil also help maintain the important human health benefits of farmed seafood. The world supply of fish meal and oil has been relatively constant for the past twenty years. The percentage going to aquaculture has increased in recent years, but if not purchased by the aquaculture industry, fish meal and oil would be consumed by other sectors. Because increases in the supply of fish meal and oil are not likely, the aquaculture industry is increasingly using other sources of protein and oil in aquaculture feeds such as grains, agricultural byproducts, algae, and fish processing trimmings. For more information on alternative feeds go to <http://aquaculture.noaa.gov/news/feeds.html>.

In the United States, Gulf and Atlantic menhaden represent the greatest source of fishmeal production, with Atlantic herrings and Californian pilchards accounting for a lesser amount of U.S. fishmeal and fish oil production. Gulf and Atlantic menhaden are not overfished and are not undergoing overfishing. Both

species are managed by interstate compacts and stock assessments are conducted every 4-5 years by NOAA Fisheries Service. These stock assessments are used to assess the status of each of these populations and necessary management adjustments are made on the basis of the assessments to protect these wild stocks.

What is the Council doing to reduce the potential spread of disease from cultured species to wild stocks?

The Council has selected several preferred alternatives to reduce the risk of pathogens and parasites spreading from cultured organisms to wild stocks.

- Prior to stocking cultured animals in an aquaculture system (e.g., cages and net pens) a health certificate signed by a certified aquatic animal health expert stating the cultured animals are free of reportable pathogens is required.
- Once cultured organisms are stocked in an aquaculture system for grow-out, permittees must report to NOAA Fisheries Service all findings or suspected findings of pathogens within 24 hours of diagnosis.
- NOAA Fisheries Service, in coordination with the U.S. Department of Agriculture, may order the removal of all cultured organisms upon a determination by a certified aquatic animal health expert that a suspected pathogen exists and poses a threat to the health of wild aquatic organisms.

What happens if there is a hurricane or other type of natural or man-made catastrophe?

The Aquaculture FMP requires an aquaculture facility to create an emergency disaster plan that includes, but is not limited to: preparing the aquaculture systems, equipment, and cultured organisms for a disaster such as a hurricane, tsunami, harmful algal bloom, or chemical or oil spill. The Aquaculture FMP also allows the NOAA Fisheries Service to modify time schedules and methods for recordkeeping and reporting in the event of a natural catastrophe.

Will the Aquaculture FMP prohibit the use of oil and gas platforms for offshore aquaculture?

No. The Minerals Management Service has authority to regulate the use of oil and gas platforms for offshore aquaculture and other purposes. In July 2008, the MMS published a proposed rule for establishing a program to grant leases, easements, and rights-of-way for alternative energy project activities on the Outer Continental Shelf (OCS) as well as for certain previously unauthorized activities that involve the alternate use of existing facilities located on the OCS (e.g., use of oil and gas platforms for aquaculture).