

South Atlantic Fishery Management Council Habitat Program Evaluation and Blueprint



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Introduction

The South Atlantic Fishery Management Council (Council) developed this Habitat Program Evaluation and Blueprint (Blueprint) to evaluate the goals and objectives of its habitat program, ensure Magnuson-Stevens Fishery Conservation and Management Act (MSA) requirements are addressed by Council Fishery Management Plans (FMPs), and provide guidance and direction for habitat program activities. The MSA requires federal fishery management councils to describe and identify Essential Fish Habitat (EFH) for species managed under federal fishery management plans (FMPs), minimize to the extent practicable adverse impacts on such habitat caused by fishing, and identify other actions to encourage the conservation and enhancement of such habitat. Fishery Management Plans must also identify activities other than fishing that may adversely impact EFH. Fishery Management Councils are also encouraged to designate subsets of EFH as EFH-Habitat Areas of Particular Concern (EFH-HAPCs or HAPCs) to highlight conservation and management priority areas within EFH.

Habitat Program Purpose Statement:

To support the identification, monitoring, and protection of the habitats required by the species managed by the South Atlantic Council to preserve their ecosystem function and ensure their long-term sustainable use.

SAFMC Habitat Program Goals and Objectives

Goal I. Comply with the habitat mandates of the MSA and its amendments.

1. Describe and identify essential fish habitat (EFH) for the fishery as required in Council Fishery Management Plans (FMP).
2. Provide information for use in FMP development to minimize, to the extent practicable, adverse effects on such habitat caused by fishing.
3. Identify other actions to encourage the conservation and enhancement of such habitat.
4. Provide information to support the Council's role in mandatory EFH reviews.
5. Provide information to support Council comments on activities by Federal or State agencies that may impact the habitat of the resources managed by the Council.

Goal II. Provide information to support Council communication on habitat issues.

1. Provide habitat research needs for consideration in Council Research and Monitoring Plans.
2. Provide habitat research needs and Council habitat priorities to inform regional planning and research efforts.
3. Provide information to support Council responses to habitat related requests for information.
4. Provide information to support Council outreach activities on habitat issues.

EFH Designations

The 1996 reauthorization of the MSA required that Council identify and describe EFH, minimize adverse effects caused by fishing, and identify other actions to encourage habitat protection. Guidance for addressing EFH requirements was finalized in 2002 and is included in the Code of Federal Regulations (CFR). Appendix A provides the MSA and CFR text addressing EFH requirements and Council obligations.

The Council developed several FMP amendments to address the 1996 EFH requirements. Initially, the Council amended nine FMPs through its 1998 [Comprehensive EFH Amendment](#) (SAFMC 1998a). Supporting information for these designations is provided in the Council's Habitat Plan for the South Atlantic Region (SAFMC 1998b). EFH for Dolphin and Wahoo was designated through the [Dolphin Wahoo FMP](#) in 2003 (SAFMC 2003). Spatial representation of EFH was provided in the first [Comprehensive Ecosystem Based Amendment](#) (CEBA-1) in 2009 (SAFMC 2009b).

The 2002 final guidance on EFH allowed Councils to also designate HAPCs. In response, the Council developed its [Comprehensive Ecosystem-Based Amendment 2](#) (CEBA-2) in 2012 (SAFMC 2012) to designate EFH-HAPCs for Tilefish and deepwater coral, and new EFH for

pelagic *Sargassum*. Supporting information for the Council’s EFH designations has been subsequently updated and revised through Fishery Ecosystem Plans (SAFMC 2009a and 2018) and are described in the [SAFMC User Guide](#).

Fishery management plans and amendments that designated or revised EFH and HAPCs for fisheries under the jurisdiction of the South Atlantic Fishery Management Council are summarized in Table 1.

EFH Reviews

In addition to specifying EFH, Councils and NMFS are required to regularly review EFH information. EFH reviews can be completed at any time, but must be completed at least once every five years in accordance with CFR requirements. Councils are granted flexibility to develop procedures for these EFH reviews, which has enabled the Council to address mandatory EFH reviews through several documents:

- 2009: Fishery Ecosystem Plan
- 2016: User’s Guide to Essential Fish Habitat Designation by the South Atlantic Fishery Management Council (EFH User Guide)
- 2018: Fishery Ecosystem Plan II
- 2021: Revisions to the EFH User’s Guide

Table 1. Fishery management plans and amendments that designated or revised Essential Fish Habitat (EFH) and Habitat Areas of Particular Concern (HAPC) for fisheries under the jurisdiction of the South Atlantic Fishery Management Council.

Fishery Management Plan	EFH Designations	Additional EFH or EFH-HAPC Designations	EFH Level
Coral, Coral Reefs, and Live/Hard Bottom Habitats	Comprehensive EFH Amendment (1998)	CEBA 1 (2009) Spatial Representation CEBA 2 (2011) Designate HAPCS	2
Pelagic Sargassum Habitat	CEBA 2 (2011)		2
Shrimp Fishery of the South Atlantic Region	Comprehensive EFH (1998)	CEBA 1 (2009) Spatial Representation	2
Snapper Grouper Fishery of the South Atlantic Region	Comprehensive EFH Amendment (1998)	CEBA 1 (2009) Spatial Representation CEBA 2 (2011) Designated the Deepwater MPAs as EFH-HAPCs & designated EFH-HAPCs for golden and Blueline Tilefish	2
Golden Crab Fishery of the South Atlantic Region	Comprehensive EFH Amendment (1998)	CEBA 1 (2009) Spatial Representation	2
Dolphin and Wahoo Fishery of the Atlantic	Fishery Management Plan for Dolphin and Wahoo (2003)	CEBA 1 (2009) Spatial Representations	2
Coastal Migratory Pelagics of the Gulf of Mexico and Atlantic Region	Comprehensive EFH Amendment (1998)	CEBA 1 (2009) Spatial Representation	2
Spiny Lobster Fishery of the Gulf and South Atlantic Region	Comprehensive EFH Amendment (1998)	CEBA 1 (2009) Spatial Representation	2

Advisory Panel

Background

The Magnuson-Stevens Act (MSA) allows Councils “establish such advisory panels as are necessary or appropriate to assist it in carrying out its functions under this Act.” The Council established its Habitat Protection and Ecosystem-based Management Advisory Panel (HEAP) to advise the Council on habitat and ecosystem management issues, including recommendations on EFH policy statements and activities being considered for permitting. The HEAP is established under Section 302(g)(2) of the MSA. Consistent with MSA provisions, decisions and recommendations of the HEAP are advisory in nature.

The HEAP shall be composed of 26 members, chosen from scientists with habitat, biological, ecological, ecosystem or other relevant expertise; agency representatives, conservationists, fisherman, and interested constituents. Members may be drawn from a range of sources including Federal, State, university and private scientific communities; other Council advisory panels; conservation organizations and NGOs, and interested constituencies. HEAP members also serve as the Council’s habitat contacts and professionals in the field. The HEAP is structured and tasked differently than the Council’s fishery advisory panels.

The HEAP includes four designated state sub-panels (one for each South Atlantic state) and other appointed participants who are not part of sub-panels. Each sub-panel is composed of representatives from the state marine fisheries agencies, state coastal zone management agency, and 2 at-large members. The at-large members on HEAP state panels may be selected from any applicant who resides in the state and has expertise useful to the panel. Applicants may include, but are not limited to, researchers and scientists, fishermen, constituent representatives, or conservationists. These panels provide recommendations on Council related habitat issues in their state and may meet separately from the full HEAP. Sub-panels can be tasked to draft recommendations and comments for Council responses to habitat impacts and threats in their area. Each state sub-panel selects a panel leader from its membership.

Advisory Panel Revisions

Updating the HEAP, including evaluation of its tasks and memberships, was a key factor in the Council’s decision to develop this Blueprint. Concerns were raised about the overall size of the HEAP and the associated meeting expense and ability of the group to function efficiently, as well as a lack of participation by some agencies asked to provide participants. Additionally, the lack of a clear definition of the term ‘conservationist’ as applied to seats on the panel has created difficulties for Council members when making panel appointments.

One reason identified for the large size of the HEAP was the broad charge of the HEAP to address habitat and ecosystem-based management issues. It was noted that despite its size and broad charge, the expertise on the HEAP traditionally leaned heavily toward habitat specialties. This has posed a challenge to addressing ecosystem-based fisheries management issues, particularly as ecosystem-based fisheries management has become increasingly technical and quantitatively based. The SSC and existing species-based Advisory Panels can be consulted by the Council to provide guidance on

ecosystem based fisheries management issues, and are intended to play a greater role in ecosystem based management activities in the future.

1. HEAP Purpose

The HEAP is responsible for providing guidance and recommendations to assist the Council in addressing its habitat-related obligations under the MSA.

2. Formal HEAP Name

The HEAP is renamed the “Habitat and Ecosystem Advisory Panel”, to accurately reflect its revised charge.

3. Meaning of “Conservationist” in context of the HEAP

For purposes of the HEAP, ‘conservationist’ is defined as someone with a general interest in habitat ecosystem and protection, who may lack affiliation or employment with a group having designated representation on the HEAP. This definition is intended to provide the Council flexibility to appoint someone with a useful and valued perspective or skill set who does not otherwise fit into member categories.

4. HEAP Charge

- Provide recommendations to the Council to assist in identifying EFH and HAPCs.
- Assist the Council in identifying and responding to potential threats to EFH and HAPCs.
- Assist staff in drafting comments for review and consideration by the Council to address specific habitat impacts and threats.
- Provide recommendations on habitat and ecosystem related research and monitoring priorities.
- Provide an annual Habitat Activities Report to the Council following the Spring HEAP meeting.
- Perform other duties and provide recommendations as requested by the Council to carry out its functions under the MSA.

5. HEAP Annual Habitat Activities Report

The HEAP will provide the Council an annual report addressing habitat activities, including consultations, comment letters, future threats, research needs, and use of habitat policies during the prior calendar year. The report is intended to provide a mechanism for keeping the Council informed of habitat activities throughout the region, highlighting the use of habitat policies, and providing advance notice of developing issues. The report will be finalized by the HEAP at its Spring meeting and presented to the Council at the next scheduled Habitat Committee meeting. The report should rely heavily on tables, text and bulleted lists to convey the relevant information efficiently.

HEAP Annual Habitat Activities Report Contents

1. Status of EFH-related comments submitted by the Council, South Atlantic States, and NMFS Habitat Conservation Division (HCD).
2. Status of Council Habitat Policy Statements
 - Usage in submitted comments

- Adequacy of existing statements to current activities
 - Suggestions for revisions of existing policies or creation of new policies
3. Research and monitoring recommendations
 4. Potential future or developing habitat threats
 5. Other information of possible interest to the Council

Revised HEAP Membership

Membership of the HEAP was thoroughly reviewed during development of this Blueprint. Membership changes are based on the revised purpose of the HEAP, consideration of past participation by agencies, the realities of ongoing difficulties in securing applicants for AP seats in general, and the Council’s desire to reduce the overall size of the HEAP. The revised HEAP consists of 26 members.

Primary changes in membership include:

- Dropping USFWS state representation on the state sub-panels, due to an ongoing lack of participation.
- Combining the fishery, researcher, and conservationist categories into a general “at-large” category on the state sub-panels, and limiting the newly defined “at-large” seats on each state panel to 2.
- Eliminating EPA and USGS seats.
- Creating a USFWS regional seat, to replace the prior USFWS state seats.
- Creating a USCG seat, in recognition of their habitat protection role.

Habitat and Ecosystem Advisory Panel Membership Composition

NC Sub-Panel

- NC DMF
- NC CZM
- 2 At-Large

SC Sub-Panel

- SC DNR
- SC CZM
- 2 At-Large

GA Sub-Panel

- GA DNR
- GA CZM
- 2 At-Large

FL Sub-Panel

- FL FWCC
- FL CZM
- 2 At-Large

Non sub-panel members:

- NMFS Southeast Fisheries Science Center (SEFSC)
- NMFS Southeast Regional Office (SERO) Habitat Conservation Division (HCD)
- NMFS Sanctuaries
- Atlantic States Marine Fisheries Commission (ASMFC) habitat staff lead
- Bureau of Ocean Energy Management (BOEM)
- US Navy
- USFWS Regional Headquarters
- USCG
- Harbor Branch Oceanographic Institute (HBOI)/Florida Atlantic University (FAU)/NOAA Cooperative Research Institute (COEIRT)
- 1 undefined At-Large

6. Maintaining HEAP membership

If an agency identified for representation on the list of non sub-panel members declines to nominate a representative, the Council may appoint additional at-large members to reach 26 members. If an agency that declined representation later decides to nominate a representative, their nomination will be considered at the next opportunity when an at-large term ends and a possible vacancy is created.

Additional HEAP Provisions

Ad-Hoc, Working Group, and Subcommittee Meetings

The HEAP is authorized to convene *ad hoc* subcommittees and working groups to address specific issues. Such groups conduct their business in the most efficient and convenient means available to enable them to complete their assignments within occasionally tight timelines. Group tasks may be accomplished through email, video conference, and meetings. Only HEAP members may serve as sub-group members; groups may consult with and receive information from other experts who are not HEAP members. Each group selects a leader from its membership. Subcommittees and working groups are functionally APs under the MSA and covered by MSA and SAFMC AP policies.

Meeting Deliberations

The HEAP shall operate under consensus rather than formal voting. The expectation for consensus applies to the comments and recommendations put forth for the Council and does not require the HEAP to unanimously agree on a single answer or position for every issue. Consensus statements should be developed that provide the Council guidance on the full range of alternatives and that address uncertainties related to recommendations.

HEAP recommendations shall be based on science and scientific principles. The use of references and scientific documentation to support recommendations is encouraged.

All members are expected to participate in the HEAP's discussions and report preparation.

Participation on the HEAP, or any other Council advisory panel, does not provide members an "inside track" for commenting on issues before the Council. Comments submitted to the Council by a HEAP member that are not part of an HEAP report must follow the Council's public comment process.

Membership and Appointment

The HEAP is subject to the provisions of the SAFMC AP Policy, unless otherwise stated here or in the AP policy. Provisions specific to the HEAP, that may differ from the standard AP policy, are highlighted in the following bullets.

- The HEAP shall be composed of scientists with habitat, biological, ecological, ecosystem or other relevant expertise; agency representatives, conservationists, fishermen, and interested constituents. Members may be drawn from a range of sources including Federal, State, university and private scientific communities; other Council advisory panels; conservation organizations and NGOs, and interested constituencies.

- Agency representatives are nominated by their agency, approved by the Council, and will serve 3-year terms without a limit on the number of terms served. This is consistent with the state representation on the SSC.

HEAP appointments are made by the Council. The member appointment process has some additional flexibility described below to address the numerous agency representatives on the HEAP. This is necessary because their ability to serve can be subject to agency personnel decisions that are outside of Council control, while at the same time it can be important to provide agency representation on time sensitive topics such as developing comments. Applications to fill vacancies for designated agency seats will be solicited from the appropriate agency or organization.

- Applications for at-large fishery, research, and conservationist seats will be advertised consistent with notifications of other AP vacancies.
- When vacancies occur on the HEAP due to resignation or Council action removing a member:
 - Vacancies for at-large fishery, researcher, and conservationist members will be filled at the next scheduled Council AP appointment meeting (typically at the June and December Council Meetings).
 - Vacancies of state and federal agency and university designated seats will be filled by a representative of that agency.
 - The agency shall designate a replacement in writing through a letter to the Council Executive Director.
 - The replacement HEAP representative designated in writing by the agency may attend with Council travel support and participate in discussion at an HEAP meeting prior to Council appointment, but is not considered a member until appointed by the Council and cannot make motions, vote, or provide consensus statements. (Similar to SSC approach)
 - The Council will be asked to consider the appointment at the next scheduled Council meeting.

EFH Consultation and Council Comment

While the Council is not granted authority to directly regulate many activities that could impact fish habitat, under the MSA the Council is authorized to comment on various activities that could impact habitat. One of the goals of this Blueprint is to define the process of identifying habitat threats and developing Council comments.

The following outlines the process the Council follows in considering if and how to comment on an EFH issue.

Comment Development Process

1. The Council is notified of a project or policy that may impact EFH
Notification may come from many sources: Council members, HEAP, HCD, State partners, etc.

2. Action Determination

- a. Council staff consults with HCD, Habitat Committee Chair, Council Chair
 - i. Considers significance of the proposal under council policies
 - ii. Habitat Committee and Council chairs determine course of action
- b. Action Alternatives
 - i. No action required
 - 1. The project or policy will not impact Council-designated EFH
 - ii. Informal review
 - 1. The project or policy may have an impact, and the nature of the project and impacts are clear and may be addressed through existing Council policy or prior comments.
 - 2. May be applied if the response deadline does not allow time for formal review.
 - iii. Formal Review required
 - 1. The policy may have an impact on Council-designated EFH and the impact and review timeline justify a formal review.
 - a. The Council may in some cases request a comment extension if formal review is desired by the timeline does not accommodate the formal review process.
 - 2. The policy poses a novel situation that requires additional evaluation to develop an appropriate response.
 - 3. The formal review process includes review during a Council meeting.
- c. Action Procedures
 - i. No Action required; Council will not offer a response
 - ii. Informal Review Process
 - 1. Habitat Committee Chair and Council Chair direct staff, in consultation with NMFS HCD, the HEAP chair and relevant AP members, to draft a response.
 - a. The Council is informed of the recommendation and planned response.
 - 2. If time allows, staff and the HEAP Chair may convene a sub-panel of AP members to assist in preparing the response.
 - 3. The HEAP reviews the draft response.
 - 4. Habitat Committee Chair and Council Chair review and approve the draft response.
 - a. If time allows, include email review by the Council.
 - iii. Formal Review Process
 - 1. Habitat Committee Chair and Council Chair direct staff, in consultation with NMFS HCD, the HEAP chair, and relevant AP members, to draft a response.
 - a. The Council is informed of the recommendation and planned response.
 - 2. If time allows, staff and the HEAP Chair may convene a sub-panel of AP members to assist in preparing the response.

3. The HEAP reviews the draft response during a meeting or via email.
4. The Habitat Committee reviews the response during a meeting and takes a position for consideration by the Council.
 - a. HEAP Chair attends
5. The Council takes public comment on the response during the meeting, along with comment submitted for the meeting.
6. The Council considers the response, public comment, and committee recommendations, and provides guidance.
7. Final response incorporating Council guidance drafted by staff
8. Final response reviewed and approved by the Habitat Committee Chair and Council Chair.

Comment Follow-up and Tracking

SAFMC comments on permits and policies will be tracked in cooperation with NMFS HCD. HCD presently tracks all consultation requests received and the results of the consultations.

NMFS HCD staff responsible for day-to-day EFH consultation and permit review will provide status reports on all EFH consultation activities related to the South Atlantic region and SAFMC-designated habitats during the Spring AP meetings. The update will include maps of affected areas. The AP will include the status update in its reports to the Habitat and Ecosystem Committee.

NMFS HCD is also providing an end of year status report on major EFH consultation activities and location map of consultations during the Fall AP meeting and are included in AP Chair report out to the Habitat and Ecosystem Committee during the December Council meeting.

Notification and Tracking

- Council Habitat staff will distribute Council comments to members, staff, habitat advisors and other Councils as appropriate. The comment letter and response if provided will be made available on the website possibly associated with the Policy Statement supporting the comment.
- HCD and the Council will continue to share all comment letters and additional components, such as annual location maps of all consultations. Council staff will distribute NMFS HCD comments received to appropriate state members.
- NMFS HCD maintains a Tracking System Google sheet and HCD has set up a link to notify Council Habitat staff when the Google sheet is updated.
- The HEAP will provide an annual report to the Council summarizing the status of all comment activities over the prior year.

Council EFH Policies

The Council develops EFH policy statements to address specific habitat needs and activities that affect habitat (**Table 2**). EFH policy statements (**Table 3** and [Habitat Webpage](#)) provide detailed descriptions of habitat resources, discuss potential impacts to those resources, and identify

actions that protect EFH. The Council's EFH policy statements and recommendations provide NMFS, state agencies, other Federal and regional habitat partners guidance and rationale to conserve and protect EFH in the South Atlantic region. The Council may revise EFH policies and recommendations or develop new policies as needed to address its habitat mandates.

The Council process for developing habitat policy statements for specific habitat types and activities is described below. The Council uses the approved habitat policy statements to develop and support comments when formal review is not feasible due to time constraints or not considered necessary by the Council due to the project scope.

Policy Development Process

1. The Council is notified of a policy need by HEAP.
 - a. Notification or request may be offered by Council members, HEAP, HCD, State partners, etc.
 - b. Staff coordinates with HEAP Chair to determine whether the HEAP needs to be involved. Notifications or requests for policy development that originate outside the HEAP will be remanded to the HEAP for consideration and verification that the issue is not addressed by an existing policy.
2. Action Determination
 - a. HEAP policy recommendation options to the Habitat Committee:
 - i. No policy is necessary – the issues is addressed in an existing policy or is inappropriate for policy consideration.
 - ii. Policy revisions – the issue is addressed in an existing policy, but that policy requires updating or revision.
 1. The HEAP includes a preliminary timeline and process
 - iii. New Policy – The issue is appropriate for a policy, and not covered by existing policy.
 1. The HEAP includes a preliminary timeline and process
 - b. Habitat Committee Consideration – action taken at Committee meeting.
 - i. Determine the policy action to pursue (none, revision, new)
 - ii. Provide guidance on the role of the Committee, SSC, and other APs in developing and reviewing the policy.
 - iii. The Committee's recommendations are reviewed and approved by the Council.
3. Policy Development, for revisions and new policies
 - a. Staff works with HEAP chair to develop a draft plan of work to implement the Council's recommendation.
 - i. May include a sub-committee to draft the policy.
 - ii. Other AP or SSC members may be included in the sub-committee if directed by Council.
 - b. Draft Plan of work reviewed by HEAP.
 - c. Council staff coordinates policy development and review per plan of work.
 - i. May include webinar and in-person meetings and public comment opportunities.

- ii. The HEAP will review the policy, as will other groups (SSC, APs) as directed by the Council through the plan of work.
- d. Draft policy provided to the Habitat Committee for review and approval.
- e. The Council considers the Habitat Committee's recommendations and takes final action.

Table 2. Non-fishing threats identified for the South Atlantic region.

SAFMC EFH Policy Statements										
Policy	Food Web Connectivity	Climate Variability	Marine Aquaculture	SAV	Beach Nourishment	Energy Exploration	Flows	Invasive	Artificial Reefs	
Non-fishing Threat										Policies Addressing Threat
Navigation	X		X	X	X	X	X	X	X	8
Hydrologic Alterations	X		X	X	X		X	X	X	7
Natural Events and Climate Change	X	X	X	X			X	X	X	7
Urban/Suburban Development	X			X	X	X	X	X	X	7
Offshore Mining, Beach Dredge and Fill	X		X		X			X	X	5
Oil and Gas			X		X	X		X	X	5
Transportation (roadways and bridges)	X			X	X		X	X		5
Alternative Energy Technologies			X		X	X		X		4
Dredged Material Disposal	X			X	X			X		4
Industrial/ Commercial Activities			X			X		X	X	4
Non-native or nuisance species			X	X				X	X	4
Agriculture	X			X			X			3
Aquaculture			X	X				X		3
Artificial Reefs			X					X	X	3
Dams, Impoundments, Barriers to Passage	X						X	X		3
Inshore Mining			X		X			X		3
Marine Debris			X					X	X	3
Nonpoint-source Pollution			X	X						2
Silviculture										0

Table 3. SAFMC policies and threats addressed by each.

SAFMC EFH Policies	What is addressed
<p>South Atlantic Food Webs and Connectivity Developed - Dec 2016</p>	<p>Assess potential threats and impacts to managed species EFH and EFH-HAPCs and the South Atlantic ecosystem associated with changes in food webs and connectivity and processes that could improve those resources or place them at risk.</p> <ul style="list-style-type: none"> • Incorporate into management strategies the potential indirect effects of fisheries on food web linkages and identify unintended consequences; • Use food web models to simulate the ecosystem, understand food web linkages, inform single species assessment and management, generate reference points and ecosystem-level indicators to enhance ecosystem stability and resilience.
<p>South Atlantic Climate Variability and Fisheries Developed - Dec 2016</p>	<p>Assess potential threats and impacts to managed species EFH and EFH-HAPCs and the South Atlantic ecosystem associated with climate variability or change and processes that could improve those resources or place them at risk.</p> <ul style="list-style-type: none"> • Develop indicators to track ecological, social, and changing fisheries trends that appear to be due to changing ocean environmental conditions; • Consider tradeoffs and necessary responses to account for predicted and realized increases or decreases in productivity; • Apply the precautionary approach and careful scientific and management evaluation as new fisheries develop.
<p>Marine Aquaculture Developed- June 2014</p>	<p>Provide guidance for marine aquaculture development in offshore and coastal waters, riverine systems, and adjacent wetland habitats to protect EFH.</p> <ul style="list-style-type: none"> • Require effective regulation under MSA and other applicable federal statutes; • Require at least a 10-year permit with annual reporting, operational and option for revocation; • Require only drugs, biologics, and other chemicals approved for aquaculture by the FDA, EPA, or USDA be used; • Allow only native species for aquaculture in federal waters of the South Atlantic and prohibit use of genetically modified organisms unless approved by FDA; • Require applicant to provide all information necessary to thoroughly evaluate the suitability of potential aquaculture sites; • Require applicant/permit holder to develop environmental monitoring plans for projects authorized under MSA and have adequate funds committed to ensure removal of organisms and decommissioning of facilities; • NOAA Fisheries specify conditions of use and outline process to repeal, modify or revoke permits.
<p>Marine Submerged Aquatic Vegetation In Comprehensive EFH Amend (1998) June 2014</p>	<p>Protect remaining habitat and support actions to restore SAV in locations where they have occurred in the past.</p> <ul style="list-style-type: none"> • Develop a comprehensive adaptive management strategy to address SAV decline; • Adopt a reliable status and trend survey methodology (mapping and monitoring) to verify the location, health, and coverage of SAV at sub-regional and/or local scales.
<p>Beach Dredging and Filling, Beach Renourishment and Large-Scale Coastal Engineering In Comp EFH Amend (1998) Revised March 2015</p>	<p>Avoid, minimize and offset damage to EFH from large-scale dredging and disposal of sediments in the coastal ocean and adjacent habitats.</p> <ul style="list-style-type: none"> • Require a comprehensive environmental document be prepared for each project; • Specify fill material match the sediment characteristics of the recipient beach as closely as possible; • Limit dredging to bathymetric peaks and the shallowest depths possible to reduce the likelihood of infilling with fine-grained sediments.
<p>Energy Exploration, Development, Transportation and Hydropower Re-Licensing In Comp EFH Amend (1998) Revised June 2005 Revised December 2015</p>	<p>Provide guidance for energy exploration, development and transportation in offshore and coastal waters, riverine systems and adjacent wetland habitats. Avoid and minimize impacts to EFH and EFH-HAPCs and optimize benefits from these activities.</p> <ul style="list-style-type: none"> • Use best available, least damaging technologies to avoid, minimize, and offset damage to EFH, EFH-HAPCs and avoid intersection or overlap with allowable fishing areas within the Deepwater Coral HAPCs; • Design energy exploration activities and facilities to avoid impacts on coastal ecosystems and sand sharing systems. • Comply with existing standards and requirements regulating domestic and international energy transportation including regulated waste disposal and emissions. • Avoid open-loop LNG processing facilities in favor of closed-loop systems with water intake minimized and establish baseline studies and project monitoring. • Recommend that pilot scale projects not occur in areas where full-scale efforts are predicted to be environmentally unacceptable (e.g., MPAs, CHAPCs, and Spawning SMZs).

SAFMC EFH Policies	What is addressed
<p>Alterations to Riverine, Estuarine and Nearshore Flows June 2014</p>	<p>Avoid, minimize, and offset damage to EFH and EFH-HAPCs, diadromous fishes, state and federally-listed species, Federal critical habitat, and State Critical Habitat Areas (CHAs) caused by alteration of flows in southeast rivers, estuaries and nearshore ocean habitats.</p> <ul style="list-style-type: none"> • Provide detailed impact analyses, assessments of potential unavoidable damage to EFH and other marine resources; • Avoid impacts, require compensatory mitigation for unavoidable impacts, and account for the cumulative impacts in the same watershed; • Recommend that projects meet state and Federal water quality standards, include baseline monitoring, and establish on-going maintenance and repair programs; • Recommend that construction not coincide with spawning migrations or early development of sensitive species; • Avoid impingement and entrainment of sensitive species at water intakes and provide detailed requirements for developing the intake design; • Natural flow regime should be altered as little as possible; • Hydropower projects implement ramping rate restrictions and a non-peaking window during the critical reproductive and rearing periods.
<p>South Atlantic Marine & Estuarine Ecosystems from Non-Native and Invasive Species Developed 2014</p>	<p>Prevent invasive species from impacting marine and estuarine habitats in the South Atlantic region.</p> <ul style="list-style-type: none"> • Remove species from the FMU to allow control or eradication strategy to be implemented; • NOAA Fisheries remove invasive species as a compensatory mitigation measure and require plant materials be obtained through local nurseries; • Grant funding to promote research and education and outreach efforts targeting invasive species; • National Aquatic Nuisance Species Task Force support developing management plans for potentially invasive species in South Atlantic waters; • Develop novel gears and invasive species harvest, eradication, and/or removal strategies/programs which do not impact South Atlantic habitats and ecosystems and encourage removal from areas of high ecological/economic importance; • Integrate monitoring of invasive species into existing fishery-independent and dependent programs; • Require inspection/surface cleaning prior to placement of Fish Attracting Devices; • Discourage use of non-indigenous species in aquaculture in the SA region and ensure compliance with existing regulations; • Energy infrastructure permits require monitoring the settlement and dispersal of non-indigenous species; • Regional partners develop regulations controlling ballast water and research and development to advance treatment technology.
<p>Artificial Reefs Developed 2017</p>	<p>Protection and mitigation (avoidance, minimization, and compensatory mitigation) of EFH and EFH-HAPCs related to artificial reef development, placement, and maintenance.</p> <ul style="list-style-type: none"> • Defines uses of ARs: recreational and commercial activities, spawning, breeding, feeding, and refuge for growth to maturity; • Support state requests to designate specific ARs as SMZs; • Provide a more standardized comparison for scientific investigations; • Managers consult with stakeholders prior to siting in order to reduce user conflict and maximize the value of ARs as EFH; • Properly site ARs to connect life stages of target species, do not impact right whales/Atlantic sturgeon or hazards to navigation; • Require the use of environmentally safe, long-lasting materials for reef construction; • Consider impacts of decommissioning structures on a case-by-case basis; • Mitigation measures be specified if the function of an AR is lost.

Information Products Developed to Support SAFMC Habitat Program

Numerous information products have been pursued through the Council’s habitat program . Some, such as EFH maps, are intended to address MSA EFH requirements, while others strive to develop linkages between fisheries and habitats, illustrate various types of information that are available in the South Atlantic Region, or support the efforts of other agencies to address habitat issues. It has proven difficult, given the Council’s resources, to fully develop some of the tools and populate the databases that are necessary for full functionality. Due to concerns with the time and financial expense required for both development and maintenance, the Council directed that the Blueprint evaluate the current suite of habitat related products and web-based tools, identify those that are necessary for addressing Council EFH mandates, and consider the costs associated with adequately supporting those items. Information products are summarized in **Table 4**.

Given the complexity of the information products, the Blueprint provides general guidance to be used in further evaluating and refining the Council’s information needs and obligations.

- The need for the Council to serve as a leader in providing broad regional information has lessened recently as organizations have begun taking responsibility for sharing their own information.
- “One-stop” shops for providing spatial data can easily become overwhelming and costly to both develop and maintain overtime. Moreover, if such sources are not kept up to date their effectiveness is greatly diminished, and potential users will seek other sources.
- Past development of information products has proceeded without strong oversight by the Council and therefore without first establishing important criteria such as the intended users, applicability to the Council’s core responsibilities, resources required to keep information up-to date, role of each tool in addressing Council needs, and usefulness to Council staff.
- Information is required on the costs (financial and time) to maintain the current tools, populate them with complete and up-to-date information, and make them available through the Council’s website.
- Before pursuing further development of new tools or enhancements to existing tools, it is necessary to consider:
 - Financial costs borne by the Council for development and maintenance.
 - Availability of information through other sources and partners.
 - Objectives and intended audiences and users.
- When evaluating tools and meeting information needs, consideration should first be given to integrating existing tools and services into the new website, with appropriate consideration of objectives for each intended user group and purpose.

Table 4. Information products supporting habitat activities.

SAFMC Product Name	Description	Council needs met	Maintained by	Intended Users	Pros	Cons
SAFMC EFH	Mapping service of designated EFH and HAPCs for managed species.	Non-descriptive representation of designated EFH Links to textual descriptions of EFH	FWRI	Council, Council Staff, NOAA, NOAA HCD, State and Other Federal Agencies, Researchers, and the Public	Ability to integrate multiple types of information. Ability to provide existing rest services for other platforms to use latest shapefile of EFH. Cited by SERO HCD as the best repository for spatial representation of EFH and EFH-HAPCs. Ability to print custom maps.	Cost to maintain information (recurring obligations for contracts). Hosted at FWRI and any updates would need to be done by FWRI. Need to determine whether useful to Council staff.
SA Fisheries	Mapping service of species distribution and abundance and SA survey data. Provides tools to query and chart data from the following fishery independent regional surveys Southeast Reef Fish Survey, Coastal Survey, Pamlico Sound Survey, and Longline Survey (SEAMAP-SA, MARMAP, and SEFIS). Data from 2019 and 2021-2022.	Provides abundance summaries for managed species. Could provide species distribution and shifts over time as heat maps.	FWRI SCDNR NCDMF GDNR	Council, Council Staff, NOAA HCD, State and Federal Agencies, Researchers and the Public	Provides ability to integrate multiple types of information. Ability to provide existing rest services for use by other platforms to use latest available survey data. Ability to print custom maps.	Cost to maintain information. Unclear whether summarized information is useful to analyses that need to be conducted by Council staff. Hosted at FWRI and any updates would need to be done by FWRI.
SAFMC Managed Areas	Mapping service of MPAs, C-HAPCs, SMZs, Spawning SMZs, GCAAs, SFAAs, and Spiny	Provides spatial representations of MPAs, C-HAPCs, SMZs, Spawning SMZs, GCAAs, SFAAs, and Spiny	FWRI	Council, Council Staff, NOAA HCD, State and Federal Agencies, Researchers and the Public	“One Stop Shop” for SAFMC Managed Areas	Duplicative of page on current website. Cost to maintain information. Hosted at FWRI and any updates would need to be done by FWRI.

	Lobster Trap Gear FMAs. Includes links to CFR, representative habitat photographs and videos.	Lobster Trap Gear FMAs.			<p>Ability to integrate multiple types of information (e.g., shapefiles, kmzs) for viewing and map creation.</p> <p>Ability to provide existing rest services for other platforms to use latest representations of managed areas.</p> <p>Unique widget provides users' ability to analyze all managed area information within in a user defined area.</p> <p>Ability to print custom maps and reports.</p>	
SAFMC Digital Dashboard	<p>1) Served Council Map Service Layers (EFH, Fisheries and Managed Areas).</p> <p>2) Complementary Services (Nautical Charts, MultiBeam Bathymetry and other Habitats).</p> <p>3) External Services (NOAA's Estuarine Bathymetry, BOEM Wind Planning Areas and NOAA Shaded Relief imagery)</p>	Provides a Data Catalogue Downloadable layers in multiple formats and links to Rest Services. Provides links to Web Applications. Provides links to Regional and State Partners.	FWRI	Council, Council Staff, NOAA HCD, State and Federal Agencies, Researchers and the Public	<p>Provides a Data Catalogue Downloadable layers in multiple formats and links to Rest Services. Provides links to Web Applications. Provides links to Regional and State Partners.</p>	<p>Cost to maintain information.</p> <p>Hosted at FWRI and any updates would need to be done by FWRI.</p> <p>Unclear how to navigate and hosted separately from Council website. Any updates need to be requested through FWRI.</p>
SAFMC Atlas	Searching and visualizing GIS data relevant to the Council's mission: Links to Managed Areas, Fisheries and EFH Map Services and links to related story maps, and other associated applications. The page also includes: link to Best Fishing Practices tutorial; and: an Integrated ACCSP dashboard .	Provides platform for access to all Council Web Services and all spatial layers.	FWRI	Council, Council Staff, NOAA HCD, State and Federal Agencies, Researchers and the Public	<p>Access to all layers can be made through the Map Catalogue and associated Rest Services.</p> <p>Cost and Operation- Supports exiting investment in Server, Development Server, and all associated Arc GIS Web software necessary to maintain online Arc GIS Webservice and the Atlas (~\$150k investment).</p> <p>Updates and revisions track FWRI testing and use of new software and technologies inhouse then appropriate ones applied to SAFMC online system.</p>	<p>Cost to maintain information.</p> <p>Hosted at FWRI and any updates would need to be done by FWRI.</p> <p>Unclear how to navigate and hosted separately from Council website. Any updates need to be requested through FWRI.</p>

SAFMC Habitat and Ecosystem Partners

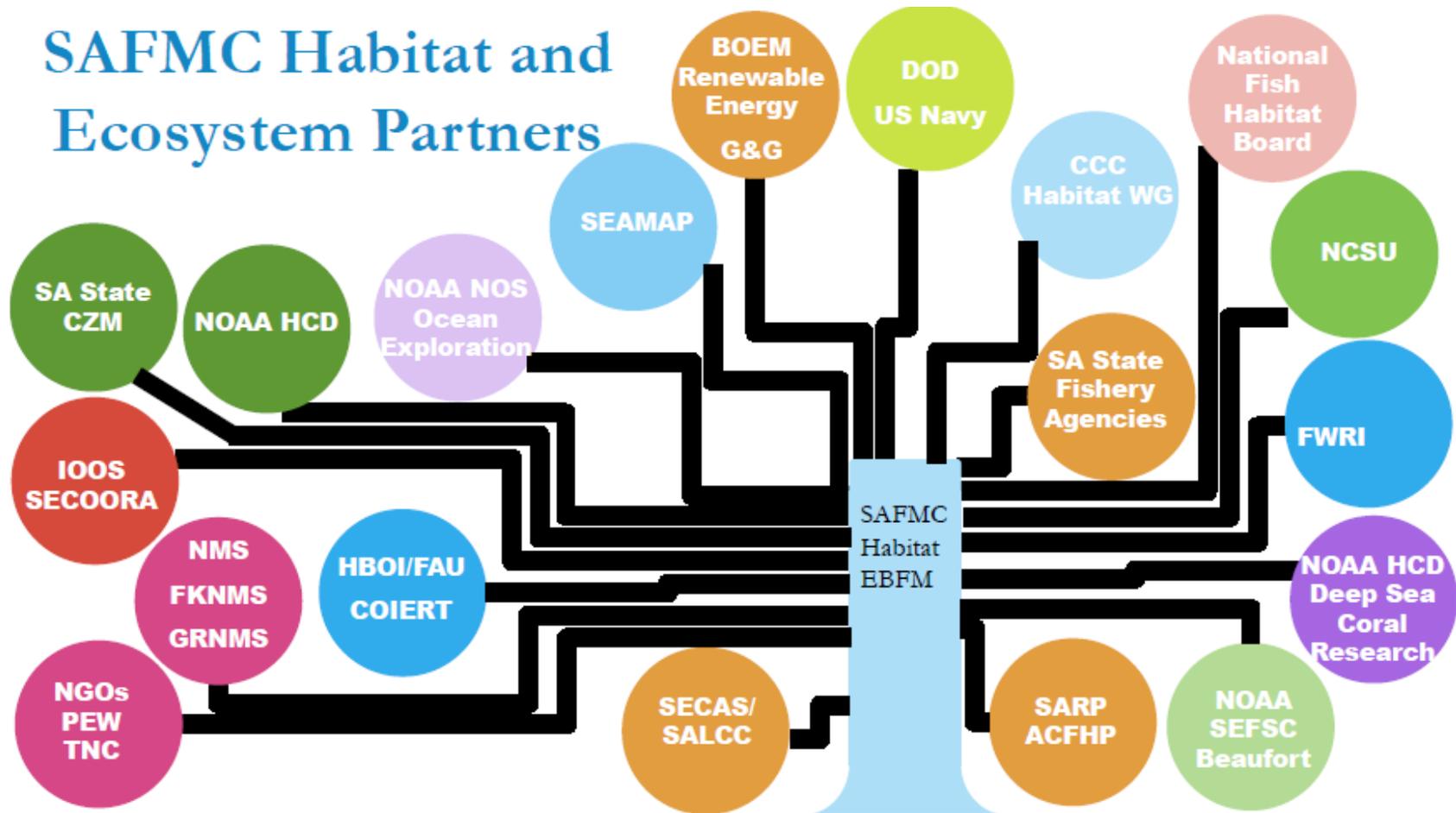


Figure 1. Habitat Partner Schematic

Habitat Partnerships

Ensuring viable and effective fisheries habitats and ecosystems is a vast and challenging endeavor involving agencies and organizations at the state, regional, and federal level (Figure 1). Additionally, due to widespread interest in protecting habitats of all types, non-governmental organizations often become engaged in habitat issues. This creates opportunities for the Council to work with these other groups to expand its habitat reach and influence and achieve its habitat mandates.

As a result, the Council has entered into both formal and informal partnerships on a variety of habitat issues in the past. However, the purpose, costs, and benefits of partnering with other organizations were not always clear to Council members, particularly when the partnership extended beyond state and federal agencies. Existing and future partnerships need to be formally evaluated to determine how each benefits the Council's habitat program and obligations and to identify costs in both staff time and Council funding. Conducting this evaluation proved beyond the scope of Blueprint development, therefore further work will be pursued and detailed in the workplan that will be developed once the Blueprint is approved. The evaluation will be based on the general criteria outlined below and may also consider additional information to adequately address the circumstance of each partnership. Once the evaluation is complete for current partnerships, the Habitat Committee will consider the Council's future role in that partnership. Requests to enter into future partnerships will be evaluated using the criteria below and then considered through the Habitat Committee.

Partnership Evaluation Criteria

- Purpose, mission, and goals of the partner organization
- Scope of the partner organization (e.g., local, national, regional)
- Other member organizations, with attention to those otherwise associated with SAFMC
- Purpose of the partnership with SAFMC
- Benefits to SAFMC, with a focus on habitat program goals and objectives
- Costs to SAFMC – financial and time commitments
- For an existing partnership:
 - History and duration of the partnership
 - Tangible and direct benefits to SAFMC

Outreach and Communication Strategy

Confusion has arisen as to Council's role in addressing habitat, particularly when it comes to protecting habitat or influencing activities that impact habitat. It has also been noted that the amount of information available on habitat can become overwhelming. Clarifying the Council's role, as done in the Blueprint by addressing MSA mandates and other requirements, is one step toward addressing past confusion. However, getting that message out to the Council's constituents requires a dedicated outreach and communication effort. This effort should focus on clearly stating, in layman's terms, the Council's habitat obligations under the MSA and other

federal laws, steps taken by the Council to meet its obligations, and the Council’s overall approach to habitat issues.

The Outreach and Communications Advisory Panel (OCAP) was consulted to provide guidance on outreach and communication products in support of the Council’s habitat program. The OCAP provided initial recommendations at its meeting of November 2021. An outreach and communication strategy and workplan will be developed after the Council adopts the Habitat Blueprint.

Outreach and Communications Advisory Panel Strategy Recommendations

- Use the website and story maps to increase awareness of the Council’s role in habitat protection;
- Consider other Councils’ websites and presentation of EFH;
- Highlight habitat protection work separately from ecosystem-based management work;
- Develop a short video on what the Council can and cannot do relevant to habitat;
- Make a general connection between healthy habitat and healthy fisheries;
- Use an infographic to illustrate the role of the Council.

Habitat Program Workplan

Future habitat program activities will be guided by a workplan developed by Council staff in consultation with the HEAP and Habitat Committee. The Workplan will be reviewed by the Habitat Committee and approved by the Council annually. Short term tasks to be addressed over the next 1-2 years, long term tasks to be addressed over the next 3 – 5 years, and ongoing or recurring tasks and responsibilities will be identified. The workplan will exist as a stand-alone document rather than a Blueprint appendix to maintain the relevance of the Blueprint into the future. The workplan will also consider future evaluations of the Blueprint, as addressed below.

The initial workplan will include short-term activities to complete the in-depth evaluations of habitat partners and habitat tools that were not fully resolved through the Blueprint, fully incorporate habitat information into the Council’s website, develop an outreach strategy, and complete the 5-year EFH review. It will also include long-term activities to evaluate HEAP changes implemented through the Blueprint, implement any recommendations of the 2024 EFH review, and plan for the 2029 EFH review.

Blueprint Evaluation

This Blueprint is intended to provide general guidance to the Council’s habitat program that will be relevant for years to come. However, the Council recognizes that changes proposed herein, such as revising the HEAP, will require evaluation to ensure the goals are met and may require further adjustment in the future. Changes may also be made to the Council’s habitat responsibilities through future MSA authorizations.

Two recurring information sources developed for the program through the Blueprint – the HEAP Annual Habitat Activities Report and the Habitat Program Workplan – provide mechanisms for

evaluating Blueprint recommendations and continued relevance. Future iterations of these documents can identify areas of the Blueprint to evaluate and reconsider. Including these ongoing opportunities to evaluate both the program and the blueprint should prevent the Blueprint from sliding into obscurity and avoid the need for evaluating the Blueprint at pre-determined intervals.

References

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South Atlantic Fishery Management Council. 2009a. Fishery Ecosystem Plan for the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place Drive; Suite 201, North Charleston, SC 29405.

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Appendix A. Federal EFH Requirements

1. Magnuson-Stevens Act Provisions

Section 303: FMP Contents

303(a)(7): describe and identify essential fish habitat for the fishery based on the guidelines established by the Secretary under section 305(b)(1)(A), minimize to the extent practicable adverse effects on such habitat caused by fishing, and identify other actions to encourage the conservation and enhancement of such habitat;

Section 305: Other Requirements and Authority

305(b) FISH HABITAT

- (1) (A) The Secretary shall, within 6 months of the date of enactment of the Sustainable Fisheries Act, establish by regulation guidelines to assist the Councils in the description and identification of essential fish habitat in fishery management plans (including adverse impacts on such habitat) and in the consideration of actions to ensure the conservation and enhancement of such habitat. The Secretary shall set forth a schedule for the amendment of fishery management plans to include the identification of essential fish habitat and for the review and updating of such identifications based on new scientific evidence or other relevant information.
(B) The Secretary, in consultation with participants in the fishery, shall provide each Council with recommendations and information regarding each fishery under that Council's authority to assist it in the identification of essential fish habitat, the adverse impacts on that habitat, and the actions that should be considered to ensure the conservation and enhancement of that habitat.
(C) The Secretary shall review programs administered by the Department of Commerce and ensure that any relevant programs further the conservation and enhancement of essential fish habitat.
(D) The Secretary shall coordinate with and provide information to other Federal agencies to further the conservation and enhancement of essential fish habitat.
- (2) Each Federal agency shall consult with the Secretary with respect to any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any essential fish habitat identified under this Act.
- (3) Each Council—
 - (A) may comment on and make recommendations to the Secretary and any Federal or State agency concerning any activity authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by any Federal or State agency that, in the view of the Council, may affect the habitat, including essential fish habitat, of a fishery resource under its authority; and
 - (B) shall comment on and make recommendations to the Secretary and any Federal or State agency concerning any such activity that, in the view of the Council, is likely to substantially affect the habitat, including essential fish habitat, of an anadromous fishery resource under its authority.
- (4) (A) If the Secretary receives information from a Council or Federal or State agency or determines from other sources that an action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by any State or Federal agency would

adversely affect any essential fish habitat identified under this Act, the Secretary shall recommend to such agency measures that can be taken by such agency to conserve such habitat.

(B) Within 30 days after receiving a recommendation under subparagraph (A), a Federal agency shall provide a detailed response in writing to any Council commenting under paragraph (3) and the Secretary regarding the matter. The response shall include a description of measures proposed by the agency for avoiding, mitigating, or offsetting the impact of the activity on such habitat. In the case of a response that is inconsistent with the recommendations of the Secretary, the Federal agency shall explain its reasons for not following the recommendations.

2. CFR Provisions

The Code of Federal Regulations provides the specific regulatory language, or laws, that implements the directives and guidance of Federal Acts such as the MSA.

Title 50 —Wildlife and Fisheries

Chapter VI —Fishery Conservation and Management, National Oceanic and Atmospheric Administration, Department of Commerce

Part 600 —Magnuson-Stevens Act Provisions

Authority: 5 U.S.C. 561 and 16 U.S.C. 1801 et seq.

Source: 61 FR 32540, June 24, 1996, unless otherwise noted.

Subpart J Essential Fish Habitat (EFH)

Source: 67 FR 2376, Jan. 17, 2002, unless otherwise noted.

§ 600.805 Purpose and scope.

(a) Purpose. This subpart provides guidelines for Councils and the Secretary to use in adding the required EFH provisions to an FMP, i.e., description and identification of EFH, adverse effects on EFH (including minimizing, to the extent practicable, adverse effects from fishing), and actions to conserve and enhance EFH.

(b) Scope —

(1) Species covered. An EFH provision in an FMP must include all fish species in the fishery management unit (FMU). An FMP may describe, identify, and protect the habitat of species not in an FMU; however, such habitat may not be considered EFH for the purposes of sections 303(a)(7) and 305(b) of the Magnuson-Stevens Act.

(2) Geographic. EFH may be described and identified in waters of the United States, as defined in 33 CFR 328.3, and in the exclusive economic zone, as defined in § 600.10. Councils may describe, identify, and protect habitats of managed species beyond the exclusive economic zone; however, such habitat may not be considered EFH for the purposes of sections 303(a)(7) and

305(b) of the Magnuson-Stevens Act. Activities that may adversely affect such habitat can be addressed through any process conducted in accordance with international agreements between the United States and the foreign nation(s) undertaking or authorizing the action.

§ 600.810 Definitions and Word Usage

(a) Definitions. In addition to the definitions in the Magnuson-Stevens Act and § 600.10, the terms in this subpart have the following meanings:

Adverse effect means any impact that reduces quality and/or quantity of EFH. Adverse effects may include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components, if such modifications reduce the quality and/or quantity of EFH. Adverse effects to EFH may result from actions occurring within EFH or outside of EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

Council includes the Secretary, as applicable, when preparing FMPs or amendments under sections 304(c) and (g) of the Magnuson-Stevens Act.

Ecosystem means communities of organisms interacting with one another and with the chemical and physical factors making up their environment.

Habitat areas of particular concern means those areas of EFH identified pursuant to § 600.815(a)(8).

Healthy ecosystem means an ecosystem where ecological productive capacity is maintained, diversity of the flora and fauna is preserved, and the ecosystem retains the ability to regulate itself. Such an ecosystem should be similar to comparable, undisturbed ecosystems with regard to standing crop, productivity, nutrient dynamics, trophic structure, species richness, stability, resilience, contamination levels, and the frequency of diseased organisms.

Overfished means any stock or stock complex, the status of which is reported as overfished by the Secretary pursuant to section 304(e)(1) of the Magnuson-Stevens Act.

(b) Word usage. The terms “must”, “shall”, “should”, “may”, “may not”, “will”, “could”, and “can” are used in the same manner as in § 600.305(c).

§ 600.815 Contents of Fishery Management Plans.

(a) Mandatory contents —

(1) Description and identification of EFH —

(i) Overview. FMPs must describe and identify EFH in text that clearly states the habitats or habitat types determined to be EFH for each life stage of the managed species. FMPs should explain the physical, biological, and chemical characteristics of EFH and, if known, how these characteristics influence the use of EFH by the species/life stage. FMPs must identify the specific geographic location or extent of habitats described as EFH. FMPs must include maps of

the geographic locations of EFH or the geographic boundaries within which EFH for each species and life stage is found.

(ii) Habitat information by life stage.

(A) Councils need basic information to understand the usage of various habitats by each managed species. Pertinent information includes the geographic range and habitat requirements by life stage, the distribution and characteristics of those habitats, and current and historic stock size as it affects occurrence in available habitats. FMPs should summarize the life history information necessary to understand each species' relationship to, or dependence on, its various habitats, using text, tables, and figures, as appropriate. FMPs should document patterns of temporal and spatial variation in the distribution of each major life stage (defined by developmental and functional shifts) to aid in understanding habitat needs. FMPs should summarize (e.g., in tables) all available information on environmental and habitat variables that control or limit distribution, abundance, reproduction, growth, survival, and productivity of the managed species. The information should be supported with citations.

(B) Councils should obtain information to describe and identify EFH from the best available sources, including peer-reviewed literature, unpublished scientific reports, data files of government resource agencies, fisheries landing reports, and other sources of information. Councils should consider different types of information according to its scientific rigor. FMPs should identify species-specific habitat data gaps and deficits in data quality (including considerations of scale and resolution; relevance; and potential biases in collection and interpretation). FMPs must demonstrate that the best scientific information available was used in the description and identification of EFH, consistent with national standard 2.

(iii) Analysis of habitat information.

(A) The following approach should be used to organize the information necessary to describe and identify EFH.

(1) Level 1: Distribution data are available for some or all portions of the geographic range of the species. At this level, only distribution data are available to describe the geographic range of a species (or life stage). Distribution data may be derived from systematic presence/absence sampling and/or may include information on species and life stages collected opportunistically. In the event that distribution data are available only for portions of the geographic area occupied by a particular life stage of a species, habitat use can be inferred on the basis of distributions among habitats where the species has been found and on information about its habitat requirements and behavior. Habitat use may also be inferred, if appropriate, based on information on a similar species or another life stage.

(2) Level 2: Habitat-related densities of the species are available. At this level, quantitative data (i.e., density or relative abundance) are available for the habitats occupied by a species or life stage. Because the efficiency of sampling methods is often affected by habitat characteristics, strict quality assurance criteria should be used to ensure that density estimates are comparable among methods and habitats. Density data should reflect habitat utilization, and the degree that a habitat is utilized is assumed to be indicative of habitat value. When assessing habitat value on

the basis of fish densities in this manner, temporal changes in habitat availability and utilization should be considered.

(3) Level 3: Growth, reproduction, or survival rates within habitats are available. At this level, data are available on habitat-related growth, reproduction, and/or survival by life stage. The habitats contributing the most to productivity should be those that support the highest growth, reproduction, and survival of the species (or life stage).

(4) Level 4: Production rates by habitat are available. At this level, data are available that directly relate the production rates of a species or life stage to habitat type, quantity, quality, and location. Essential habitats are those necessary to maintain fish production consistent with a sustainable fishery and the managed species' contribution to a healthy ecosystem.

(B) Councils should strive to describe habitat based on the highest level of detail (i.e., Level 4). If there is no information on a given species or life stage, and habitat usage cannot be inferred from other means, such as information on a similar species or another life stage, EFH should not be designated.

(iv) EFH determination.

(A) Councils should analyze available ecological, environmental, and fisheries information and data relevant to the managed species, the habitat requirements by life stage, and the species' distribution and habitat usage to describe and identify EFH. The information described in paragraphs (a)(1)(ii) and (iii) of this section will allow Councils to assess the relative value of habitats. Councils should interpret this information in a risk-averse fashion to ensure adequate areas are identified as EFH for managed species. Level 1 information, if available, should be used to identify the geographic range of the species at each life stage. If only Level 1 information is available, distribution data should be evaluated (e.g., using a frequency of occurrence or other appropriate analysis) to identify EFH as those habitat areas most commonly used by the species. Level 2 through 4 information, if available, should be used to identify EFH as the habitats supporting the highest relative abundance; growth, reproduction, or survival rates; and/or production rates within the geographic range of a species. FMPs should explain the analyses conducted to distinguish EFH from all habitats potentially used by a species.

(B) FMPs must describe EFH in text, including reference to the geographic location or extent of EFH using boundaries such as longitude and latitude, isotherms, isobaths, political boundaries, and major landmarks. If there are differences between the descriptions of EFH in text, maps, and tables, the textual description is ultimately determinative of the limits of EFH. Text and tables should explain pertinent physical, chemical, and biological characteristics of EFH for the managed species and explain any variability in habitat usage patterns, but the boundaries of EFH should be static.

(C) If a species is overfished and habitat loss or degradation may be contributing to the species being identified as overfished, all habitats currently used by the species may be considered essential in addition to certain historic habitats that are necessary to support rebuilding the fishery and for which restoration is technologically and economically feasible. Once the fishery

is no longer considered overfished, the EFH identification should be reviewed and amended, if appropriate.

(D) Areas described as EFH will normally be greater than or equal to aquatic areas that have been identified as “critical habitat” for any managed species listed as threatened or endangered under the Endangered Species Act.

(E) Ecological relationships among species and between the species and their habitat require, where possible, that an ecosystem approach be used in determining the EFH of a managed species. EFH must be designated for each managed species, but, where appropriate, may be designated for assemblages of species or life stages that have similar habitat needs and requirements. If grouping species or using species assemblages for the purpose of designating EFH, FMPs must include a justification and scientific rationale. The extent of the EFH should be based on the judgment of the Secretary and the appropriate Council(s) regarding the quantity and quality of habitat that are necessary to maintain a sustainable fishery and the managed species' contribution to a healthy ecosystem.

(F) If degraded or inaccessible aquatic habitat has contributed to reduced yields of a species or assemblage and if, in the judgment of the Secretary and the appropriate Council(s), the degraded conditions can be reversed through such actions as improved fish passage techniques (for stream or river blockages), improved water quality measures (removal of contaminants or increasing flows), and similar measures that are technologically and economically feasible, EFH should include those habitats that would be necessary to the species to obtain increased yields.

(v) EFH mapping requirements.

(A) FMPs must include maps that display, within the constraints of available information, the geographic locations of EFH or the geographic boundaries within which EFH for each species and life stage is found. Maps should identify the different types of habitat designated as EFH to the extent possible. Maps should explicitly distinguish EFH from non-EFH areas. Councils should confer with NMFS regarding mapping standards to ensure that maps from different Councils can be combined and shared efficiently and effectively. Ultimately, data used for mapping should be incorporated into a geographic information system (GIS) to facilitate analysis and presentation.

(B) Where the present distribution or stock size of a species or life stage is different from the historical distribution or stock size, then maps of historical habitat boundaries should be included in the FMP, if known.

(C) FMPs should include maps of any habitat areas of particular concern identified under paragraph (a)(8) of this section.

(2) Fishing activities that may adversely affect EFH —

(i) Evaluation. Each FMP must contain an evaluation of the potential adverse effects of fishing on EFH designated under the FMP, including effects of each fishing activity regulated under the FMP or other Federal FMPs. This evaluation should consider the effects of each fishing activity on each type of habitat found within EFH. FMPs must describe each fishing activity, review and

discuss all available relevant information (such as information regarding the intensity, extent, and frequency of any adverse effect on EFH; the type of habitat within EFH that may be affected adversely; and the habitat functions that may be disturbed), and provide conclusions regarding whether and how each fishing activity adversely affects EFH. The evaluation should also consider the cumulative effects of multiple fishing activities on EFH. The evaluation should list any past management actions that minimize potential adverse effects on EFH and describe the benefits of those actions to EFH. The evaluation should give special attention to adverse effects on habitat areas of particular concern and should identify for possible designation as habitat areas of particular concern any EFH that is particularly vulnerable to fishing activities. Additionally, the evaluation should consider the establishment of research closure areas or other measures to evaluate the impacts of fishing activities on EFH. In completing this evaluation, Councils should use the best scientific information available, as well as other appropriate information sources. Councils should consider different types of information according to its scientific rigor.

(ii) Minimizing adverse effects. Each FMP must minimize to the extent practicable adverse effects from fishing on EFH, including EFH designated under other Federal FMPs. Councils must act to prevent, mitigate, or minimize any adverse effects from fishing, to the extent practicable, if there is evidence that a fishing activity adversely affects EFH in a manner that is more than minimal and not temporary in nature, based on the evaluation conducted pursuant to paragraph (a)(2)(i) of this section and/or the cumulative impacts analysis conducted pursuant to paragraph (a)(5) of this section. In such cases, FMPs should identify a range of potential new actions that could be taken to address adverse effects on EFH, include an analysis of the practicability of potential new actions, and adopt any new measures that are necessary and practicable. Amendments to the FMP or to its implementing regulations must ensure that the FMP continues to minimize to the extent practicable adverse effects on EFH caused by fishing. FMPs must explain the reasons for the Council's conclusions regarding the past and/or new actions that minimize to the extent practicable the adverse effects of fishing on EFH.

(iii) Practicability. In determining whether it is practicable to minimize an adverse effect from fishing, Councils should consider the nature and extent of the adverse effect on EFH and the long and short-term costs and benefits of potential management measures to EFH, associated fisheries, and the nation, consistent with national standard 7. In determining whether management measures are practicable, Councils are not required to perform a formal cost/benefit analysis.

(iv) Options for managing adverse effects from fishing. Fishery management options may include, but are not limited to:

(A) Fishing equipment restrictions. These options may include, but are not limited to: seasonal and areal restrictions on the use of specified equipment, equipment modifications to allow escapement of particular species or particular life stages (e.g., juveniles), prohibitions on the use of explosives and chemicals, prohibitions on anchoring or setting equipment in sensitive areas, and prohibitions on fishing activities that cause significant damage to EFH.

(B) Time/area closures. These actions may include, but are not limited to: closing areas to all fishing or specific equipment types during spawning, migration, foraging, and nursery activities

and designating zones for use as marine protected areas to limit adverse effects of fishing practices on certain vulnerable or rare areas/species/life stages, such as those areas designated as habitat areas of particular concern.

(C) Harvest limits. These actions may include, but are not limited to, limits on the take of species that provide structural habitat for other species assemblages or communities and limits on the take of prey species.

(3) Non-Magnuson-Stevens Act fishing activities that may adversely affect EFH. FMPs must identify any fishing activities that are not managed under the Magnuson-Stevens Act that may adversely affect EFH. Such activities may include fishing managed by state agencies or other authorities.

(4) Non-fishing related activities that may adversely affect EFH. FMPs must identify activities other than fishing that may adversely affect EFH. Broad categories of such activities include, but are not limited to: dredging, filling, excavation, mining, impoundment, discharge, water diversions, thermal additions, actions that contribute to non-point source pollution and sedimentation, introduction of potentially hazardous materials, introduction of exotic species, and the conversion of aquatic habitat that may eliminate, diminish, or disrupt the functions of EFH. For each activity, the FMP should describe known and potential adverse effects to EFH.

(5) Cumulative impacts analysis. Cumulative impacts are impacts on the environment that result from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions, regardless of who undertakes such actions. Cumulative impacts can result from individually minor, but collectively significant actions taking place over a period of time. To the extent feasible and practicable, FMPs should analyze how the cumulative impacts of fishing and non-fishing activities influence the function of EFH on an ecosystem or watershed scale. An assessment of the cumulative and synergistic effects of multiple threats, including the effects of natural stresses (such as storm damage or climate-based environmental shifts) and an assessment of the ecological risks resulting from the impact of those threats on EFH, also should be included.

(6) Conservation and enhancement. FMPs must identify actions to encourage the conservation and enhancement of EFH, including recommended options to avoid, minimize, or compensate for the adverse effects identified pursuant to paragraphs (a)(3) through (5) of this section, especially in habitat areas of particular concern.

(7) Prey species. Loss of prey may be an adverse effect on EFH and managed species because the presence of prey makes waters and substrate function as feeding habitat, and the definition of EFH includes waters and substrate necessary to fish for feeding. Therefore, actions that reduce the availability of a major prey species, either through direct harm or capture, or through adverse impacts to the prey species' habitat that are known to cause a reduction in the population of the prey species, may be considered adverse effects on EFH if such actions reduce the quality of EFH. FMPs should list the major prey species for the species in the fishery management unit and discuss the location of prey species' habitat. Adverse effects on prey species and their habitats may result from fishing and non-fishing activities.

(8) Identification of habitat areas of particular concern. FMPs should identify specific types or areas of habitat within EFH as habitat areas of particular concern based on one or more of the following considerations:

- (i) The importance of the ecological function provided by the habitat.
- (ii) The extent to which the habitat is sensitive to human-induced environmental degradation.
- (iii) Whether, and to what extent, development activities are, or will be, stressing the habitat type.
- (iv) The rarity of the habitat type.

(9) Research and information needs. Each FMP should contain recommendations, preferably in priority order, for research efforts that the Councils and NMFS view as necessary to improve upon the description and identification of EFH, the identification of threats to EFH from fishing and other activities, and the development of conservation and enhancement measures for EFH.

(10) Review and revision of EFH components of FMPs. Councils and NMFS should periodically review the EFH provisions of FMPs and revise or amend EFH provisions as warranted based on available information. FMPs should outline the procedures the Council will follow to review and update EFH information. The review of information should include, but not be limited to, evaluating published scientific literature and unpublished scientific reports; soliciting information from interested parties; and searching for previously unavailable or inaccessible data. Councils should report on their review of EFH information as part of the annual Stock Assessment and Fishery Evaluation (SAFE) report prepared pursuant to § 600.315(e). A complete review of all EFH information should be conducted as recommended by the Secretary, but at least once every 5 years.

(b) Development of EFH recommendations for Councils. After reviewing the best available scientific information, as well as other appropriate information, and in consultation with the Councils, participants in the fishery, interstate commissions, Federal agencies, state agencies, and other interested parties, NMFS will develop written recommendations to assist each Council in the identification of EFH, adverse impacts to EFH, and actions that should be considered to ensure the conservation and enhancement of EFH for each FMP. NMFS will provide such recommendations for the initial incorporation of EFH information into an FMP and for any subsequent modification of the EFH components of an FMP. The NMFS EFH recommendations may be provided either before the Council's development of a draft EFH document or later as a review of a draft EFH document developed by a Council, as appropriate.

(c) Relationship to other fishery management authorities. Councils are encouraged to coordinate with state and interstate fishery management agencies where Federal fisheries affect state and interstate managed fisheries or where state or interstate fishery regulations affect the management of Federal fisheries. Where a state or interstate fishing activity adversely affects EFH, NMFS will consider that action to be an adverse effect on EFH pursuant to paragraph (a)(3) of this section and will provide EFH Conservation Recommendations to the appropriate state or interstate fishery management agency on that activity.