

CONSISTENCY OF FISHERY MANAGEMENT PLAN(FMP) AND PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT(PEIS) FOR REGULATING OFFSHORE MARINE AQUACULTURE IN THE GULF OF MEXICO (GOM) WITH NOAA GOALS FOR AQUACULTURE IN FEDERAL WATERS

Goal 1. Ecosystem compatibility – Aquaculture development in federal waters is compatible with the functioning of healthy, productive, and resilient marine ecosystems.

NOAA will achieve this goal by:

- developing, implementing, and enforcing ecosystem-based conservation and management measures for aquaculture that fulfill the agency's marine stewardship responsibilities to protect and restore healthy coastal and ocean ecosystems and to conserve living marine resources, their habitats, and other protected areas

NOAA Fisheries determined FMP meets Magnuson-Stevens Act (MSA) conservation requirements and has no adverse impact on essential fish habitat, endangered or threatened species and marine mammals.

- developing, implementing, and enforcing conservation and management measures for aquaculture designed to maintain the health, genetics, habitats, and populations of wild species; maintain water quality; prevent escapes and accidental discharges into the environment; and avoid harmful interactions with wild fish stock, marine mammals, birds, and protected species

FMP Action 2 prohibits Genetically Modified Organisms(GMO)/transgenic species.; requires that broodstock be from the same general area where facility is located; requires contractual agreement with animal health expert; requires certification that animals are pathogen free prior to stocking; require permittees to comply with monitoring, drug, pesticide, and biologic regulations from other federal agencies; inspect systems for entanglements/interactions.

FMP Action 4 allows culture of all species native to Gulf managed by the GOM Fishery Management Council (except shrimp and corals).

FMP Action 5 specifies that NOAA Fisheries Service Regional Administrator (RA) will evaluate the proposed aquaculture system and its operations based on potential risks to essential fish habitat, endangered or threatened marine species, marine mammals, wild fish or invertebrate stocks, public health, or safety; also evaluate structural integrity of system

FMP Action 6 requires that applicants submit a baseline environmental assessment of the proposed aquaculture site. Baseline environmental assessment and monitoring guidance and procedures will be developed in consultation with the Army Corps of Engineers (ACOE), Environmental Protection Agency (EPA), and other federal agencies

- pursuing efforts to restore wild stocks
 - NA. This bullet pertains to programmatic responsibilities of the NOAA Aquaculture Program in federal waters and is not directly related to the Actions set forth in the FMP
- supporting the use of only native or naturalized species in federal waters unless best available science demonstrates use of non-native or other species in federal waters would not cause undue harm to wild species, habitats, or ecosystems in the event of an escape
 - FMP Action 2 prohibits GMO/transgenic species and requires that broodstock be from same general area where facility is located.

 - FMP Action 4 allows for the culture of all species native to Gulf of Mexico managed by the Council (except shrimp and corals).
- employing science-based adaptive management
 - FMP Action 10 contains framework procedures for modifying biological reference points (MSY, OY), and management measures for offshore marine aquaculture in the Gulf of Mexico EEZ.
- taking into account the cumulative impacts of aquaculture throughout all trophic levels of the marine environment and in combination with the impacts of other activities
 - FMP PEIS (Section 6.15) discusses the cumulative impacts of FMP Actions. Analysis).
- encouraging the use of aquaculture feeds that either use fish from sustainably managed fisheries or alternative protein and lipid sources
 - FMP PEIS (Section 6.1.7) (Harvest of Prey Species for Feed) discusses the issue of prey species for food and assesses the current state of research to reduce the amount of forage fish in farmed fish diets.
- considering interactions with marine resources managed by other agencies and jurisdictions
 - FMP PEIS Section 5.5 (Administrative Environment) discusses the relationship of the FMP to authorities of other Federal and State agencies.
- conducting programmatic or site-specific reviews of impacts related to proposed facilities in federal waters in compliance with National Environmental Policy Act requirements
 - The response to Comment #15 (Appendix J) states that ‘the FMP and associated PEIS are intended to address the environmental and cumulative impacts associated with development of offshore aquaculture in the Gulf of Mexico. Any activities proposed by a Gulf Aquaculture Permit applicant that fall outside the scope of this FMP would be prohibited, or would require future amendment to this FMP.’

Goal 2. Compatibility with other uses – Aquaculture facilities in federal waters are sited and operated in a manner that is compatible with other authorized uses of the marine environment.

NOAA will achieve this goal by:

- coordinating with other agencies to develop tools to properly site aquaculture in federal waters, including tools to reduce conflicts among competing uses and identify activities for potential co-location with aquaculture operations, in the context of regional and national coastal and marine spatial planning (CMSP) activities and ecosystem compatibility goals
FMP Action 6 allows for case-by-case review of sites to identify potential user conflicts (e.g., location of the proposed site relative to important fishing grounds and habitats).
- incorporating the preferences of states in decisions about aquaculture development in federal waters
NOAA Fisheries determined the proposed action to be consistent to the maximum extent practicable with enforceable policies of approved coastal management plans of Florida, Alabama, Mississippi, Louisiana, and Texas.
- facilitating discussions among interested aquaculture developers, concerned state agencies, Fishery Management Councils, tribes, other federal agencies, federal advisory committees, and the public as early as possible in project planning and development
FMP Action 1 contains provisions for public input including a 15- to 45- day comment period and an opportunity for public testimony at a Council meeting.
- promoting the safety of human life at sea and providing situational awareness for those working on offshore aquaculture operations, including coastal and marine forecasts and marine navigation weather
All offshore aquaculture facilities must comply with the private aids to navigation 33 C.F.R. 66) and the vessel safety requirements of the U.S. Coast Guard. The ACOE permitting process will apply to the offshore facilities constructed by permit applicants, which includes review of the construction characteristics of the facility. Additionally, FMP Action 2 requires aquaculture operations to have an emergency disaster plan which could be used to assist in safety-at-sea operations.

Goal 3. Best available science and information – Management decisions for aquaculture in Federal waters are based upon the best available science and information.

NOAA will achieve this goal by:

- basing management decisions on best available scientific information – including biological, technological, ecological, economic, and social data – in management decisions
NOAA Fisheries determined that the FMP meets MSA National Standard 2, which states that 'Conservation and management measures shall be based upon the best scientific information available'.

- synthesizing and delivering information on the current state of scientific understanding about the observed and potential impacts and benefits of open ocean aquaculture
NA. This bullet pertains to programmatic responsibilities of the NOAA Aquaculture Program in federal waters and is not directly related to the Actions set forth in the FMP PEIS.
- identifying gaps and uncertainties associated with the current body of knowledge and taking these uncertainties into account in agency decisions
NA. This bullet pertains to programmatic responsibilities of the NOAA Aquaculture Program in federal waters and is not directly related to the Actions set forth in the FMP PEIS.
- conducting and supporting scientific studies to inform agency decision-makers on open ocean aquaculture technologies, practices, benefits, costs, and risks and to develop new and improve existing sustainable practices and products
NA. This bullet pertains to programmatic responsibilities of the NOAA Aquaculture Program in federal waters and is not directly related to the Actions set forth in the FMP PEIS.
- monitoring, evaluating, and maintaining databases on the impacts of aquaculture, including cumulative impacts, on biodiversity, predator-prey relationships, and other important characteristics of healthy and productive ecosystems
FMP Action 8 contains recordkeeping and reporting requirements that will allow both permitted aquaculture facilities and NOAA Fisheries to examine the aquaculture operation and its impacts to the physical, biological, and ecological environments.
- working with state and federal agencies, academia, tribes, and other entities to improve scientific understanding of the effects of open ocean aquaculture and to develop cost-effective open ocean aquaculture technologies and practices that prevent, minimize, or mitigate negative environmental or societal effects
NA. This bullet pertains to programmatic responsibilities of the NOAA Aquaculture Program in federal waters and is not directly related to the Actions set forth in the FMP PEIS.
- updating and adapting conservation and management measures to reflect the best available scientific information
FMP Action 10 contains framework procedures for modifying biological reference points (MSY, OY), and management measures for offshore marine aquaculture in the Gulf of Mexico EEZ.
- incorporating the insights gained by other countries that actively participate in open ocean aquaculture activities
NA. This bullet pertains to programmatic responsibilities of the NOAA Aquaculture Program in federal waters and is not directly related to the Actions set forth in the FMP PEIS.

Goal 4. Social and economic benefits – Investments in sustainable aquaculture in federal waters provide a net benefit to the Nation’s economy, coastal communities, and seafood consumers while considering regional and state goals and objectives.

NOAA will achieve this goal by:

- creating opportunities for new aquaculture jobs and economic growth for U.S. communities that complement commercial and recreational fishing, maintain and revitalize working waterfronts, provide upstream and downstream economic opportunities throughout the U.S. economy and provide additional domestic seafood choices for U.S. consumers

Objective 7 of the FMP is ‘ 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.
- assessing the food safety and human health effects of consumption of aquaculture products (foreign and domestic) in coordination with other federal agencies

NA. This bullet pertains to programmatic responsibilities of the NOAA Aquaculture Program in federal waters and is not directly related to the Actions set forth in the Gulf FMP PEIS.
- making the agency’s fee-for-service seafood inspection services available to aquaculture producers operating in federal waters

NA. This bullet pertains to programmatic responsibilities of the NOAA Aquaculture Program in federal waters and is not directly related to the Actions set forth in the Gulf FMP PEIS.
- assessing the likely positive and negative social, economic, and cultural impacts of management decisions, individually and cumulatively, over both the short and long term, on permit applicants, individual communities, the group of all affected communities identified, and the U.S. economy, including impacts on employment and the economic viability of working waterfronts

FMP PEIS assessed these impacts in Sections 5.4.3 (Fishing Communities), 6.0 (Environmental Consequences), 7.5 (Economic Impacts of Management Alternatives), 8.0 (Initial Regulatory Flexibility Analysis), and 9.0 (Fishery Impact Statement).
- identifying, developing, and supporting mitigation measures to address social, economic, and cultural impacts

FMP Action 10 contains framework procedures for modifying biological reference points (MSY, OY), and management measures for offshore marine aquaculture in the Gulf of Mexico EEZ.

Goal 5. Industry Accountability – To secure long-term access to operate aquaculture facilities in federal waters, operators are held accountable for protecting the environment, wild species, and human safety and for conducting and reporting ongoing monitoring.

NOAA will achieve this goal by working with federal agencies and other partners to develop an appropriate framework through which operators of aquaculture facilities will:

- conduct a baseline environmental analysis of the proposed site prior to permit review
FMP Action 6 requires that permittees conduct a baseline environmental assessment of the proposed aquaculture site. Assessment and monitoring guidance and procedures will be developed in consultation with the ACOE, EPA, and other federal agencies
- prepare and implement a broodstock management plan, an aquatic animal health plan, and a contingency plan for responding to emergencies
FMP Action 2 specifies that only species native to Gulf of Mexico will be allowed and that broodstock must be from same general area where facility located. Other requirements include: contractual agreement with animal health expert; certification animals are pathogen free prior to stocking; use of drugs/biologics/pesticides in compliance with regulations of other federal agencies; emergency disaster plan requirement. Requirements within the FMP PEIS would provide NOAA Fisheries Service information on how often broodstock are being collected and replaced; however, any specific requirements pertaining to frequency of broodstock collection and broodstock disposition after spawning would be based on relevant aquaculture regulations imposed by the various Gulf States.
- prepare, obtain federal approval for, and comply with an operating plan that uses recognized best management practices to ensure good husbandry, biosecurity, predator control, and maintenance practices that minimize the number and frequency of escapes, disease outbreaks, noise impacts, and entanglements
FMP Action 2 specifies that the use of drugs, pesticides, and biologics must comply with all applicable Food and Drug Administration, EPA, and U.S. Department of Agriculture regulations; permittee must conduct feed monitoring and management practices in compliance with Environmental Protection Agency regulations at 40 CFR 451.21.
- prepare, obtain federal approval for, and comply with a monitoring plan to meet all monitoring and reporting requirements, including reports of escapes, disease outbreaks, drug or chemical applications, nutrient discharges, and other environmental monitoring as required by NOAA or other federal agencies
FMP Action 6 includes a requirement for a baseline assessment and monitoring. Permitted facilities will be required to monitor water quality and other parameters according to protocols and procedures to be established by NOAA Fisheries Service in consultation with other federal agencies. FMP Action 8 also establishes 17 recordkeeping and reporting requirements in addition to that required by other federal agencies.
- incorporate environmentally efficient and responsible management practices that limit inputs and waste discharges into the environment from drugs, chemicals, feeds, etc.

FMP Action 2 specifies that the use of drugs, pesticides, and biologics must comply with all applicable Food and Drug Administration, EPA, and U.S. Department of Agriculture regulations; permittee must conduct feed monitoring and management practices in compliance with Environmental Protection Agency regulations at 40 CFR 451.21.

- allow regular inspection of facilities by authorized officers
FMP Action 2 requires that permittees provide NOAA Fisheries Service employees and authorized officers' access to the aquaculture facility. NOAA Fisheries Service staff shall conduct at least annual inspections of each permitted aquaculture facility.
- provide, upon request, evidence of compliance with applicable laws, including those governing use of drugs and feeds and other operational details that are under the jurisdiction of other agencies
FMP Actions 2 and 8 require that operations comply with operational, recordkeeping, and reporting requirements. These requirements will alert NOAA Fisheries Service of potential problems occurring at a facility and provide them with a basis for modifying, suspending, or revoking a permit in accordance with subpart D of 15 CFR part 904 for non-compliance.
FMP Action 2 specifies that NOAA Fisheries Service staff will conduct on-site visits, at least annually, to review operations at aquaculture facilities and determine compliance with applicable regulations
- provide evidence of an assurance bond to address facility removal and site remediation
FMP Action 2 requires documentation of an assurance bond.
- safely remove facilities and organisms once operations end and, to the extent necessary and practicable, restore environmental conditions of the site
The assurance bond requirement in FMP Action 2 specifies that the bond must be sufficient to cover the costs of removal of all components of the aquaculture facility, including cultured organisms remaining in allowable aquaculture systems.
- ensure the safety of human life at sea
All offshore aquaculture facilities must comply with the private aids to navigation (33 C.F.R. 66) and the vessel safety requirements of the U.S. Coast Guard. The ACOE permitting process will apply to the offshore facilities constructed by permit applicants, which includes review of the construction characteristics of the facility. Additionally, FMP Action 2 requires aquaculture operations to have an emergency disaster plan which could be used to assist in safety-at-sea operations

Goal 6. Approval process – Management decisions for aquaculture operations in federal waters are made in an efficient and transparent manner that produces timely, unbiased, and scientifically based decisions.

NOAA will achieve this goal by:

- implementing efficient, coordinated, transparent, and timely processes for science-based permit review and issuance and making easily understood information about the permitting process and requirements available on the agency's website
 - FMP Action 1 requires RA to review each application and make a preliminary determination regarding whether the application warrants further consideration. If the RA determines that an application warrants further consideration, notification of the application will be published in the *Federal Register* and there will be a 15- to 45- day comment period and an opportunity for public testimony at a Council meeting. The RA may consult with the Council on the permit application and the applicant would be provided an opportunity to appear in support of the application at a Council meeting. RA will publish a notice of approval or disapproval in the *Federal Register*.*

- reducing regulatory uncertainty and minimizing unnecessary regulatory burden on individuals, private or public organizations, or federal, state, tribal, or local governments
 - Section 8.0 of the Gulf FMP PEIS discusses the Regulatory Flexibility Act (RFA). The purpose of the RFA is to inform the agency, as well as the public, of the expected economic impacts of the alternatives contained in the FMP or amendment (including framework management measures and other regulatory actions) and to ensure that the agency considers alternatives that minimize the expected impacts while meeting the goals and objectives of the FMP and applicable statutes.*

- coordinating permit review, approval, and enforcement, both internally and with other federal agencies, to ensure compliance with existing regulatory requirements and to foster an efficient and timely regulatory process
 - As stated in the response to Comment #9 of Appendix J in the FMP PEIS, the intent of the FMP 'is to integrate MSA requirements with current Federal agency requirements (e.g., EPA and ACOE) and not duplicate them'. Additionally, Preferred Alternative 3 in FMP Action 6 establishes that baseline environmental assessment and monitoring guidance and procedures will be developed in consultation with the ACOE, EPA, and other Federal agencies having authority to regulate offshore aquaculture.*

- providing public notice and opportunities for Fishery Management Council, state, tribal, local government and stakeholder input on agency management decisions
 - FMP Action 1 requires a 15- to 45- day comment period for each application and an opportunity for public testimony at a Council meeting.*

- providing leadership in conducting periodic reviews of federal statutory and regulatory requirements to identify gaps or overlaps in federal authority, clarify federal agency roles and responsibilities, and develop streamlined processes for authorizing aquaculture and enforcing regulatory requirements in federal waters, in consultation with Congress, other federal agencies, Fishery Management Councils, and states

NA. This bullet pertains to programmatic responsibilities of the NOAA Aquaculture Program in federal waters and is not directly related to the Actions set forth in the Gulf FMP PEIS.

Goal 7. Public information – The public has an accurate understanding of sustainable aquaculture development in federal waters and the associated environmental, social, and economic challenges and benefits; monitoring information is readily available to the public.

NOAA will achieve this goal by:

- developing, widely disseminating, and effectively communicating regional and national informational materials on the merits, trade-offs, technologies, species, and practices used to conduct aquaculture in federal waters

NA. This bullet pertains to programmatic responsibilities of the NOAA Aquaculture Program in federal waters and is not directly related to the Actions set forth in the Gulf FMP PEIS.

- making publicly available – in a timely manner and in accordance with applicable standards for transparency and confidentiality – monitoring data, results, and information submitted by aquaculture facilities operating in federal waters, analyses of the data reported by aquaculture operators in federal waters, and the results of research conducted by NOAA and others

FMP Action 6 includes a requirement for a baseline assessment and monitoring. Permitted facilities will be required to monitor water quality and other parameters according to protocols and procedures to be established by NOAA Fisheries Service in consultation with other federal agencies. FMP Action 8 also establishes 17 recordkeeping and reporting requirements in addition to that required by other federal agencies.

- communicating to the public, through extension or other outreach services, new research findings, particularly those from local research and demonstration projects

NA. This bullet pertains to programmatic responsibilities of the NOAA Aquaculture Program in federal waters and is not directly related to the Actions set forth in the Gulf FMP PEIS.