DRAFT DOCUMENT

Amendment 11 to the Fishery Management Plan for Coral, Coral Reefs, and Live / Hard Bottom Habitats of the South Atlantic

Amendment 12 to the Fishery Management Plan for the Shrimp Fishery of the South Atlantic Region

Establish a Shrimp Fishery Access Area Along the Northern Extension of the Oculina Bank Habitat Area of Particular Concern

Environmental Assessment, Regulatory Flexibility Act Analysis, and Regulatory Impact Review

June 2025 DRAFT

South Atlantic Fishery Management Council
4055 Faber Place Drive; Suite 201
North Charleston, SC 29405

Award Number FNA15NMF4410010

Table of Contents

List of Appendices

List of Figures

List of Tables

No table of figures entries found.

Summary

Amendment 11 to the Fishery Management Plan (FMP) for the Coral, Coral Reefs, and Live/Hard Bottom Habitats of the South Atlantic Region (Coral FMP) and Amendment 12 of the FMP for the Shrimp Fishery of the South Atlantic Region (Shrimp FMP) proposes to establish a shrimp fishery access area (SFAA) along the eastern boundary of the northern extension of the Oculina Bank Habitat Area of Particular Concern (OHAPC) where trawling for rock shrimp is currently prohibited. Rock shrimp fishermen requested that the proposed area be reviewed to determine if historic commercial trawling areas could be reopened to rock shrimp fishing.

The OHAPC was established through the original Coral FMP in 1982. Anchoring within the area by all fishing vessels was prohibited in 1996 (SAFMC 1995) and the area was later expanded to include newly discovered *Oculina* coral habitat. With the discovery of extensive deepwater coral ecosystems in 2011, the South Atlantic Fishery Management Council (Council) added the northern extension to the OHAPC through Amendment 8 to the Coral FMP in 2014 (SAFMC 2013a). Coral Amendment 8 also allowed transit through the OHAPC by fishing vessels with a valid commercial permit for rock shrimp and rock shrimp on board, and modified vessel monitoring system requirements for such vessels.

While finalizing Coral Amendment 8, the Council received public comments that a discrete area of the proposed northern extension of the OHAPC (the area now proposed in Coral Amendment 11/ Shrimp 12 for SFAA designation) was economically important for the rock shrimp fishery. The rock shrimp industry provided coordinates delineating the area they wished to retain for fishing in March 2013 and further refined those coordinates in March 2014. During their June 2014 meeting, the Council discussed industry concerns and agreed to further discuss and review the issue of whether to allow rock shrimp fishing in an area within the northern extension of the OHAPC. In addition, it was clarified that the review would only focus on the newly closed area, from which rock shrimp industry representatives maintained they would be losing economic benefits.

The Council revisited the SFAA action in June 2020 and recommended moving forward with the action in response to the Presidential Executive Order (EO) 14276 on Seafood Competitiveness and Economic Growth. Coral Amendment 10 addressed the EO 13921 recommendation to "Consider Re-Opening Closed Areas" to commercial fishermen that have lost access to areas that have been traditionally fished. The South Atlantic Council began developing Coral Amendment 10 after its September 2020 meeting.

In December 2021, Coral Amendment 10 was submitted to the Department of Commerce. The Secretary of Commerce disapproved Coral Amendment 10 citing deficiencies in the analyses and inconsistencies with the goals and objectives of the Coral FMP.

In this amendment the Council is reconsidering the establishment of a SFAA to allow access to historic fishing grounds for the rock shrimp fishery and addressing the deficiencies noted in the disapproval letter for Coral Amendment 10.

What Actions are Being Proposed in This Amendment?

Amendment 11 to the Coral FMP and Amendment 12 to the Shrimp FMP 12 proposes the following:

Action 1. Establish a shrimp fishery access area along the eastern edge of the northern extension of the Oculina Bank Habitat Area of Particular Concern.

Purpose for Action

The purpose of this amendment is to reinstate commercial access to this historically important fishing ground for the Rock Shrimp fishery by creating a Shrimp Fishery Access Area along the eastern edge of the Northern Oculina Habitat Area of Particular Concern boundary in an area where the rock shrimp fishery operated historically while minimizing impacts to deepwater coral.

Need for Action

The need for this amendment is to allow the rock shrimp fishery to attain OY while minimizing negative impacts to deepwater coral in the Council's jurisdiction.

Chapter 1. Introduction

1.1. What Actions are Being Proposed?

The proposed action in Amendment 11 to the Fishery Management Plan (FMP) for Coral, Coral Reefs, and Live/Hard Bottom Habitats of the South Atlantic Region (Coral FMP) and Amendment 12 to the Fishery Management Plan for the Shrimp Fishery of the South Atlantic Region (Shrimp FMP) would allow access to a discrete historic fishing area along the eastern boundary of the northern extension of the Oculina Bank Habitat Area of Particular Concern (OHAPC) through establishment of a shrimp fishery access area (SFAA). Fishing in this area was prohibited through regulations implementing Amendment 8 to the Coral FMP (80 FR 42423, August 17, 2025, SAFMC 2013a). However, before the finalization of Coral Amendment 8, rock shrimp fishermen requested that the proposed area be reviewed to determine if this specific historic trawling area could be reopened to fishing for rock shrimp.

1.2. Who is Proposing the Actions?

The South Atlantic Fishery Management Council (Council) and the National Marine Fisheries Service (NMFS) are responsible for managing fish stocks under fishery management plans (FMP) for the Coral, Coral Reefs, and Live/Hard Bottom Habitats of the South Atlantic Region (Coral FMP), and for the Shrimp Fishery of the South Atlantic Region (Shrimp FMP). The Council develops the amendment to an FMP and sends it to NMFS, who reviews and implements amendments on behalf of the Secretary of Commerce. NMFS is an agency of the National Oceanic and Atmospheric Administration within the Department of Commerce. Guided by the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), the Council works with NMFS, other partners, and stakeholders to sustainably manage fishery resources in the South Atlantic.

South Atlantic Fishery Management Council

- Responsible for conservation and management of fish stocks in the South Atlantic Region.
- Consists of 13 voting members and 4 non-voting members; voting members include 1 representative from each of the 4 South Atlantic state fishery management agencies, 8 members appointed by the Secretary of Commerce, and the Southeast Regional Administrator of NMFS.
- Responsible for developing fishery management plans and amendments under the Magnuson-Stevens Act; recommends actions to NMFS for implementation.
- Management area is from 3 to 200 nautical miles off the coasts of North Carolina, South Carolina, Georgia, and east Florida through Key West, except for mackerel which is from New York to Florida, and dolphin and wahoo, which is from Maine to Florida.

The Council and NMFS are also responsible for making this amendment available for public comment. The draft environmental assessment (EA) was combined with the amendment and was made available to the public during the scoping process, public hearings, and in Council meeting briefing books. The final EA and amendment will be made available for public

comment during the proposed rule stage of the rulemaking process. The final EA and amendment will be found on the Council's website at http://www.safmc.net.

1.3. Where is the Project Located?

Management and conservation of coral, coral reefs, and live/hard bottom habitats in waters off the southeastern United States (South Atlantic) in the 3-200 nautical miles U.S. exclusive economic zone (EEZ) is conducted under the Coral FMP (GMFMC & SAFMC 1982) (Figure 1.3.1). The South Atlantic Council manages over 400 coral species and associated habitat under this FMP. The OHAPC, as modified through Coral Amendment 8 (SAFMC 2013a), is located in the EEZ off the east coast of Florida (Figure 1.3.2). The OHAPC protects the known distribution of *Oculina* coral in the region. Management and conservation of shrimp in waters of the South Atlantic EEZ is conducted under the Shrimp FMP. This FMP includes three penaeid shrimp species, brown, pink, and white shrimp as well as one deepwater shrimp species, rock shrimp.

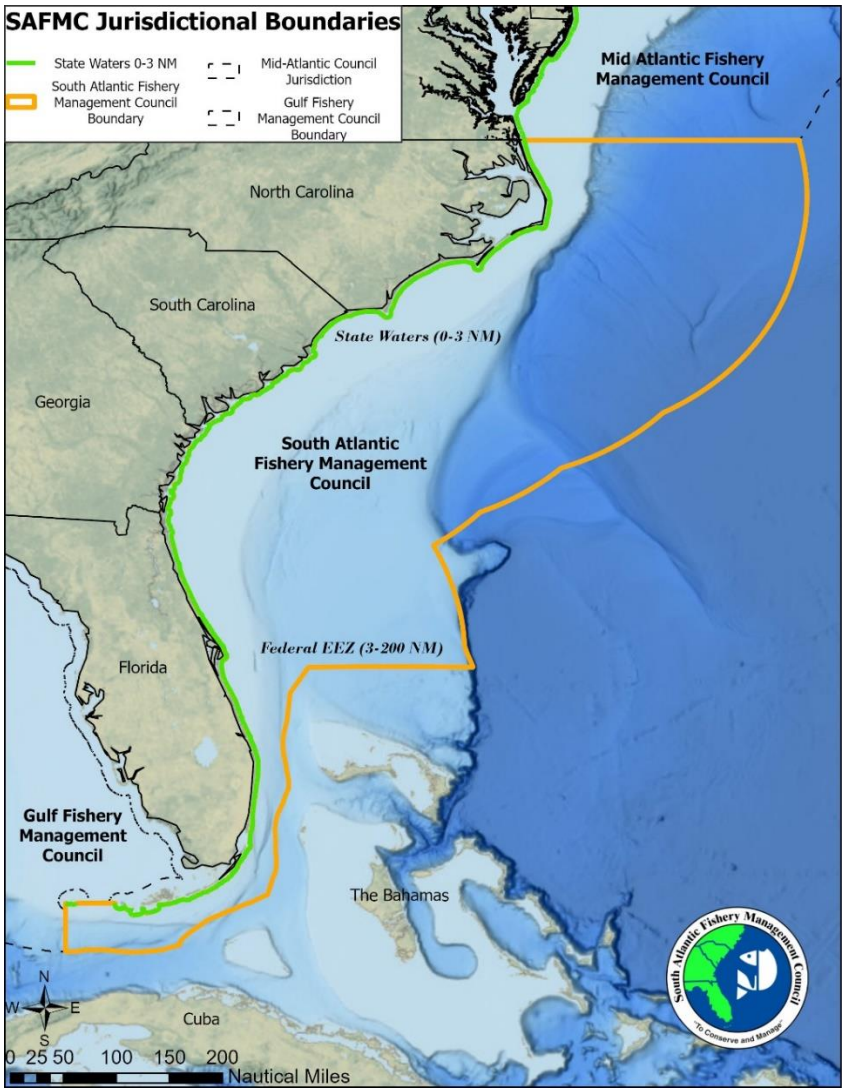

Figure 1.3.1. Jurisdictional boundaries of the South Atlantic Fishery Management Council as managed by the Council.

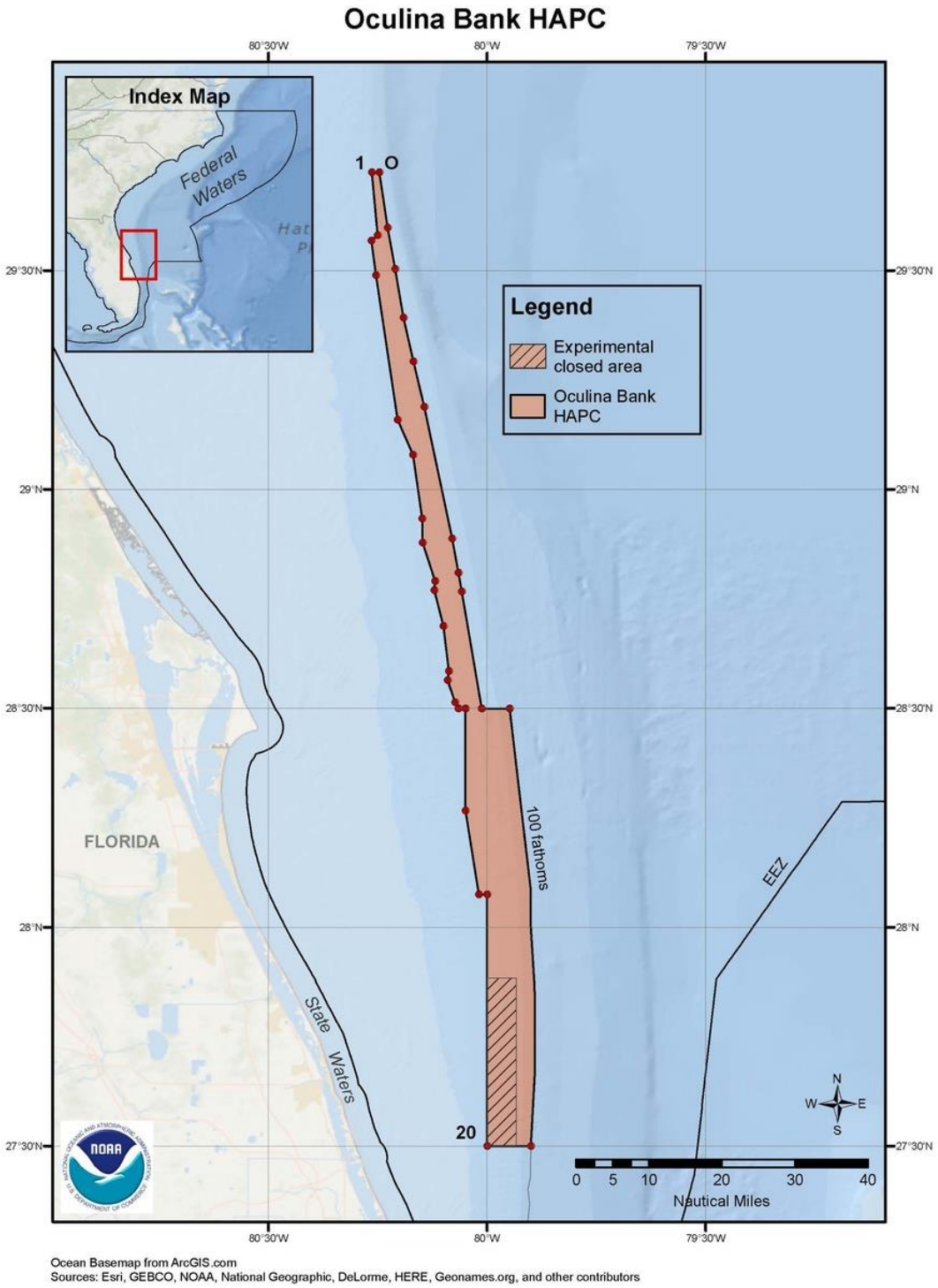

Figure 1.3.2. Map of the OHAPC. The OHAPC is the entire area in red. The experimental closed area, which is within the OHAPC, is applicable only for the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region
Source: https://www.fisheries.noaa.gov/resource/map/oculina-bank-hapc-and-experimental-closed-area-fishery-management-area-map-gis-data.

1.4. Why are the Council and NMFS Considering Action?

Purpose for action

The purpose of this amendment is to reinstate commercial access to this historically important fishing ground for the Rock Shrimp fishery by creating a Shrimp Fishery Access Area along the eastern edge of the Northern Oculina Habitat Area of Particular Concern boundary in an area where the rock shrimp fishery operated historically while minimizing impacts to deepwater coral.

Need for Action

The need for this amendment is to allow the rock shrimp fishery to attain OY while minimizing negative impacts to deepwater coral in the Council's jurisdiction.

The Council received public comment during its September 2013 meeting when it was finalizing Coral Amendment 8 that a discrete area along the eastern edge of the northern extension of the OHAPC was an important fishing ground for rock shrimp. Coral Amendment 8 was approved November, 2013 and implemented July 17, 2015.

Meanwhile, the commercial rock shrimp industry provided the location coordinates for the historic fishing area in March 2013, and further refined the coordinates in March 2014 through a Deepwater Shrimp Advisory Panel report. During the May 2014 Deepwater Shrimp Advisory Panel (AP) meeting, AP members indicated vessel monitoring system (VMS) data verified past rock shrimp fishing in the proposed area. The AP Chair also noted that the rock shrimp portion of the shrimp fishery is transitory as fishing effort changes based on upwelling conditions and shifting catch composition.

During their June 2014 meeting, the South Atlantic Council discussed industry concerns and agreed to further discuss and review the issue of whether to allow rock shrimp fishing in an area within the northern extension of the OHAPC. In addition, the council clarified that the review would only focus on the newly closed area in the OHAPC, as this was the closed area from which rock shrimp industry representatives maintained they would be losing economic benefits. South Atlantic Council members considered what information would be needed for the review, passed a motion requesting the NMFS Southeast Fisheries Science Center provide: VMS data up to in 2014; South Atlantic rock shrimp bycatch results from observer trips; detailed mapping and percent of area mapped of the OHAPC northern extension; observations on algae in the southern area of the rock shrimp fishery; updated landings through 2014; updated trip costs and value; and electronic logbook data from Gulf of Mexico shrimp vessels operating in the South Atlantic by September 1, 2014. In June 2015, the South Atlantic Council decided to develop an amendment to consider establishing an SFAA for rock shrimp fishing along the eastern boundary of the northern extension of the OHAPC.

Development of Coral Amendment 10 began following the South Atlantic Council's guidance at their September 2020 meeting. The South Atlantic Council took final action to approve Coral Amendment 10, and then submitted it to the Secretary of Commerce (Secretary) for review in December 2021.

During the development of Coral 10, NMFS published a notice of availability and accepted comments on the amendment. NMFS received 353 comment submissions during the public comment period on the notice of availability for Coral Amendment 10. Several of the submissions consisted of a list of individual signatures on form letters in opposition to the action. Inclusion of those individuals brings the public comment count to over 32,200 individuals. Comment submissions were from commercial and recreational fishermen, fishing organizations, environmental groups, and the general public, with most comments in opposition to establishing the proposed SFAA. The comments in support of the amendment (approximately 30) were made by commercial rock shrimp fishermen, seafood dealers, restaurateurs, the Southern Shrimp Alliance, and the Florida Fish and Wildlife Conservation Commission.

Comments opposing the action emphasized the following main points:

- The proposed action does not minimize adverse fishing impacts to essential fish habitat (EFH).
- The proposed action is inconsistent with the goals and objectives of the Coral FMP, specifically in regards to protection of EFH.
- The proposed action is not based on best scientific information available because the Council disregarded their Coral and Habitat and Ecosystem APs recommendations to select the no action alternative. Also, the Council concluded that the degree and likelihood of adverse impacts were unknown, and thus not based on the best scientific information available.
- The proposed action does not provide an adequate buffer to minimize adverse impacts to coral from bottom trawling. The Coral AP recommended a minimum buffer of 1,000 m to reduce potential impacts from direct trawling and sedimentation.
- The proposed action of opening a previously closed area counters the Biden Administration's goal of conserving at least 30% of U.S. lands by 2030.
- The proposed action poses a high potential for adverse effects to the ecosystem for very small economic gains to the industry.

The Secretary disapproved Coral Amendment 10 and stated Amendment 10 and its supporting analyses did not adequately demonstrate how the amendment was consistent with:

- Section 303(a)(7) of the Magnuson-Stevens Act, which requires FMPs to minimize to the extent practicable the adverse effects of fishing on essential fish habitat;
- Section 301(a)(9) of the Magnuson-Stevens Act, which requires fishery conservation and management measures to minimize bycatch to the extent practicable and, to the extent bycatch cannot be avoided, minimize the mortality of such bycatch; and
- Goals and objectiv es of the Coral FMP, specifically in regards to protection of essential fish habitat**.**

Under Section 304(a)(4) of the Magnuson-Stevens Act, the Council has the opportunity to remedy the deficiencies and then resubmit a revised amendment to NMFS. Upon further review, the Council determined that the establishment of the SFAA should be done through a joint amendment to the Shrimp FMP and the Coral FMP. The Council decided to develop a new amendment under the Coral FMP that would revise Coral Amendment 10 to address the reasons for the original disapproval and to correct administrative issues, along with also amending the

Shrimp FMP.

1.4.1. What is the History of Management for Coral?

Management of coral resources was originally established with the joint Gulf of America (previously Gulf of Mexico) Fishery Management Council (Gulf Council) and South Atlantic Council Coral FMP (GMFMC & SAFMC 1982). Below are amendments to the Coral FMP addressing gear and harvest restrictions within the South Atlantic EEZ.

Coral FMP

The Coral FMP's intent was to optimize the benefits generated from the coral resource while conserving the coral and coral reefs. Specific management objectives addressed through the Coral FMP were to: (1) develop scientific information necessary to determine feasibility and advisability of harvest of coral; (2) minimize, as appropriate, adverse human impacts on coral and coral reefs; (3) provide, where appropriate, special management for Coral Habitat Areas of Particular Concern (HAPC); (4) increase public awareness of the importance and sensitivity of coral and coral reefs; and (5) provide a coordinated management regime for the conservation of coral and coral reefs.

The Coral FMP implemented the following management measures for coral and coral reefs: (1) disallowed any level of foreign fishing and established the domestic annual harvest to equal the OY; (2) prohibited the taking of stony corals and sea fans or the destruction of these corals and coral reefs anywhere in the EEZ of the Gulf and South Atlantic Councils' (Councils) area of jurisdiction; (3) established that stony corals and sea fans taken incidentally in other fisheries must be returned to the water in the general area of capture as soon as possible (with the exception of the groundfish, scallop, or other similar fisheries where the entire unsorted catch is landed, in which case stony corals and sea fans may be landed but not sold); (4) established that the Councils may notify the Secretary of the threat of widespread or localized depletion from overharvest of one or more species of octocorals and recommend specific actions; (5) established a permit system for the use of chemicals for the taking of fish or other organisms that inhabit coral reefs; (6) established a permit system for taking prohibited corals for scientific and educational purposes; and (7) identified HAPCs and established time and area restrictions in HAPCs.

Coral FMP Amendment 1

Amendment 1 was a joint amendment with the Gulf Council. It implemented a combined octocoral quota for Gulf and South Atlantic EEZ.

Coral FMP Amendment 2

Amendment 2 was a joint amendment with the Gulf Council. It provided definitions of live rock and allowable octocoral, established various prohibitions, and required a permit for aquaculture operations.

Coral FMP Amendment 3

Amendment 3 implemented the following: (1) established a live rock aquaculture permit system for the South Atlantic EEZ; (2) prohibited octocoral harvest north of Cape Canaveral to prevent expansion of the shrimp fishery to areas where octocorals constitute a more significant portion of the live/hard bottom habitat; and (3) prohibited anchoring of all fishing vessels in the OHAPC.

Coral FMP Amendment 4

Amendment 4, included in the Comprehensive Essential Fish Habitat Amendment, expanded the OHAPC to an area bounded to the west by 80°W., to the north by 28°30' N., to the south by 27°30' N., and to the east by the 100 fa (600 ft) depth contour. Amendment 4 expanded the OHAPC to include the area closed to rock shrimp harvest. The expanded OHAPC is 60 nm long by about 5 nm wide although the width tracks the 100 fa (600 ft) depth contour rather than a longitude line. Within the expanded OHAPC area, no person may:

1. Use a bottom longline, bottom trawl, dredge, pot, or trap.
2. If aboard a fishing vessel, anchor, use an anchor and chain, or use a grapple and chain.
3. Fish for rock shrimp or possess rock shrimp in or from the area on board a fishing vessel.

Coral FMP Amendment 5 included in the Comprehensive Sustainable Fisheries Act Amendment

The amendment addressed definitions and other required provisions in Fishery Management Plans of the South Atlantic Region. It also modifies the framework procedures in the South Atlantic Fishery Management Council's FMPs to allow the addition of biomass levels and age-structured analyses to these FMPs.

Coral FMP Amendment 6 included in Comprehensive Ecosystem-Based Amendment 1

The amendment established deepwater coral HAPCs (CHAPC) and prohibited the use of bottom tending gear in these areas, established "Shrimp Fishery Access Areas" within the Stetson-Miami Terrace CHAPC and established "Allowable Golden Crab Fishing Areas" within the Stetson-Miami Terrace and Pourtalés Terrace CHAPCs.

Coral FMP Amendment 7

Amendment 7 modified management of octocorals in the South Atlantic, special management zones off South Carolina, and sea turtle release gear requirements for the snapper grouper fishery. It also designated essential fish habitat (EFH) and EFH-HAPC for multiple fishery management plans.

Coral FMP Amendment 8

With the discovery of extensive deepwater coral ecosystems, the South Atlantic Council added the northern extension of the OHAPC through Coral Amendment 8 in 2013. Coral Amendment 8 also allowed transit through the OHAPC by fishing vessels with rock shrimp on board, and modified vessel monitoring system requirements for rock shrimp fishermen transiting through the OHAPC with rock shrimp on board.

Coral FMP Amendment 9

Amendment 9 was included in the Comprehensive Dealer Reporting Amendment. It modified permitting and reporting requirements for seafood dealers receiving federally managed species under eight fishery management plans.

Coral FMP Amendment 10

The goal of Amendment 10 was to establish a Shrimp Fishery Access area along the western boundary of the northern extension of the Oculina Bank Habitat Area of Particular Concern (OHAPC) where fishing for rock shrimp would be allowed. The area under consideration was once utilized by the fishery but access to it was restricted with the implementation of Coral Amendment 8 in 2014. This amendment was disapproved by the Secretary of Commerce in 2022.

1.4.2. What is the History of Management for Shrimp?

Below are amendments to the FMP for the Shrimp Fishery of the South Atlantic Region (Shrimp FMP) addressing rock shrimp within the South Atlantic EEZ.

Shrimp FMP

The fishery management plan established the goals and objectives for the federal management of white shrimp, later adding brown, pink, and rock shrimp. This action also provided South Atlantic states with the ability to request concurrent closure of the white shrimp in the EEZ adjacent to their closed state waters following severe winter cold weather; established a buffer zone extending seaward from shore 25 nm, inside which no trawling is allowed with a net having less than 4 inches stretch mesh during an EEZ closure. The plan also provided for transit through the EEZ during closure of white shrimp. The plan provided an exemption for rock shrimp to allow harvest of rock shrimp to be prosecuted with minimal disruption during a closure of federal waters for protection of white shrimp.

Shrimp FMP Amendment 1

This action added rock shrimp to the management unit and limited the impact of the rock shrimp portion of the shrimp fishery on essential bottom habitat by prohibiting trawling for rock shrimp east of 80° W longitude between 27°30' N. latitude and 28°30' N. latitude in depths less than 100 fathoms; and implemented measures to ensure adequate reporting and monitoring.

Shrimp FMP Amendment 2

Amendment 2 added pink shrimp to the management unit, defined overfishing for brown and pink shrimp; defined optimum yield for brown and pink shrimp, required the use of certified bycatch reduction devices (BRDs) on all penaeid shrimp trawls in the EEZ, and established a framework for certification of BRD devices.

Shrimp FMP Amendment 3

Amendment 3, which was included in the Comprehensive EFH Amendment, identified EFH and established EFH- HAPC for penaeid shrimp in the South Atlantic. This amendment also implemented a voluntary vessel monitoring system (VMS) within the rock shrimp fishery.

Shrimp FMP Amendment 5

This action addressed requirements for rock shrimp including the establishment of a limited access program requiring limited access endorsements for owners of vessels who qualified; required operator permits; established a minimum mesh size for the cod end of a rock shrimp trawl in the EEZ off Florida and Georgia of 1 7/8 inches to allow the escapement of juvenile shrimp; and required the use of VMS for vessels operating in the South Atlantic to protect increase enforcement capability and protect habitat, especially the OHAPC off the East Coast of Florida that is closed to trawling.

Shrimp FMP Amendment 6

Amendment 6 established a federal permit for the penaeid (pink, white, and brown) shrimp, required certified BRDs in the rock shrimp portion of the shrimp fishery, amended the BRD testing protocol and criteria for certification, established a method to monitor and assess bycatch in the shrimp fishery, and addressed stock status determination criteria.

Shrimp FMP Amendment 7

Shrimp Amendment 7 addressed the landing requirements for rock shrimp limited access endorsements, reinstated endorsements lost due to either to not meeting the landing requirement in one of four consecutive calendar years or not renewing the endorsement on time; renamed the permit/endorsement system to minimize confusion; required verification of a VMS to renew, reinstate or transfer a limited access endorsement; and required provision of economic data by federal shrimp permit holders.

Shrimp FMP Amendment 8

Shrimp Amendment 8, part of the Comprehensive Ecosystem- Based Amendment 1, addressed mapping requirements for EFH and established SFAAs in the Stetson Miami Terrace CHAPC.

Shrimp FMP Amendment 9

This action addressed the criteria process for a state to request a concurrent closure of South Atlantic penaeid shrimp in the adjacent EEZ during severe winter weather and revise the overfished status determination criteria for pink shrimp.

Shrimp FMP Amendment 10

Shrimp Amendment 10 included in the Comprehensive Dealer Reporting Amendment. Modified permitting and reporting requirements for seafood dealers receiving federally managed species under eight fishery management plans.

Shrimp FMP Amendment 11

Shrimp Amendment 11 modified transit provisions for cold weather closed areas for the penaeid (brown, pink, and white) shrimp fishery.

Chapter 2. Proposed Actions

2.1. Action 1. Establish a shrimp fishery access area along the eastern edge of the northern extension of the Oculina Bank Habitat Area of Particular Concern.

2.1.1. Alternatives

Alternative 1 (No Action). No person may use a bottom longline, bottom trawl, dredge, pot, or trap in the Oculina Bank Habitat Area of Particular Concern. If aboard a fishing vessel, no person may anchor, use an anchor and chain, or use a grapple and chain. There are no shrimp fishery access areas within the Oculina Bank Habitat Area of Particular Concern.

Preferred Alternative 2. Establish a shrimp fishery access area along the eastern edge of the northern extension of the Oculina Bank Habitat Area of Particular Concern, that is 16.61 NM^2. Allow a shrimp vessel with a valid Commercial Vessel Permit for Rock Shrimp South Atlantic EEZ (Limited Access) to bottom trawl for rock shrimp within the established area bounded by the following coordinates.

Point	Latitude	Longitude
Origin	29°17′31.98″	80°10′22.02″
1	29°10′58.98″	80°08′39.00″
2	29°03′34.98″	80°07′28.98″
3	28°54′25.02″	80°05′22.98″
4	28°48′36.00″	80°04′22.02″
5	28°30′00.00″	80°01′01.02″
6	28°30′00.00″	80°00′46.02″
7	28°46′00.84″	80°03′28.50″
8	28°48′37.14″	80°03′56.76″
9	28°53′18.36″	80°04′48.84″
10	29°11′19.62″	80°08′36.90″
11	29°17′33.96″	80°10′06.90″
Origin	29°17′31.98″	80°10′22.02″

Alternative 3. Establish a shrimp fishery access area along the eastern edge of the northern extension of the Oculina Bank Habitat Area of Particular Concern that is 24.16 NM^2. Allow a shrimp vessel with a valid Commercial Vessel Permit for Rock Shrimp South Atlantic EEZ (Limited Access) to bottom trawl for rock shrimp within the established area bounded by the following coordinates.

Point	Latitude	Longitude
Origin	29°17′31.98″	80°10′22.02″
1	29°11′19.98″	80°8′54.00″
2	28°53′15.00″	80°5′27.00″
3	28°48′36.00″	80°4′33.00″
4	28°45′57.00″	80°4′4.98″
5	28°30′00.00″	80°01′01.02″
6	28°30′00.00″	80°00′46.02″
7	28°46′00.84″	80°03′28.50″
8	28°48′37.14″	80°03′56.76″
9	28°53′18.36″	80°04′48.84″
10	29°11′19.62″	80°08′36.90″
11	29°17′33.96″	80°10′06.90″
Origin	29°17′31.98″	80°10′22.02″

Discussion

Alternative 1 (No Action) would keep all the current regulations in place protecting *Oculina* coral and would not establish a shrimp fishery access area (SFAA) along the northern extension of the Oculina Bank Habitat Area of Particular Concern (OHAPC).

Preferred Alternative 2 and **Alternative 3** would establish an SFAA to reopen historic shrimp fishing grounds to the rock shrimp fishery along the northern extension of the OHAPC that were closed in Coral Amendment 8 in October 7, 2015 (80 FR 60565, October 7, 2015). During the South Atlantic Council's final discussions to approve Coral Amendment 8, the Council agreed to further discuss and review the issue of whether to allow rock shrimp fishing in an area within the northern extension of the OHAPC. This joint amendment contains the current Council's review and analysis of reopening this area to certain commercial rock shrimp fishers.

Preferred Alternative 2 would establish an SFAA that encompasses approximately 16.61 NM^2 and is based on coordinates presented by rock shrimp fishermen as part of the March 2014 public comment for Coral Amendment 8 (Figure 2.1.1). This set of coordinates was reaffirmed during the November 2020 meeting of the Deepwater Shrimp Advisory Panel. The depths of the western boundary of the SFAA in **Preferred Alternative 2** range from .049 to .051 NM. On the eastern boundary of the SFAA, along the edge of the existing OHAPC, the average depth is .052 NM.

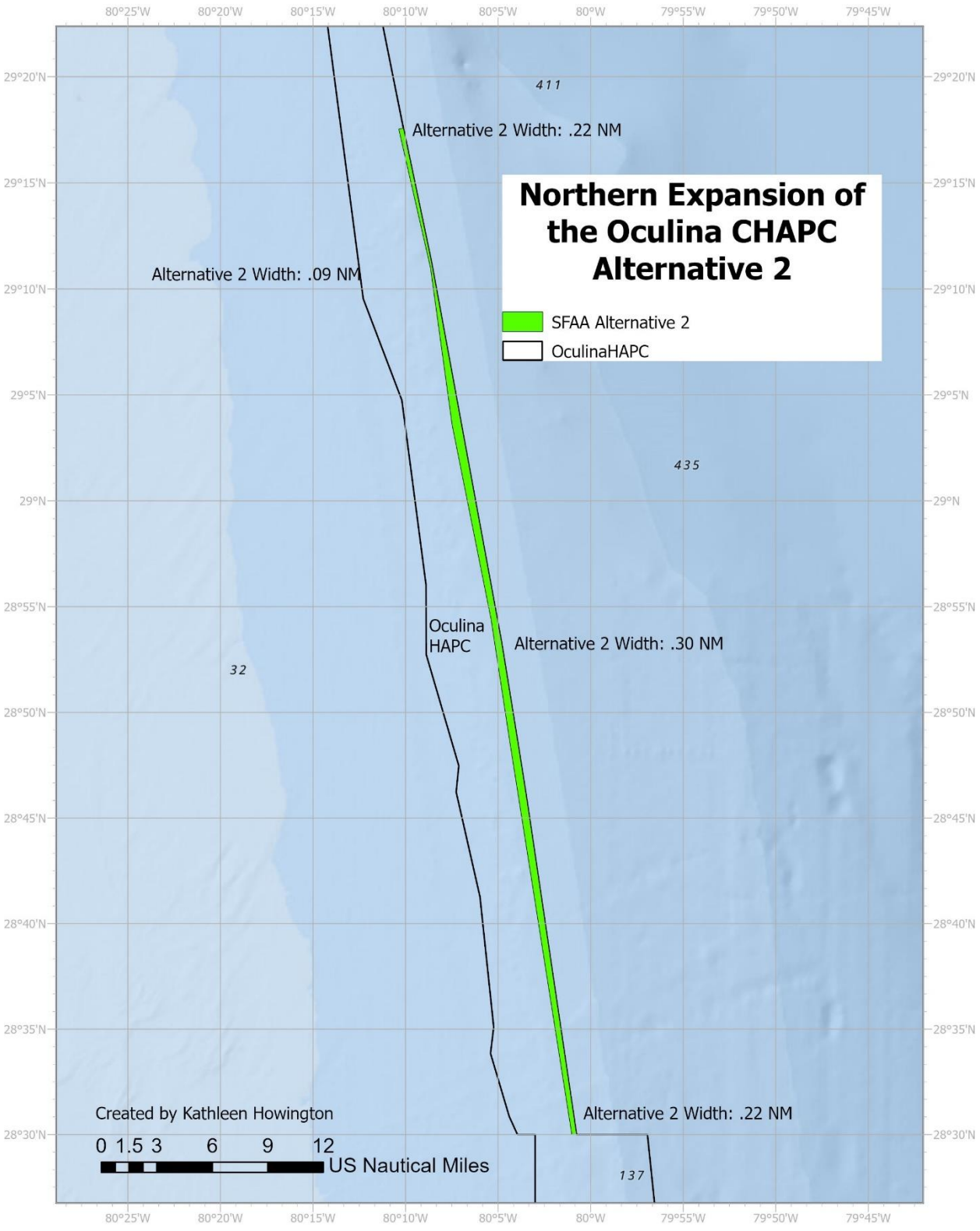

Figure 2.1.1. Shape and approximate widths for the proposed SFAA (**Preferred Alternative 2**; based on 2014 fishermen input). Note: OHAPC Northern Extension width range (3.62 -.8 Nautical Miles).

Alternative 3 would establish an SFAA that encompasses approximately 24.16 NM^2 and is based on coordinates presented by rock shrimp fishermen as part of their March 2013 public comment for Coral Amendment 8 (Figure 2.1.2). The depths of the western boundary of the SFAA in **Alternative 3** range from .047 to .048 NM. On the eastern boundary of the SFAA, along the edge of the existing OHAPC, the average depth is .052 NM.

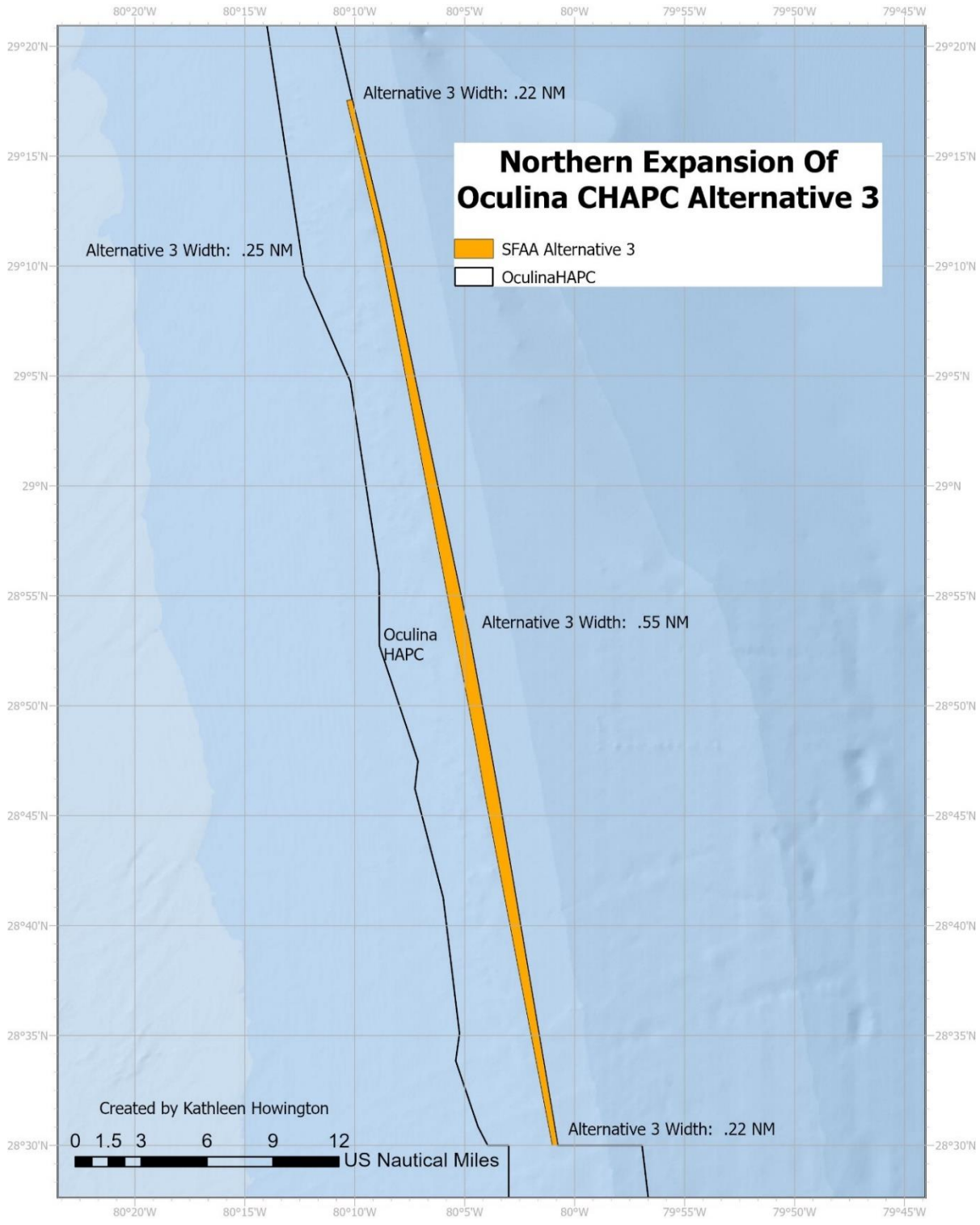

Figure 2.1.2. Shape and approximate widths for the proposed SFAA (Alternative 3; based on 2013 fishermen input). Note: OHAPC Northern Extension width range (3.62 -.8 Nautical Miles).

Figure 2.1.3 presents the two alternatives overlapped for comparison. **Preferred Alternative 2**, at various points along the proposed western boundary, is between .134 to .270 NM narrower than **Alternative 3**.

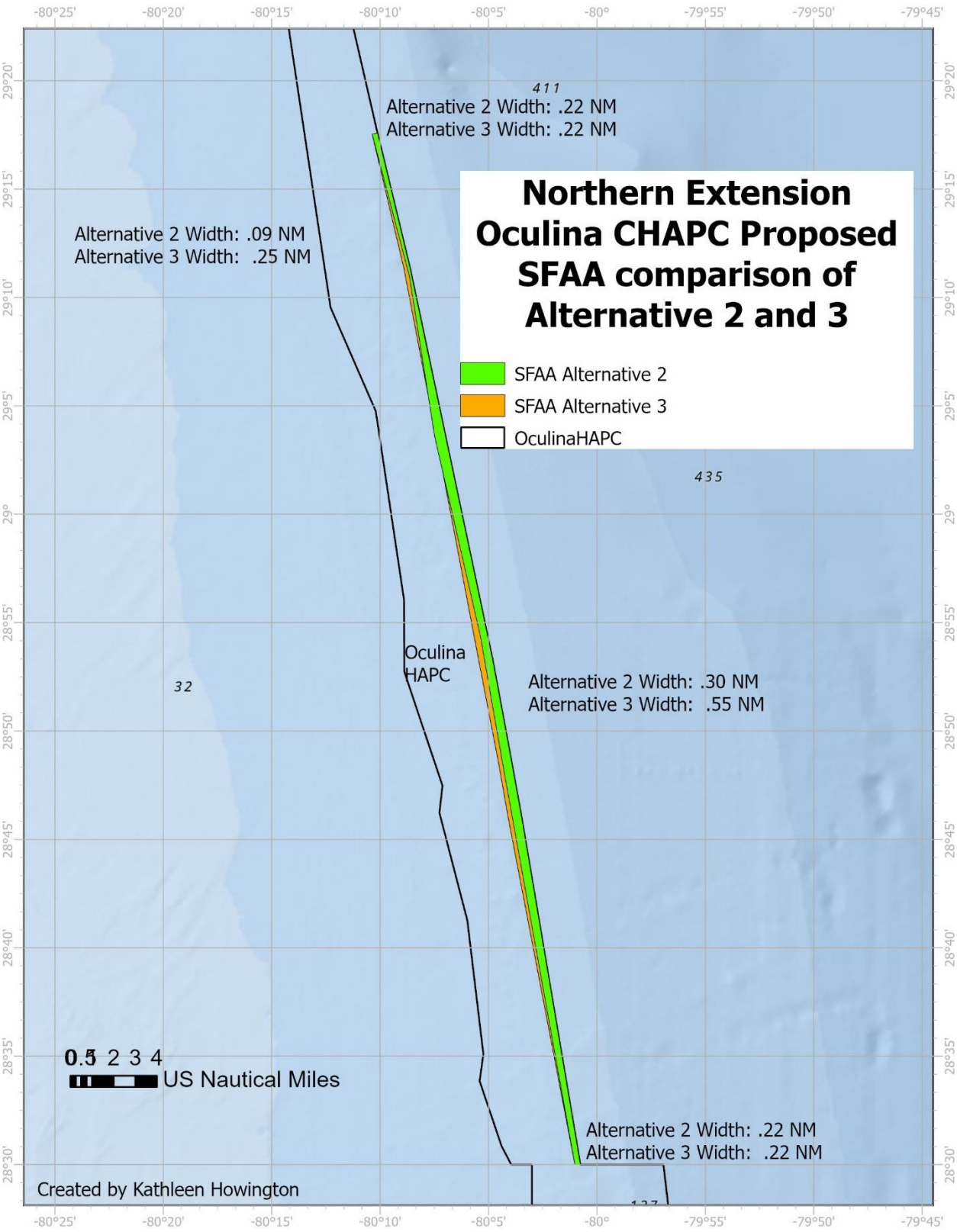

Figure 2.1.3. Comparison of SFAA **Preferred Alternative 2** and **Alternative 3** layouts and widths.

The proposed SFAA is based on historical fishing grounds, where the rock shrimp industry was previously able to access the resources and increase the profitability of their trips prior to the effective date of Coral Amendment 8 on August 2014. Reopening these historic fishing grounds supports the recent executive order (EO) 13921, Restoring American Seafood Competitiveness[1] (See Appendix A). Both **Preferred Alternative 2** and **Alternative 3** would, as required by the EO, reduce regulatory burden on the rock shrimp industry, improve access to the rock shrimp resource, and help to enhance economic profitability for the rock shrimp industry.

2.1.2 Comparison of Alternatives

TO BE UPDATED

Alternative 1 (No Action) would keep all the current regulations in place protecting *Oculina* coral and would not establish an SFAA. **Preferred Alternative 2** and **Alternative 3** would establish SFAAs of 16.61 NM^2 and 24.16 NM^2, respectively. Establishing SFAAs as proposed under **Preferred Alternative 2** and **Alternative 3** could result in negative biological impacts to the deepwater coral habitat within the SFAAs as they would allow intermittent bottom trawling for rock shrimp. However, trawling would likely occur where rock shrimp were previously caught in low relief and predominately sand bottom areas already impacted by past fishing activities. Fishing effort in the area was historically low, and the impact is not expected to be minimal.

Alternative 1 (No Action) would result in foregone landings of rock shrimp and thus foregone economic benefits associated with these landings compared to **Preferred Alternative 2** and **Alternative 3**. **Preferred Alternative 2** and **Alternative 3** would result in net economic benefits by allowing vessels fishing for rock shrimp with bottom trawl gear to potentially increase landings of rock shrimp through access to an additional 16.61 NM^2 or 24.16 NM^2 areas, respectively. Given the likely variability in usage of the area as well as exhibited variability in overall participation in the limited access component of the rock shrimp portion of the shrimp fishery, the economic effects of **Alternative 3** would likely be similar to those described for **Preferred Alternative 2**, but economic benefits under **Alternative 3** would be comparatively higher since this alternative would allow access to 10 more square miles than **Preferred Alternative 2**.

Alternative 1 (No Action) would likely result in minimal social effects because the fleet is already harvesting in open areas and prohibited from working in the closed areas. **Preferred Alternative 2** and **Alternative 3** address stakeholder concerns regarding access to a discrete and historically important fishing area and may improve stakeholder perceptions of the management process. As such, **Preferred Alternative 2** represents the most recent recommendation by rock shrimp fishermen and is expected to have the greatest social benefit, followed by **Alternative 3**, and **Alternative 1 (No Action)**. **Preferred Alternative 2** includes coordinates provided by industry, which shifted the proposed boundary even further offshore from known or suspected high relief habitat than presented in **Alternative 3**.

The establishment of an SFAA (**Preferred Alternative 2** and **Alternative 3**) would have minimal administrative impacts. This amendment will not modify the transit provision for the

[1] https://www.whitehouse.gov/presidential-actions/2025/04/restoring-american-seafood-competitiveness/

OHAPC and vessels will need to continue to maintain a ping rate of 1 ping per 5 minutes **when transiting through the OHAPC**. Vessels fishing within any established SFAA will need to maintain the established trawling ping rate of 1 ping per hour.

Chapter 3. Affected Environment

TO BE UPDATED

This section describes the affected environment in the proposed project area. The affected environment is divided into five major components:

- **Habitat Environment** (Section 3.1)
- **Biological and Ecological Environment** (Section 3.2)
- **Economic Environment** (Sections 3.3)
- **Social Environment** (Section 3.4)
- **Administrative Environment** (Section 3.5)

3.1. Habitat Environment

Information on the habitat utilized by species in the coral and shrimp species managed under the Coral Fishery Management Plan (FMP) and Shrimp FMP, respectively, is included in Volume II of the Fishery Ecosystem Plan (FEP; SAFMC 2009c), incorporated here by reference. The South Atlantic Fishery Management Council (Council) designated essential fish habitat (EFH), EFH-Habitat Areas of Particular Concern (HAPC, and EFH Coral Habitat Areas of Particular Concern (CHAPC) are presented in the SAFMC User Guide and spatial representations of these and other habitat related layers are in within the Council' SAFMC Mapper.

The following are the EFH and HAPCs for the Coral, Snapper Grouper, and Shrimp Fishery Management Plans. Coral and Shrimp are included because they are the associated FMPs that this amendment will directly affect. Snapper grouper is included because the Coral present in Oculina Bank and the hard bottom found within the proposed SFAA boundaries are EFH for many Snapper grouper species, as identified by the life history of coral in section 3.2.

3.1.1 Essential Fish Habitat

For current EFH information for species managed under the Coral, Coral Reef, and Live/Hard bottom Habitats of the South Atlantic Region FMP, Snapper Grouper FMP, or Shrimp FMP; refer to Appendix E.

3.1.2 Habitat Areas of Particular Concern

For current EFH-HAPC for species managed under the Coral, Coral Reef, and Live/Hard bottom Habitats of the South Atlantic Region FMP, Snapper Grouper FMP, or Shrimp FMP; refer to Appendix E.

3.2 Biological and Ecological Environment

The two species directly affected by the action proposed in these amendments are *Oculina* coral and rock shrimp. *Oculina* is considered an HAPC for snapper grouper, so the proposed action could affect those species indirectly. Environmental effects of the action are discussed in Chapter 4.

3.2.1 *Oculina* Coral

Life History

Oculina coral is a genus of colonial stony coral in the family Oculinidae. In deepwater (>60 meters [m]), *Oculina varicosae* (*Oculina*) forms spherical, dendroid, bushy colonies that are 10 cm to 1.5 m in diameter and height (Figure. 3.2.1.1). The branches, average 6 mm in diameter near the tips and frequently grow apart and refuse together to form a large interconnected structure. Individual corals may coalesce, forming linear colonies 3-4 m in length or massive thickets of contiguous colonies on the slopes and tops of the banks (Reed, 1980). The deepwater form lacks symbiotic algae, or zooxanthellae, whereas in shallow water, *Oculina* is usually golden brown with the algal symbiont, and colonies average <30 cm in diameter with thicker branches. The average growth rate for *Oculina*. at a depth of 80 m was estimated to be very slow, at 16 mm/yr (Reed 1981). Bullis and Rathjen (1959) identified rugged coral formations in depths from 27 to 180 m between St. Augustine and Cape Canaveral, Florida. The highest growth rate for *Oculina* is on the top or on the current facing side of the coral mound. In addition, *Oculina* reefs are periodically exposed to nutrient-rich, cold water upwelling temperatures of 7.4 to 10 °C.

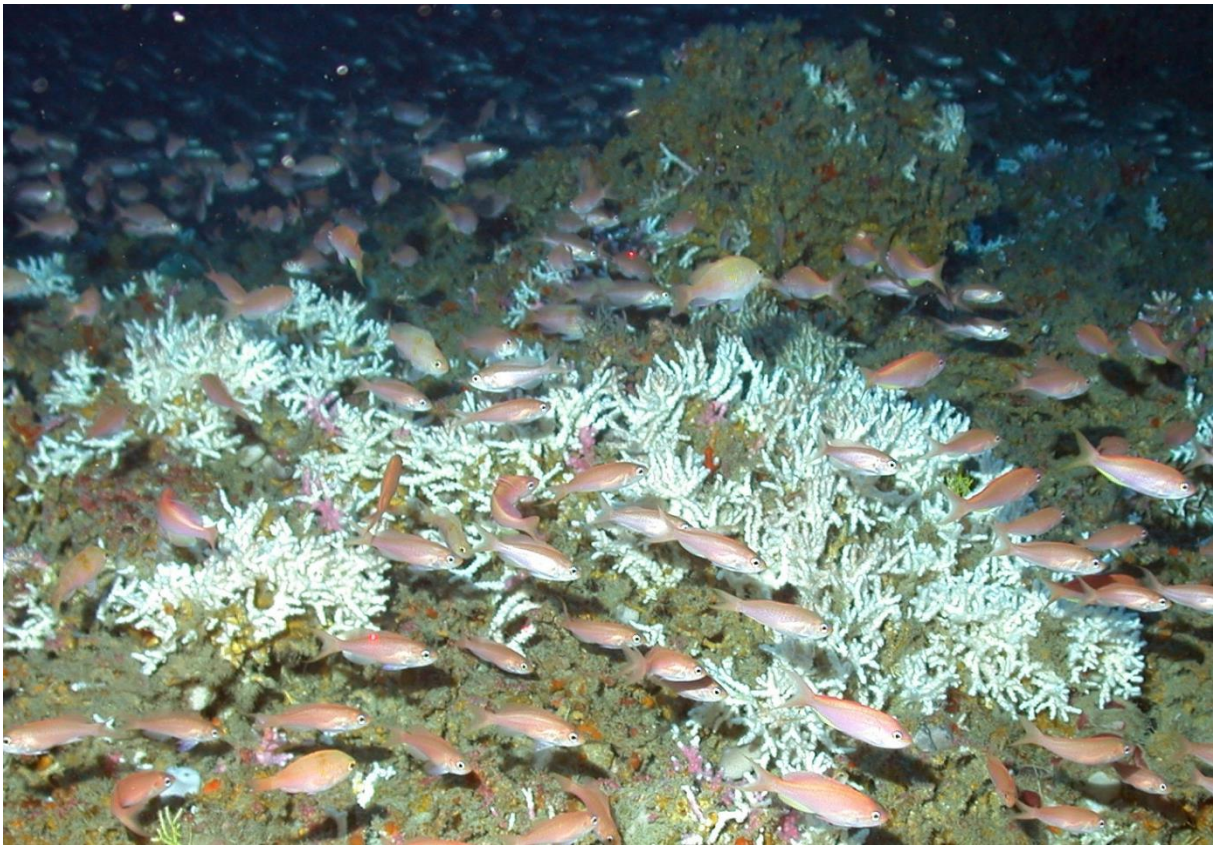

Figure 3.2.1.1. *Oculina* Coral with fish swimming.

Oculina bank ecosystems are unique in that they are monospecific, comprised of one species of delicate branching coral covering hundreds of feet of hills and pinnacles with 25 m relief. *Oculina* banks thrive in areas of strong currents (up to 60 cm/ s), which are thought to contribute to growth (Reed 1992).

Oculina coral can range from the Caribbean to Bermuda and the Gulf of Mexico, at depths of 5-152 m. The majority of the *Oculina* coral reefs are found in depths of 60 to 100 meters (m) in a zone 2 to 6 km wide along the eastern Florida shelf of the U.S. (Avent et al. 1977; Reed 1980). Much of the habitat mapped and characterized is within or adjacent to the Oculina Bank Habitat Area of Particular Concern (OHAPC), located 15 nautical miles off Fort Pierce and extending northward towards Cape Canaveral, Florida. According to Reed (1980) the majority of massive *Oculina* growth occurs between 27° 30' N. latitude and 28° 30' N. latitude, which encompasses the Oculina CHAPC.

Oculina constitutes essential habitat to a complex of species, including those managed under the Snapper Grouper Fishery Management Plan (Snapper Grouper FMP; SAFMC 1983). Biodiversity on Oculina reefs is high, and similar to that of shallow tropical coral reefs (Koenig 2001). The deep shelf-edge Oculina reefs form natural spawning grounds for species managed under the Snapper Grouper FMP, including commercially important populations of gag and scamp. They also serve as nursery grounds for snowy grouper (*Epinephelus niveatus*), and

feeding grounds for these and many other commercial fish species including black sea bass (*Centropristis striata*), red grouper (*E. morio*), speckled hind (*E. drummondhayi*), Warsaw grouper (*E. nigritus*), amberjack (*Seriola* spp.), red porgy (*Pagrus pagrus*), and red snapper (*Lutjanus campechanus*) (Gilmore and Jones 1992). Biodiversity, grouper densities, and percentage of intact coral have been documented to be higher inside the Oculina Bank HAPC compared to outside (Harter et al. 2009). At least 73 species of fishes are known from the Oculina reefs (GMFMC and SAFMC 1982; Koenig et al. 2005; Reed et al. 2006), and like the invertebrate community, this is a sub-tropically derived fauna.

The Florida *Oculina* reefs support a diverse invertebrate fauna with mostly subtropical affinities. Over 20,000 individual invertebrates were found living among the branches of 42 small *Oculina* colonies, yielding 230 species of mollusks; 50 species of decapods, 47 species of amphipods, 21 species of echinoderms and numerous other phyla and: species (Reed et al., 1982; Reed and Hoskin, 1987; Reed and Mikkelsen, 1987). Densities of associated invertebrates rival those of shallow coral reef systems (see review in Reed 2002b). Avent et al. (1977) presented a preliminary list of benthic invertebrates dredged from some *Oculina* mounds. Analysis of 42 small *Oculina* colonies yielded about 350 invertebrate species, including 262 mollusk species (Reed and Mikkelson 1987), 50 decapod crustacean species (Reed et al. 1982), 47 amphipod species, 21 echinoderm species, 15 pycnogonid species, and 23 families of polychaetes (Reed 2002b). Although *Oculina* habitats appear to have more associated mobile macroinvertebrates than deeper coral areas, large sponges and soft/horny corals are less abundant (Reed et al. 2006).

3.2.2 Rock Shrimp

Life History

Rock shrimp, *Sicyonia brevirostris*, are very different in appearance from the three penaeid species (Figure 3.2.1.1). Rock shrimp can be easily separated from penaeid species by their thick, rigid, stony exoskeleton. The body of the rock shrimp is covered with short hair and the abdomen has deep transverse grooves and numerous tubercles.

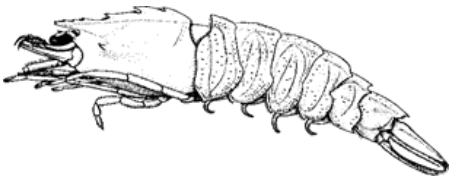

Figure 3.2.1.1. Rock shrimp, Sicyonia brevirostris.

Rock shrimp are found in the Gulf of America (formerly Gulf of Mexico), Cuba, the Bahamas, and in the U.S. South Atlantic northward to Virginia (SAFMC 1993). The center of abundance for rock shrimp in the South Atlantic region occurs off northeast Florida south to Jupiter Inlet. Rock shrimp live mainly on sand bottom from a few meters to 183 m (600 ft), and occasionally deeper (SAFMC 1993). The largest concentrations are found between 25 and 65 m (82 and 213 ft). Small quantities of rock shrimp are also found off North Carolina, South Carolina, and Georgia.

Rates of growth in rock shrimp are variable and depend on factors such as season, water temperature, shrimp density, size, and sex. Rock shrimp grow between 0.08 and 0.12 inches carapace length (CL) per month (2 to 3 millimeters) as juveniles and 0.02 inches CL per month as adults (0.5 - 0.6 millimeters). Rock shrimp are bottom feeders, most active at night, with a diet primarily of mollusks, crustaceans, and polychaete worms.

The only comprehensive research to date on rock shrimp off the east coast of Florida was by Kennedy et al. (1977). This section presents some of the more significant findings by Kennedy et al. (1977) regarding the biology of rock shrimp on the east coast of Florida. Recruitment to the area offshore of Cape Canaveral, Florida, occurs between April and August with two or more influxes of recruits entering within one season (Kennedy et al. 1977). Keiser (1976) described the distribution of rock shrimp in coastal waters of the southeastern U.S. Whitaker (1983) presented a summary of information on rock shrimp off South Carolina. Additional life history information on rock shrimp can be found in Volume II (PDF page 601) of the Fishery Ecosystem Plan[2] and Coral Amendment 8 (SAFMC 2013a) and are incorporated here by reference.

Landings

The center of abundance and the concentrated commercial fishery for rock shrimp in the South Atlantic region occurs off northeast Florida south to Jupiter Inlet (SAFMC 1996). Although rock shrimp occasionally are landed from federal waters off North Carolina, South Carolina, and Georgia, they are not landed in quantities capable of supporting a sustainable commercial fishery comparable to the fishery prosecuted in federal waters off Florida. Landings information is presented in Section 3.3.1.

Fishing Techniques

Typical rock shrimp gear configuration consists of two outriggers, each dragging, via a main cable, a two net setup, with some vessels employing a third try net closer to the vessel. Each net has two doors and is required to be equipped with both a turtle excluder device (TED)[3] and one of five approved bycatch reduction devices (BRD)[4]. If a boat is 80 ft in length, a single outrigger is approximately 30 ft in length. A boat pulling 4 nets will have the outside drag outside the rigger, as the door trails directly behind the tip of the outrigger connected to the main cable. If the nets have a head rope length of 55 ft and a door height of 4 ft, then approximately 38.5 ft (70% of the headrope length) and 4 ft (door height, roughly 10% of the headrope extension) door would extend beyond the outrigger due to gear configuration (Figure 3.2.1.3).

[2] http://safmc.net/ecosystem-management/fishery-ecosystem-plan/
[3] https://www.fisheries.noaa.gov/southeast/bycatch/turtle-excluder-devices
[4] https://www.fisheries.noaa.gov/southeast/bycatch/bycatch-reduction-devices-gulf-america-and-south-atlantic

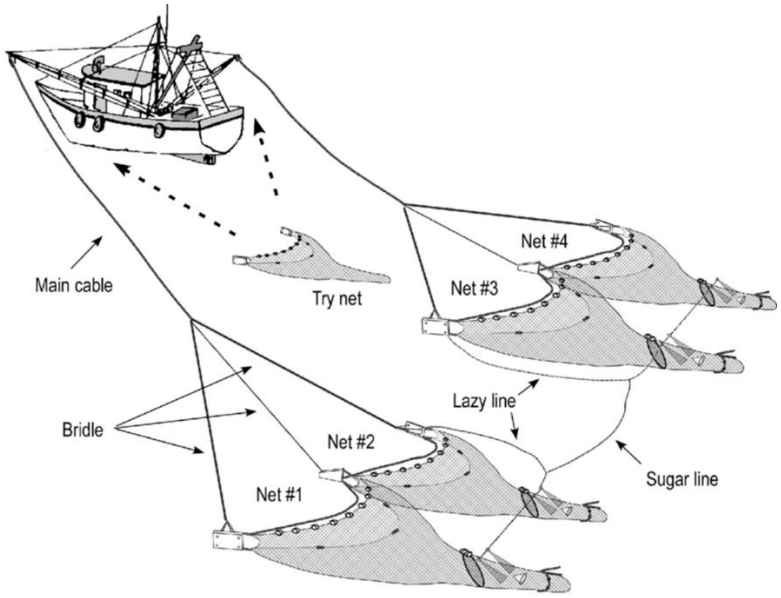

Figure 3.2.2.1. Typical gear configuration for the U.S. southeastern shrimp vessels equipped with for nets. Source : Scott Denton et al. 2012.

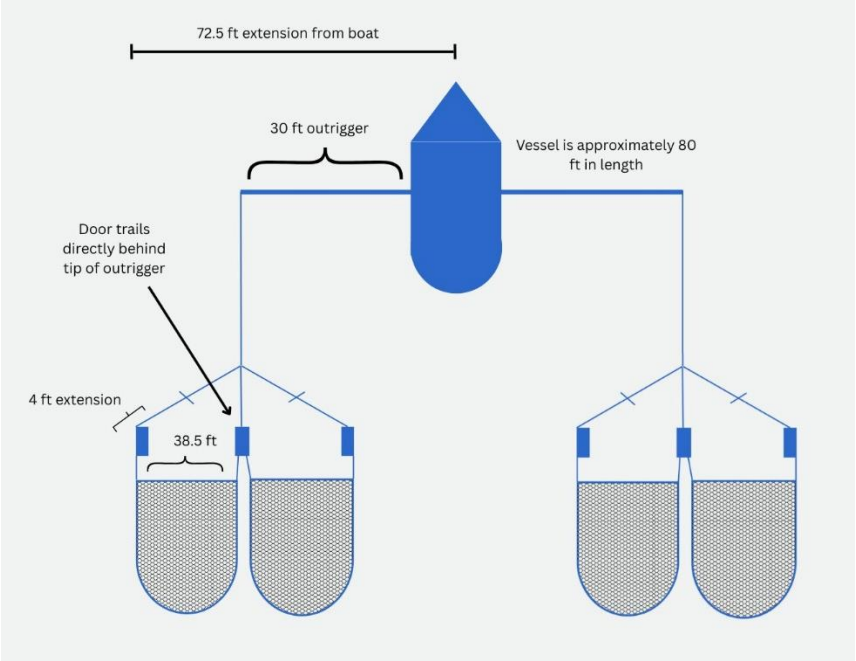

Figure 3.2.2.2. Depiction of a four-rig shrimp fishing vessel with four identical nets. A head rope (float line) width of 55 ft, would result in an estimated 70% spread. Doors are typically 10 ft in length and 4 ft wide (see www.fao.org/3/ac740t/AC740T05.htm#ch5.4/).

3.2.3 Protected Species

The National Marine Fisheries Service (NMFS) manages marine protected species in the Southeast region under the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA). There are 29 ESA-listed species or Distinct Population Segments (DPS) of marine mammals, sea turtles, fish, and corals managed by NMFS that may occur in the exclusive

economic zone (EEZ) of the South Atlantic or Gulf of Mexico. There are 91 stocks of marine mammals managed within the Southeast region plus the addition of the stocks such as North Atlantic right whales (NARW), and humpback, sei, fin, minke, and blue whales that regularly or sometimes occur in Southeast region managed waters for a portion of the year (Hayes et al. 2017). All marine mammals in U.S. waters are protected under the MMPA. The MMPA requires that each commercial fishery be classified by the number of marine mammals they seriously injure or kill. NMFS's List of Fisheries (LOF)[5] classifies U.S. commercial fisheries into three categories based on the number of incidental mortality or serious injury they cause to marine mammals.

Five of the marine mammal species (sperm, sei, fin, blue, and NARW) protected by the MMPA, are also listed as endangered under the ESA. In addition to those five marine mammals, six species or DPSs of sea turtles [green (the North Atlantic DPS and the South Atlantic DPS), hawksbill, Kemp's ridley, leatherback, and the Northwest Atlantic DPS of loggerhead]; nine species or DPSs of fish (the smalltooth sawfish; five DPSs of Atlantic sturgeon; Nassau grouper; oceanic whitetip shark, and giant manta ray); and seven species of coral (elkhorn coral, staghorn coral, rough cactus coral, pillar coral, lobed star coral, mountainous star coral, and boulder coral) are also protected under the ESA and occur within the action area of the shrimp fishery. Portions of designated critical habitat for NARW, the Northwest Atlantic DPS of loggerhead sea turtles, and *Acropora* corals occur within the Council's jurisdiction.

On April 26, 2021, NMFS completed its reinitiation of ESA section 7 consultation and issued a new biological opinion on the implementation of the sea turtle conservation regulations under the ESA (applicable to shrimp trawling) and the authorization of the southeast U.S. shrimp fisheries in federal waters under the Magnuson-Stevens Act, which analyzed the effects on threatened and endangered species and designated critical habitat. The new opinion anticipates the southeast U.S. shrimp fisheries to interact, capture, and potentially result in mortalities of sea turtles, Atlantic and Gulf sturgeon, giant manta ray, and smalltooth sawfish. NMFS concluded that the activities addressed in the consultation are not likely to jeopardize the continued existence of any threatened or endangered species.

In June 2023, the Southeast Regional Office (SERO) and Sustainable Division (SFD) requested SERO protected Resources Division (PRD) reinitiate Section 7 consultation on U.S. shrimp fisheries for giant manta rays and smalltooth sawfish. The reinitiation was required to address unanticipated observed lethal incidental take of giant manta ryas and new information revealing effects of southeast shrimp fisheries on smalltooth sawfish and giant manta rays not considered in the 2021 Shrimp Opinion. No other reinitiation triggers were met so reinitiation scope was limited to addressing only those two species. SERO PRD is revising bycatch estimates based on recent observer data, evaluating the best available data on both species, completing smalltooth sawfish and giant manta rays population viability analyses for understanding the impact of Southeastern shrimp fisheries on these species, and examining the nature and the extent of the lethal trawl interactions. SERO PRD will also be updating the smalltooth sawfish and giant manta ray recovery plans, monitoring observer data for new takes. More information regarding

[5] https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-protection-act-list-fisheries/

the updated biological opinion is expected in September 2025.

3.3 Economic Environment

TO BE COMPLETED

3.4 Social Environment

TO BE COMPLETED

3.5 Administrative Environment

3.5.1 Federal Fishery Management

Federal fishery management is conducted under the authority of the Magnuson-Stevens Act (16 U.S.C. 1801 et seq.), originally enacted in 1976 as the Fishery Conservation and Management Act. The Magnuson-Stevens Act claims sovereign rights and exclusive fishery management authority over most fishery resources within the EEZ, an area extending 200 nm from the seaward boundary of each of the coastal states, and authority over U.S. anadromous species and continental shelf resources that occur beyond the U.S. EEZ.

Responsibility for federal fishery management decision-making is divided between the U.S. Secretary of Commerce (Secretary) and eight regional fishery management councils that represent the expertise and interests of constituent states. Regional councils are responsible for preparing, monitoring, and revising management plans for fisheries needing management within their jurisdiction. The Secretary is responsible for collecting and providing the data necessary for the councils to prepare fishery management plans and for promulgating regulations to implement proposed plans and amendments after ensuring that management measures are consistent with the Magnuson-Stevens Act and with other applicable laws. In most cases, the Secretary has delegated this authority to NMFS.

The South Atlantic Council is responsible for conservation and management of fishery resources in federal waters of the U.S. South Atlantic. These waters extend from 3 to 200 mi offshore from the seaward boundary of North Carolina, South Carolina, Georgia, and east coast of Florida to Key West. The South Atlantic Council has thirteen voting members: one from NMFS; one each from the state fishery agencies of North Carolina, South Carolina, Georgia, and Florida; and eight public members appointed by the Secretary. On the South Atlantic Council, there are two public members from each of the four South Atlantic States. Non-voting members include representatives of the U.S. Fish and Wildlife Service, U.S. Coast Guard (USCG), State Department, and Atlantic States Marine Fisheries Commission (ASMFC). The South Atlantic Council has adopted procedures whereby the non-voting members serving on the Council Committees have full voting rights at the Committee level but not at the full Council level. The South Atlantic Council also established two voting seats for the Mid-Atlantic Council on the South Atlantic Mackerel Committee. Council members serve three-year terms and are recommended by state governors and appointed by the Secretary from lists of nominees

submitted by state governors. Appointed members may serve a maximum of three consecutive terms.

Public interests also are involved in the fishery management process through participation on Advisory Panels and through council meetings, which, with few exceptions for discussing personnel and legal matters, are open to the public. The South Atlantic Council uses its Scientific and Statistical Committee (SSC) to review the data and science being used in assessments and fishery management plans/amendments. In addition, the regulatory process is in accordance with the Administrative Procedure Act, in the form of "notice and comment" rulemaking.

3.5.2 State Fishery Management

The state governments of North Carolina, South Carolina, Georgia, and Florida have the authority to manage fisheries that occur in waters extending three nautical miles from their respective shorelines. North Carolina's marine fisheries are managed by the Marine Fisheries Division of the North Carolina Department of Environmental Quality. The Marine Resources Division of the South Carolina Department of Natural Resources manages South Carolina's marine fisheries. Georgia's marine fisheries are managed by the Coastal Resources Division of the Department of Natural Resources. The Division of Marine Fisheries Management of the Florida Fish and Wildlife Conservation Commission is responsible for managing Florida's marine fisheries. Each state fishery management agency has a designated seat on the South Atlantic Council. The purpose of state representation at the Council level is to ensure state participation in federal fishery management decision-making and to promote the development of compatible regulations in state and federal waters.

The South Atlantic states are also involved through ASMFC in management of marine fisheries. This commission was created to coordinate state regulations and develop management plans for interstate fisheries. It has significant authority, through the Atlantic Striped Bass Conservation Act and the Atlantic Coastal Fisheries Cooperative Management Act, to compel adoption of complementary state regulations to conserve coastal species. The ASFMC is also represented at the South Atlantic Council but does not have voting authority at the Council level.

NMFS's State-Federal Fisheries Division is responsible for building cooperative partnerships to strengthen marine fisheries management and conservation at the state, inter-regional, and national levels. This division implements and oversees the distribution of grants for two national (Inter-jurisdictional Fisheries Act and Anadromous Fish Conservation Act) and two regional (Atlantic Coastal Fisheries Cooperative Management Act and Atlantic Striped Bass Conservation Act) programs. Additionally, it works with the ASMFC to develop and implement cooperative State-Federal fisheries regulations.

3.5.3 Enforcement

Both the NMFS Office for Law Enforcement (NOAA/OLE) and the US Coast Guard (USCG) have the authority and the responsibility to enforce Council regulations. NOAA/OLE agents, who specialize in living marine resource violations, provide fisheries expertise and investigative

support for the overall fisheries mission. The USCG is a multi-mission agency, which provides at sea patrol services for the fisheries mission.

Neither NOAA/OLE nor the USCG can provide a continuous law enforcement presence in all areas due to the limited resources of NOAA/OLE and the priority tasking of the USCG. To supplement at sea and dockside inspections of fishing vessels, NOAA entered into Cooperative Enforcement Agreements with all but one of the states in the Southeast Region (North Carolina), which granted authority to state officers to enforce the laws for which NOAA/OLE has jurisdiction. In recent years, the level of involvement by the states has increased through Joint Enforcement Agreements, whereby states conduct patrols that focus on federal priorities and, in some circumstances, prosecute resultant violators through the state when a state violation has occurred.

The NOAA Office of General Counsel Penalty Policy and Penalty Schedule is available online at http://www.gc.noaa.gov/enforce-office3.html/.

Chapter 4. Environmental Effects and Comparison of Alternatives

4.1 Action 1. Establish a shrimp fishery access area along the eastern edge of the northern extension of the Oculina Bank Habitat Area of Particular Concern.

Alternatives

1. (No Action). Do not establish a shrimp fishery access area.

2. **Establish a shrimp fishery access area that is 16.61 NM^2 along the eastern edge of the northern extension of the Oculina Bank Habitat Area of Particular Concern.**

3. Establish a shrimp fishery access area that is 24.16 NM^2 along the eastern edge of the northern extension of the Oculina Bank Habitat Area of Particular Concern.

*See Chapter 2 for detailed language of alternatives. **Preferred indicated in bold.**

4.1.1 Biological Effects

Alternative 1 (No Action) would not establish a shrimp fishery access area (SFAA) along the northern extension of the Oculina Bank Habitat Area of Particular Concern (OHAPC) and would retain the existing closure through the entire northern extension of the OHAPC. **Alternative 1 (No Action)** would be expected to have the most positive biological benefits to any coral that exists in the area as well as rock shrimp populations.

Preferred Alternative 2 and **Alternative 3** would establish SFAAs of 16.61 NM^2 and 24.16 NM^2, respectively, and would allow a rock shrimp fishermen with a commercial vessel permit for Rock Shrimp South Atlantic EEZ (Limited Access) access to an area where they previously fished until 2014. The proposed areas are based on discrete areas in which these fishermen had historically fished. However, use of all other bottom tending gear and anchoring would continue to remain prohibited within the SFAA.

Fishermen are most likely to fish in areas where they historically fished. Although shrimp fishermen affirm that they avoid hard bottom habitat when trawling to avoid snags and gear loss, and rock shrimp prefer sand bottom, there is still a chance for gear interactions with coral mounds near the eastern edge of SFAA (Reed et al. 2007).

Deepwater coral reefs worldwide have experienced direct and indirect effects of trawling, primarily from physical damage from nets and doors. Changes in benthic community abundance and composition can result from this damage, in addition to degraded species diversity and the loss of corals and sponges, which play a keystone role in providing habitat for a large number of other organisms (Fosså et al. 2002; Gage et al. 2005). During the 1980s and 1990s, bottom trawling within the *Oculina* ecosystem, primarily for rock shrimp and brown shrimp, was the primary cause of major habitat destruction (Reed et al. 2007).

Cobb et al. (1973) found the inshore distribution of rock shrimp to be associated with terrigenous and biogenic sand and only sporadically on mud. Rock shrimp may also utilize hard bottom and coral habitat areas (SAFMC 1996). This habitat was confirmed by scientific sampling which

captured large amounts of rock shrimp in and around the OHAPC prior to its designation and prior to significant exploitation and development of the directed fishery (Cobb et al. 1973).

In 2022, the Southeast Fisheries Science Center (SEFSC) conducted a visual survey of the proposed SFAAs. They aimed to classify the bottom type as either live (standing), dead (standing), rubble, or sand. To collect information on bottom type, the crew aboard the R/V Weatherbird utilized a towed camera system. The crew executed 14 dives, however only two of those dives were able to classify bottom type. From their conclusions, they noted that all live colonies of *Oculina* coral have previously been found on medium and high relief habitat, with rubble often found at the perimeter of the relief and that there have never been standing live or dead colonies on low relief areas. Based on the successful tows from this trip, no live, standing dead or rubble was observed in or immediately adjacent to the SFAA. The team did note however that they could not state definitively that no live *Oculina* colonies exist within the SFAA, but based on existing multibeam bathymetry of the entire SFAA, which shows only low or no relief, they predicted that the likelihood of live *Oculina* is very low (Appendix G).

In addition to the 2022 visual survey, in April 2025, the National Oceanic and Atmospheric Administration (NOAA) Ship *Nancy Foster* performed a mapping trip in the proposed SFAA. This mapping trip collected bathymetry and backscatter data at 2-meter (m) resolution across the 16.61 NM^2 proposed SFAA. Mapping showed that mound features formed by *Oculina* corals were not evident in the proposed SFAA (Appendix F). Both studies demonstrate that there is no live or dead *Oculina* coral within the proposed SFAA and that since the area was closed to rock shrimp fishing there has been no coral growth within the area.

The degree and likelihood of potential direct biological impacts from bottom tending fishing gear on coral habitat as a result of **Preferred Alternative 2** and **Alternative 3** are low based on the current habitat mapping and habitat characterization. While no high relief mounds are present, low-relief hard bottoms and coral rubble could be providing substrate available for coral recruitment and recovery from previous trawling events. Rock shrimp vessels are required to carry a vessel monitoring system (VMS) to fish for rock shrimp. Therefore, VMS data are a source of vessel operating information, and VMS points that correspond to a vessel moving at speeds between 2 and 4 knots are used as a proxy for fishing activity. Before the implementation of Coral 8, rock shrimping predominately occurred east of the northern boundary implemented in Coral 8. Rock shrimp fishing inside the edge of the boundary accounted for 1.76% of all fishing points from 2003 through 2014, 2.20% of points during 2013, and 8.50% of points during 2014, based on historic trawling operations as represented by VMS data. The amount of fishing effort that occurred along the eastern edge of the northern extension of the OHAPC, as measured by VMS fishing points, was essentially the same for 2013 and 2014. However, the percentage of the total fishing effort that occurred within that area increased in 2014 (8.5%). No information on fishing activity from VMS data exists from within the OHAPC from 2015 to present since trawling within the area was prohibited through the implementation of Coral Amendment 8 (final rule effective August 17, 2015, SAFMC 2013a). The final rule for Coral Amendment 8 required rock shrimp vessels transiting through the OHAPC to maintain a minimum speed of no less than 5 knots as determined by a VMS, which transmits vessel location at a ping rate acceptable to law enforcement to identify transit. Currently, when a rock shrimp vessel with rock shrimp on board transits the OHAPC, the VMS on that vessel must transmit at a minimum ping rate of 1 ping per 5 minutes. This amendment will not modify the transit

provision for the OHAPC and rock shrimp vessels will need to continue to maintain a ping rate of 1 ping per 5 minutes **when transiting through the OHAPC**. Vessels fishing within any established SFAA will need to maintain the established VMS ping rate 1 ping per hour while fishing.

Both **Preferred Alternative 2** and **Alternative 3** could result in negative direct impacts to the rock shrimp within the SFAA as targeted fishing would likely occur. However, the presence of rock shrimp in the proposed areas is highly variable due to the nature of the fishery, but access is very important in years when rock shrimp are present. Past fishing effort in the northern extension of the OHAPC and proposed SFAAs was historically low, averaging less than 1.8% of the total number of vessel monitoring system (VMS) fishing points, which are used as a proxy for fishing activity. Additionally, the rock shrimp fishery has not been fished at or exceeded the OY (optimum yield) target since 2004.

Both **Preferred Alternative 2 and Alternative 3** may have a negative impact on snapper grouper species that may be caught as bycatch in the rock shrimp fishery. As described in the bycatch practicability analysis (Appendix D), fish taken in shrimp trawls are generally small and young. Juveniles are more expendable in one respect because they occur in high numbers, and relatively few actually survive to adulthood. The reproductive potential of a stock can be compromised if fish are not provided sufficient opportunities to reproduce before they are exposed to fishing or bycatch mortality. However, as mentioned above, the historical fishing effort in this area was low and the impacts on snapper grouper is expected to be low.

Effects to coral could result through influx of suspended benthic sediments created while trawling the bottom. Increased sedimentation can cause smothering and burial of coral polyps, shading, tissue necrosis, population explosions of bacteria in coral mucus, and generally reduces recruitment, survival, and settlement of coral larvae (Erftemeijer et al. 2012). Coral recruits are particularly susceptible to sedimentation and an increase in fine sediment can significantly reduce coral recruit survival (Fourney and Figueiredo 2017).

The sediments on shelf-edge *Oculina* reefs are relatively fine and have a higher composition of muds (14.4% mud) compared to sediments in shallow coral reef counterparts (Hoskin et al. 1987). In addition, areas east of the high relief *Oculina* mounds have a higher (29%) average percentage of muds (Hoskin et al. 1987). Fine sediments tend to have greater negative effects on corals than coarse sediments. Coral experts and members of the South Atlantic Fishery Management Council's (South Atlantic Council) Coral Advisory Panel (AP) and Habitat and Ecosystem AP indicated that establishing a protective buffer between known coral habitat and fishing grounds would be prudent to prevent adverse impacts to coral colonies (explained further in Chapter 5).

However, research has not established what the optimal buffer distance should be. Miller et al. (2016) found suspended particles can travel and impact coral over 700 m from active dredging operations, which was also the farthest they looked. The spatial extent of impacts from dredging can be variable, and in a severe case, water quality impacts have been detected up to 20 km away from the dredging activity when oceanographic features included unidirectional flow during the project (Fisher et al. 2015).

Based on mapping data from 2011, the western boundaries of the SFAA are between 300 m-75-m from known Oculina pinnacles.

Depending on direction and magnitude of water currents in the affected area, shrimp trawls could create similar sediment plumes during fishing operations and the plumes could be transported to coral habitats. However, at this point, no definitive studies on the impacts of trawling and sedimentation in this area have been conducted.

Little is known about the effects of sedimentation from trawling on *Oculina* and other sensitive species in the OHAPC ecosystem. From a study examining the size, duration, and composition of sediment plumes from multiple trawl types in the Mediterranean Sea, lateral plume spreading depends strongly on current variability. This study observed plumes spreading for hundreds of meters laterally in the hours after trawling (Durrieu de Madrona, et al. 2005). Therefore, more information on the seafloor current direction, strength, and particle size/weight would aid prediction of a sediment plume swath created by trawling activities, and ultimately inform decisions regarding trawl distance from known corals.

Potential negative biological impacts to the affected environment relative to **Alternative 1 (No Action)** would be greatest under **Alternative 3** (largest proposed allowable fishing area) followed by **Preferred Alternative 2**.

Expected Effects to Protected Species

The action in this plan amendment would not significantly modify the way in which the rock shrimp portion of the shrimp fishery is prosecuted in terms of gear types. Historical fishing effort in the proposed areas was variable and future fishing effort is anticipated to be similar to historical effort. Therefore, there are no additional impacts on ESA-listed species or designated critical habitats anticipated as a result of this action (see Section 3.2.3 for a more detailed description of ESA-listed species and critical habitat in the action area).

4.1.2 Economic Effects

Alternative 1 (No Action) would continue to disallow additional fishing access to rock shrimp vessels within the northern extension of the OHAPC; however, since this area is currently closed to bottom trawl gear, there would not be a change in economic benefits. **Alternative 1 (No Action)** would result in foregone landings of rock shrimp and thus foregone economic benefits associated with these landings compared to **Preferred Alternative 2** and **Alternative 3.**

Preferred Alternative 2 would result in net economic benefits by allowing vessels fishing for rock shrimp with bottom trawl gear to potentially increase landings of rock shrimp through access to an approximate 16.61 NM^2 area in which rock shrimp harvest was allowed prior to implementation of Coral Amendment 8 in 2015. Based on historical VMS data, the use of this area would likely vary from year to year. However, participants in the rock shrimp portion of the shrimp fishery have reported, and historical VMS data indicate that rock shrimp were historically caught in the proposed access area. Increases in catches of rock shrimp would be expected to

increase gross revenue and producer surplus[6], thus resulting in net economic benefits. Given the likely variability in usage of the area, as well as the exhibited variability in overall participation in the regional rock shrimp portion of the shrimp fishery, these economic effects cannot be quantified. Additionally, if landings of rock shrimp increase, these landings are a relatively small component of the overall market for shrimp given the magnitude of shrimp imports. Thus, higher landings of rock shrimp would not be expected to change ex-vessel or consumer prices and therefore there is no anticipated change in consumer surplus. The economic effects of **Alternative 3** would likely be similar to those described for **Preferred Alternative 2**, but economic benefits under **Alternative 3** would be comparatively higher since this alternative would allow access to an additional 10 mi^2 of fishing grounds.

The economic effects on individual vessel owners from **Preferred Alternative 2** and **Alternative 3** would depend on each vessel owner's profit maximization strategy, their dependence on rock shrimp, their seasonal fishing behavior, and their propensity to fish for rock shrimp in the new area compared to existing open areas. Some vessel owners may benefit from additional rock shrimp landings, while others may not. These types of individual vessel level effects cannot be determined with available models.

Net economic benefits for commercial rock shrimp vessels would be highest under **Alternative 3**, followed by **Preferred Alternative 2**, and **Alternative 1 (No Action)**. In general, rock shrimp dealers are indirectly affected whenever gross revenues to commercial fishing vessels are expected to change as a result of a change in landings (e.g., increases in gross revenues from increased landings are expected to indirectly benefit dealers and vice versa). This would occur due to increased sales and associated increased producer surplus for dealers. Thus, the ranking of net economic benefits to dealers would be the same as for commercial fishing vessels.

4.1.3 Social Effects

In general, closed areas can have negative social effects on fishermen if important fishing grounds are no longer open to harvest. Fishermen would need to fish other areas to maintain operations, which may result in user conflicts or overcrowding issues. Additionally, increased economic costs associated with travel to other fishing grounds could affect crew employment opportunities on vessels. Long-term social benefits may be associated with the long-term biological benefits of closed areas if the closures are appropriately selected and include a periodic evaluation of effectiveness. Closing some areas may have broad social benefits by protecting more coral areas and may contribute to improved fishery resources.

Alternative 1 (No Action) would likely result in minimal social effects because the fleet is already harvesting in open areas and prohibited from working in the closed areas. The social benefit of establishing an SFAA to the rock shrimp fleet would not occur under **Alternative 1 (No Action)** and changes in fishing behavior or fishing opportunities would not be expected.

[6] Producer surplus (PS) is the difference between the amount a producer is paid for a unit of a good and the minimum amount the producer would accept to supply that unit (i.e., marginal cost). Total PS in a market or industry is measured by the difference between total gross revenue and total variable costs. PS is a measure of net economic benefits to producers.

Maintaining closed areas where substantial deepwater coral exists may prevent any future impacts from fishing activities that could have negative biological effects on the habitat. As discussed in **Section 4.1.1**, the SFAAs proposed in **Preferred Alternative 2** and **Alternative 3** are expected to result in some negative biological impacts to the deepwater coral habitat resulting from increased trawling in the area.

Preferred Alternative 2 and **Alternative 3** would impact the rock shrimp fleet by opening some historic fishing grounds. The size and the location of the SFAA are the two most significant factors that would be expected to positively impact fishermen. The larger areas proposed under **Alternative 3** could have more benefits than the smaller proposed area under **Preferred Alternative 2** if the location is if the location is in an area that would provide needed access to rock shrimp while simultaneously avoiding any deepwater coral. **Preferred Alternative 2** and **Alternative 3** are based on coordinates presented by rock shrimp fishermen during public comment in March 2014 and March 2013, respectively. In April 2024, the Shrimp and Deepwater Shrimp Advisory Panels met and reiterated the importance of establishing a SFAA. AP members noted that regular use of the area is variable due to the nature of the fishery, but access is very important in years when rock shrimp are present. **Preferred Alternative 2** represents the most recent recommendation and is supported by the South Atlantic Council's Deepwater Shrimp Advisory Panel. Additionally, **Preferred Alternative 2** and **Alternative 3** directly address stakeholder concerns regarding access to historically important fishing grounds and may improve stakeholder perceptions of the management process. **Preferred Alternative 2** and **Alternative 3** are expected to have greater social benefit than **Alternative 1 (No Action)**. The social effects of **Preferred Alternative 2** and **Alternative 3** are expected to be similar, though **Preferred Alternative 2** may have slightly higher social benefit because it represents what was previously recommended by rock shrimp fishermen.

4.1.4 Administrative Effects

Alternative 1 (No Action) would not change the administrative environment from its current condition. The establishment of an SFAA (**Preferred Alternative 2** and **Alternative 3**) would have minimal administrative impacts. The existing requirement of VMS in the rock shrimp portion of the shrimp fishery enhances enforcement of the regulations and helps to ensure protection of the sensitive *Oculina* coral habitat within the OHAPC. In Coral Amendment 8, a higher vessel location reporting rate (ping rate) when transiting the OHAPC was implemented (80 FR 42423, July 17, 2015). Administrative impacts would be incurred through the rulemaking process, outreach, and enforcement. The administrative impacts could differ between the alternatives relative to the amount of area they cover.

However, because the proposed SFAAs are small and are not substantially different in size, expected enforcement costs would increase initially as costs associated with increased VMS reporting will have to be accounted for and administrative burden would be reduced afterwards. Associated costs to reconfigure VMS reporting may be incurred by NOAA and industry, depending on vendor capabilities. The administrative impacts associated with these alternatives relate to at-sea enforcement, increased VMS staff monitoring and ensuring VMS vendor units are configured to report as required when in the SFAAs.

Chapter 5. Council's Rationale for the Preferred Alternatives

5.1. Action 1. Establish a shrimp fishery access area along the eastern edge of the northern extension of the Oculina Bank Habitat Area of Particular Concern.

5.1.1. Coral Advisory Panel Comments and Recommendations

TO BE COMPLETED

5.1.2. Shrimp Advisory Panel Comments and Recommendations

TO BE COMPLETED

5.1.3. Scientific and Statistical Committee Comments and Recommendations

TO BE COMPLETED

5.1.4. Public Comments and Recommendations

TO BE COMPLETED

5.1.5. Council's Rationale

TO BE COMPLETED

Chapter 6. Cumulative Effects

This environmental assessment (EA) is being prepared according to NOAA NEPA procedures 216-6 A and accompanying companion manual. The cumulative effects discussed in this section meet the two-part standard for "reasonable foreseeability" and "reasonably close causal connection" required by the new definition of effects or impacts. Below is the five-step cumulative effects analysis that identifies criteria that should be considered in an EA.

6.1 Affected Area

The immediate impact area would be the federal 200-mile limit of the Atlantic off the coast of northern Florida, which is within the South Atlantic Fishery Management Council's (South Atlantic Council) area of jurisdiction. The ranges of affected species are described in Chapter 3 of this amendment. For the proposed action found in Amendment 11 to the Fishery Management Plan (FMP) for Coral, Coral Reefs, and Live/Hard Bottom Habitat of the South Atlantic Region (Coral FMP), and Amendment 12 to the FMP for the Shrimp, the effects analyses include data from 2015 through 2019. Additionally, this cumulative effects analysis includes an analysis of actions and events dating back to 1982 when the original Coral FMP was implemented, and through what is expected to take place in the reasonably foreseeable future.

6.2 Past, Present, and Reasonably Foreseeable Actions Impacting the Affected Area

Fishery managers implemented the first significant regulations pertaining to coral species in 1982 through the Coral FMP (GMFMC and SAFMC 1982), including prohibiting trawling within the Oculina Bank Habitat Area of Particular Concern (OHAPC). The implementation of the Shrimp FMP in 1993 has resulted in regulations associated with penaeid and rock shrimp. Listed below are other past, present, and reasonably foreseeable actions occurring in the South Atlantic Region. These actions, when added to the proposed management measures, may result in cumulative effects on the biophysical and socio-economic environment. The complete history of management of the *Oculina* coral habitat and the rock shrimp portion of the shrimp fishery can be found in Chapter 2.

Past Actions

Coral FMP (SAFMC 1982) established the OHAPC. Within the OHAPC area, no person may: 1) use a bottom longline, bottom trawl, dredge, pot, or trap; 2) if aboard a fishing vessel, anchor, use an anchor and chain, or use a grapple and chain; or 3) fish for rock shrimp or possess rock shrimp in or from the area on board a fishing vessel.

Amendment 4 to the Coral FMP and Amendment 3 to the Shrimp FMP, included in the Comprehensive Essential Fish Habitat (EFH) Amendment (SAFMC 1998b), expanded the OHAPC and incorporated two adjacent areas within the OHAPC.

Amendment 5 to the Shrimp FMP required the use of vessel monitoring system (VMS) by vessels fishing for rock shrimp in the South Atlantic.

Amendment 6 to the Coral FMP and Amendment 8 to the Shrimp FMP, included in the Comprehensive Ecosystem-Based Amendment 1 (CE-BA 1; SAFMC 2009a and 2009 b), established deepwater Coral HAPCs (CHAPC), prohibited the use of bottom tending gear in these areas, and established shrimp fishery access areas within the Stetson-Miami Terrace CHAPC.

Amendment 8 to the Coral FMP (SAFMC 2013a) expanded the Stetson-Miami Terrace Deepwater CHAPC, the Cape Lookout Deepwater CHAPC, and the OHAPC; and implemented a transit provision for rock shrimp fishermen through the OHAPC.

Coral Amendment 10 to the Coral FMP (SAFMC 2021) would have established a Shrimp Fishery Access area along the western boundary of the northern extension of the Oculina Bank Habitat Area of Particular Concern (OHAPC) where fishing for rock shrimp would be allowed. The area was a historical fishing area for rock shrimpers but access to it was restricted with the implementation of Coral Amendment 8 in 2014. However, in December 2021, Coral Amendment 10 was disapproved by the Secretary of Commerce because the amendment didn't state how it met the objectives of the Coral FMP, and didn't include a bycatch practicability analysis. Coral Amendment 11/Shrimp 12 addresses the issues raised in Coral Amendment 10 and also amends the Shrimp FMP.

Present Actions
Effects from the action in this plan amendment are discussed in Chapter 4.

Reasonably Foreseeable Future Actions
There are no reasonably foreseeable future actions that would amend the Coral or Shrimp FMP.

Expected Impacts from Past, Present, and Future Actions
The intent of Coral Amendment 11/Shrimp Amendment 12 is to create a shrimp fishery access area within OHAPC, which are the historic fishing grounds of rock shrimp fishermen were lost when the OHAPC was expanded. When combined with the impacts of past, present, and future actions affecting the rock shrimp resource, minor cumulative impacts are likely to accrue. The action in this plan amendment is not expected to result in significant cumulative adverse biological or socio-economic effects to the rock shrimp portion of the shrimp fishery when combined with the impacts of past, present, and future actions (see Chapter 4).

6.3 Consideration of Climate Change and Other Non-Fishery Related Issues

Climate Change
Global climate changes could have significant effects on South Atlantic fisheries, though the extent of these effects on the shrimp fishery is not known at this time. The Environmental Protection Agency's climate change webpage (https://www.epa.gov/climate-indicators/marine-species-distribution), and NOAA's Office of Science and Technology climate webpage (https://www.fisheries.noaa.gov/topic/climate), provides background information on climate change, including indicators which measure or anticipate effects on oceans, weather and climate, ecosystems, health and society, and greenhouse gases. The United Nations Intergovernmental

Panel on Climate Change's Fifth Assessment Report also provides a compilation of scientific information on climate change (November 2, 2014). Those findings are summarized below.

Ocean acidification, or a decrease in surface ocean pH due to absorption of anthropogenic carbon dioxide emissions, affects the chemistry and temperature of the water. Increased thermal stratification alters ocean circulation patterns, and causes a loss of sea ice, sea level rise, increased wave height and frequency, reduced upwelling, and changes in precipitation and wind patterns. Changes in coastal and marine ecosystems can influence organism metabolism and alter ecological processes such as productivity, species interactions, migration, range and distribution, larval and juvenile survival, prey availability, and susceptibility to predators. The "center of biomass," a geographical representation of each species' weight distribution, is being used to identify the shifting of fish populations. Warming sea temperature trends in the southeast have been documented, and animals must migrate to cooler waters, if possible, if water temperatures exceed survivable ranges (Needham et al. 2012). Harvesting and habitat changes also cause geographic population shifts. Changes in water temperatures may also affect the distribution of native and exotic species, allowing invasive species to establish communities in areas they may not have been able to survive previously. The combination of warmer water and expansion of salt marshes inland with sea-level rise may increase productivity of estuarine-dependent species in the short term. However, in the long term, this increased productivity may be temporary because of the loss of fishery habitats due to wetland loss (Kennedy et al. 2002). The numerous changes to the marine ecosystem may cause an increased risk of disease in marine biota. An increase in the occurrence and intensity of toxic algae blooms will negatively influence the productivity of keystone animals, such as corals, and critical coastal ecosystems such as wetlands, estuaries, and coral reefs (Kennedy et al. 2002; IPCC 2014).

Climate change may impact coral and shrimp, but the level of impacts cannot be quantified at this time, nor is the time frame known in which these impacts will occur. In the near term, it is unlikely that the management measures contained in this amendment would compound or exacerbate the ongoing effects of climate change.

Weather Variables

The annual hurricane season is from June 1 to November 30, and accounts for 97% of all tropical activity affecting the Atlantic basin. These storms, although unpredictable in their annual occurrence, can devastate areas when they occur. Although these effects may be temporary, those fishing-related businesses whose profitability is marginal may go out of business if a hurricane strikes.

6.4 Overall Impacts Expected from Past, Present, and Future Actions

The proposed action would establish a shrimp fishery access area (SFAA) in the northern extension of the OHAPC. Past impacts to the overall OHAPC ecosystem occurred from fishing gear interactions and resulted in 100% loss of live coral at multiple sites (Reed et al. 2007). In the 1970s, *Oculina* reefs hosted large spawning aggregations of grouper and snapper. By the early 1990s, commercial and recreational fishing caused a dramatic decline in fish populations while bottom trawling for rock shrimp fishing had destroyed large portions of *Oculina* habitat. Comparisons of photographic transects of *Oculina* habitat from 1975-1977 dives and 2001 dives

show that severe or complete loss of standing coral habitat on several reefs occurred during this time due to trawling activity (Reed et al. 2007).

The action is expected to result in minimal biological impacts to the deepwater coral habitat in the SFAA as it would allow bottom trawling for rock shrimp in areas that were historically fished by the rock shrimp fishermen. Fishermen are most likely to fish in areas where they historically fished. However, these areas could also be exhibiting signs of recovery as trawled low relief hard bottom or standing dead coral rubble provides habitat for coral recruitment and coral growth subsequent to trawling events.

In 2022, the Southeast Fisheries Science Center (SEFSC) conducted a visual survey of the proposed SFAA. They aimed to classify the bottom type as either live (standing), dead (standing), rubble, or sand. To collect information on bottom type, the crew aboard the R/V Weatherbird utilized a towed camera system. The crew executed 14 dives, however only 2 of those dives were able to classify bottom type. From their conclusions, they noted that all live colonies of *Oculina* coral have previously been found on medium and high relief habitat, with rubble often found at the perimeter of the relief and that there have never been standing live or dead colonies on low relief areas. Based on the successful tows from this trip, no live, standing dead or rubble was observed in or immediately adjacent to the SFAA. The team did note however that they could not state definitively that no live *Oculina* colonies exist within the SFAA, but based on existing multibeam bathymetry of the entire SFAA, which shows only low or no relief, they predicted that the likelihood of live *Oculina* is very low (Appendix G). Additionally, in 2025 there was a mapping effort conducted by the *Nancy Foster* that did not find any evidence of coral in the area (Appendix F).

This action would result in net economic and social benefits by allowing vessels fishing for rock shrimp with bottom trawl gear to potentially increase landings of rock shrimp through access to the SFAA. The proposed management action is summarized in Chapter 2 of this document. Detailed discussions of the magnitude and significance of the impacts of the alternatives on the human environment appear in Chapter 4 of this document. None of the impacts of the action in this amendment, in combination with past, present, and future actions have been determined to be significant.

The proposed actions would not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places as these are not in the South Atlantic exclusive economic zone (EEZ). These actions are not likely to result in direct, indirect, or cumulative effects to unique areas, such as significant scientific, cultural, or historical resources, park land, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas as the proposed action is not expected to substantially increase fishing effort or the spatial and/or temporal distribution of current fishing effort within the South Atlantic region. The Monitor, Gray's Reef, and Florida Keys National Marine Sanctuaries are within the boundaries of the South Atlantic EEZ. The proposed action would not cause loss or destruction of these national marine sanctuaries (NMS) because the action is not expected to result in appreciable changes to current fishing practices and the action area is outside of NMS. Additionally, the proposed action is not likely to change the way in which the rock shrimp portion of the shrimp fishery is prosecuted; therefore, the action is not expected to result in adverse impacts on health or human safety beyond the status quo.

6.5 Monitoring and Mitigation

The effects of the proposed action are and would continue to be, monitored through collection of data by the National Marine Fisheries Service (NMFS), economic and social analyses, and other scientific observations. Vessels that participate in the rock shrimp portion of the shrimp fishery are monitored through vessel monitoring systems (VMS). Currently, rock shrimp vessels transiting through the OHAPC must increase the VMS ping rates, store equipment and maintain a constant forward direction. Additionally, VMS is required on rock shrimp vessels while fishing. While VMS cannot replace at-sea enforcement by aircraft, vessels, and boarding teams, the technology complements existing capability and allows enforcement to target violators, thereby increasing enforcement efficiency. A vessel for which a federal Commercial South Atlantic Rock Shrimp permit has been issued must carry a NMFS-approved observer, if selected for observer coverage. The Southeast Fisheries Science Center allocates 20% of the total general shrimp observer funds distributed annually for at-sea observers on shrimp vessels to the South Atlantic. Approximately 1% of penaeid shrimp and <1% of rock shrimp trips (698 days from 2011-2016; Scott-Denton et al. 2020) have observer coverage.

The proposed action relates to the harvest of indigenous species in the Atlantic, and the activities/regulations being altered do not introduce non-indigenous species and are not reasonably expected to facilitate the spread of such species through depressing the populations of native species. Additionally, these alternatives do not propose any activity, such as increased ballast water discharge from foreign vessels, which is associated with the introduction or spread of non-indigenous species.

Chapter 7. List of Preparers

Name	Agency/Division	Title
Allie Iberle	SAFMC	Fishery Scientist/IPT Lead
Myra Brouwer	SAFMC	Deputy Director for Management
Chip Collier	SAFMC	Deputy Director for Science and Statistics
Mike Schmidtke	SAFMC	Data analyst
Christine Wiegand	SAFMC	Social Scientist
John Hadley	SAFMC	Economist
Kathleen Howington	SAFMC	Habitat and Ecosystem Scientist/IPT Lead
Karla Gore	SERO/SF	Fishery Biologist/IPT Lead
Rick DeVictor	SERO/SF	South Atlantic Branch Chief
Scott Sandorf	SERO/SF	Technical Writer and Editor
Alisha Gray	SERO/SF	Data Analyst
Christina Package-Ward	SERO/SF	Social Scientist
David Records	SERO/SF	Economist
Matt Johnson	SERO/SF	Chief, Habitat Ecology Branch
Monica Smit-Brunello	NOAA GC	General Counsel
Manny Antonaras	SERO/OLE	Criminal Investigator
Matthew Walia	SERO/OLE	Compliance Liaison Analyst
Christopher Liese	SEFSC	SEFSC Economist
Jennifer Lee	SERO/PR	Fishery Biologist, Protected Resources Division

IPT = Interdisciplinary Planning Team, SAFMC = South Atlantic Fishery Management Council, SERO = Southeast Regional Office, SF = Sustainable Fisheries Division, PR = Protected Resources Division, HC = Habitat Conservation Division, NOAA=National Oceanic and Atmospheric Administration, GC = General Counsel, OLE = Office of Law Enforcement, SEFSC = Southeast Fisheries Science Center.

Chapter 8. Agencies and Persons Consulted

Responsible Agencies

South Atlantic Fishery Management Council (Administrative Lead)
4055 Faber Place Drive, Suite 201
N. Charleston, South Carolina 29405
843-571-4366/ 866-SAFMC-10 (TEL)
843-769-4520 (FAX)
www.safmc.net

NMFS, Southeast Region
263 13th Avenue South
St. Petersburg, Florida 33701
727- 824-5301 (TEL)
727-824-5320 (FAX)

List of Agencies, Organizations, and Persons Consulted

SAFMC Law Enforcement Advisory Panel
SAFMC Snapper Grouper Advisory Panel
SAFMC Scientific and Statistical Committee
North Carolina Coastal Zone Management Program
South Carolina Coastal Zone Management Program
Georgia Coastal Zone Management Program
Florida Coastal Zone Management Program
Florida Fish and Wildlife Conservation Commission
Georgia Department of Natural Resources
South Carolina Department of Natural Resources
North Carolina Division of Marine Fisheries
North Carolina Sea Grant
South Carolina Sea Grant
Georgia Sea Grant
Florida Sea Grant
Atlantic States Marine Fisheries Commission
National Marine Fisheries Service
- -Washington Office
- -Office of Ecology and Conservation
- -Southeast Regional Office
- -Southeast Fisheries Science Center

Chapter 9. References

Avent, R. M., M. E. King, and R. H. Gore. 1977. Topographic and faunal studies of shelf-edge prominences off the central eastern Florida coast. Int. Rev. Ges. Hydrobiol. 62:185-208.
Bullis, H. R.s, Jr., and W. F. Rathjen. 1959. Shrimp explorations off southeastern coast of the United States (1956-195 8). Comm. Fish. Rev. 2 1 (6): 1 -20

Cobb, S. P., C. R. Futch, and D. Camp. 1973. The Rock Shrimp, *Sicyonia brevirostris*, Stimpson, 1871 (Decapoda, Penaeidae). Memoirs of the Hourglass Cruises. Vol. III, Part I, February.

Durrieu de Madrona, et al. 2005. Trawling-induced resuspension and dispersal of muddy sediments and dissolved elements in the Gulf of Lion. Continental Shelf Research 25: 2387-2409.

Erftemeijer, P. L. A., R. Bernhard, B. W. Hoeksema, and P. A. Todd. 2012. Environmental impacts of dredging and other sediment disturbances on corals: a review. Marine Pollution Bulletin. 64 (9): 1737-1765.

Fisher, R., Stark, C., Ridd, P. and Jones, R., 2015. Spatial patterns in water quality changes during dredging in tropical environments. PloS one, 10(12), p.e0143309.

Fosså, J. H., P. B. Mortensen, and D. M. Furevik. 2002. The deep-water coral *Lophelia pertusa* in Norwegian waters: distribution and fishery impacts. Hydrobiologia 471: 1–12.

Fourney, F. and J. Figueiredo. 2017. Additive negative effects of anthropogenic sedimentation and warming on the survival of coral recruits. Scientific reports. 2017 Sep 28;7(1):1-8.

Gage, J. D., J. M. Roberts, J. Hartley, and J. Humphery. 2005. Potential impacts of deep-sea trawling on the benthic ecosystem along the Northern European continental margin: a review. Am. Fish. Soc. Symp. 41: 503–517.

Gilmore, R. G. & R. S. Jones, 1992, Color variation and associated behavior in the epinepheline groupers, Mycteroperca microlepis (Goode and Bean) and M. phenax Jordan and Swain. Bull. mar. Sci. 51: 83-103

Gulf of Mexico Fishery Management Council (GMFMC) and South Atlantic Fishery Management Council (SAFMC). 1982. Fishery Management Plan and Final Environmental Impact Statement for Coral and Coral Reefs of the Gulf of Mexico and South Atlantic. South Atlantic Fishery Management Council, 1 Southpark Cir., Suite 306, Charleston, S.C. 29407-4699. 316 p.

Harter, S. L., M. M. Ribera, A. N. Shepard, and J. K. Reed. 2009. Assessment of fish populations and habitat on Oculina Bank, a deep-sea coral marine protected area off eastern Florida. Fishery Bulletin, 107(2), 195pp.

Hayes, S. A, Josephson, E., Maze-Foley, K., and Rosel, P. E., 2017. US Atlantic and Gulf of Mexico marine mammal stock assessments – 2016. Northeast Fisheries Science Center, NOAA technical memorandum NMFS-NE; 241. http://doi.org/10.7289/V5/TM-NEFSC-241.

Hoskin C. M., J. K. Reed, and D. H. Mook. 1987. Sediments from a living shelf-edge coral reef and adjacent area off central eastern Florida. Symposium on South Florida Geology Miami Geological Society, Memoir 3. 17pp.

IPCC. 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp.

Keiser, R. K. 1976. Distribution of the Rock Shrimp (*Sycionia brevirostris*) in coastal waters of the southeastern United States. South Carolina Marine Resources Research Institute, Charleston, SC. 19 p.

Kennedy, F. S., J. J. Crane, R. A. Schlieder, and D. G. Barber. 1977. Studies of the rock shrimp, *Sicyonia Brevirostris*. A new fishery resource on Florida's Atlantic Shelf. Florida Marine Research Publications Number 27, Florida Department of Natural Resources.

Kennedy, V. S., R. R. Twilley, J. A. Kleypas, J. H. Cowan, Jr., and S. R. Hare. 2002. Coastal and Marine Ecosystems & Global Climate Change: Potential Effects on U.S. Resources. Pew Center on Global Climate Change. 52 p.

Koenig. 2001. Oculina Banks habitat, fish populations, restoration, and enforcement. Report to the South Atlantic Fishery Management Council.

Koeing, C.C., Shepard, A.N., Reed J.K., Coleman F.C., Brooke S.D., Brusher, J, and Scanlon K.M., 2005. Habitat and Fish Populations in the Deep-Sea *Oculina* Coral Ecosystem of the Western Atlantic. American Fisheries Society Symposium 41: 795-805. https://www.reefball.org/album/florida/EastCoast/oculinabanks/NOAAproject/scientificpaper/2005_koenig_oculina.pdf

Needham H, Brown D, Carter L. 2012. Impacts and adaptation options in the Gulf Coast. Center for Climate and Energy Solutions, Arlington, VA, http://www.c2es.org/docUploads/gulf-coast-impacts-adaptation.pdf

Miller, M. W., J. Karazsia, C. E. Groves, S. Griffin, T. Moore, P. Wilber, and K. Gregg. 2016. Detecting sedimentation impacts to coral reefs resulting from dredging the Port of Miami, Florida USA. PeerJ 4:e2711, https://doi.org/10.7717/peerj.2711.

Quattrini, Andrea & Ross, Steve. (2006). Fishes associated with North Carolina shelf-edge hardbottoms and initial assessment of a proposed marine protected area. Bulletin of Marine Science. 79. 137-163.

Reed, J. K. 1980. Distribution and structure of deep-water *Oculina varicosa* coral reefs off central eastern Florida. Bull. Mar. Sci. 30:667-677.

Reed, J. K. 1981. In situ growth rates of the scleractinian coral *Oculina varicosa* occurring with zooxanthellae on 6-m reefs and without on 80-m banks. Proc 4th Int Coral Reef Symp, Manila 2, pp 201-206.

Reed, J. K., R . H. Gore, L. E. Scotto, & K. A. Wilson, 1982, Community composition, structure, areal and trophic relationships of decapods associated with shallow- and deep-water *Oculina varicosa* coral reefs. Bull. mar. Sci. 32: 761-786.

Reed, J. K. & C. M. Hoskin, 1987, Biological and geological processes at the shelf edge investigated with submersibles. NOAA Symp. Ser. Undersea Res. 2: 191-199.

Reed, J. K. & P. M. Mikkelsen, 1987, The molluscan community associated with the scleractinian coral *Oculina varicosa*. Bull. mar. Sci. 40: 99-131

Reed, J.K. Deep-water *Oculina* coral reefs of Florida: biology, impacts, and management. *Hydrobiologia* **471**, 43–55 (2002). https://doi.org/10.1023/A:1016588901551

Reed, J. K., A. Shepard, C. Koenig, K. Scanlon, and G. Gilmore. 2005. Mapping, habitat characterization, and fish surveys of the deep-water *Oculina* coral reef marine protected area: a review of historical and current research. Pages 443-465 in R. A. Freiwald and J. M. Roberts, editors. Cold-water corals and ecosystems. Springer-Verlag Berlin Heidelberg.

Reed, J. K. 2006. Deep-water *Oculina* Reefs of Florida: Summary of the state of knowledge of the habitat, fauna, geology, and physical processes of the ecosystem. Report to the SAFMC Oculina Evaluation Team Workshop, August 21-23, 2006. 27pp.

Reed, J.K., D. C. Weaver, C.A. Pomponi. 2006. Habitat and Fauna of Deep-water Lophelia Pertusa coral reefs off the southeastern U.S.: Blake Plateau, Straits of Florida, and Gulf of Mexico. Bulletin of Marine Science 78(2): 343–375

Reed, J. K, C. C. Koenig, A. N. Shepard. 2007. Impacts of bottom trawling on a deep-water *Oculina* coral ecosystem off Florida. Bulletin of Marine Science. 2007 Nov 1;81(3):481-96.

Reed, J.K and Mikkelsen, P.M. 1987. The Molluscan Community Associated With The Scleractinian Coral *Oculina Varicosa*. Bulletin of Marine Science. 2007 Vol. 40, No, 1. Pg 99-131.

Reed, J. K., 1992. Submersible studies of deep-water *Oculina* and *Lophelia* coral banks off southeastern U.S.A. Proc. Am. Acad. Underwater Sci. 12th Ann. Scien. Diving Symp.: 143–151.

South Atlantic Fishery Management Council (SAFMC). 1982. The Fishery Management Plan Coral and Coral Reefs of the Gulf of Mexico and South Atlantic Regions. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407.

SAFMC. 1983. The Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407.

SAFMC. 1991. Amendment 1 to the Fishery Management Plan Coral and Coral Reefs of the Gulf of Mexico and South Atlantic Regions. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407.

SAFMC 1993. Fishery Management Plan for Shrimp Fishery of the South Atlantic Region Including a Final Environmental Impact Statement and Regulatory Impact Review. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407-4699.

SAFMC. 1994. Amendment 2 to the Fishery Management Plan for the Coral and Coral Reefs of the Gulf of Mexico and South Atlantic Regions. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407.

SAFMC. 1995. Amendment 3 to the Fishery Management Plan for the Coral and Coral Reefs of the South Atlantic Regions. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407.

SAFMC. 1996. Amendment 1 to the Fishery Management Plan for the Shrimp Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407.

SAFMC. 1997. Amendment 2 to the Fishery Management Plan for the Shrimp Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407.

SAFMC. 1998a. Amendment 4 to the Fishery Management Plan for the Shrimp Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407.

SAFMC. 1998b. Amendment 4 to the Fishery Management Plan for the Coral, Coral Reefs, and Live/Hard Bottom Habitat of the South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407.

SAFMC. 1999a. Amendment 5 to the Fishery Management Plan for the Coral, Coral Reefs, and Live/Hard Bottom Habitat of the South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407.

SAFMC. 1999b. Amendment 3 to the Fishery Management Plan for the Shrimp Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407.

SAFMC. 2002. Amendment 5 to the Fishery Management Plan for the Shrimp Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407.

SAFMC. 2005. Amendment 6 to the Fishery Management Plan for the Shrimp Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407.

SAFMC. 2008. Amendment 7 to the Fishery Management Plan for the Shrimp Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407.

SAFMC. 2009a. Amendment 6 to the Fishery Management Plan for Coral, Coral Reefs, and Live/Hard Bottom Habitat of the South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

SAFMC. 2009b. Amendment 8 to the Fishery Management Plan for the Shrimp Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

SAFMC. 2009c. Fishery Ecosystem Plan for the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

SAFMC. 2012. Amendment 7 to the Fishery Management Plan for Coral, Coral Reefs, and Live/Hard Bottom Habitat of the South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407.

SAFMC. 2013a. Amendment 8 to the Fishery Management Plan for Coral, Coral Reefs, and Live/Hard bottom Habitat of the South Atlantic Region, Including a Final Environmental Assessment and Regulatory Impact Review. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

SAFMC. 2013b. Amendment 9 to the Fishery Management Plan for the Shrimp Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

SAFMC. 2014. Generic Amendment to the Fishery Management Plans in the Gulf of Mexico and South Atlantic Regions. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

SAFMC. 2018. Fishery Ecosystem Plan II for the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

SAFMC. 2020. Amendment 11 to the Fishery Management Plan for the Shrimp Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

SAFMC. 2021. Amendment 10 to the Fishery Management Plan for Coral, Coral Reefs, and Live/Hard bottom Habitat of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

Whitaker, J. D. 1983. Effects of severe winters on white shrimp stocks in the Atlantic Ocean off the Southeastern United States. Presented at the National Shellfish Association. Hilton Head, SC.

Appendix A. Other Applicable Law

1.1 Administrative Procedure Act (APA)

All federal rulemaking is governed under the provisions of the APA (5 U.S.C. Subchapter II), which establishes a "notice and comment" procedure to enable public participation in the rulemaking process. Among other things under the APA, the National Marine Fisheries Service (NMFS) is required to publish notification of proposed rules in the *Federal Register* and to solicit, consider and respond to public comment on those rules before they are finalized. The APA also establishes a 30-day waiting period from the time a final rule is published until it takes effect, with some exceptions. This amendment complies with the provisions of the APA through the South Atlantic Fishery Management Council's (South Atlantic Council) extensive use of public meetings, requests for comments, and consideration of comments. The notice of availability and the proposed rule associated with this amendment will each have public comment periods, which complies with the APA, and upon publication of the final rule, unless the rule falls within an APA exception, there will be a 30-day waiting period before the regulations are effective.

1.2 Information Quality Act (IQA)

The IQA (Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Public Law 106-443)) which took effect October 1, 2002, directed the Office of Management and Budget (OMB) to issue government-wide guidelines that "provide policy and procedural guidelines to federal agencies for ensuring and maximizing the quality, objectivity, utility, and integrity of information disseminated by federal agencies." OMB directed each federal agency to issue its own guidelines, establish administrative mechanisms allowing affected persons to seek and obtain correction of information that does not comply with OMB guidelines, and report periodically to OMB on the number and nature of complaints. The NOAA Section 515 Information Quality Guidelines require a series of actions for each new information product subject to the IQA. This amendment uses the best available information and made a broad presentation thereof. The information contained in this document was developed using the best available scientific information. Therefore, this document is in compliance with the IQA.

1.3 Coastal Zone Management Act (CZMA)

Section 307(c)(1) of the federal CZMA of 1972 requires that all federal activities that directly affect the coastal zone be consistent with approved state coastal zone management programs to the maximum extent practicable. While it is the goal of the South Atlantic Council to have management measures that complement those of the states, federal and state administrative procedures vary, and regulatory changes are unlikely to be fully instituted at the same time. The Council believes the actions in this amendment are consistent to the maximum extent practicable with the Coastal Zone Management Plans of Florida, Georgia, South Carolina, and North Carolina. Pursuant to Section 307 of the CZMA, this determination will be submitted to the responsible state agencies who administer the approved Coastal Zone Management Programs in the States of Florida, South Carolina, Georgia, and North Carolina.

1.4 Executive Order 12612: Federalism

E.O. 12612 requires agencies to be guided by the fundamental federalism principles when formulating and implementing policies that have federalism implications. The purpose of the Order is to guarantee the division of governmental responsibilities between the federal government and the states, as intended by the framers of the Constitution. No federalism issues have been identified relative to the actions proposed in this document and associated regulations. Therefore, preparation of a Federalism assessment under E.O. 12612 is not necessary.

1.5 Executive Order 13089: Coral Reef Protection

E.O. 13089, signed by President William Clinton on June 11, 1998, recognizes the ecological, social, and economic values provided by the Nation's coral reefs and ensures that federal agencies are protecting these ecosystems. More specifically, the Order requires federal agencies to identify actions that may harm U.S. coral reef ecosystems, to utilize their program and authorities to protect and enhance the conditions of such ecosystems, and to ensure that their actions do not degrade the condition of the coral reef ecosystem.

The alternatives considered in this document are consistent with the directives of E.O. 13089.

1.6 Executive Order 13158: Marine Protected Areas (MPA)

E.O. 13158 was signed on May 26, 2000, to strengthen the protection of U.S. Ocean and coastal resources through the use of Marine Protected Areas. The E.O. defined MPAs as "any area of the marine environment that has been reserved by federal, state, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein." It directs federal agencies to work closely with state, local and non-governmental partners to create a comprehensive network of MPAs "representing diverse U.S. marine ecosystems, and the Nation's natural and cultural resources."

The alternatives considered in this document are consistent with the directives of E.O. 13158.

1.7 National Marine Sanctuaries Act (NMSA)

Under the NMSA (also known as Title III of the Marine Protection, Research and Sanctuaries Act of 1972), as amended, the U.S. Secretary of Commerce is authorized to designate National Marine Sanctuaries to protect distinctive natural and cultural resources whose protection and beneficial use requires comprehensive planning and management. The National Marine Sanctuary Program is administered by the Sanctuaries and Reserves Division of NOAA. The NMSA provides authority for comprehensive and coordinated conservation and management of these marine areas. The National Marine Sanctuary Program currently comprises 13 sanctuaries around the country, including sites in American Samoa and Hawaii. These sites include significant coral reefs and kelp forest habitats, and breeding and feeding grounds of whales, sea lions, sharks, and sea turtles. The three sanctuaries in the South Atlantic exclusive economic zone are the Monitor, Gray's Reef, and Florida Keys National Marine Sanctuaries.

The alternatives considered in this document are not expected to have any adverse impact on the resources managed by the National Marine Sanctuaries.

1.8 Paperwork Reduction Act (PRA)

The purpose of the PRA is to minimize the burden on the public. The PRA is intended to ensure that the information collected under the proposed action is needed and is collected in an efficient manner (44 U.S.C. 3501 (1)). The authority to manage information collection and record keeping requirements is vested with the Director of the Office of Management and Budget (OMB). This authority encompasses the establishment of guidelines and policies, approval of information collection requests, and reduction of paperwork burdens and duplications. The PRA requires NMFS to obtain approval from the OMB before requesting most types of fishery information from the public. Actions in this document are not expected to affect PRA.

1.9 Small Business Act (SBA)

Enacted in 1953, the SBA requires that agencies assist and protect small-business interests to the extent possible to preserve free competitive enterprise. The objectives of the SBA are to foster business ownership by individuals who are both socially and economically disadvantaged; and to promote the competitive viability of such firms by providing business development assistance including, but not limited to, management and technical assistance, access to capital and other forms of financial assistance, business training, and counseling, and access to sole source and limited competition federal contract opportunities, to help firms achieve competitive viability. Because most businesses associated with fishing are considered small businesses, NMFS, in implementing regulations, must make an assessment of how those regulations will affect small businesses.

1.10 Public Law 99-659: Vessel Safety

Public Law 99-659 amended the Magnuson-Stevens Fishery Conservation and Management Act to require that a FMP or FMP amendment must consider, and may provide for, temporary adjustments (after consultation with the U.S. Coast Guard and persons utilizing the fishery) regarding access to a fishery for vessels that would be otherwise prevented from participating in the fishery because of safety concerns related to weather or to other ocean conditions. No vessel would be forced to participate in South Atlantic fisheries under adverse weather or ocean conditions as a result of the imposition of management regulations proposed in this amendment. No concerns have been raised by South Atlantic fishermen or by the U.S. Coast Guard that the proposed management measures directly or indirectly pose a hazard to crew or vessel safety under adverse weather or ocean conditions.

1.11 Executive Order 14276: Restoring American Seafood Competitiveness

E.O. 14276 was signed on April 17th, 2025, to reduce burdens on domestic fishing and increase production. The E.O. requires the Secretary of Commerce, with each Regional Fishery Management Council identify ways to identify actions that will stabilize domestic seafood markets, improve access to domestic fishing resources, enhance profitability for American fishermen, and prevent closures.

The alternatives considered in this document are consistent with the directives of E.O. 14276.

Appendix B. Regulatory Impact Review

TO BE COMPLETED

B.1. Introduction

B.2. Problems and Objectives

B.3. Description of Fisheries

B.4. Effects of Management Measures

B.5. Public Costs of Regulations

B.6. Net Benefits of Regulatory Action

B.7. Determination of Significant Regulatory Action

Appendix C. Regulatory Flexibility Act Analysis

TO BE COMPLETED

C.1. Introduction.

C.2. Statement of the Need for, Objective of, and Legal Basis for the Proposed Action

C.3. Description and Estimate of the Number of Small Entities to Which the Proposed Action Would Apply

C.4. Description of the Projected Reporting, Record-Keeping and Other Compliance Requirements of the Proposed Action, Including an Estimate of the Classes of Small Entities Which Will Be Subject to the Requirement and the Type of Professional Skills Necessary for the Preparation of the Report or Records

C.5. Identification of All Relevant Federal Rules, Which May Duplicate, Overlap, or Conflict with the Proposed Action

C.6. Significance of Economic Impacts on a Substantial Number of Small Entities

C.7. Description of the Significant Alternatives to the Proposed Action and Discussion of How the Alternatives Attempt to Minimize Economic Impacts on Small Entities

Appendix D. Bycatch Practicability Analysis

TO BE COMPLETED

D.1. Background

D.2. Population Effects for the Bycatch Species

D.3. Practicability of Management Measures in Directed Fisheries Relative to their Impact on Bycatch and Bycatch Mortality

D.4. Ecological Effects Due to Changes in Bycatch

D.5. Changes in the Bycatch of Other Fish Species and Resulting Population and Ecosystem Effects

D.6. Effects on Marine Mammals and Birds

D.7. Changes in Fishing, Processing, Disposal, and Marketing Costs

D.8. Changes in Fishing Practices and Behavior of Fishermen

D.9. Changes in Research, Administration, and Enforcement Costs and Management Effectiveness

D.10. Changes in the Economic, Social, or Cultural Value of Fishing Activities and Non-Consumptive Uses of Fishery Resources

D.11. Changes in the Distribution of Benefits and Costs

D.12. Social Effects

D.13. Conclusion

Appendix E. Essential Fish Habitat and Ecosystem-Based Management

E.1. EFH and EFH-HAPC Designations and Cooperative Habitat Policy Development

Summary
The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) requires federal fishery management councils and the National Marine Fisheries Service (NMFS) to designate essential fish habitat (EFH) for species managed under federal fishery management plans (FMP). Federal regulations that implement the EFH program encourage fishery management councils and NMFS to designate subsets of EFH to highlight priority areas for conservation and management. These subsets of EFH are called EFH-Habitat Areas of Particular Concern (EFH-HAPCs or HAPCs) and are designated based on ecological importance, susceptibility to human-induced environmental degradation, susceptibility to stress from development, or rarity of the habitat type.

Information supporting EFH and EFH-HAPC designations was updated (pursuant to the EFH Final Rule) in Fishery Ecosystem Plan (FEP) II (SAFMC 2018). Additional detailed information supporting the EFH designations appears in FEP I (SAFMC 2009), individual FMPs, general information on the EFH provisions of the Magnuson-Stevens Act and its implementing regulations (50 CFR 900 Subparts J and K), and the EFH User Guide (SAFMC 2024).

In addition to implementing regulations to protect habitat from degradation due to fishing activities, the Council cooperates with NMFS to comment on non-fishing projects or policies that may impact EFH. The Council established a Habitat and Ecosystem Advisory Panel (AP) and adopted a comment and policy development process that was recently revised in the Habitat Blueprint (SAFMC 2023). Members of the AP serve as the Council's habitat contacts and professionals in the field and have guided the Council's development of the policy statements. To access these policy statements, refer to the habitat website: https://safmc.net/fishery-management-plans/habitat/

Habitat Conservation
The Council has been proactive in advancing habitat conservation through extensive fishing gear restrictions in all Council FMPs and by directly managing habitat and fisheries affecting those habitats through two FMPs: the FMP for Coral, Coral Reefs and Live/Hard Bottom Habitat of the South Atlantic Region (Coral FMP;SAFMC 1984) and the FMP for the Sargassum Fishery of the South Atlantic Region (SAFMC 2003).

Ecosystem Approach to Conservation and Management of Deepwater Ecosystems
Building on the long-term conservation approach, the Council facilitated the evolution of the Habitat Plan into FEP and FEP II to assemble information on the physical, biological, and human/institutional context of ecosystems within which fisheries are managed. These two documents were intended to initiate the transition from single species management to Ecosystem-Based Fisheries Management (EBFM) in the region. To support this, the South

Atlantic Council adopted broad goals: (1) maintaining or improving ecosystem structure and function; (2) maintaining or improving economic, social, and cultural benefits from resources; and (3) maintaining or improving biological and cultural diversity.

Through Comprehensive Ecosystem-Based Amendment 1 (CE-BA 1; SAFMC 2009b), Comprehensive Ecosystem-Based Amendment 2 (SAFMC 2011), and Coral Amendment 8 (SAFMC 2013), the South Atlantic Council established and expanded deepwater coral HAPCs (CHAPCs) and co-designated them as EFH-HAPCs.

E.2. EFH for species managed under the Coral FMP

Essential Fish Habitat (EFH) for hermatypic stony corals includes rough, hard, exposed, stable substrate from Palm Beach County south through the Florida reef tract in subtidal to 30 m depth, subtropical (15°-35° C), oligotrophic waters with high (30-35o/oo) salinity and turbidity levels sufficiently low enough to provide algal symbionts adequate sunlight penetration for photosynthesis. Ahermatypic stony corals are not light restricted, and their essential fish habitat includes defined hard substrate in subtidal to outer shelf depths throughout the management area.

EFH for *Antipatharia* (black corals) includes rough, hard, exposed, stable substrate, offshore in high (30-35o/oo) salinity waters in depths exceeding 18 meters (54 feet), not restricted by light penetration on the outer shelf throughout the management area.

EFH for octocorals excepting the order Pennatulacea (sea pens and sea pansies) includes rough, hard, exposed, stable substrate in subtidal to outer shelf depths within a wide range of salinity and light penetration throughout the management area.

EFH for Pennatulacea (sea pens and sea pansies) includes muddy, silty bottoms in subtidal to outer shelf depths within a wide range of salinity and light penetration.

E.3. HAPCs and C-HAPCs for species managed under the Coral FMP

Areas which meet the criteria for EFH-Habitat Areas of Particular Concern (EFH-HAPCs) for coral, coral reefs, and live/hard bottom include The 10-Fathom Ledge, Big Rock, and The Point (North Carolina); Hurl Rocks and The Charleston Bump (South Carolina); Gray's Reef National Marine Sanctuary (Georgia); The *Phragmatopoma* (worm reefs) reefs off the central east coast of Florida; Oculina Banks off the east coast of Florida from Ft. Pierce to Cape Canaveral; nearshore (0-4 meters; 0-12 feet) hard bottom off the east coast of Florida from Cape Canaveral to Broward County); offshore (5-30 meter; 15-90 feet) hard bottom off the east coast of Florida from Palm Beach County to Fowey Rocks; Biscayne Bay, Florida; Biscayne National Park, Florida; and the Florida Keys National Marine Sanctuary.

Under the FMP for Coral, Coral Reefs and Live/Hard Bottom Habitat, SAFMC can use its regulatory authority to designate coral-HAPCs to eliminate or reduce the impact of fishing on those habitats. The first CHAPC that SAFMC designated was Oculina Bank in 1984. This area was expanded in 2000 to include the Oculina Experimental Closed Area and expanded again to include the northern extension in 2013. In 2010, SAFMC designated five new coral-HAPCs: Cape Lookout Coral HAPC, Cape Fear Coral HAPC, Blake Ridge Diapir Coral HAPC, Stetson-Miami Terrace Coral HAPC, and Pourtalés Terrace Coral HAPC. SAFMC added the EFH-HAPC designation to each of these areas in 2012 via CEBA-2.

E.4. EFH for species managed under the Snapper Grouper FMP

EFH for species managed under the Snapper Grouper FMP includes coral reefs, live/hard bottom, submerged aquatic vegetation, artificial reefs and medium to high profile outcroppings on and around the shelf break zone from shore to at least 183 meters (m) (but to at least 610 m for wreckfish) where the annual water temperature range is sufficiently warm to maintain adult populations of members of this largely tropical complex. EFH includes the spawning area in the water column above the adult habitat and the additional pelagic environment, including *Sargassum*, required for larval survival and growth, up to and including settlement. In addition, the Gulf Stream is an EFH because it provides a mechanism to disperse snapper grouper species larvae.

For specific life stages of estuarine dependent and nearshore snapper grouper species, EFH includes areas inshore of the 31 m contour, such as attached macroalgae; submerged rooted vascular plants (seagrasses); estuarine emergent vegetated wetlands (saltmarshes, brackish marsh); tidal creeks; estuarine scrub/shrub (mangrove fringe); oyster reefs and shell banks; unconsolidated bottom (soft sediments); artificial reefs; and coral reefs and live/hard bottom.

E.5. HAPC for species managed under the Snapper Grouper FMP

EFH-HAPC for species managed under the Snapper Grouper FMP include medium to high profile offshore hard bottoms where spawning normally occurs; localities of known or likely periodic spawning aggregations; nearshore hard bottom areas; The Point, The Ten Fathom Ledge, and Big Rock (North Carolina); The Charleston Bump (South Carolina); mangrove habitat; seagrass habitat; oyster/shell habitat; all coastal inlets; all state-designated nursery habitats of particular importance to snapper grouper (e.g., Primary and Secondary Nursery Areas designated in North Carolina); pelagic and benthic Sargassum; Hoyt Hills for wreckfish; the Oculina Bank HAPC; all hermatypic coral habitats and reefs; manganese outcroppings on the Blake Plateau; and Council-designated Special Management Zones (SMZ).Areas that meet the criteria for EFH-HAPCs include habitats required during each life stage (including egg, larval, post-larval, juvenile, and adult stages).

EFH-HAPCs for Golden Tilefish includes irregular bottom comprised of troughs and terraces inter-mingled with sand, mud, or shell hash bottom. Mud-clay bottoms in depths of 150-300 m are HAPC. Golden tilefish are generally found in 80-540 m, but most commonly found in 200 m depths. EFH-HAPC for Blueline Tilefish includes irregular bottom habitats along the shelf edge in 45-65 m depth; shelf break; or upper slope along the 100-fathom contour (150-225 m); hard bottom habitats characterized as rock overhangs, rock outcrops, manganese-phosphorite rock slab formations, or rocky reefs in the South Atlantic Bight; and the Georgetown Hole (Charleston Lumps) off Georgetown, South Carolina.

EFH-HAPCs for the Snapper Grouper complex include the following deepwater marine protected areas (MPA) as designated in Amendment 14 to the Snapper Grouper FMP: Snowy Grouper Wreck MPA, Northern South Carolina MPA, Edisto MPA, Charleston Deep Artificial Reef MPA, Georgia MPA, North Florida MPA, St. Lucie Hump MPA, and East Hump MPA.

The Council established the Special management Zone (SMZ) designation process in 1983 in the Snapper Grouper FMP, and SMZs have been designated in federal waters off North Carolina, South Carolina, Georgia, and Florida since that time. The purpose of the original SMZ designation process, and the subsequent specification of SMZs, was to protect snapper grouper populations at the relatively small, permitted artificial reef sites and "create fishing opportunities that would not otherwise exist." Thus, the SMZ designation process was centered on protecting the relatively small habitats, which are known to attract desirable snapper grouper species.

In CE-BA 1 (SAFMC 2009b), the Council determined that SMZs met the criteria to be EFH-HAPCs for species included in the Snapper Grouper FMP. Since CE-BA 1, the Council has designated additional SMZs in the Snapper Grouper FMP including Spawning SMZs. The SMZ and EFH-HAPC designations serve similar purposes in identifying and protecting valuable and unique habitat for the benefit of fish populations, which are important to both fish and fishers. Therefore, the Council determined that a designated SMZ meets the criteria for an EFH-HAPC designation, and the Council intends that all SMZs designated under the Snapper Grouper FMP also be designated as EFH-HAPCs under the Snapper Grouper FMP.

E.6. EFH for species managed under the Shrimp FMP

SAFMC's EFH designation for shrimp applies to all waters from the EEZ to the landward most influence of the tide, from the Virginia/North Carolina border to the Dry Tortugas in the Florida Keys. Within this area, the specific habitats and locations that are EFH are listed below.

EFH Designations in the Comprehensive Amendment for *Penaeid Shrimp* (SAFMC 1998b):
For penaeid shrimp, Essential Fish Habitat (EFH) includes inshore estuarine nursery areas, offshore marine habitats used for spawning and growth to maturity, and all interconnecting water bodies as described in the Habitat Plan. Inshore nursery areas include tidal freshwater (palustrine), estuarine, and marine emergent wetlands (e.g., intertidal marshes); tidal palustrine

forested areas; mangroves[7], tidal freshwater, estuarine, and marine submerged aquatic vegetation (e.g., seagrass); and subtidal and intertidal non-vegetated flats. This applies from North Carolina through the Florida Keys.

EFH Designations in the Comprehensive Amendment for *Rock Shrimp* (SAFMC 1998b):
For rock shrimp, Essential Fish Habitat (EFH) consists of offshore terrigenous and biogenic sand bottom habitats from 18 to 182 meters in depth with highest concentrations occurring between 34 and 55 meters. This applies for all areas from North Carolina through the Florida Keys. EFH includes the shelf current systems near Cape Canaveral, Florida which provide major transport mechanisms affecting planktonic larval rock shrimp. These currents keep larvae on the Florida Shelf and may transport them inshore in spring. In addition, the Gulf Stream is an essential fish habitat because it provides a mechanism to disperse rock shrimp larvae.

Designations in the Comprehensive Amendment for *Royal Red Shrimp* (SAFMC 1998b):
Essential Fish Habitat (EFH) for royal red shrimp include the upper regions of the continental slope from 180 meters (590 feet) to about 730 meters (2,395 feet), with concentrations found at depths of between 250 meters (820 feet) and 475 meters (1,558 feet) over blue/black mud, sand, muddy sand, or white calcareous mud. In addition, the Gulf Stream is an essential fish habitat because it provides a mechanism to disperse royal red shrimp larvae.

E.7. HAPC for species managed under the Shrimp FMP

Areas which meet the criteria for EFH-Habitat Areas of Particular Concern (EFH-HAPCs) for penaeid shrimp include all coastal inlets, all state-designated nursery habitats of particular importance to shrimp (for example, in North Carolina this would include all Primary Nursery Areas and all Secondary Nursery Areas), and state-identified overwintering areas.

Clarifications to Designations for *Penaeid Shrimp:*

1. The public and resource agencies have requested a complete list of the state-designated areas that may function as nursery habitats of species managed by the SAFMC. T Appendix 1 of the User Guide contains a complete list of State protected areas with marine and or estuarine waters that function as nursery habitat and/or that are designated as EFH or EFH-HAPC for Council-managed species. No state-identified overwintering grounds have been identified for penaeid shrimp.
2. Coastal inlets include the throat of the inlet as well as shoal complexes associated with the inlets (SAFMC User guide, Figure 2). Shoals formed by waters moving landward through the inlet are referred to as flood tidal shoals, and shoals formed by waters moving waterward through the inlet are referred to as ebb tidal shoals.

[7] Mangroves are defined by this document as a tree or shrub that grows in chiefly tropical coastal swamps that are flooded at high tide. This definition includes coastal areas dominated by buttonwoods as they are habitat with similar ecosystem services.

Clarifications to Designations for *Rock Shrimp:*
No clarifications of these designations have been requested during EFH consultations.

Clarifications to Designations for *Royal Red Shrimp*:
No clarifications of these designations have been requested during EFH consultations.

References

GMFMC (Gulf of Mexico Fishery Management Council and SAFMC (South Atlantic Fishery Management Council). 1984. FMP for Coral, Coral Reefs of the Gulf of Mexico and South Atlantic (Coral FMP). Gulf of Mexico Fishery Management Council 4107 W Spruce St #200, Tampa, FL 33607 and the South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, North Charleston, SC 29405.

SAFMC (South Atlantic Fishery Management Council). 2003. Fishery Management Plan for the Sargassum Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, North Charleston, SC 29405

SAFMC (South Atlantic Fishery Management Council). 2009a. Fishery Ecosystem Plan I of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, North Charleston, SC 29405.

SAFMC (South Atlantic Fishery Management Council). 2009b. Comprehensive Ecosystem-Based Amendment 1 for the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Suite 201; North Charleston, SC 29405.

SAFMC (South Atlantic Fishery Management Council). 2011. Comprehensive Ecosystem-Based Amendment 2 for the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Suite 201; North Charleston, SC 29405.

SAFMC (South Atlantic Fishery Management Council). 2013. Amendment 8 to the Fishery Management Plan for Coral, Coral Reefs, and Live/Hardbottom Habitats of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Suite 201; North Charleston, SC 29405.

SAFMC (South Atlantic Fishery Management Council). 2018. Fishery Ecosystem Plan II of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, North Charleston, SC 29405.

SAFMC (South Atlantic Fishery Management Council). 2023. South Atlantic Fishery Management Council Habitat Program Evaluation and Blueprint. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, North Charleston, SC 29405.

SAFMC (South Atlantic Fishery Management Council). 2024. Users Guide to Essential Fish Habitat Designations by the South Atlantic Fishery Management Council. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, North Charleston, SC 29405.

Appendix F. OHAPC SFAA Mapping Results 2025 Update

In April 2025, NOAA Ship *Nancy Foster* collected bathymetry and backscatter data at 2m resolution across the 22 mi^2 proposed shrimp fishery access area (SFAA) in the *Oculina* Bank Habitat Area of Particular Concern (OHAPC). Figure 1 shows the OHAPC and proposed SFAA with available bathymetric information and spatially-precise *Oculina varicosa* observations. Data from the April expedition (NF2501) have been processed comprehensively and the bathymetry surface in particular shows few artifacts. Backscatter data were also collected to indicate relative hardness or roughness of the seafloor, with hard bottom and smooth surfaces each reflecting sound more strongly and appearing lighter in color (Fig. 2).

Known *Oculina* observations occur in a consistent depth range along the inshore extent of the OHAPC. The western boundary of the proposed SFAA is slightly deeper than these observations by a horizontal distance of approximately 300-1000 m. Mound features formed by these corals are not evident in the NF2501 multibeam bathymetry data collected in April 2025 inside the SFAA. Relatively large coral mounds are visible as small, elevated circles in older multibeam bathymetry data collected by NOAA Southeast Fisheries Science Center in 2005, to the south of proposed SFAA (Fig. 3).

The newest NOAA BlueTopo compilation also suggests that *Oculina* mounds extend along the same north-south line just west of the entire proposed SFAA. The regional BlueTopo, consisting primarily of interpolated bathymetry surfaces in the area around the OHAPC, does not resolve individual corals or mounds; it suggests the presence of relatively large aggregations of mounds. No large areas of coral mounds are visible in BlueTopo within the proposed SFAA (Fig. 4).

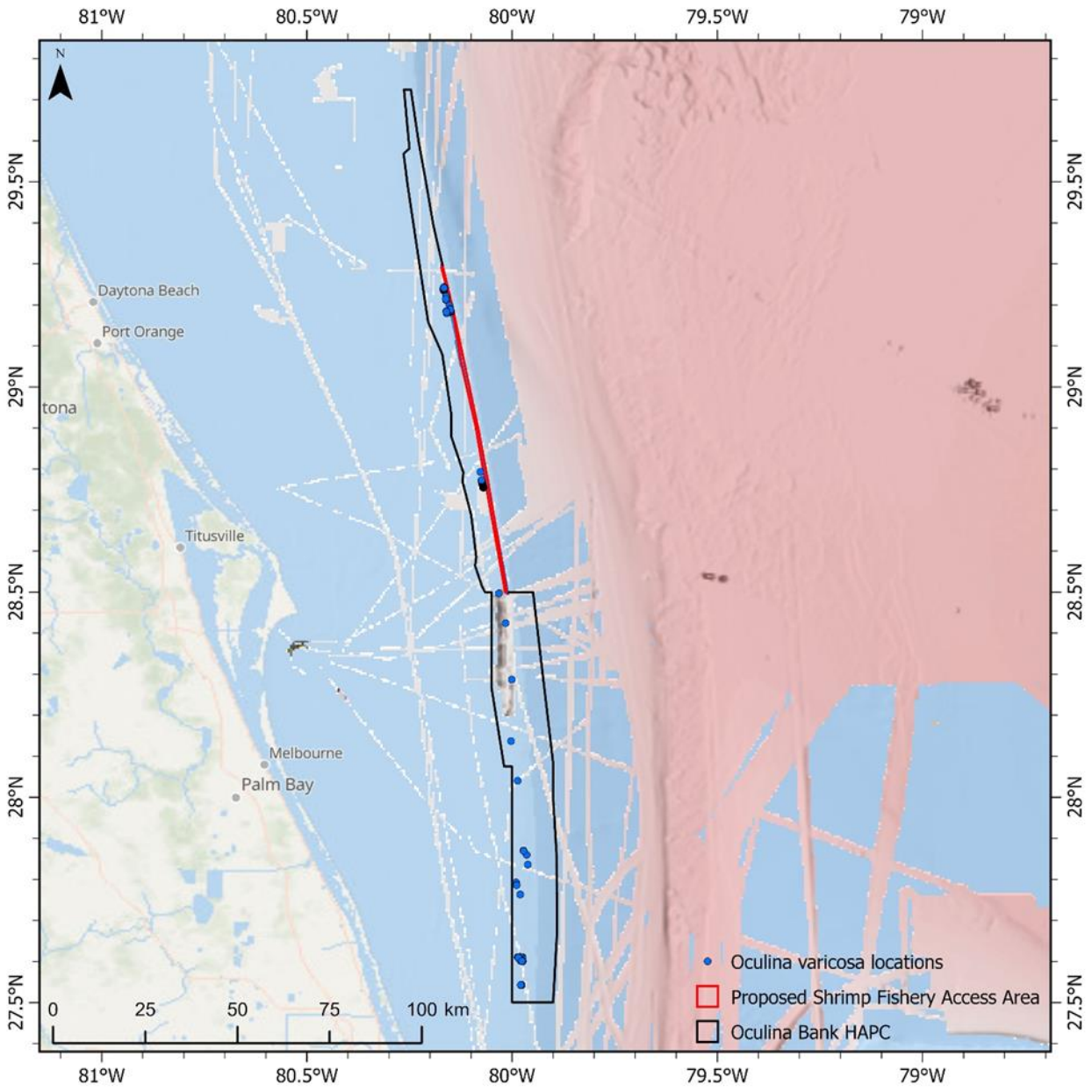

Figure F.1.1. Locations of the Oculina Bank Habitat Area of Particular Concern (HAPC, outlined in black) and proposed Shrimp Fishery Access Area (outlined in red) offshore South Florida. Spatially precise (±20 m) known locations of Oculina varicosa occurrence (blue circles) are included from the NOAA National Database for Deep-Sea Corals and Sponges. Available multibeam bathymetry (pink shading) from the NOAA National Centers for Environmental Information is also shown. There is very limited contiguous multibeam bathymetry data available within the OHAPC, since much of the existing coverage comes from vessel transits.

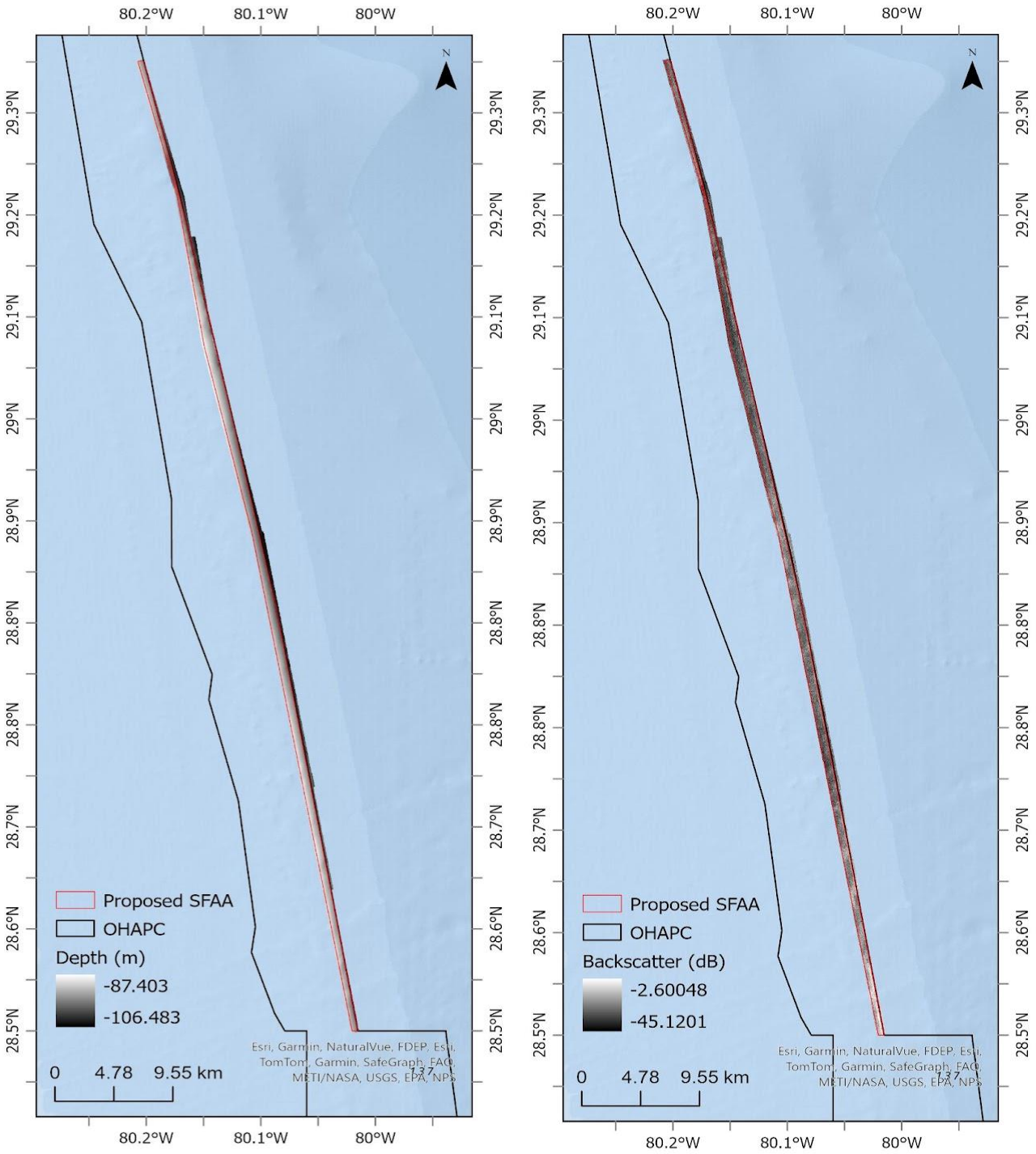

Figure F.1.2. Bathymetry (left) and backscatter (right) in the proposed SFAA collected in 2025 demonstrate depth ranges and substrate hardness suitable to support Oculina varicosa colonies.

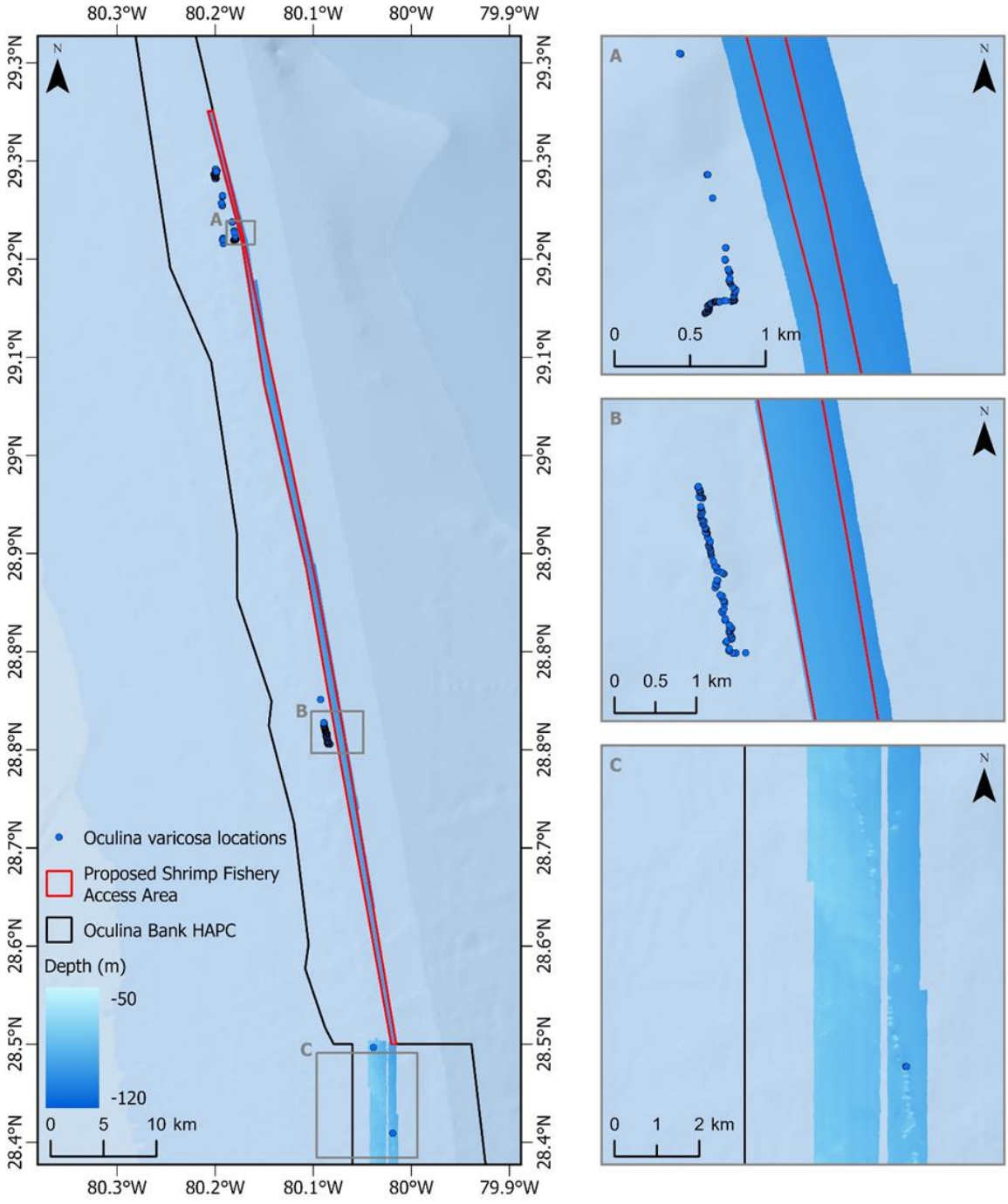

Figure F.1.3. *Oculina varicosa* colonies have been observed 360-1580 m west of the proposed SFAA. *Oculina* mounds are not evident in multibeam bathymetry collected by NOAA Ship *Nancy Foster* in April 2025 inside the proposed SFAA (e.g., panels A and B). In contrast, coral mounds are visible as lighter colored circles in the multibeam bathymetry collected by NOAA Southeast Fisheries Science Center in 2005 to the south of the proposed SFAA (panel C).

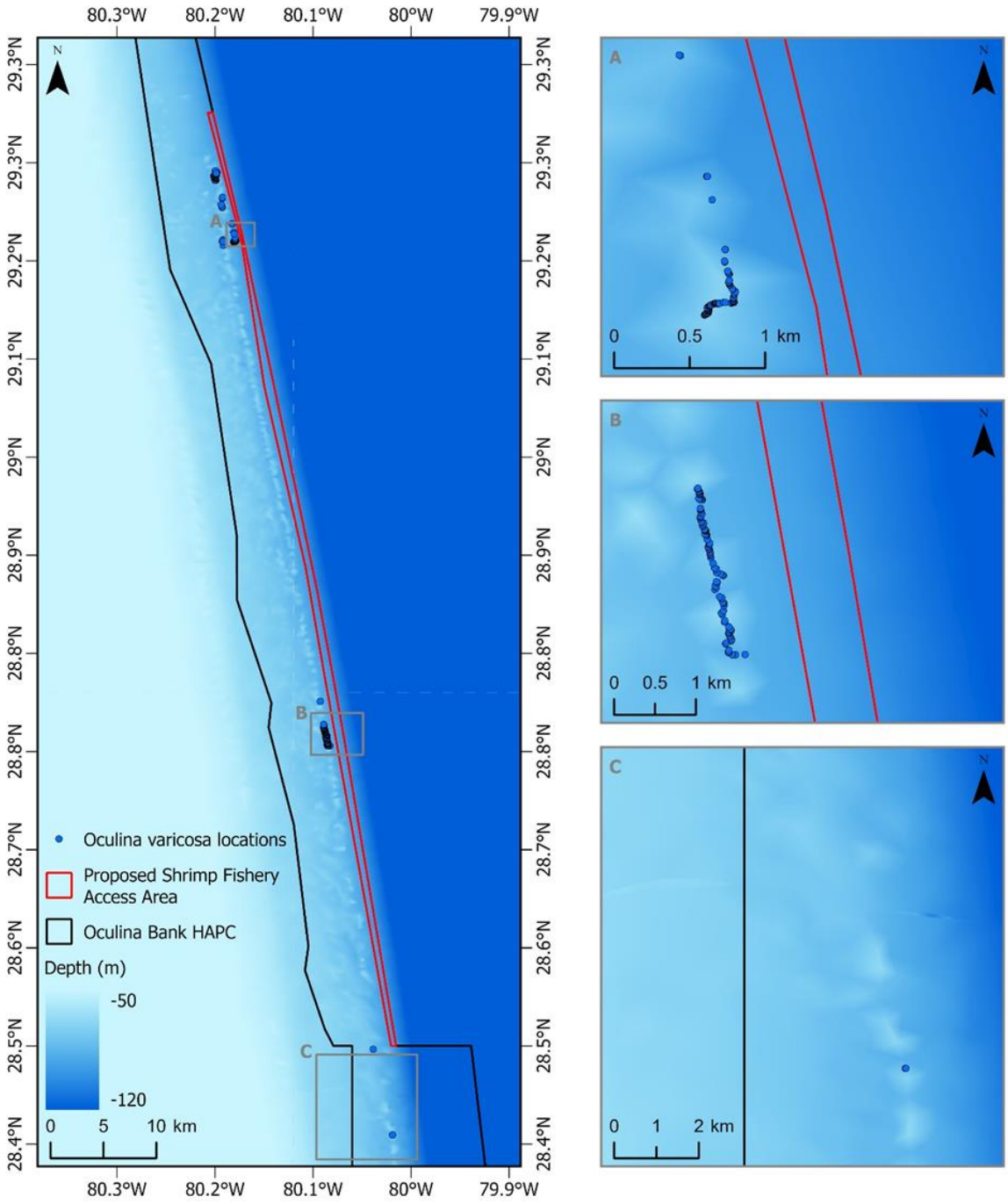

Figure F.1.4. Coral mounds are shown as small, elevated (i.e., lighter colored) shapes in the NOAA BlueTopo layer, visible in the background of this figure. Because underlying low resolution bathymetry data were collected primarily in the 1960s, individual coral mounds are not discernable, but aggregations are shown in panels A-C. No large areas of coral mounds are visible in BlueTopo within the proposed SFAA.

Appendix G. Visual Survey of the proposed Shrimp Fishery Access Area (SFAA) within the *Oculina* Habitat Area of Particular Concern (OHAPC) 28 May – 03 June 2022

Summary:

- The SEFSC was tasked with generating a quick-turnaround survey to provide visual data on the presence or absence of *Oculina* coral in the SFAA to the SEFSC, SERO and NOAA Fisheries.
- The SEFSC used a towed camera system as our observation platform. 14 dives were made but with currents between 4 and 5 kts, only 2 dives were successful.
- The data revealed no *Oculina*, live, dead or rubble, observed in the ~35 km surveyed (~27 km in the SFAA, ~7.5 km immediately east & west of the SFAA).
- In the >25 years of working on *Oculina* reefs off the east coast of Florida, all live colonies have been found on medium and high relief habitat. *Oculina* rubble is often found along the perimeter of the relief. The SEFSC has never observed live or standing dead colonies on the low and no relief areas between *Oculina* mounds, although small amounts of dispersed rubble have been noted.
- No live, standing dead or *Oculina* rubble was observed in or immediately adjacent to the SFAA in the May-June 2022 SEFSC visual survey.
- While the SEFSC cannot state definitively that no live *Oculina* colonies exist within the SFAA, based upon the results of the visual survey and the existing multibeam bathymetry of the entire SFAA (which shows only low or no relief), we predict the likelihood of live *Oculina* within the SFAA is very low.

For the full presentation, please refer to the SAFMC September 2022 Briefing book. The presentation is linked here: https://safmc.net/documents/fc2_a4_sefsc-oculina-hapc-survey-presentation_sept2022/

Figure G.1.1. Representative image of bottom within the SFAA. Sand/mud with small amount of shell hash. Laser spacing is 10 cm.

Appendix H. Fishery Impact Statement

TO BE COMPLETED

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) requires a Fishery Impact Statement (FIS) be prepared for all amendments to Fishery Management Plans (FMPs). The FIS contains an assessment of the likely biological, social, and economic effects of the conservation and management measures on: 1) fishery participants and their communities; 2) participants in the fisheries conducted in adjacent areas under the authority of another Council; and 3) the safety of human life at sea.

H.1. Actions Contained in Snapper Grouper Amendment

H.2. Assessment of Economic Effects

H.3. Assessment of the Social Effects

H.4. Assessment of Effects on Safety at Sea

Appendix I. Actions and Alternatives Removed from Consideration

Action 1. Establish a shrimp fishery access area along the eastern edge of the northern extension of the Oculina Bank Habitat Area of Particular Concern.

Proposed Alternative 4. Establish a shrimp fishery access area that narrows the area proposed in **Alternative 2** lengthwise (Figure I.1.1).

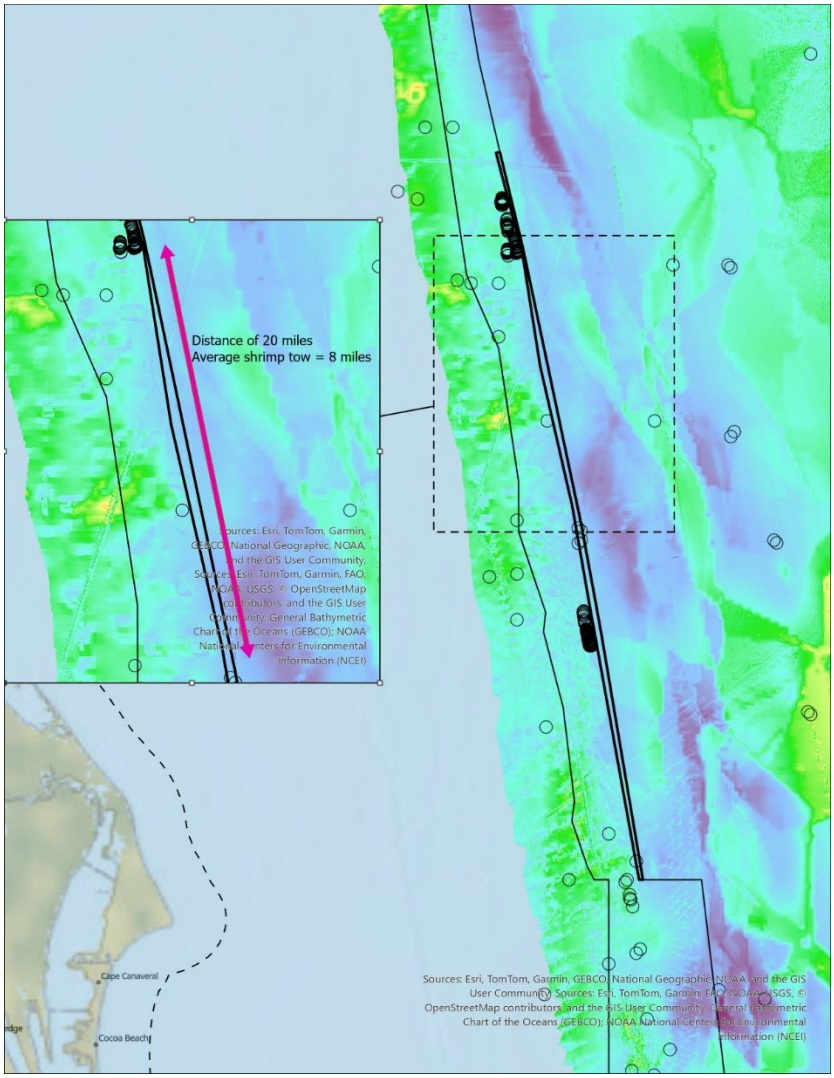

Figure I.1.1. The "Heat map" from Saldago et. al. (2022) based on a predictive algorithm. Blue denotes the least likely occurrence of coral; red/yellow denotes a high probability of coral. The circles indicate visually identified coral that have been observed and appear in the Deep-Sea Coral Data Portal (DSCRTP, 2024). The thicker black line denotes the boundary from Alternative 2 (preferred in Coral Amendment 10). The thinner black line is the OHAPC boundary. The inset is an identified 20-mile zone with low predicted coral and no known coral locations.

Discussion: During the June 2024 Council meeting there was discussion of adding an alternative that would shorten the **width** of the previous preferred alternative from Coral Amendment 10 (Alternative 2) to provide an additional buffer between where shrimping is conducted (according to vessel monitoring system [VMS] tracks) and the boundary of the OHAPC. During that same meeting shrimp fishermen noted that they already conduct trawls with a self-imposed 0.25-mile buffer to ensure they are remaining outside the OHAPC boundary, especially in the event of VMS malfunction. Because of this feedback from shrimp fishermen and lack of direction from the Council the interdisciplinary planning team (IPT) did not explore this as an alternative. After this meeting, the IPT had a sub-group meeting with staff from SERO, the Deep Sea Coral Research and Technology Program, National Center for Coastal Ocean Science, and the Habitat Conservation Division who provided a heat map of predicted coral locations in and around the OHAPC as well as visually identified coral locations mapped in the Deep Sea Coral Data Portal.

Based on the locations of known coral pinnacles and the lower likelihood of coral within a 20-mile stretch of the SFAA proposed in **Alternative 2**, and previous discussion of a "compromise" alternative, the IPT presented a brief outline for **Proposed Alternative 4** which would be to shorten the proposed SFAA (from Alternative 2) length-wise as long as the resulting length was greater than the length of an average rock shrimp tow. The identified area is roughly 20 miles long. According to observer data, the average tow is 8 miles. The IPT noted that more analysis into tow length and alternative language development would be needed if the Council chooses to include this alternative for analysis.

At the March 2025 meeting, the Council did not feel that this proposed alternative met the purpose and need of the amendment and emphasized that the action described in this amendment was to reopen historic rock shrimp fishing grounds that were closed in error. Ultimately, the Council directed staff not to include this proposed alternative within the amendment.