

Habitat Report

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Initiating an Aquaculture Framework to the Atlantic Salmon FMP

Summary

- Salmon FMP prohibits directed fishing and possession in federal waters and allows for authorization of salmon aquaculture via a framework action
- Recent offshore aquaculture proposal (Blue Water Fisheries project) spurred the Council to consider developing an action to facilitate salmon aquaculture
- An action to authorize possession of cultured Atlantic salmon would provide a clear path forward for salmon aquaculture projects in federal waters
- **Action for today:** Habitat Committee recommends that the Council initiate an action to consider authorizing possession of cultured Atlantic salmon

Atlantic Salmon FMP (1987)



- Objective: Complement restoration/management programs of states and North Atlantic Salmon Conservation Organization (NASCO)
- § 648.40 Prohibition on possession (implemented in 1988 via original FMP)
 - Federal management program prohibits directed or incidental fishery, and possession of salmon, in federal waters (3-200 miles)
 - Evidence that fish were harvested from...aquaculture enterprises will be sufficient to rebut the presumption that Atlantic salmon were taken in violation of the regulation.
- § 648.41 Framework specifications (implemented in 1999 via Amendment 1)
 - Council can initiate an action that will “allow for Atlantic salmon aquaculture projects in the EEZ, provided such an action is consistent with the goals and objectives of the Atlantic Salmon FMP”

Council aquaculture framework

- Committee recommends that the Council develop an action that focuses on authorizing possession of salmon, provided fish were cultured under NASCO standards
 - Suggest making this authorization generic to any future salmon aquaculture project (vs. applying to Blue Water Fisheries project only)
- Committee also recommends that the action explore enforcement and reporting issues
- Committee recommends that the Council initiate this action today
 - This timing works well relative to DEIS development for the Blue Water Fisheries project

Council can address other issues via consultation

- Concerns about potential impacts of aquaculture articulated in the Council's 2020 [Aquaculture Policy](#)
 - Siting/spatial planning, habitat and fisheries impacts, water quality, genetics/source of cultured fish, emergency response plans, etc.
- Council can consult and coordinate with agencies to address these issues
 - NMFS, Environmental Protection Agency, U.S. Army Corps of Engineers
- Council can comment on specific projects, or on regional initiatives (i.e., aquaculture opportunity area development)
- The Habitat Committee recommended that the Council should continue to consult on these issues, in parallel with development of the aquaculture framework

Habitat Advisory Panel discussion

- No formal consensus statement or motion, but general agreement that the Council should initiate this action
- Suggestions from individual members:
 - The Council should consider expanding this authorization to include other Council-managed species (in this action, or via a future action)
 - Aquaculture developers should share information/data with the Council
 - The Council should be willing to support aquaculture under reasonable circumstances
- Questions from individual members:
 - Implications of Gulf of Mexico lawsuit?
 - Will there be an ESA consultation on the Blue Water Fisheries project?
 - Why is this action needed, given the language about possession and aquaculture in the salmon regulations?

Committee Motion

The Committee recommends that the Council initiate an Atlantic salmon aquaculture framework, focused on possession of farm raised salmon, raised according to NASCO standards. Other issues to explore include enforcement and reporting. The Council would continue to consult and coordinate on individual aquaculture projects in addition to developing this framework.

Rationale: The Atlantic Salmon FMP does not allow possession; important for the Council to be involved in offshore aquaculture issues as they relate to Council-managed fisheries.

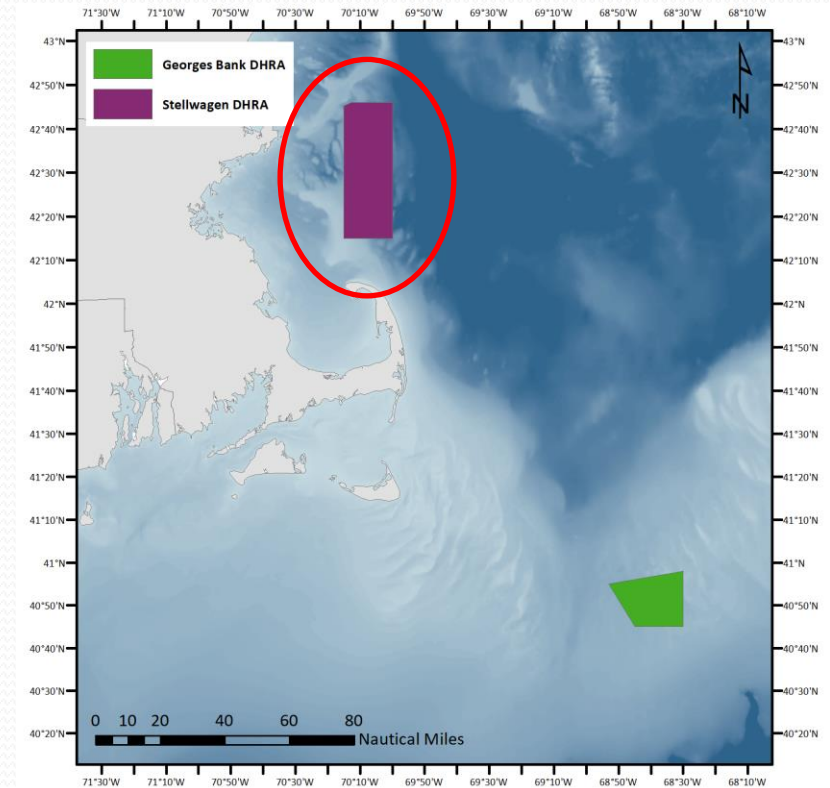
Three-year review of Dedicated Habitat Research Areas (DHRA)

Summary

- The two Dedicated Habitat Research Areas established via OHA2 have a 3-year sunset provision that allows for administrative removal by GARFO
- This summer, GARFO began a review of the use of the areas relative to Council research objectives
- The Habitat Committee deferred on making a recommendation to GARFO about retention/removal of areas until seeing the report with GARFO's findings, which is now available
- **Action for today:** Review GARFO's findings and consider making a recommendation about retention/removal of each area so that GARFO can proceed with administrative action, if appropriate

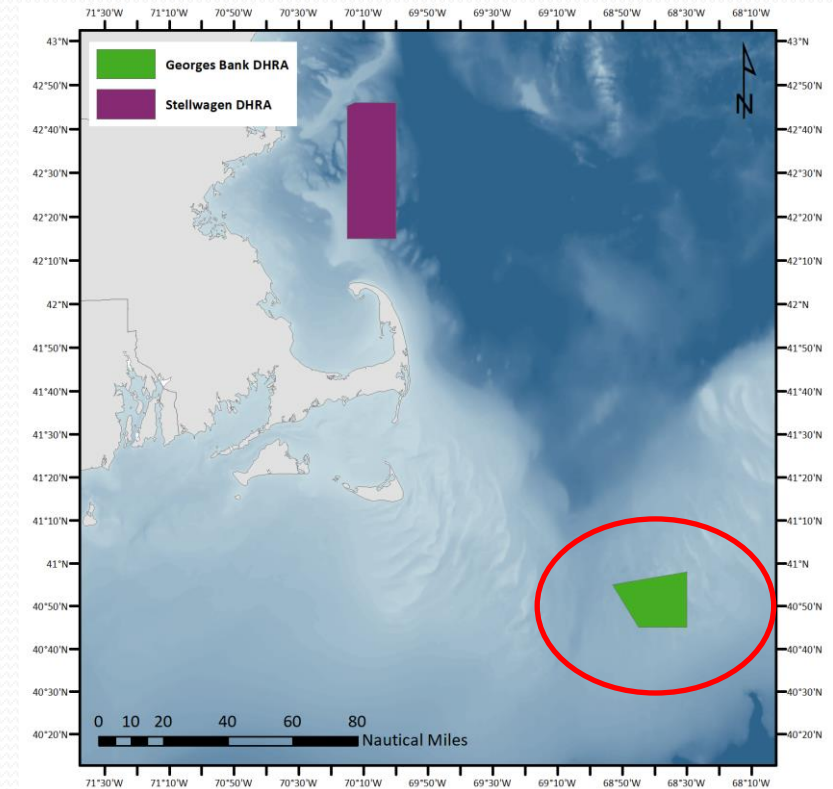
Stellwagen DHRA

- Closed to bottom trawls, dredges, sink gillnets, bottom longlines (exceptions for approved research fishing)
- Purpose was to:
 - Facilitate study of (1) fishing gear impacts on benthic habitats, (2) habitat recovery, (3) effects of natural vs. anthropogenic disturbance on fish habitats, and (4) effects of fishing and habitat type on the productivity of managed resources
 - Focus research efforts on this location and facilitate the permitting process
- Area contains a wide array of habitat types and species, and there are numerous baseline studies of the area to build on
- Stellwagen Bank in general is a highly productive area, and a better understanding as to why this is could improve fisheries management in the western Gulf of Maine



Georges Bank DHRA

- Closed to bottom trawls and dredges (exceptions for approved research fishing)
- Purpose was to:
 - Facilitate study of (1) fishing gear impacts on benthic habitats, (2) habitat recovery, (3) effects of natural vs. anthropogenic disturbance on fish habitats, and (4) effects of fishing and habitat type on the productivity of managed resources especially the relationships between scallop distribution, abundance, growth, and seabed type
 - Focus research efforts on this location and facilitate the permitting process



DHRA Research Objectives



- Impacts: These questions address the differential susceptibility and recovery of habitats by gear type, and gear contact with the seabed.
- Recovery: These questions focus on recovery models, patch size effects, and effort-response issues.
- Natural disturbance: These questions address the difference between natural and fishing disturbance.
- Productivity: These questions address productivity by habitat type.

DHRA Sunset Provision

- The DHRA regulations include a provision that the Regional Administrator initiate a review 3 years after establishment to determine whether they should be maintained
- Criteria used to evaluate the DHRAs include documented active and ongoing research in the form of data records, cruise reports, or inventory of samples, approved research proposals, or funding requests for pending research
- Review intended to evaluate whether appropriate research activities are ongoing or imminent, or if these designated areas are unused for their intended purpose of improving habitat science



Evaluation questions

- Is research actively being conducted in the DHRA?
 - If yes, is it anticipated that it would continue beyond this fishing year?
- Is there potential research:
 - Currently in the permitting process at GARFO or other entities, e.g., SBNMS?
 - Currently in the funding process?
 - If yes, is there a high likelihood that the project will be funded?
 - Is there potential research at some other critical stage in the idea generation to funding process?
- Are the fishing restrictions associated with the DHRA designation an explicit part of the design of the existing or proposed project?

Habitat Committee discussion

- Did not make a recommendation about retention/removal
- Suggested that the Council wait until GARFO completes its review and consider their findings before submitting any Council feedback or comments
- If the DHRA designations are removed, could send a message that this type of habitat impact research is not a priority for the Council
- Noted that:
 - Stellwagen DHRA - has other overlapping fishery management closures → no change in fishing restrictions if designation removed
 - Georges Bank DHRA – no other fishing restrictions → removing designation would allow trawl, dredge fishing to resume

GARFO Review Findings

- Yes, there is ongoing research in both DHRAs
 - Resource surveys (NEFSC, SMAST drop camera, SMAST video trawl (Stellwagen))
 - Video analysis of the patterns and processes of natural disturbances in the Stellwagen DHRA
- Yes, this work is expected to continue
- No additional potential research was identified
- Of the ongoing projects identified, only the video analysis in SBNMS explicitly relies on the DHRA designation and associated fishing restrictions

Habitat Advisory Panel discussion

- The AP didn't make a consensus statement about whether to retain or remove each of the DHRAs
- One member recommended retaining the Georges Bank DHRA to explore questions about scallop productivity

Possible Council actions

- Recommend to GARFO that they retain or remove each of the DHRAs
- Defer to GARFO on retention/removal of areas, and allow them to take administrative action as they see fit
- Ask for more time to consider this issue and make a recommendation to GARFO later

Review of Final Report Exempted Fishing Permit 19066

GSC HMA Research Objectives (June 2019)

1. Improve the Council's understanding of the distribution of living and non-living habitat features within the GSC HMA, including topography, substrate, epifauna, and infauna (i.e., develop habitat maps).
2. Improve the Council's understanding of habitat stability including epifaunal persistence in relation to substrate type, tidal flows and storm events.
3. Improve the Council's understanding of habitat vulnerability to mussel and clam dredges. Vulnerability includes both the nature of habitat/gear interactions (susceptibility) and recovery rates.
4. Improve the Council's understanding of why the GSC HMA is important to managed species, such as Atlantic cod.

Not intended to be accomplished through a single project

EFP 19066 Project Objectives

1. Use dredge-mounted cameras to document substrate, habitat features (e.g., sand waves, mussel beds), fishes and invertebrates within the Rose and Crown area of the HMA.
2. Create spatiotemporal distributions of biotic and abiotic habitat features to be used to inform future management actions regarding the HMA.
3. Establish relationships between high clam CPUE and habitat complexity.
4. Determine spatiotemporal presence of Atlantic cod in this area.

Project represents the only EFP-based research that has been conducted in research area since implemented.

Main Project Results

- Complex habitat is widespread throughout project area
- Clam dredges operate in areas with complex pebble-cobble bottom
- Habitat is very heterogenous even on small spatial scales (based on substrate patch sizes on scale of tens of meters)

Surfclams:

- Clam catch sig. increased with increasing percent pebble-cobble coverage
 - Other significant variables: swept area, season, tidal stage

Fish:

- High abundances of dogfish, black seabass (attracted to dredge?) esp. in summer, fall
 - Significant variables: season, swept area, mussel clump coverage, diel phase (dogfish only)
- Flatfish abundance (windowpane, yellowtail) also modeled; season was significant

PDT Concerns - Methods

- Sampling methods make results difficult to use for understanding habitat complexity
 - Characterized areas dredged commercially, but not unfished areas
 - Areas with fewer clams or large boulders were avoided; fishing locations not evenly distributed or randomized; tows not independent from each other
- Seasonal changes in benthic characteristics could reflect true seasonal differences, or may be due to differences in fishing locations across seasons or the result of impacts from prior dredging
- Limits to what can be concluded re-fish distribution/abundance
 - Detectability in sampling gear unknown; unobserved or rare species may occur or be more prevalent even if not seen in video

PDT Findings - Utility for Management

- Results cannot be used to design future exemption areas in the Rose and Crown area of the HMA, assuming the Council's objective is to minimize adverse impacts of fishing on complex habitats
- Evidence that habitat is very heterogenous at scales of tens of meters and clam catches are distributed throughout the area
 - Unable to identify discrete zones for fishing where interactions with complex habitat is unlikely
- Reaffirm the need for additional mapping in other areas of the HMA
 - We don't know if other areas have different patch sizes, or larger areas of "less-complex" habitat that might be suitable for exemptions
- Study was not designed to evaluate gear impacts, habitat recovery rates vs. natural disturbance, or habitat stability over time
 - Need a properly designed study to understand impact & recovery relative to natural disturbance

Habitat Committee Recommendations

- The Council should clarify info needed to support management, including complex habitat
- EFP-based studies can provide useful information but should be carefully designed; additional surveys using fishery-independent techniques would be helpful (HabCam, acoustics, drop camera)
- Funding for habitat characterization and fishing impacts research is limited
 - Compensation fishing may be needed
 - Plans for such fishing should be clearly outlined, strategically implemented

Habitat Advisory Panel Discussion

- No formal consensus statement or motion
- Comments from individual members
 - Would like to see research, sooner than later, to understand impacts and recovery relative to natural disturbance – can industry conduct such studies in partnership with NEFSC?
 - PDT's report did not sufficiently emphasize seasonal variation in substrate, bryozoans, fish, and megafauna noted in final report (see pages 21-29 of [final report](#))
 - PDT's report also underemphasized fishing aspect (catch relative to swept area, see pages 15-16 of [final report](#))

Possible Council actions

- Discuss whether the Council agrees with the PDT/CTE findings about utility of the study for management
- Determine whether to take additional steps at this time related to the HMA
 - As they recommended, task the Habitat Committee with clarifying what specific information is needed to support management of the Great South Channel HMA
 - Communicate findings related to design of EFP-based studies to GARFO, as recommended by the Committee (sampling designing, fishing)
 - Consider exemption area revisions as a 2023 work priority (not recommended by Committee)

Draft Council Comments on Current Offshore Wind Development Issues

Gulf of Maine Request for Competitive Interest

Draft Council Comments to BOEM

- Research lease is a key opportunity for learning prior to commercial development – however, research leasing is only slightly ahead of commercial leasing
 - Likely unable to adopt lessons learned
- RFCI area is larger than what Maine requested; unclear if the research array siting will change given outcome of the GOM Port Access Route Study
- Will be essential to coordinate scientific work across various entities involved in research planning, including Maine's [Research Consortium](#)

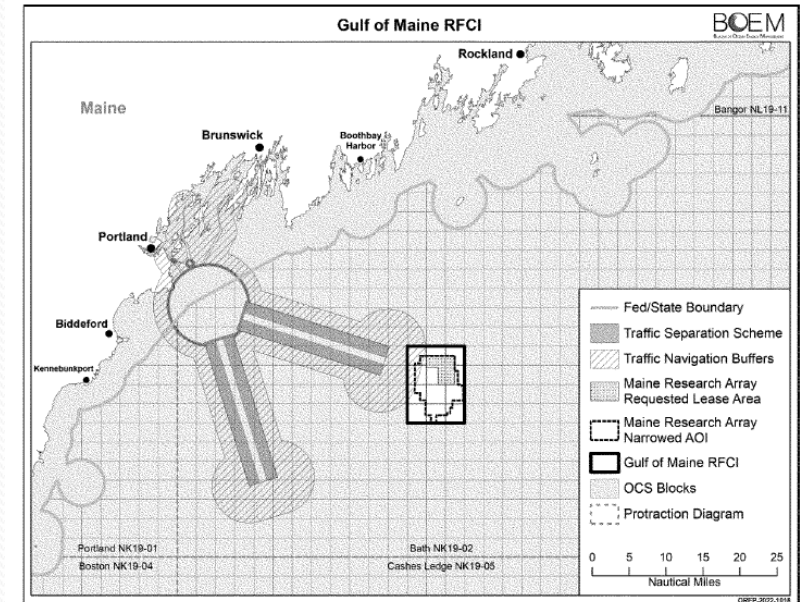


Figure 1: Request for Competitive Interest Area, Including Maine's Requested Research Lease Area, Narrowed Area of Interest, and Traffic Separation Scheme

RFCI comments, cont.

- Recommend following NMFS' guidance on fisheries data to include in analysis, for example HMS fisheries occur in the vicinity of the RFCI area
- Recommend thorough evaluation of seabed conditions during site assessment; area is likely mud/gravel habitat with few outcroppings, but is data poor
- Identify shifting fishing activity and offshore aquaculture as potential future uses to consider
- Note that impacts to protected resources, including from secondary entanglement, are a concern that must be addressed when evaluating this or any other floating wind project in the Gulf of Maine

Gulf of Maine Request for Interest Draft Council Comments to BOEM

- Timing of commercial leasing is only slightly behind research leasing
 - Unable to adopt lessons learned
 - Unable to inform selection of commercial lease areas, where initial siting is critical for minimizing impacts
- Unsure of overall leasing goals (MW)
- Reiterate July comments that a Programmatic EIS would be useful for this process
- Many areas of uncertainty in data will make area identification challenging

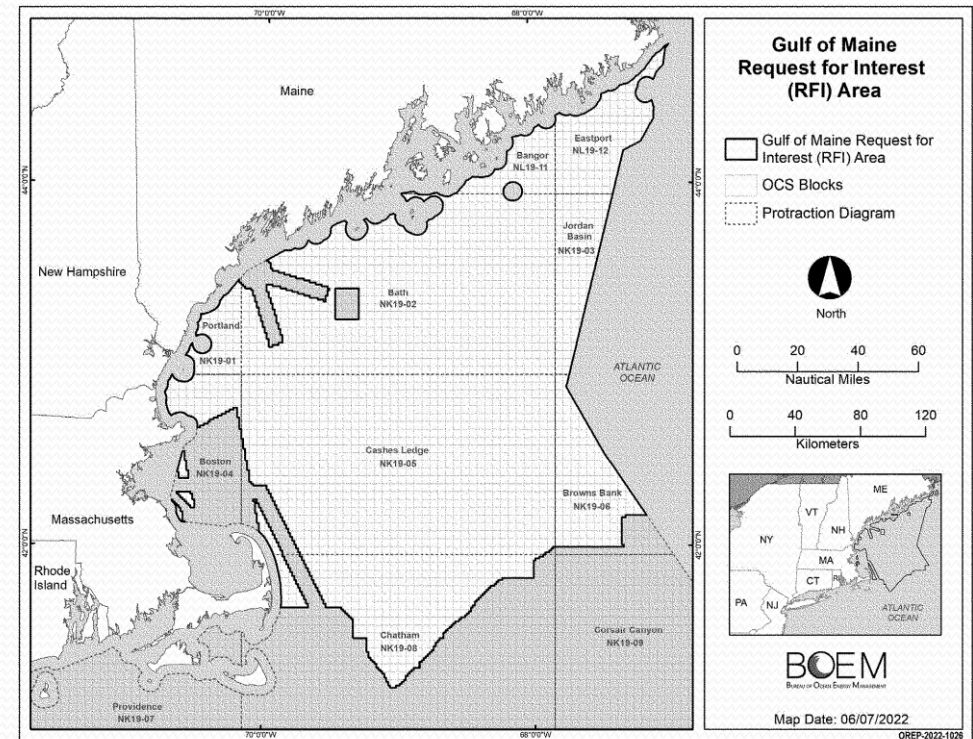


Figure 1: Gulf of Maine Request for Interest Area

RFI Comments, continued

- Unclear how the current PARS timing will align
- Suggesting additional data sets to include in inventory
- Suggesting specific areas to exclude from leasing
- Recommending making data publicly available as part of data inventory
- Note that impacts to protected resources, including from secondary entanglement, are a concern that must be addressed when evaluating floating wind projects in the Gulf of Maine