

Completion Report for the Initial Two Tasks Assigned to the MAFAC Aquaculture Task Force

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1.0 Purpose

The Marine Fisheries Advisory Committee (MAFAC), with the assistance of the Office of Aquaculture (OA), National Oceanic and Atmospheric Administration (NOAA), appointed an Aquaculture Task Force (ATF) on January 15, 2015 (Attachment A). The purpose of the ATF was to supplement the aquaculture expertise of MAFAC members and broaden the expertise available to assist MAFAC and NOAA with aquaculture-related issues.

Initially two tasks were assigned to ATF:

Task 1: Review NOAA progress on the current 10 Year Plan for Marine Aquaculture and review the new Draft Strategic Priorities and 5 Year Strategic Plan for Marine Aquaculture, 2016 to 2020.

Task 2: Provide the Interagency Working Group on Aquaculture (IWGA), Regulatory Task Force (RTF), with a representative commercial project (Mock Project) and provide feedback into developing the Draft Gulf Coordinated Permit Application and Process Framework.

Both these tasks were challenging for ATF and NOAA because both dealt with “works in progress” that involved various internal agency deadlines. Due to the requirements of this process to meet agency schedules, ATF provided both comments to MAFAC for review, finalization and formal forwarding to NOAA leadership and informal ATF comments, which were sent directly to the OA and the Gulf Regional Aquaculture Coordinator (GRAC). This report briefly describes the ATF work to complete the initial two tasks and the status of the two issues.

2.0 Review of the New Strategic Priorities and Progress with the NOAA 10 Year Implementation

2.1 Review of the Draft Future Strategic Priorities for Marine Aquaculture Development

Initially OA wanted to develop a set of overarching statements that would guide Plan development. ATF provided input into two drafts of the Strategic Priorities, which addressed a Vision, a Mission, and Goals – Measures of Performance were added to the goals in the second Draft for discussion purposes. The modified second Draft including ATF comments was presented at MAFAC’s April, 2015 meeting and the Committee had a few more changes, before being approved and sent to NOAA and OA.

For comparison purposes, the first Draft of the Strategic Priorities framework was as follows:

Vision Statement: A vibrant U.S. marine aquaculture sector that creates jobs, provides sustainable seafood, and supports healthy oceans.

Mission Statement: To provide science, services, and policies to support significant growth of sustainable U.S. marine aquaculture, including commercial production and restoration.

Goal 1: Develop a clear and effective regulatory system for the marine aquaculture sector.

Goal 2: Promote environmental stewardship and sustainability in the marine aquaculture sector.

Goal 3: Develop science-based tools, technologies and services for the marine aquaculture sector.

Goal 4: Increase public understanding of marine aquaculture.

Goal 5: Build internal support for marine aquaculture.

A more explicit second Draft of the Strategic Priorities was adopted by MAFAC and sent to NOAA and OA as follows:

Vision Statement: A robust, economically viable, environmentally responsible, U.S. marine aquaculture sector that creates jobs, provides sustainable seafood, and supports healthy oceans.

Mission Statement: To enhance science, services, policies and interagency coordination to support rapid growth of sustainable U.S. marine aquaculture, including commercial production and habitat and stock restoration.

Goal 1: Develop a streamlined, coordinated, and predictable regulatory process for commercial marine aquaculture.

Goal 2: Promote environmental stewardship and sustainability in the marine aquaculture sector using best available science and technologies.

Goal 3: Develop science-based tools, technologies and extension services for the marine aquaculture industry.

Goal 4: Increase education and outreach capacity to improve public understanding of marine aquaculture.

Goal 5: DROPPED.

2.2 Review of the Progress in Implementing the 10 Year Plan for Marine Aquaculture.

In June, 2015, ATF finished its review of the report, “NOAA Progress on Implementing NOAA’s 10 Year Plan for Marine Aquaculture Prepared for MAFAC Aquaculture Task Force.” The Program Report was requested by ATF to help accomplish Task 1. The intent of this review was to identify important issues and constraints that are holding back U.S. marine aquaculture development and these would be specifically addressed in the Plan. For this Program review the OA also asked for ATF responses to specific questions to help guide the work and these included:

- Overall assessment?
- Most important activities?
- Least important activities?
- What is the best allocation of existing resources?
- How should additional resources be directed?

In addition to detailed ATF Summary Comments, more detailed suggestions on language and organization were made in the report, embedded in the text, and sent to OA. Important recurring issues evident from the eight years of Plan implementation were identified as follows:

- Lack of a strong and consistent top down, agency-wide commitment to implementing the goal and policy statements described in NOAA planning and policy documents.
- Failure of NOAA to issue any commercial aquaculture permit for finfish culture in federal waters since publication of the 2007 plan.
- Need to establish functional rules to implement the Gulf Fishery Management Plan (GFMP) through adopting a coordinated permit process that encourages commercial investment.
- Realignment of the Office of Aquaculture (OA) for greater focus on establishing commercial farming in federal waters and creating performance measures (metrics) to gauge progress.

- Improvement of agency-wide understanding of the environmental impacts of marine aquaculture using available science, particularly in the National Marine Fisheries Service (NMFS), Protected Resources staff.
- Resolution of various federal permitting constraints limiting progress, such as federal-state duplicative information requirements and inconsistent treatment of aquaculture permits across regions.
- Creation of management and communication mechanisms to enhance the effectiveness of all NOAA programs affecting marine aquaculture.
- Reduction of Program activities in the international arena and efforts to promote aquaculture for stock and habitat enhancement and repurposing these resources to improve progress in the regulatory area.
- In the short-term, accelerate the development of FMP's to permit aquaculture in federal waters and in the long-term create, under NOAA, a commercial aquaculture lease process for farming economically important species in all federal waters.

2.3 Comments on the NOAA Aquaculture Program and Draft New 5 Year Strategic Plan for Marine Aquaculture, 2016 – 2020.

The ATF received a copy of the first Draft of the new Strategic Plan in August, 2015. Concurrently, the Draft was put out for Public Review. ATF's comments were pulled together in a report to MAFAC entitled, "MAFAC Comments and Recommendations on the NOAA Aquaculture Program and the Draft NOAA Fisheries Marine Aquaculture Strategic Plan, 2016 – 2020; Moving Marine Aquaculture Forward." This report was adopted by MAFAC and sent to the Secretary of Commerce and NOAA leadership. ATF also sent detailed text comments, embedded in the document, directly to OA for their use.

The MAFAC/ATF report developed findings in three areas: influential trends and seafood security, NOAA progress and accomplishments and recurring challenges faced by the NOAA Aquaculture Program that should be addressed in the new Plan. The report highlighted 11 Priority Concerns and Recommendations that are discussed in detail. They briefly are:

- Move forward with establishing a Coordinated Permit Process for siting commercial aquaculture in federal waters of the Gulf of Mexico and begin processing permits.
- Define a timely and efficient, standardized permit pathway for all Regions to conduct short-term research projects and allow testing and demonstration of aquaculture technologies in the Exclusive Economic Zone (EEZ).
- Establish in the new Plan that NOAA Fisheries is the lead coordinating agency in the federal government for national marine aquaculture development and the Plan is the National Plan for marine aquaculture development.
- The marine aquaculture industry and the investment community are looking for strong positive support by NOAA for commercial farming in federal waters and the agency should embrace its leadership role and actively pursue implementation of the Plan.
- NOAA should take steps to reduce perceived aquaculture permitting conflicts with internal agencies involved in the permit review that delay timely action.
- Seek a strong positive support letter for marine aquaculture introducing the Plan from NOAA Leadership or the Secretary of Commerce to demonstrate industry development is an agency priority.
- Demonstrate NOAA Leadership's strong support of marine aquaculture by formally adopting the Plan as an agency-wide guidance document.

- The Strategic Plan needs more specific objectives, deliverables, and measurable outcomes to encourage accountability and facilitate its implementation and management.
- The Plan's target five year goal of at least 50% increase in production volume should be increased, as it assumes a status quo growth rate (continues the 8 % per year for the past five years) and is hopelessly unambitious, showing a lack of confidence in the industry and the Plan.
- The Plan and its volume production target fail to respond to the significant need for more domestic production and the opportunities and challenges described in the Plan and by its statistical presentations.
- Growth opportunities for marine finfish have the highest potential of any cultured product to reduce seafood imports and NOAA should fund a comprehensive marine finfish initiative to farm the federal waters.

The report also included several attachments that enhanced the content. Five additional ATF concerns were listed in Attachment B and they are: 1) The final Gulf Rule regulating permitting of aquaculture raises a number of issues that could affect implementation and will need fine-tuning (e.g., the maximum permit term of 10 years is too short and a NOAA permit is not a lease with respect to providing exclusive use controls, property rights and property protections, 2) A high profile marine finfish initiative should be developed, 3) the language of the Plan has no sense of urgency and should be more proactive, 4) The Plan should be more realistic and less aspirational, and 5) A clearer presentation of key statistics is needed.

Attachment C addresses the question of how should additional budget (two or three times the current amount of roughly \$7M) for OA be allocated. Suggestions discussed include: increase targeting of specific research, development and demonstration priority projects; focus more attention on offshore aquaculture; expand outreach to stakeholders, the general public and sister agencies; and develop a NOAA Marine Finfish Aquaculture Initiative.

Attachment D goes further, taking advantage of ATF expertise in commercial fish aquaculture, and provides a detailed outline for a Proposed National Marine Finfish Aquaculture Initiative.

2.4 Plan Status

ATF believes in general that the extensive interaction between members and OA staff had significant, positive impacts on the content of the Draft Plan that went out for public review, though the changes made represent only a small part of what was recommended formally and informally. To illustrate: Goal Statements were changed or eliminated and performance measures offered, Sections of the DRAFT Plan were reorganized and rewritten for clarity and improved substance, important Plan action items were enhanced and added, and there was a distinct OA effort to have the Plan establish a supportive regulatory climate that is conducive to commercial development in federal waters.

However, ATF notes that the 5 Year Strategic Plan for Marine Aquaculture is still under revision by NOAA and has not been published. The impacts of comments and recommendations by MAFAC/ATF and the public are not known at this time. Ultimately the influence of the ATF review will be known only when the final Plan is published and adopted by NOAA.

3.0 The Mock Project and the Gulf of Mexico Permit Process

The second task assigned to ATF was to work with OA and the IWGA, RTF to develop and process a representative commercial aquaculture project, (Mock Project) for federal waters of the Gulf of Mexico.

The Gulf of Mexico Regional Fishery Management Council spent five years developing the Fishery Management Plan for Regulating Offshore Marine Aquaculture, termed the Gulf Aquaculture Plan (GAP), to provide a mechanism to utilize federal waters for commercial aquaculture – adopted in 2009.

Plan implementation required NOAA to formulate and adopt a Rule governing the process, which involves three primary permits from NOAA, the Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (USCOE) and numerous consultations with stakeholder agencies. The Rule was adopted in January of 2016. Since this regional approach would be new, MAFAC suggested to NOAA that the process be “tested” by using a Mock Project to help identify problem areas with the “paper work” content and the process steps, before real applications are accepted.

3.1 Development of a Proposed Mock Project and Site

A subgroup of ATF with extensive experience in building, siting and operating offshore commercial fish farms in U.S. state waters and other countries developed a Mock Project in sufficient detail to be evaluated by regulatory agencies. The project can be highlighted as follows:

- Name- Gulf Mock Fish Farm
- Species- Red Drum
- Production Level- At full build out, 12 million lbs. a year (the maximum allowed by Rule)
- Site Size- 840 surface acres
- Number of Cages- At full build out, 14 cages
- Proposed Permit Term- The maximum 10 years, renewable

Next the ATF began to discuss proposed sites in the Gulf. Fortunately, the Coastal Aquaculture Planning and Environmental Sustainability Program (CAPES) of NOAA’s National Ocean Service (NOS) offered to help with site identification. CAPES specializes in developing science-based decision tools for planning, scoping, authorizing, and mitigating ocean use to allow space for aquaculture development – marine spatial planning to inform siting.

CAPES used their marine spatial planning resources and known site requirements for offshore cage culture to identify 15 potential sites in federal waters. These 15 sites were reviewed by ATF commercial farmer members and reduced to 3 potential sites, which were characterized in great detail by CAPES. Ultimately a single site was chosen off Texas for the Mock Project permit application.

3.2 Pre-application Information Checklist

The NOAA GRAC, with the RTF, as part of the emerging process, developed a Draft Pre-application Information Checklist for Offshore Aquaculture in the Gulf of Mexico. The Checklist will guide applicants in gathering the information they will need to submit to begin the process and have the Pre-application Meeting with the stakeholder regulatory agencies. ATF submitted a preliminary Mock Project description and site description containing what members thought would be needed based on experience with getting permits for other locations. Through a back and forth discussion, a Mock Project description took shape that satisfied the revised Checklist and the GRAC. ATF submitted informal comments on the Checklist during the discussions that emphasized NOAA’s necessary leadership/advocacy role in the entire permit process and addressed various content and clarity aspects in the Draft.

3.3 Pre-application Meeting with Regulatory Agencies

The GRAC distributed the Mock Project description to the stakeholder agencies for their review prior to an initial Conference Call discussion (A Mock Meeting) on the Project – simulating what would happen with a real project. The Call was held on December 17, 2015. Agencies participating were: NOAA Fisheries, EPA, USCOE, Bureau of Energy Management (BOEM), and the U.S. Department of Agriculture (USDA). Agencies part of the process, but not present were: U.S. Coast Guard (USCG), Bureau of Safety and Environmental Enforcement (BSEE), and the U.S. Fish and Wildlife Service (USFWS).

After the Call and some follow up with the agencies, ATF provided informal comments on the process, including the Pre-application Conference Call. The concerns are highlighted as follows:

- ATF was concerned the GRAC's role in the Gulf permit process seemed limited to organizing the Pre-application Meeting and facilitating the NOAA permit – one of the three required permits – and not directly assisting applicants with all the required permits and consultations in an overall process facilitation role. According to the Draft Strategic Plan, the Regional Coordinators role includes advocacy, permit facilitation and education of government staff and the general public.
- The Conference Call process was not conducive to detailed discussion of complicated issues related to understanding project feasibility and cost. The option of a face-to-face meeting should be explored.
- Both the agencies and the applicant needed to do more preparation prior to the initial discussion for maximizing benefits. Having the GRAC organize a pre-meeting webinar for the agencies to review the current status of the marine aquaculture industry and the technology was suggested.

3.4 Review of the Permits Guide

The GRAC and the RTF developed a Draft guide to assist applicants with applying for permits, entitled “A Guide to the Application Process for Offshore Aquaculture in U.S. Federal Waters of the Gulf of Mexico.” ATF reviewed the guide in December 2015 and informal comments were sent to the GRAC in January 2016.

ATF postulated a Primary Goal for the Guide as, “give the user enough initial information to have a working understanding of: process complexity; how much information, time, cost and risk are involved in the process; and where to go for the information.” It made numerous suggestions on the guide organization and content to clarify various statements and increase the level of detail in the information provided. ATF comments are highlighted as follows:

- In the end, according to the guide the applicant must work with three main permit agencies, simultaneously, without a lead agency or lead contact person for the process. How can coordination be implemented without designated and proactive leadership? Previous ATF comments strongly suggested that NOAA and the GRAC should provide the process leadership–backed up by the OA.

- Consideration by the three main permit agencies of a preferred sequence for the applicant to submit and pursue the required permits should be undertaken, rather than “simultaneous submittal.” ATF thinking is the GAP permit application is the most influential, detailed, complicated, and subject to change during the process and should receive the initial effort.
- Various permit process and consultation requirements in the guide need further clarification and expansion, e.g., the NOAA GAP; EPA, National Pollution Discharge Elimination System permit; and the Department of the Army Section 10 Permit.
- Are there opportunities for consolidation of similar process steps, such as public notices? Does the applicant have to formally answer the public comments and will the answers be published?
- Clarification of the relationship of the National Environmental Policy Act (NEPA) requirements for issuance of federal permits to this process needs to be spelled out. In particular, the relationship of the GAP Programmatic Environmental Impact Statement (PEIS) to the required Environmental Survey, which is jointly being designed by NOAA and EPA to satisfy both agency’s needs, should be clarified further. In addition, NEPA’s relationship to the Department of the Army Section 10 permit environmental requirements needs clarification.
- There are more helpful resources available to assist the applicant than are listed. Also, government contacts for the Gulf States should be listed given the important Coastal Zone Management (CZM) Consistency Review requirement. A list of species that can be grown should be included.

3.5 Status of the Gulf Permit Process

ATF commented on three important aspects of the emerging Gulf permit process using the Mock Project: the Pre-application Information Checklist; the Preliminary Conference Call with the regulatory agencies; and the Draft Permits Guide for applicants. With the review process for the Checklist and the Conference Call, ATF made significant suggestions to both process and content for the two aspects, some of which were utilized. Notably, the regulatory agencies were very complimentary during the Call of MAFAC’s proposing a Mock Project to help test the Coordinated Permit Process and familiarize the agencies with offshore aquaculture. Clearly these activities begin a learning curve process for the agencies, which will continue with each real project.

Regarding the Permits Guide review, the GRAC and the RTF made very few changes in the Draft as a result of ATF’s numerous comments. Perhaps this was in part the result of a rush to get it out to meet an internal deadline, as well as a difference in opinion on how much is enough Guide content. Unfortunately two other key pieces of the Permit Process did not receive ATF or MAFAC input; the Permit Application Form and the Guidelines for a Baseline Environmental Survey. It will be interesting to see how the Gulf Permit Process evolves with the processing of real projects.

On January 11, 2016, NOAA filed the final Rule implementing the regulatory process to permit commercial aquaculture in the federal waters of the Gulf of Mexico. A web site was launched in February of 2016 at the Southeast Regional Office of NOAA that has the necessary information to apply for a permit. It was announced NOAA is “open for business” to permit aquaculture in the Gulf. MAFAC should monitor the industry’s response to this opportunity.

4.0 Conclusions

Overall, the ATF and MAFAC spent many hours discussing and formally and informally commenting to OA and the GRAC on the marine aquaculture Program, Plan, and permit process for federal waters of the Gulf. Beneficial changes to the Draft Plan and the pre-final documents and process for permitting aquaculture in the Gulf were evident, though many suggestions were not used. NOAA and the Office of Aquaculture have made important progress as of this date with the pending publication of the new 5 Year Strategic Plan, 2016 -2020, and the launch of a coordinated permit process for commercial aquaculture in the Gulf of Mexico. MAFAC has requested a yearly progress report from OA on U.S. marine aquaculture industry expansion and Gulf aquaculture activities to monitor these issues.

4.1 Measures of MAFAC/ATF Impact

While a number of significant Draft Plan and permit process changes were fostered by the MAFAC/ATF process there could be more impacts evident in the next few years. There are at least three major NOAA activities coming up to help judge the influence of the MAFAC Task Force process: 1) Changes in the published 5 Year Strategic Plan for Marine Aquaculture, 2016 – 2020; 2) Changes in the staff activities and funding allocations with the implementation of the FY 16 OA/NOAA budget; and 3) Changes in the staff activities and funding allocations in the proposed FY 17 OA/NOAA budget. Monitoring of these plan and budget activities will be needed.

4.2 Suggested Industry Benchmark

Recently, a highly relevant paper was published that reviews the status and the future of the U.S. marine aquaculture industry.¹ Gunnar Knapp is a respected fishery and aquaculture economist with the University of Alaska and Michael Rubino is the Director of the Office of Aquaculture. The paper does two things very well: 1) Discusses the current status of the U.S. marine aquaculture industry and the issues constraining its growth, and 2) Offers five broad strategies and describes recent implementation efforts to advance the U. S. industry; namely a) fixing problems, b) creating benefits, c) building partnerships, d) arguing with opponents successfully, and e) reforming governance. It is recommended that MAFAC use this paper as a “ Benchmark” (point of reference) to monitor NOAA and industry progress in the coming years and in 2021 use it to look back to see how far the U.S. industry has come.

Finally, I want to thank the members of the ATF and the MAFAC staff, Kristina Trotta, for their work on these tasks. I also want to thank the MAFAC members for their support of the reports from the Task Force to NOAA.

¹ Gunnar Knapp and Michael Rubino, 2016. “The Political Economics of Marine Aquaculture in the United States.” *Reviews in Fisheries and Aquaculture* . Vol. 24, No. 3, 213 – 229.

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ATTACHMENT A

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