

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**

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The National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service Southeast Regional Office and the Council prepared this Environmental Assessment (EA) for the Action under the Fishery Management Plan for the Coral, Coral Reefs, and Live/Hard Bottom Habitats of the South Atlantic Region (Coral FMP) and the FMP for the Shrimp Fishery of the South Atlantic Region (Shrimp FMP), (EAXX-006-48-1SE-1775757504) in compliance with the National Environmental Policy Act (NEPA) (42 U.S.C. § 4321 et seq.) and NOAA's Policy and Procedures for Compliance with the National Environmental Policy Act and Related Authorities: Companion Manual for NOAA Administrative Order 216-6A (June 30, 2025).

Certifications

NOAA has considered the factors mandated by NEPA and has determined that the EA represents NOAA's good-faith effort to prioritize documentation of the most important considerations required by the statute within the congressionally mandated page limits. This prioritization reflects NOAA's expert judgment and any considerations addressed briefly or left unaddressed were, in NOAA's judgment, comparatively not of a substantive nature that meaningfully informed the consideration of environmental effects and the resulting decision on how to proceed.

The resulting EA also represents NOAA's good-faith effort to fulfill NEPA's requirements within the congressionally mandated timeline. The EA is substantially complete and, in NOAA's expert opinion, the agency has thoroughly considered the factors mandated by NEPA. In NOAA's judgment, the analysis contained herein is adequate to inform and reasonably explain NOAA's final decision regarding the proposed activity or decision.

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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) is an amendment that 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 this historic commercial trawling area could be reopened to rock shrimp fishing.

The Council added the northern extension to the OHAPC through Amendment 8 to the Coral FMP in 2014 (SAFMC 2013). 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 transmission 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 this important fishing area and further refined those coordinates in March 2014.

The Council reviewed the issue in June 2020 and recommended moving forward with the action in response to the Presidential Executive Order (EO) 13921 on Seafood Competitiveness and Economic Growth to “reduce burdens on domestic fishing and to increase production within sustainable fisheries” for commercial fishermen who have lost access to areas that had been traditionally fished. Opening the historic fishing grounds would reduce regulatory burden. The Council began developing Amendment 10 to the Coral FMP after its September 2020 meeting with an action to establish an SFAA within the OHAPC to re-establish access to the rock shrimp fishery.

The Council approved Coral Amendment 10 at its September 2021 meeting and submitted it to the Secretary of Commerce in December 2021. On April 29, 2022, the National Marine Fisheries Service (NMFS) published a notice of availability to allow for public comment on Coral Amendment 10 (87 FR 25438). Finally, on July 28, 2022, NMFS disapproved Coral Amendment 10, citing inconsistencies with the Magnuson-Stevens Act (MSA), deficiencies in the analyses, and inconsistencies with the goals and objectives of the Coral FMP.

In Coral Amendment 11/Shrimp Amendment 12, the Council is addressing the deficiencies noted [in the disapproval letter for Coral Amendment 10](#) and proposing the establishment of an SFAA that would allow access to historic fishing grounds for the rock shrimp fishery within a narrow area along the OHAPC boundary.

What Actions are Being Proposed in This Amendment?

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

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

Preferred Alternative 2. Establish a shrimp fishery access area along the eastern boundary of the northern extension of the Oculina Bank Habitat Area of Particular Concern, that is 14.10 square nautical miles (NM²) if the latitude and longitude are projected using a geodesic measurement and a WGS-1984 projection. 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.

Table S.1.1. Coordinates for the proposed SF AA under **Preferred Alternative 2.**

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 boundary of the northern extension of the Oculina Bank Habitat Area of Particular Concern that is 18.87¹ NM² if the latitude and longitude are projected using a geodesic measurement and a WGS-1984 projection. 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.

¹ Calculated area for identical coordinates can change depending on the program, projection, or type of measurement used. The area was calculated using ArcGIS with a geodesic measurement and a WGS 1984 Projection.

Table S.1.2. Coordinates for the proposed SFAA under Alternative 3.

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"

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 boundary of the northern extension of the Oculina Habitat Area of Particular Concern 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 optimize yield in the rock shrimp fishery by expanding access to fishing grounds 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 (Coral Amendment 8)(SAFMC 2013) (80 FR 42423, July 17, 2015; correcting final rule published October 7, 2015, at 80 FR 60565). 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 in the future.

1.2. Who is Proposing the Action?

The South Atlantic Fishery Management Council (Council) and the National Marine Fisheries Service (NMFS) are responsible for managing fish stocks under the Coral FMP and the Shrimp FMP. The Council develops the amendment and sends it to NMFS, who determines whether to approve the amendment and publish a rule to implement the amendment 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.

The Council and NMFS are also responsible for making this amendment available for public comment. The draft environmental assessment (EA) is combined with the amendment and made available to the public during the scoping process, public hearings, and in Council meeting briefing books. In addition, the final EA and amendment will be made available for public comment during the rulemaking process that would implement the amendment. The final EA and amendment may be found on the Council's website at <http://www.safmc.net>.

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.

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) (Figure 1.3.1) is conducted under the Coral FMP (GMFMC & SAFMC 1982). The Council manages over 400 coral species and associated habitat under this FMP (SAFMC 1984). The OHAPC, as modified through Coral Amendment 8 (SAFMC 2013), is in the EEZ off the east coast of Florida (Figure 1.3.2). The OHAPC protects the known distribution of *Oculina* coral and the surrounding habitat 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. The proposed action in this amendment only directly affects the rock shrimp fishery.

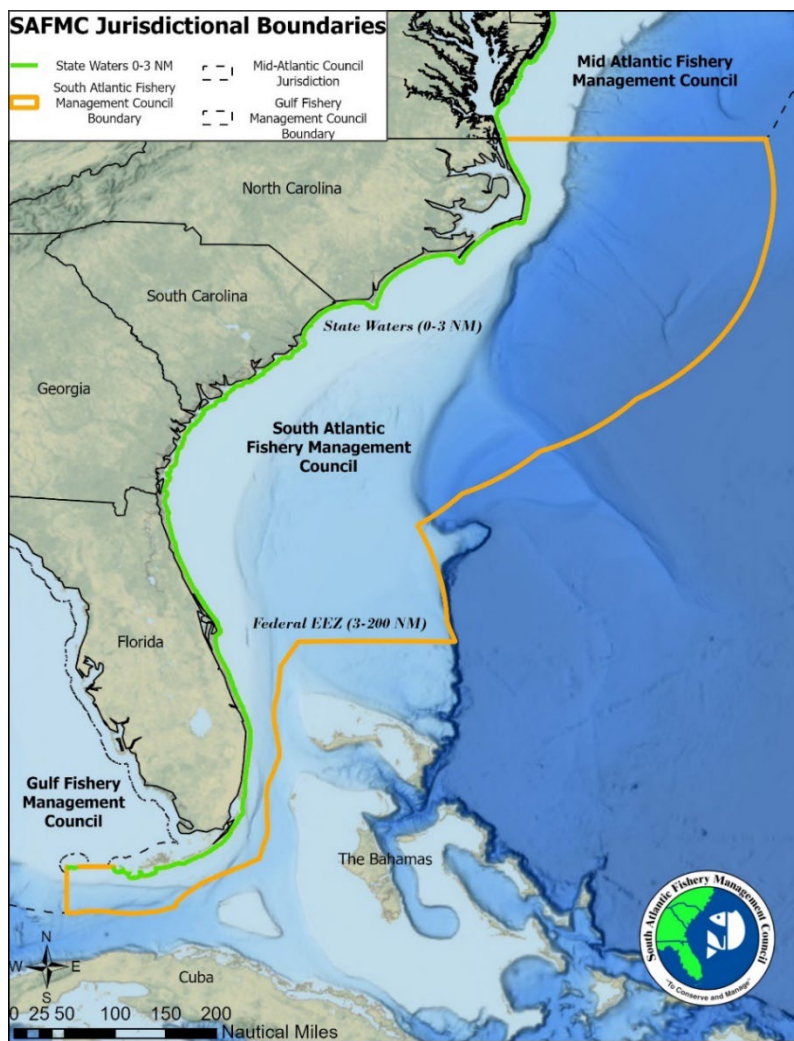


Figure 1.3.1. Jurisdictional boundaries of the South Atlantic Fishery Management Council.

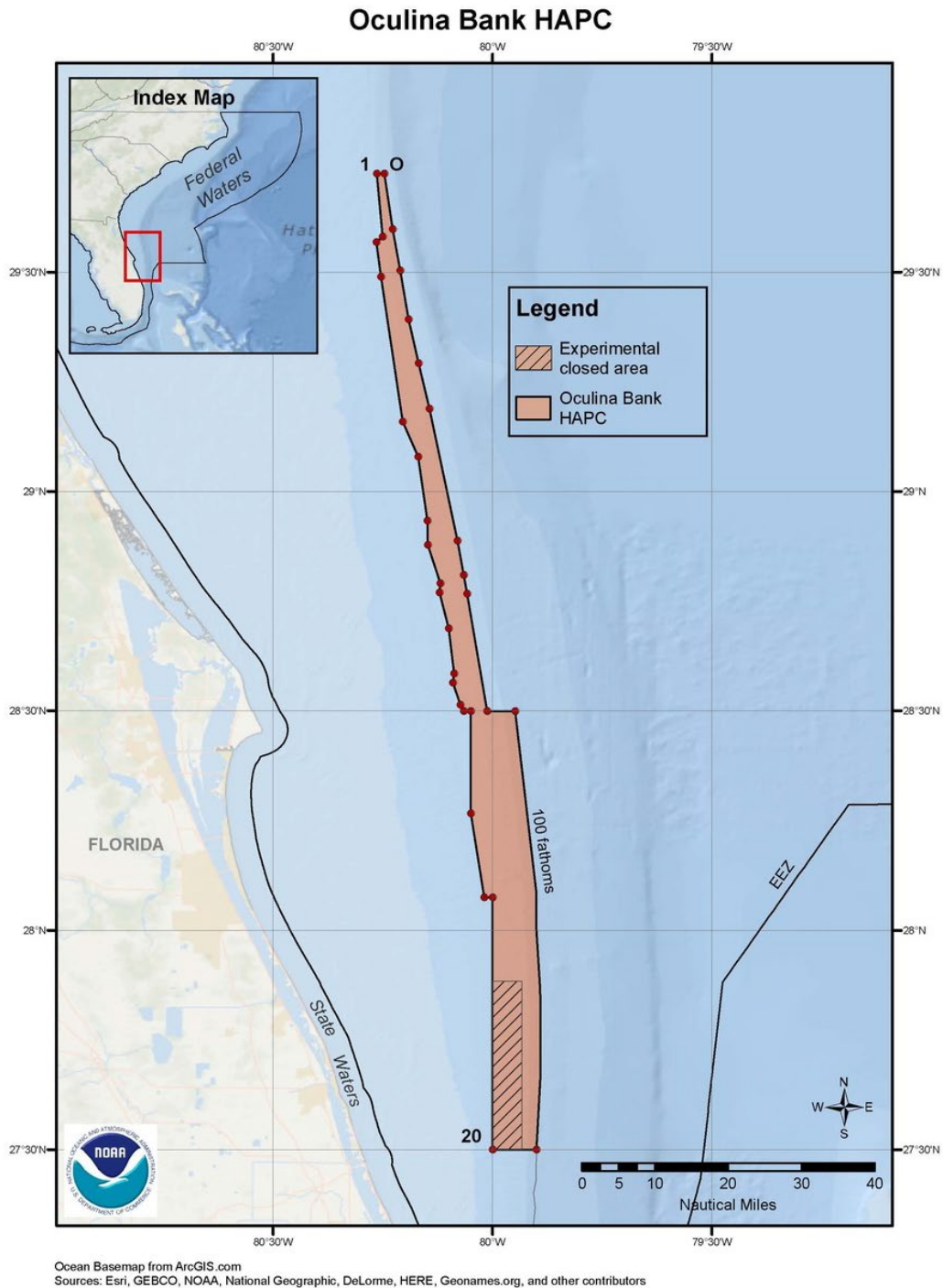


Figure 1.3.2. Map of the OHAPC. The OHAPC is the entire area in red. The experimental closed area, which is within the OHAPC, was established under the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region.

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 boundary of the northern extension of the *Oculina* Habitat Area of Particular Concern 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 optimize yield in the rock shrimp fishery by expanding access to fishing grounds while minimizing negative impacts to deepwater coral in the Council's jurisdiction.

Discussion

The South Atlantic Fishery Management Council (Council) established the OHAPC through the original Coral FMP in 1982 and prohibited fishing with bottom longline, bottom trawl, dredge, pot, or trap in the OHAPC (49 FR 29607; July 23, 1984). 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 Council approved Coral Amendment 8 to expand the boundaries of the OHAPC at its September 2013 meeting. NMFS, on behalf of the Secretary of Commerce, approved the amendment on August 18, 2014, and the final rule to implement Coral Amendment 8 became effective on August 17, 2015 (80 FR 42423; July 17, 2015; correcting final rule published October 7, 2015, at 80 FR 60565).

The Council received public comment when it was finalizing Coral Amendment 8 that a discrete area along the eastern boundary of the northern extension of the OHAPC was an important fishing ground for rock shrimp. The commercial rock shrimp industry provided the coordinates for the historic fishing area during the development of Amendment 8. During the May 2013 Deepwater Shrimp Advisory Panel (AP) meeting, AP members indicated that vessel monitoring system (VMS) data verified past rock shrimp fishing in the proposed area. The AP Chair also noted that the portion of the rock shrimp fishery that intends to use this area is variable; fishing effort changes based on upwelling conditions and shifting catch composition.

During their June 2014 meeting, the Council discussed industry concerns and agreed to further consider 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 expanded portion of the OHAPC, as this was the closed area from which rock shrimp industry representatives maintained they would be losing economic benefits. To conduct an evaluation, the Council requested the NMFS Southeast Fisheries Science Center provide the following: data up to 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 America (Gulf) shrimp vessels operating in the South

Atlantic by September 1, 2014. In June 2015, the Council decided to add the development of an amendment to consider establishing an SFAA for rock shrimp fishing along the eastern boundary of the northern extension of the OHAPC to the workplan. Due to an increased staff workload and the need for more mapping data on the area, the development of the amendment was delayed.

At the June 2018 Council meeting, a motion was made to consider adjusting the eastern edge of the Oculina Bank HAPC. During discussions on what would become Coral Amendment 10, which contained the same coordinates for an SFAA that are identical to **Preferred Alternative 2**, a Council member with in-depth knowledge of the rock shrimp fishery offered additional information for the Council to consider, including a historical account of how the fishery originated and developed. Development of Amendment 10 to the Coral FMP (Coral Amendment 10, SAFMC 2021) began following the Council's direction at its September 2020 meeting. Coral Amendment 10 proposed to establish a SFAA along the eastern boundary of the northern extension of the OHAPC, where trawling for rock shrimp is currently prohibited. The Council took final action to approve Coral Amendment 10 at its September 2021 meeting and then submitted it to the NMFS for review in December 2021.

The NMFS, on behalf of the Secretary of Commerce, disapproved Coral Amendment 10 and stated that 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 objectives of the Coral FMP, specifically in regard 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 in Coral Amendment 10 as listed above and then resubmit a revised amendment to NMFS. Upon further review, the Council determined that the establishment of the SFAA should be done through amendments to the Shrimp FMP and the Coral FMP.

1.5. What is the History of Management for Coral?

Management of coral resources was originally established in the Coral FMP by the Gulf (previously Gulf of Mexico) Fishery Management Council (Gulf Council) and the Council in 1982 (GMFMC & SAFMC 1982). The Council subsequently established a separate Coral FMP. The reader is referred to the following link for the management history, summary of changes under each amendment, implementation dates, an up-to-date list of amendments under development, and more: <https://safmc.net/fishery-management-plans/coral/>.

1.6. What is the History of Management for Shrimp?

Management of shrimp in the South Atlantic first began in 1993 (SAFMC, 1993). The reader is referred to the following link for the management history, summary of changes under each

amendment, implementation dates, an up-to-date list of amendments under development, and more: <https://safmc.net/fishery-management-plans/shrimp/>.

1.7. Coral FMP Goals and Objectives (1984)

- Optimize the benefits generated from the coral resource while conserving the coral and coral reefs.
- Minimize adverse human impacts on coral, coral reefs, and live hard bottom habitat.
- Designate Coral Habitat Areas of Particular Concern (CHAPCs) to protect coral and live bottom habitat.
- Increase public awareness of the importance and sensitivity of coral and coral reefs.
- Provide a coordinated management regime for the conservation of coral and coral reefs.

1.8. Shrimp FMP Goals and Objectives (2009)

- Eliminate fishing mortality on over-wintering white shrimp following severe winter cold kills.
- Reduce the bycatch of non-target finfish, invertebrates, and threatened, protected, and endangered species.
- Coordinate development of measures reducing bycatch with South Atlantic states to enhance enforceability of both state and federal regulations.
- Enhance compliance of trawl fishermen participating in a transboundary penaeid shrimp fishery through standardization of bycatch reduction strategies.
- Encourage states with mariculture facilities to carefully monitor these operations and require safeguards to prevent exotic species from escaping and/or diseases from entering the environment.
- Reduce or eliminate loss and/or alteration of the habitat on which shrimp depend, or degradation of water quality through pollution that would reduce shrimp production.
- Provide a mechanism to manage rock shrimp under the fishery management plan for the shrimp fishery in the South Atlantic region.
- Minimize impacts of the rock shrimp fishery on coral, coral reefs, and live/hard bottom habitat in the South Atlantic region.
- Implement permit and reporting requirements needed to ensure the necessary data are provided by the rock shrimp industry.
- Manage the resource to provide for higher sustainable net benefits by taking the first step in reducing the current overcapacity in the rock shrimp fishery.
- Remove latent permits from the rock shrimp fishery and restrict future entrants so as not to exacerbate the overcapacity problem in the future.
- Protect the interests of traditional user groups in the rock shrimp fishery. Traditional users also tend to be more familiar with management regulations pertaining to their fishery as opposed to new entrants who enter a fishery and participate infrequently.
- Decrease fishing mortality on unmarketable small/juvenile rock shrimp with the goal of increasing future yield in the rock shrimp industry from reduced discards of small shrimp.
- Improve enforcement of current fishery management regulations, particularly with regard to illegal fishing in the Oculina Bank HAPC, by requiring vessel monitoring systems on rock shrimp vessels.
- Protect the interests of vessel owners who are not operators and increase compliance with management regulations by the requirement for operator permits for rock shrimp vessels.

- Ensure that sufficient effort remains active to sustain the rock shrimp fishery and infrastructure.

Chapter 2. Proposed Actions

2.1. Action 1. Establish a shrimp fishery access area along the eastern boundary 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 boundary of the northern extension of the Oculina Bank Habitat Area of Particular Concern, that is 14.10^2 square nautical miles (NM²) if the latitude and longitude are projected using a geodesic measurement and a WGS-1984 projection. 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 boundary of the northern extension of the Oculina Bank Habitat Area of Particular Concern that is 18.87^3 NM² if the latitude and longitude are projected using a geodesic measurement and a WGS-1984 projection.

² Calculated area for identical coordinates can change depending on the program, projection, or type of measurement used. The area was calculated using ArcGIS with a geodesic measurement and a WGS 1984 Projection.

³ Calculated area for identical coordinates can change depending on the program, projection, or type of measurement used. The area was calculated using ArcGIS with a geodesic measurement and a WGS 1984 Projection.

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"

2.1.2. Discussion

Alternative 1 (No Action) would maintain current regulations and not 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).

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 on August 17, 2015 (80 FR 42423; July 17, 2015; correcting final rule published October 7, 2015, at [80 FR 60565](#)).

Preferred Alternative 2 would establish an SFAA that encompasses approximately 14.10 NM² and is based on coordinates presented by rock shrimp fishermen (Figure 2.1.1). This set of coordinates was reaffirmed during the November 2020 meeting of the Deepwater Shrimp Advisory Panel.

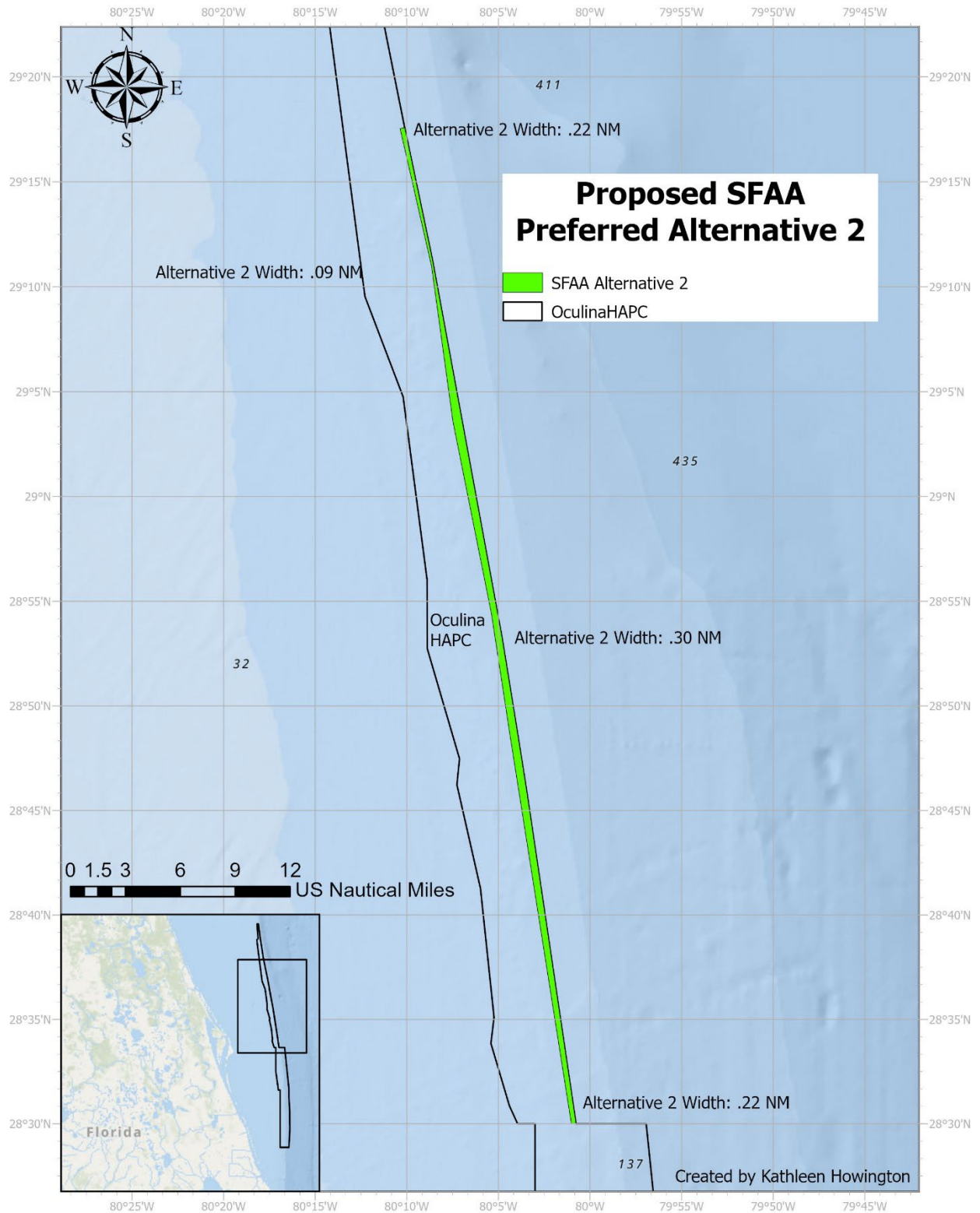


Figure 2.1.1. Shape and approximate widths for the proposed SFAA (Preferred Alternative 2). Note: OHAPC Northern Extension width range (0.1-0.5 nautical miles).

Alternative 3 would establish an SFAA that encompasses approximately 18.87 NM² and is based on coordinates presented by rock shrimp fishermen (Figure 2.1.2).

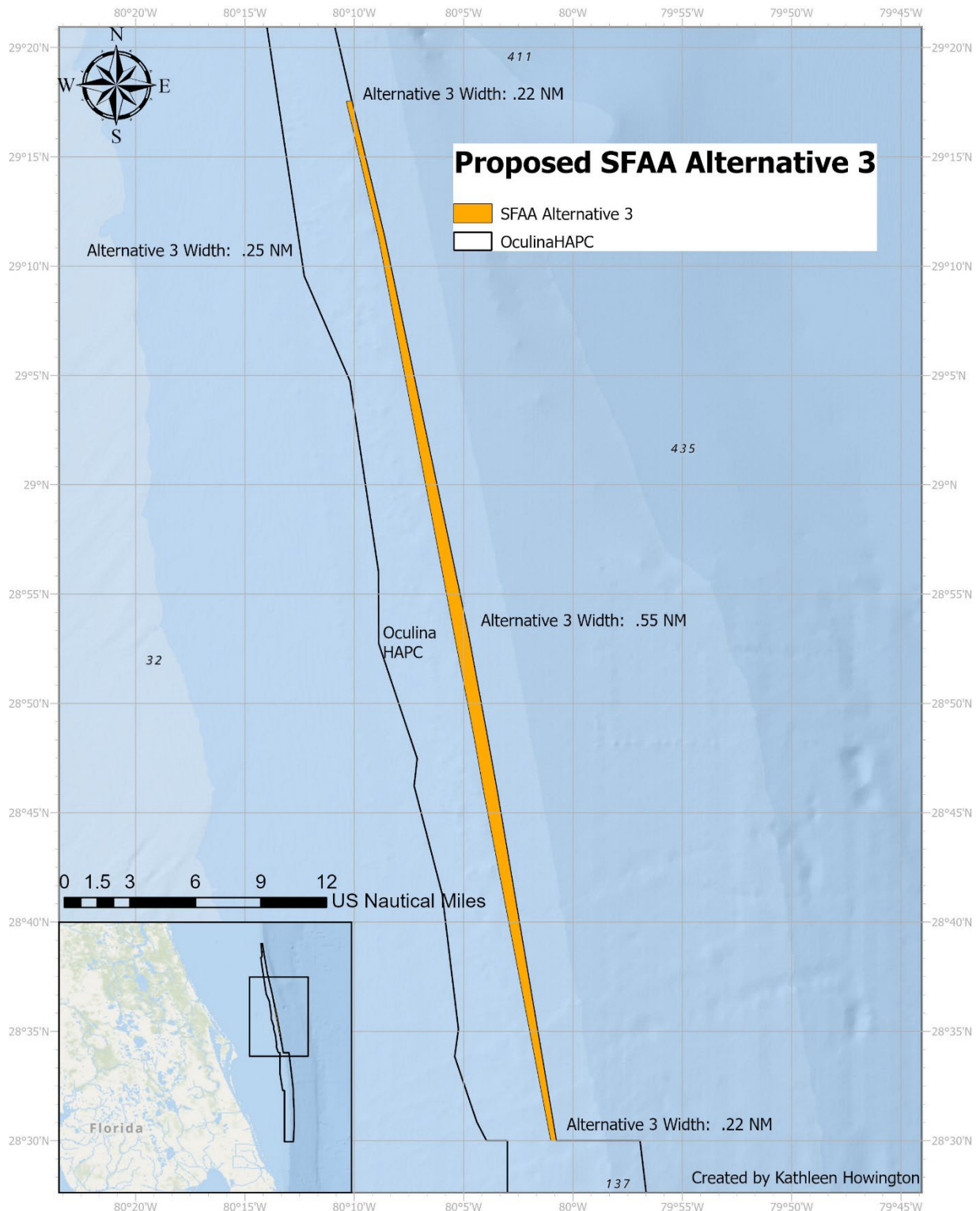


Figure 2.1.2. Shape and approximate widths for the proposed SFAA (Alternative 3; based on fishermen input). Note: OHAPC Northern Extension width range (0.2 -0.6 nautical miles).

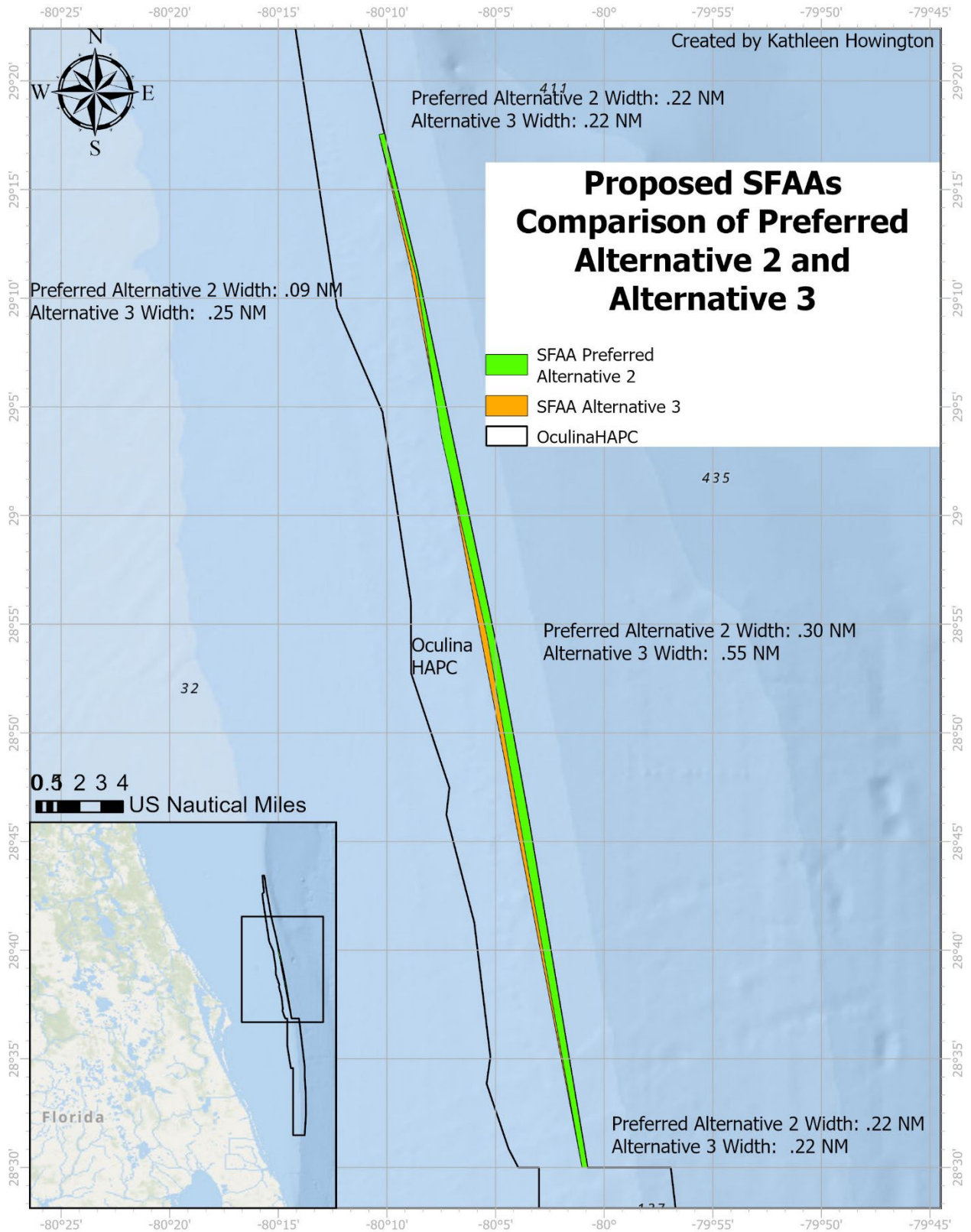


Figure 2.1.3. Comparison of SFAA Preferred Alternative 2 and Alternative 3 layouts and widths.

2.2. Comparison of Alternatives

Alternative 1 (No Action) would not establish an SFAA. **Preferred Alternative 2** and **Alternative 3**, would establish SFAAs of approximately 14.10 NM² and 18.87 NM², respectively. Establishing an SFAA as proposed under **Preferred Alternative 2** and **Alternative 3** is not expected to result in direct negative biological impacts to Essential Fish Habitat (EFH) in the area, which is identified as deepwater coral. No *Oculina* coral pinnacles are known to exist within the proposed SFAA (Appendix G). The SFAA is located in an area where *Oculina* coral presence is not expected. There could, however, be indirect negative impacts from gear damage to *Oculina* pinnacles, if they existed close to the boundary of the SFAA, or from sediment plumes generated by trawling activities. The effects of gear damage on nearby *Oculina* coral is expected to be low, as fishermen avoid gear interactions, and vessels that would be allowed to fish in the SFAA are equipped with vessel monitoring systems (VMS) that help ensure they do not trawl within the closed area. Prior to the restrictions in Coral Amendment 8, the fishing effort within the proposed SFAA has historically been low and variable. The bycatch in the area is also expected to be low since shrimpers avoid areas with known coral so the only bycatch that may occur is if reef-dwelling species swim off the reef into the proposed SFAA. For the full bycatch information, refer to Appendix D.

Sedimentation risk from trawling is also expected to be low. However, there is very little information on the dispersal of sediment related to trawling activity in this region. It is known that upwelling events in the area can cause episodic intrusions of cold water throughout the year (Reed 2006) that would increase the risk of sedimentation if shrimping were occurring in the proposed SFAA. A review of Surfline⁴ and National Weather Service reports⁵ for the area, only noted four upwelling events in a 20-year period from 2014-2024. An analysis of buoy temperature data for the National Data Buoy Center number 41009⁶ off the coast of Cape Canaveral showed a temperature drop that indicated an average of 1.5 upwelling days per year during the months of May-September. The distance between known *Oculina* coral pinnacles and the boundary of the SFAA in **Preferred Alternative 2** would provide a larger buffer than under **Alternative 3**, decreasing potential sedimentation impacts.

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 14.10 NM² or 18.87 NM² areas, respectively. Given the 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 4.77 more square nautical miles within the OHAPC than **Preferred Alternative 2**. Additionally, if landings of rock shrimp increase, these landings are a

⁴ <https://www.surflines.com/surf-reports-forecasts-cams/united-states/florida/brevard-county/cape-canaveral/4149959>

⁵ <https://forecast.weather.gov/MapClick.php?lat=28.388229&lon=-80.605878>

⁶ https://www.ndbc.noaa.gov/station_page.php?station=41009

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.

Alternative 1 (No Action) would likely result in minimal social effects because the fleet is already harvesting in open areas and is prohibited from working in the entirety of the OHAPC. **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. **Preferred Alternative 2** and **Alternative 3** directly address stakeholder concerns regarding access to historically important fishing grounds. **Preferred Alternative 2** includes coordinates provided by the industry, which shifted the proposed western SFAA boundary even further offshore from known or suspected high relief habitat than presented in **Alternative 3**.

The proposed SFAA comprises an area of historical fishing grounds, where the rock shrimp industry was previously able to access rock shrimp prior to the effective date of Coral Amendment 8 in August 2015. Reopening these historic fishing grounds supports the recent Executive Order (EO) 14276, Restoring American Seafood Competitiveness⁷ (See Appendix A). Both **Preferred Alternative 2** and **Alternative 3** would 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.

The establishment of an SFAA (**Preferred Alternative 2** and **Alternative 3**) would have minimal administrative impacts. This amendment would not modify the transit provision for the OHAPC, and vessels would need to continue to maintain a VMS transmission rate of 1 position per 5 minutes when transiting through or fishing in the OHAPC. However, for effective monitoring of fishing activity within any established SFAA, vessels with a valid commercial permit for rock shrimp operating within a SFAA must ensure that the required VMS unit transmits a signal indicating the vessel's accurate position every five minutes. Both proposed SFAAs are narrow and within the boundary of the OHAPC. A VMS transmission rate of five-minute intervals will aid in effective monitoring of fishing activity within and near the OHAPC. The administrative impacts are expected to be minimal since there would not be a need to alter VMS technical specifications, in regard to transmission rates or fishing activity via transit. Approved VMS units are currently configured for five-minute transmission rates through a NOAA approved contractor. Any additional costs associated with trawling at a higher transmission rate would involve modifications to the specific VMS vendors used by the vessel owner and would be the vessel owner's responsibility.

⁷ <https://www.whitehouse.gov/presidential-actions/2025/04/restoring-american-seafood-competitiveness/>

Chapter 3. Affected Environment

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 coral and shrimp species managed under the Fishery Management Plan (FMP) for the Coral, Coral Reefs, and Live/Hard Bottom Habitats of the South Atlantic Region (Coral FMP) and the FMP for the Shrimp Fishery of the South Atlantic Region (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's [SAFMC Mapper](#).

The following are the EFH, CHAPCs, and HAPCs for the Coral FMP, Snapper Grouper Fishery of the South Atlantic Region FMP (Snapper Grouper FMP), and Shrimp FMP. The Snapper Grouper FMP is included because the *Oculina* coral present in Oculina Bank and the hard bottom found within the Oculina Bank Habitat Area of Particular Concern (OHAPC) are EFH for many snapper grouper species, as identified in section 3.2. In addition, Amendment 4 to the Coral FMP established the entire OHAPC as EFH-HAPC for snapper grouper species (SAFMC 1998a).

3.1.1. Essential Fish Habitat

For current EFH designations for species managed under the Coral 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 varicosa* coral and rock shrimp (*Sicyonia brevirostris*). *Oculina* is considered EFH for snapper grouper species, 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 and Ecological Function

Oculina is a genus of colonial stony coral in the family Oculinidae. The majority of research on *Oculina* coral was conducted in the 1980-1990s on the southern zone of the now established OHAPC. The most recent studies that were conducted in the northern zone of the OHAPC are included in Appendices F and G.

In deepwater (>60 meters [m]), *Oculina* forms spherical, dendroid, bushy colonies that are 10 centimeters (cm) to 1.5 meters (m) in diameter and height. The branches average 6 millimeters (mm) in diameter near the tips and frequently grow apart and fuse to form a large, interconnected structure. Individual *Oculina* 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 *Oculina* 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 current-facing side of the *Oculina* coral mound. In addition, *Oculina* reefs are periodically exposed to nutrient-rich, cold water upwelling temperatures of 7.4 to 10 degrees Celsius (°C).

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/second[s]), which are thought to contribute to growth (Reed 1992).

Oculina coral can range from the Caribbean to Bermuda and the Gulf, at depths of 5-152 m. The majority of the *Oculina* coral reefs are found in depths of 60 to 100 m in an area 2 to 6 kilometers (km) wide along the eastern Florida shelf (Avent et al. 1977; Reed 1980). Much of the habitat that has been mapped and characterized is within or adjacent to the OHAPC, located 15 nautical miles off Fort Pierce and extending northward towards Cape Canaveral, Florida. According to Reed (1981) the majority of massive *Oculina* growth occurs between 27° 30' N. latitude and 28° 30' N. latitude, which encompasses the *Oculina* HAPC.

Oculina constitutes essential fish habitat to a multitude 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 (*Mycteroperca microlepis*) and scamp (*Mycteroperca phenax*). They also serve as nursery grounds for snowy grouper (*Hyporthodus niveatus*) and feeding grounds for these and many other fish species including black sea bass (*Centropristis striata*), red grouper (*E. morio*), speckled hind (*E. drummondhayi*), Warsaw grouper (*E. nigrurus*), amberjack (*Seriola* spp.), red porgy (*Pagrus pagrus*), and red snapper (*Lutjanus campechanus*) (Gilmore and Jones 1992). Biodiversity, grouper densities, and percentage of intact *Oculina* coral have been documented to be higher inside the *Oculina* Bank HAPC compared to outside (Harter et al. 2009). At least 73 species of fish are known to reside upon 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, 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 2002). 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 Mikkelsen 1987), 50 decapod crustacean species (Reed et al. 1982), 47 amphipod species, 21 echinoderm species, 15 pycnogonid species, and 23 families of polychaetes (Reed 2002). 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 3.2.2.1). 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.

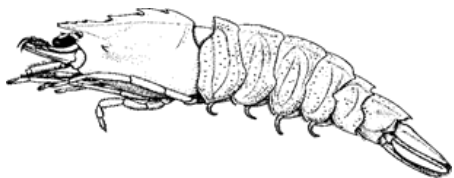


Figure 3.2.2.1. Rock shrimp, *Sicyonia brevirostris*.

Rock shrimp are found in the Gulf, 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 feet [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 (SAFMC 1993).

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 mm) as juveniles and 0.02 inches CL per month as adults (0.5 - 0.6 mm). Rock shrimp are bottom feeders, most active at night, with a diet primarily of mollusks, crustaceans, and polychaete worms.

The foundational research by Kennedy et al. (1977) remains a significant source of information on rock shrimp. This section presents some of the more significant findings from that study regarding the biology of rock shrimp on the east coast of Florida. For example, 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). Other early studies, such as Keiser (1976), described the distribution of rock shrimp in coastal waters of the southeastern U.S., and 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 (SAFMC, 2009c)⁸ and Coral Amendment 8 (SAFMC 2013) and is 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.

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 positions that correspond to a vessel moving at speeds between 2 and 4 knots are used as a proxy for fishing activity. VMS data from 2009 to 2024 were from the areas proposed as SFAAs in this amendment were analyzed. The analysis focused on separating out VMS positions pre-closure of the OHAPC (February 2009 to September 2015) and post-closure of the OHAPC (October 2025 to December 2024) and only focused on vessels which were actively trawling. A representation of these vessels based on VMS data is in Figure 3.2.2.2.

⁸ https://safmc.net/documents/combined-fep_toc-pdf/

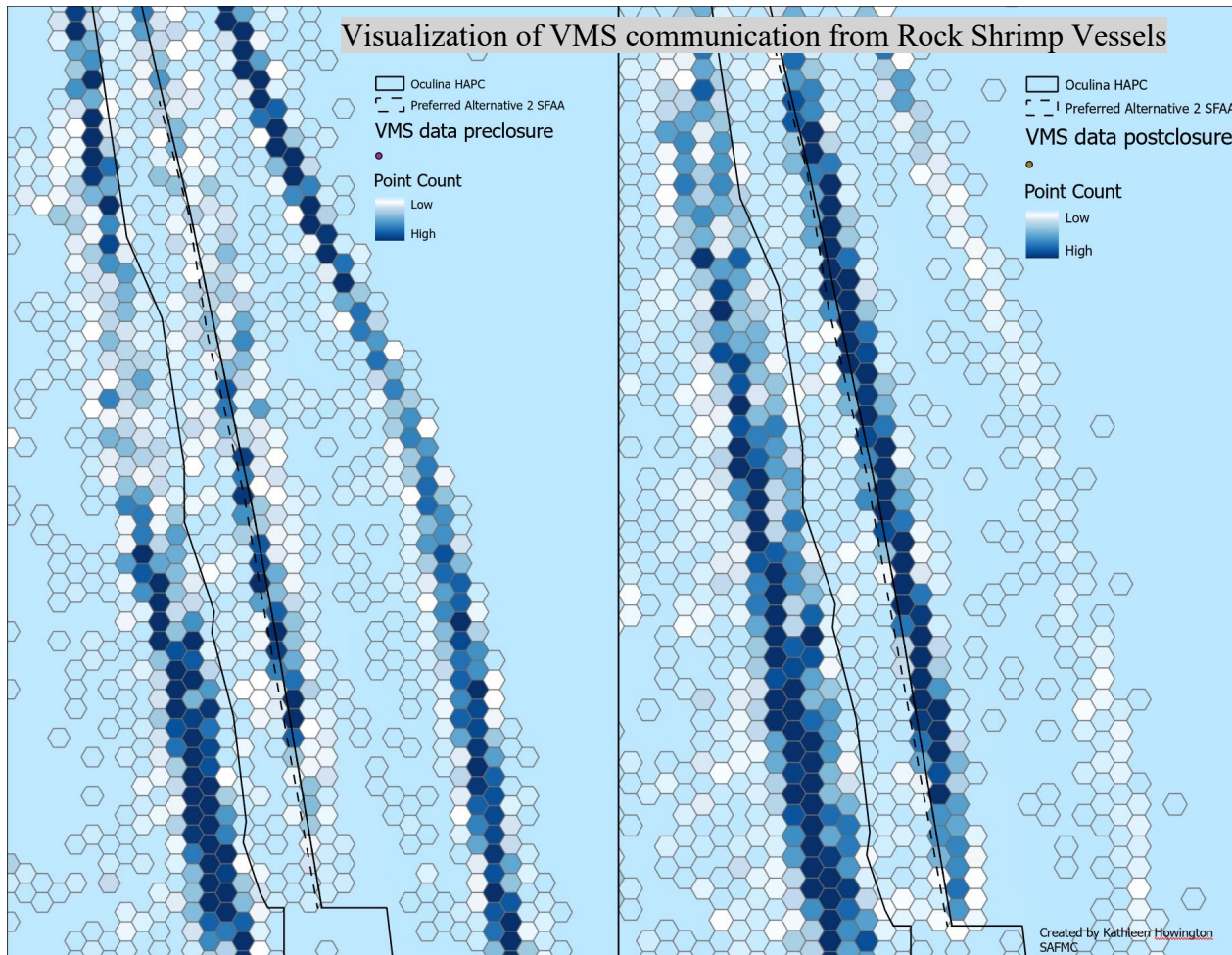


Figure 3.2.2.2. A visualization of VMS positions from rock shrimp vessels separated out pre-closure of the OHAPC (February 2009 to September 2015) and post-closure of the OHAPC (October 2015 to December 2024) that were actively trawling (moving at a speed above 0 and below 5 knots). The VMS communication points were aggregated into a heatmap using the [ArcGIS Binning tool](#). The darker hexes indicate more VMS communication pings and therefore indicate areas utilized more often by the rock shrimp fishermen for trawling.

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)⁹ and one of five approved bycatch reduction devices (BRD)¹⁰. 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 net 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 3.2.2.3, Brown et al. 2012).

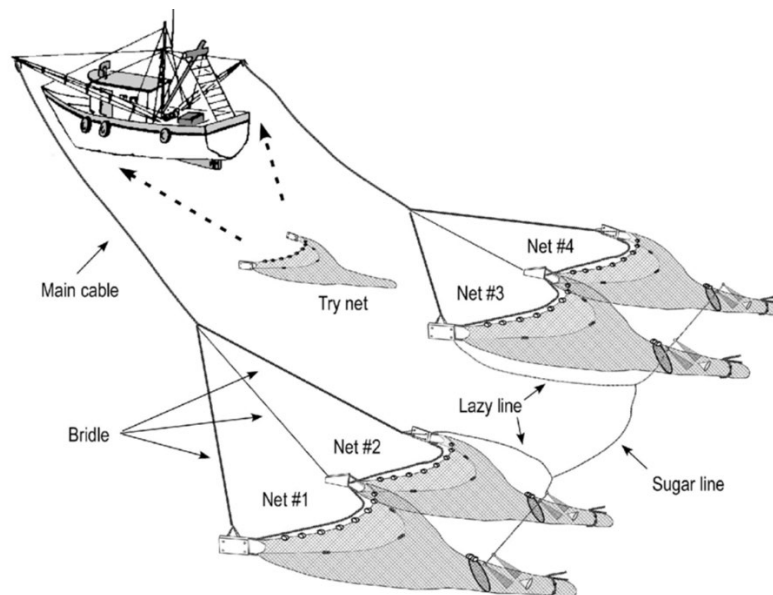


Figure 3.2.2.3. Typical gear configuration for the U.S. southeastern shrimp vessels equipped with four nets. Source: Scott-Denton et al. 2012.

Fishery History

The rock shrimp portion of the shrimp fishery started as a home processing effort that involved hand splitting the shrimp and selling them to restaurants along the Indian River Lagoon in Florida. Half a dozen boats operated out of Port Canaveral, Florida, in the 1970s, harvesting and processing about ten million pounds of rock shrimp. With the modification of the shrimp peeling machine to mechanically peel and de-vein rock shrimp, dozens of large Gulf shrimp vessels entered the once small boat portion of the fishery. Rock shrimp landings increased dramatically, with participation in the fishery increasing to 150 boats in just a few years. In addition to the rock shrimp fleet, hundreds of calico scallop vessels based out of Port Canaveral were dredging the scallop beds from the Carolinas to Cape Canaveral, Florida, impacting rock shrimp habitat

⁹<https://www.fisheries.noaa.gov/southeast/bycatch/turtle-excluder-devices>

¹⁰<https://www.fisheries.noaa.gov/southeast/bycatch/bycatch-reduction-devices-gulf-america-and-south-atlantic>

and *Oculina* coral. Subsequently, east coast rock shrimp industry representatives worked with the Council to establish the expanded OHAPC and limit participation in the rock shrimp portion of the fishery. Rock shrimp vessels were subsequently required to have a federal fishing permit, and the limited access rock shrimp fishery was established in the South Atlantic by the Council in the Shrimp FMP Amendment 5 (January 16, 2003; 68 FR 2188). In addition, vessels in the limited access fishery were also required to use a VMS when fishing for or possessing rock shrimp to enhance monitoring of the fishery.

During the beginning of the rock shrimp season in the early fall, rock shrimp are found on the inshore side of the OHAPC; when the Gulf Stream shifts further offshore, the shrimp follow it. During the second half of the season, the shrimp are found on the offshore side of the reef, so vessels trawl along the offshore side of the reef, which becomes narrower and narrower north of Cape Canaveral, Florida. This constrains the area where vessels can fish for rock shrimp. Because of the concentrated nature of the rock shrimp portion of the fishery along the eastern boundary of the northern extension of the OHAPC, reducing even a portion of the area would impact the fishery (SAFMC 2021).

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. 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), 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) 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 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 Fisheries Division (SFD) requested SERO protected Resources Division (PRD) reinstate Section 7 consultation on U.S. shrimp fisheries for giant manta rays and smalltooth sawfish. The reinstatement was required to address unanticipated observed lethal incidental takes of giant manta rays and new information revealing effects of southeast shrimp fisheries on smalltooth sawfish and giant manta rays not considered in the 2021 Shrimp Biological Opinion. No other reinstatement triggers were met so the reinstatement 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 ray 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, and monitoring observer data for new takes.

In September 2025 the Council was given an overview by SERO PRD reviewing the updated bycatch estimates for giant manta ray and the results of the Population Viability Analysis (PVA) for smalltooth sawfish. The Council, like the Gulf Council, passed a motion to develop a workgroup made of shrimp harvester representatives, NMFS staff, Council members and staff, a Scientific and Statistical Committee (SSC) member, and researchers to identify workable solutions that aim to reduce interactions with smalltooth sawfish and giant manta ray. The workgroup has been identified and plans to meet spring 2026. Ultimately, the group will provide the Council with an action plan outlining ways to reduce interactions.

3.3. Economic Environment

A description of the rock shrimp stock affected by the actions considered in this plan amendment is provided in Section 3.2. Additional details and a description of the rock shrimp fishery and its economic environment are included by reference (SAFMC 2009a, SAFMC 2013, SAFMC 2021). The South Atlantic rock shrimp portion of the shrimp fishery consists of two sectors: the harvesting sector and the dealer/processor sector. The following discussion provides summary statistics and selected characteristics for these sectors. Economic impacts of the fishery and a note on shrimp imports are also presented.

3.3.1. Harvesting Sector

The harvesting sector is generally composed of relatively large vessels that are predominantly active in federal waters, and almost always use trawl gear. Vessels harvesting rock shrimp from federal waters in the South Atlantic must have a federal permit. There are two types of federal

permits in the South Atlantic rock shrimp fishery: 1) a rock shrimp limited access (RSLA) vessel permit, and 2) a rock shrimp Carolinas Zone (RSCZ) vessel permit. The RSLA permit is a limited access permit that allows vessels to harvest and possess rock shrimp from the South Atlantic EEZ off the east coast of Florida and Georgia, where a directed fishery for rock shrimp is prosecuted. The RSCZ permit is an open access permit and is required to harvest or possess rock shrimp off South Carolina and North Carolina unless the vessel has an RSLA permit. Rock shrimp are an incidentally harvested species off the Carolinas. The number of vessels with a valid RSLA permit has been stable from 2019 through 2025, while the number of vessels possessing a valid RSCZ permit has fluctuated (Table 3.3.1.1).

Table 3.3.1.1. Number of South Atlantic Rock Shrimp Permits from 2019-2025.

Year	RSLA	RSCZ
2019	103	140
2020	101	146
2021	101	138
2022	101	141
2023	101	154
2024	100	141
2025	100	130

Source: NMFS SERO Sustainable Fisheries (SF) Access permits database (report: 12/17/2025).

The actions and alternatives in these amendments would only affect active vessels with RSLA permits (i.e., inactive vessels with RSLA permits and vessels with RSCZ permits would not be affected). Thus, the following information focuses on active vessels with RSLA permits. For example, Table 3.3.1.2 excludes alleged landings of South Atlantic rock shrimp in the Florida Keys by state registered Florida boats from Florida Bay and nearshore waters that were harvested by gear other than otter trawls (e.g., roller frames) and were sold for aquarium trade or bait purposes, as these landings are not part of the managed fishery.

Participation in the South Atlantic rock shrimp portion of the shrimp fishery by vessels with RSLA permits was highly variable from 2019 through 2023, ranging from a low of 14 vessels in 2020 and 2023 and a high of 35 vessels in 2022 to (Table 3.3.1.2). Thus, only 14-35% of the vessels with RSLA permits have been active in the fishery in recent years. Further, the average number of active permitted vessels during these years (23) is considerably below the average number of active vessels from 2003-2007 (126) as reported in South Atlantic Shrimp Amendment 7 (SAFMC 2008) and even further below the maximum number of vessels (150) the South Atlantic Council determined could sustainably operate, both biologically and economically, in the fishery as reported in South Atlantic Shrimp Amendment 5 (GMFMC and SAFMC 2002).

Table 3.3.1.2. Landings and revenue statistics for active vessels harvesting South Atlantic rock shrimp with an RSLA permit, 2019-2023. Dollar values are in 2024 dollars.

Year	Number of active RSLA permitted vessels	South Atlantic rock shrimp landings (lbs ww)	South Atlantic rock shrimp revenue	Other Atlantic shrimp revenue	Other Atlantic seafood revenue	Gulf seafood revenue (>99% shrimp)	Total revenue	Percent of total revenue that is rock shrimp
Totals:								
2019	21	1,040,704	\$2,530,444	\$8,690,974	\$300,966	\$1,187,280	\$12,709,664	20%
2020	14	304,549	\$673,506	\$6,808,407	\$53,602	\$114,578	\$7,650,093	9%
2021	31	2,196,345	\$6,622,415	\$10,280,862	\$285,382	\$3,608,268	\$20,796,928	32%
2022	35	3,857,347	\$6,555,664	\$6,122,364	\$3,385,979	\$3,940,569	\$20,004,576	33%
2023	14	485,275	\$926,177	\$4,876,090	\$71,132	\$178,311	\$6,051,710	15%
Vessel Means:								
2019		49,557	\$120,497	\$413,856	\$14,332	\$56,537	\$605,222	20%
2020		21,754	\$48,108	\$486,315	\$3,829	\$8,184	\$546,435	9%
2021		70,850	\$213,626	\$331,641	\$9,206	\$116,396	\$670,869	32%
2022		110,210	\$187,305	\$174,925	\$96,742	\$112,588	\$571,559	33%
2023		34,662	\$66,156	\$348,292	\$5,081	\$12,736	\$432,265	15%

Source: Atlantic Coastal Cooperative Statistics Program, pers. comm., September 26, 2024, and GulfFIN/Gulf States Marine Fisheries Commission, pers. comm., August 23, 2024.

U.S. South Atlantic rock shrimp landings and revenue exhibit major fluctuations year to year. From 2019 through 2023, revenues from South Atlantic rock shrimp were at their highest in 2021, at around \$6.6 million (in 2024 dollars) for 2.2 million pounds whole weight (mp ww) landed. Landings peaked in 2022, at over 3.86 mp ww (a 75% increase), but, surprisingly, revenue decreased as shrimp prices dropped precipitously (greater than 40% decrease). In contrast, in both 2020 and 2023, landings were under half a mp ww and revenues below a million dollars. These estimates reflect the high degree of variability that has existed in this fishery with respect to participation, landings, and revenue since its inception. In addition, average annual landings from 2019 through 2023 were 1.58 mp ww, which is only 23% of the maximum sustainable yield (MSY) and optimum yield (OY) of 6,829,449 lbs ww for this portion of the fishery, as established in the Comprehensive Sustainable Fisheries Act Amendment (SAFMC 1998b). Even the recent peak year landings of just over 3.86 mp ww in 2022 amount to under 57% of MSY and OY. Thus, the rock shrimp portion of the shrimp fishery has been consistently operating well below its prescribed OY and MSY during this time.

Table 3.3.1.2 also illustrates that these vessels, overall, are highly dependent on revenue from species other than South Atlantic rock shrimp, which is one reason for the highly variable levels of participation, landings, and revenue in the rock shrimp fishery over time. While revenue from South Atlantic rock shrimp accounted for about 32% and 33% of their total revenue in 2022 and 2023, respectively, it only accounted for about 9% of their total revenue in 2020. The 5-year average annual share of revenue generated by rock shrimp is only 22%, while rock shrimp accounted for 26% of overall revenue generated across all five years by these vessels. The difference is again an indicator of the high variability of rock shrimp landings and revenue

(skewedness from a statistical perspective). It is critical to note that, each year, a substantial fraction of vessels are much more or fully dependent on revenue from South Atlantic rock shrimp than these fleet averages would imply.

On average, most of these vessels' revenue comes from other Atlantic fisheries, with the vast majority coming from the Atlantic penaeid shrimp fisheries. Rock shrimp revenue is of secondary importance, while revenue from Gulf fisheries, the vast majority of which comes from the Gulf shrimp fishery, is the 3rd most important source of revenue. Caution is warranted when comparing different years with each other given the small numbers and yet large fluctuation in the number of vessels participating in the South Atlantic rock shrimp fishery each year, i.e., the rock shrimp "fleet" is composed of a very different set of vessels each year, and hence the absence/inclusion of individual vessels can skew annual results.

An annual economic sample survey of federally permitted shrimp vessels has been conducted each year since 2009 in the U.S. South Atlantic. While the survey is designed to generate economic returns and other economic performance estimates for all shrimp-permitted vessels (penaeid shrimp and rock shrimp permits), it is possible to generate results just for vessels active in the rock shrimp fishery. Given the significant declines in the number of active vessels over time, the number of observations per year has declined, and we generated estimates for 2021 and 2022 data combined to deal with small sample sizes for the purpose of this amendment. These estimates are provided in Table 3.3.1.3. Note that the 16 vessels in the 2021/22 sample generate more revenue, on average, than the average vessel catching rock shrimp based on dealer data.

Vessels that target rock shrimp (active RSLA permitted vessels) are typically large shrimp vessels. In 2021/22 the average vessel was made of steel, was 84 feet long, weighed 160 tons, and was built in 1997. Most of the vessels are operated by four crew, and only 19% are owner-operated. Vessels that target rock shrimp typically have significantly higher annual gross revenues from fishing relative to vessels that primarily harvest penaeid shrimp (SAFMC 2020). In general, although vessels with higher gross revenues also have higher operating expenses, they also generated greater net cash flow, net revenue from operations, and economic returns. That said, the average economic performance in 2021/22 deteriorated somewhat from 2017/18 (SAFMC 2021), which itself was lower than the average economic performance for these vessels in 2011-2014 (SAFMC 2020).

Table 3.3.1.3. Economic and financial characteristics of an average shrimp vessel with an RSLA permit active in the South Atlantic rock shrimp fishery, averaged across 2021 and 2022 observations (N=16). Dollar values are in 2024 dollars.

Number of observations	Mean
Balance Sheet	
Assets	\$985,168
Liabilities	\$43,808
Equity	\$941,360
Cash Flow	
Inflow	\$873,302
Atlantic rock shrimp	\$219,358
Atlantic penaeid shrimp	\$383,137
Gulf shrimp (any)	\$260,006
Non-shrimp seafood	\$6,511
Non-fishing revenue	\$4,290
Outflow	\$780,455
Net cash flow	\$92,847
Income Statement	
Revenue (commercial fishing operations)	\$869,012
Cost of Operations	\$798,093
Variable costs – Non-labor	36%
Variable costs – Labor	39%
Fixed costs	25%
Net revenue from operations	\$70,919
Net revenue before tax (profit or loss)	\$73,147
Returns	
Margin	8.2%
Economic Return	7.2%
Return on Equity	7.8%

Source: C. Liese, pers. comm., December 18, 2025.

Generally, the economic performance of these actively-rock-shrimping vessels has not changed much between 2017/18 and 2021/22. These vessels continued to carry very little debt, in contrast to earlier years (2009-2014). Three possible measures of economic performance are net cash flow, net revenue from operations, and net revenue before tax, each with a somewhat different focus on liquidity, economic profitability, or owner’s profit, respectively. Of these measures, net revenue from operations most closely represents economic profits generated by the fishery as a whole. As shown in Table 3.3.1.3, the average rock shrimp vessel in 2021/22 earned \$219 thousand in Atlantic rock shrimp revenue and \$869 thousand in total revenue from all commercial fishing operations. After accounting for variable and fixed costs, the average rock shrimp vessel received approximately \$71 thousand in net revenue from operations. The implied “profit margin” was 8.2%. The economic return on invested capital (proxied by the asset value) was 7.2%. It should be noted that these returns are before financing costs or cost of capital are considered. Under the assumption of a capital cost of around 5%, the implication is that the

industry performed only a bit better than breaking even in 2021/22 in economic terms, on average. There is nonetheless much variation in the economic performance at the individual vessel level.

3.3.2. Dealers

Table 3.3.2.1 provides selected characteristics for South Atlantic rock shrimp dealers from 2019 through 2023. During this time, the number of South Atlantic rock shrimp dealers fluctuated from eight in 2019 to a peak of 11 in 2021 when rock shrimp prices were high, to just five in 2023. The value of rock shrimp purchases in certain years differs slightly from the information provided in Table 3.3.1.2 because Table 3.3.2.1 is based on a separate data set. Known discrepancies include landings from the shrimp vessels that did not possess RSLA permits being included in the dealer data and South Atlantic-caught rock shrimp landings occurring at dealers outside the region (and not counted in the South Atlantic dealer data). Important differences exist between rock shrimp vessels and rock shrimp dealers.

Table 3.3.2.1. Selected characteristics of South Atlantic rock shrimp dealers*, 2019-2023. Dollar values are in 2024 dollars.

Year	Number of Dealers	Statistic	South Atlantic rock shrimp purchases	Other purchase	Total purchase	Percent of total purchases that are rock shrimp	Average price/lb (ww) rock shrimp
2019	8	Total	\$2,289,991	\$27,748,676	\$30,038,667	8%	\$2.43
		Mean	\$286,249	\$3,468,585	\$3,754,833		
2020	7	Total	\$674,370	\$20,469,333	\$21,143,703	3%	\$2.21
		Mean	\$96,339	\$2,924,190	\$3,020,529		
2021	11	Total	\$6,362,823	\$37,453,780	\$43,816,604	15%	\$3.01
		Mean	\$578,438	\$3,404,889	\$3,983,328		
2022	7	Total	\$6,343,856	\$15,931,733	\$22,275,589	28%	\$1.71
		Mean	\$906,265	\$2,275,962	\$3,182,227		
2023	5	Total	\$926,177	\$13,318,873	\$14,245,050	7%	\$1.91
		Mean	\$185,235	\$2,663,775	\$2,849,010		

Source: Atlantic Coastal Cooperative Statistics Program., September 26, 2024.

*A South Atlantic rock shrimp dealer is a dealer that purchased rock shrimp harvested from South Atlantic waters.

As with rock shrimp vessels, the dependency of rock shrimp dealers on purchases of rock shrimp varies from year to year depending on the value of rock shrimp landings and the number of dealers buying rock shrimp. Thus, while rock shrimp purchases accounted for almost 28% of dealers' total seafood purchases in 2022, they only accounted for 3% in 2020 when rock shrimp landings were much lower. Throughout 2019-2024, rock shrimp purchases accounted for about 13% of these dealers' total seafood purchases. Thus, on average, dealers are less dependent on rock shrimp compared to vessels. As is the case for individual vessels, some dealers are relatively more dependent than other dealers. Nonetheless, even these dealers are still relatively less dependent on rock shrimp compared to their vessel counterparts. These are typical findings in most fisheries as dealers have greater flexibility with respect to the species they purchase, compared to vessels that are more specialized in certain species given fixed gear and fishery access. This relative lack of dependency is also partly attributable to the economic size of their operations, as rock shrimp dealers' total seafood purchases are, on average, 5-7 times greater than the average total revenue of a rock shrimp vessel.

Table 3.3.2.1 also illustrates that, like other aspects of the South Atlantic rock shrimp portion of the shrimp fishery, the average ex-vessel price of rock shrimp is also highly variable from year to year, ranging from a high of \$3.01/lb (ww) in 2021 to a low of \$1.71/lb (ww) in 2022 (prices in 2024 dollars). The rock shrimp price trend over these five years roughly mirrors that of U.S. penaeid shrimp and shrimp imports. Coming out of the COVID-19 pandemic, prices increased in 2021 as demand skyrocketed. Then oversupply (of imports) and consumer retreat (possibly driven by inflation concerns) collapsed prices in 2022 and 2023.

Another factor that can affect the average ex-vessel price is changes in the average size of rock shrimp from year to year. As with penaeid shrimp, smaller rock shrimp tend to command a lower ex-vessel price. Thus, if the average size of the landed shrimp declines, the average ex-vessel price will also decline, all other things being equal. Thus, despite rock shrimp being a somewhat unique shrimp species with respect to appearance and taste, and directly comparable species not being imported, in recent years the price trends are similar. More research is needed on changes in ex-vessel prices over time.

3.3.3. Economic Impacts of the South Atlantic Rock Shrimp Fishery

The commercial harvest and subsequent sales and consumption of shrimp generate business activity as fishermen expend funds to harvest shrimp and consumers spend money on goods and services, such as shrimp purchased at a local seafood market and served during restaurant visits. These expenditures spur additional business activity in the region where the harvest and purchases are made, such as jobs in local seafood markets, grocers, restaurants, and fishing supply establishments. In the absence of the availability of a given species for purchase, consumers would likely spend their money on substitute goods and services. As a result, the analysis presented below represents a distributional analysis only; that is, it only shows how economic impacts may be distributed through regional markets.

Economic impact models are used to determine the current economic impacts of an industry or sector, as reflected by these measures, as well as changes expected to occur if expenditures or gross revenues change in a particular industry or sector. Economic impacts are generally characterized in terms of jobs (full- and part-time), income impacts (wages, salaries, and self-

employed income), output impacts (gross business sales), and value-added impacts, which represent the contribution made to the U.S. Gross Domestic Product, that accrue to the local, state, regional and the national economy as a result of expenditures or gross revenues. These impacts should not be added together because this would result in double counting. These results are based on average relationships developed through the analysis of many fishing operations that harvest many different species. Separate models to address individual species are not available. Estimates were derived using the model developed for and applied in NMFS (2024¹¹).

In addition to these types of impacts, economic impact models can be used to determine the sources of the impacts. Each impact can be broken down into direct, indirect, and induced economic impacts. “Direct” economic impacts are the results of the money initially spent in the study area (e.g., country, region, state, or community) by the fishery or industry being studied. This includes money spent to pay for labor, supplies, raw materials, and operating expenses. The direct economic impacts from the initial spending create additional activity in the local economy, i.e., “indirect” economic impacts. Indirect economic impacts are the results of business-to-business transactions indirectly caused by the direct impacts. For example, businesses initially benefiting from the direct impacts will subsequently increase spending at other local businesses. The indirect economic impact is a measure of this increase in business-to-business activity, excluding the initial round of spending which is included in the estimate of direct impacts. “Induced” economic impacts are the results of increased personal income caused by the direct and indirect economic impacts. For example, businesses experiencing increased revenue from the direct and indirect impacts will subsequently increase spending on labor by hiring more employees, increasing work hours, raising salaries/wage rates, etc. In turn, households will increase spending at local businesses. The induced impact is a measure of this increase in household-to-business activity.

Average annual gross revenue from rock shrimp harvested from South Atlantic waters averaged about \$3.32 million between 2019 and 2023 (in 2024 dollars). Estimates of the annual economic impacts generated as a result of this revenue are provided in Table 3.3.3.1. According to this information, South Atlantic rock shrimp landings purchased by dealers generated employment, income, value added, and output (sales) impacts of 334 jobs, \$11 million, \$16 million, and \$32 million, respectively.

¹¹ A detailed description of the input/output model is provided in NMFS (2011).

Table 3.3.3.1. Economic impacts of the South Atlantic rock shrimp fishery. All monetary estimates are in thousands of 2024 dollars.

	DIRECT	INDIRECT	INDUCED	TOTAL
Harvesters				
Employment impacts	47	9	11	67
Income impacts	1,380	390	680	2,450
Value added impacts	1,472	1,397	1,173	4,042
Output impacts	3,319	3,226	2,256	8,801
Primary dealers/processors				
Employment impacts	13	5	9	27
Income impacts	585	539	510	1,633
Value added impacts	623	688	960	2,271
Output impacts	1,882	1,418	1,876	5,176
Secondary wholesalers/distributors				
Employment impacts	3	1	3	7
Income impacts	189	56	199	445
Value added impacts	202	94	340	637
Output impacts	507	185	662	1,354
Grocers				
Employment impacts	20	2	4	26
Income impacts	561	185	280	1,026
Value added impacts	598	298	473	1,370
Output impacts	959	484	929	2,372
Restaurants				
Employment impacts	169	11	27	208
Income impacts	3,094	927	1,751	5,772
Value added impacts	3,298	1,657	2,950	7,905
Output impacts	6,030	2,593	5,822	14,445
Harvesters and seafood industry (overall)				
Employment impacts	252	28	54	334
Income impacts	5,809	2,097	3,419	11,326
Value added impacts	6,192	4,135	5,897	16,224
Output impacts	12,697	7,906	11,544	32,148

Source: Calculated by NMFS SERO using the model developed for and applied in NMFS (2024).

3.3.4. Imports

The United States imports the vast majority of the shrimp it consumes and, in general, consumers do not differentiate between U.S. wild-caught shrimp and imported, farmed shrimp. As a result, the long-term trend of U.S.-caught shrimp prices has generally followed that of the import prices (Liese et al., in press). As previously mentioned though, rock shrimp are a somewhat unique shrimp species with respect to processing, appearance, and taste and cater to a very local, niche market. NMFS is not aware of directly comparable species being imported. Also, the total rock shrimp fishery is a tiny fraction of U.S. shrimp fisheries, which themselves provide just about

5% of overall shrimp consumption. Hence, the role of (penaeid) imports in relation to the South Atlantic rock shrimp fishery is unknown but probably not dominant.

3.4. Social Environment

This amendment affects the commercial management of rock shrimp through the establishment of a shrimp fishery access area (SFAA) along the eastern border of the OHAPC's northern extension. This area has been noted by rock shrimp fishermen as historically important fishing grounds. The harvesting of corals is not permitted in the area and therefore the following description focuses on the presentation of baseline information on rock shrimp fishing participants and fishing communities. This description includes the current status of the fishery in order to present the communities that are expected to be primarily affected by the action in this amendment because they are the most engaged in and/or reliant on the fishery and is used to inform the social effects. In addition, some historical information on the fishery is also included to provide context. Community level data are presented whenever possible in order to meet the requirements of National Standard 8 of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), which requires the consideration of the importance of fishery resources to human communities when changes to fishing regulations are considered.

The following description includes the history of the rock shrimp fishery and the top communities engaged in rock shrimp fishing. Rock shrimp permits by state and vessels with landings of rock shrimp by state are included in order to provide a geographic distribution of fishing involvement. Descriptions of the top communities with commercial rock shrimp permits, communities with vessels with rock shrimp landings, and top communities by landings of rock shrimp are included, as well as their commercial engagement and reliance. Lastly, social vulnerability data are presented for all top-ranking communities.

The most recent data available have been utilized in the following section; however, the year range or date presented may not match what is included elsewhere because some sources of data are not available at the community or state level.

3.4.1. Rock Shrimp Fishery

Information on the rock shrimp fishery including a historical account of the origins and development of the fishery is included in Section 1.4 and a description of rock shrimp landings, VMS positions of rock shrimp vessels, and fishing techniques for rock shrimp are included in Section 3.2.2. Some additional historical details are summarized here in order to provide information on the social dimensions of the rock shrimp fishery.

The rock shrimp industry emerged following the development of a machine in 1969 that aided in the splitting and deveining of the shrimp. The hard shell had previously prevented the shrimp from being commercially attractive on a large scale and until then, had largely been caught incidentally by trawlers in the penaeid shrimp fishery (Stiles et al. 2007). The first commercial harvest of rock shrimp (1200 pounds) was landed in 1970, and the fishery grew rapidly from there, with 443,000 pounds landed in 1972. An additional technology developed in 1984 to peel rock shrimp aided in the processing of the stock and allowed for continued commercial expansion. Management plans in the 1980s sought to protect young shrimp by closing trawling

areas, while later amendments established limited access programs, implemented vessel monitoring systems, and regulated mesh sizes to protect sensitive habitats like the Oculina Bank. Additionally, fishermen also use sea turtle excluder devices and bycatch reduction devices to mitigate ecological impacts. The amount of rock shrimp landed has varied, with a peak in landings in 1996. The collapse of the calico scallop market in the 1980s forced many fishers into this area (SAFMC 2023). Annual catch has declined significantly since then. Current challenges to the rock shrimp industry, which largely focuses on the South Atlantic and the Florida Gulf, are competition over dockside infrastructure, water pollution, marine debris, and algae growth. Debris from space-related activities also increases the cost and time for catching rock shrimp by fouling and tearing nets, causing a loss of catch.

Permits

As of October 1, 2025, there were 100 federally permitted commercial South Atlantic rock shrimp vessels (valid and renewable RSLA permits, SERO Permits Office). Most South Atlantic rock shrimp permits are issued to vessels with homeports in Alabama (33% of South Atlantic rock shrimp vessels), Florida (29%), and North Carolina (18%, SERO Permits Office, October 1, 2025). Vessels with homeports in Georgia, South Carolina, and other states (Louisiana, Mississippi, New Jersey, and Texas) also hold commercial rock shrimp permits, but these states represent a small percentage of the total number of issued permits.

South Atlantic rock shrimp permits are held by those with homeports in 36 communities (SERO Permits Office, October 1, 2025). Communities with the most commercial rock shrimp permits are located in Alabama, North Carolina, Florida, Mississippi, and Texas (Table 3.4.1.1). Communities with most of the South Atlantic rock shrimp permits are not confined to this region. Several communities located in the Gulf are among the top communities with South Atlantic rock shrimp permits. These Gulf vessels are likely participants who seasonally migrate to South Atlantic waters, particularly during boom years of the fishery and have done so since the mid-1990s. The communities with the most rock shrimp permits are Bayou La Batre, Alabama (25% of rock shrimp permits); Beaufort, North Carolina (9%); and Jacksonville, Florida (6%).

Table 3.4.1.1. Top homeports by number of South Atlantic rock shrimp permits.

State	Community	Rock Shrimp Permits (RSLA)
AL	Bayou La Batre	25
NC	Beaufort	9
FL	Jacksonville	6
MS	Pascagoula	5
NC	Swan Quarter	4
FL	Fernandina Beach	3
FL	Fort Myers Beach	3
FL	Panama City	3
FL	Port Canaveral	3
FL	Southport	3
MS	Biloxi	3
TX	Port Lavaca	3

Source: SERO Permits Office, October 1, 2025.

Vessels with Landings

A large portion of federally permitted rock shrimp vessels are not active in the fishery. From 2019 to 2023, a total of 55 unique vessels landed rock shrimp (ACCSP, September 2024). Vessels with landings from 2019 to 2023 were matched to federal permit data available in the permit database as of October 1, 2025, in order to link vessels to a particular community. The vessel homeport was used to determine the community and state. Because the homeport is based on the information available in the permits system as of October 1, 2025, the homeport location could have varied during the included landings time period; however, these are the best data available at the community level. Approximately nine vessels with landings could not be matched with an address and are not included; therefore, the following analysis includes a total of 46 vessels.

The majority of rock shrimp vessels with landings reported homeports in Alabama (28.3% of rock shrimp vessels with landings), Florida (28.3%), and North Carolina (26.1%, ACCSP, September 2024 and SERO Permits Office, October 1, 2025). Those with homeports in Georgia and other states (Louisiana, Mississippi, Texas, and Virginia) also made landings of rock shrimp, but these states represent a small percentage of the total number of vessels with landings of rock shrimp.

Vessels with landings of South Atlantic rock shrimp were linked to individuals with homeports in 19 communities (Table 3.4.1.2). The number of vessels is not included in Table 3.4.1.2 in order to maintain confidentiality for those communities with fewer than three vessels. The communities with the most vessels with rock shrimp landings are Bayou La Batre, Alabama (21.7% of vessels with rock shrimp landings); Beaufort, North Carolina (17.4%); and Jacksonville, Florida (8.7%, ACCSP, September 2024 and SERO Permits Office, October 1, 2025).

Table 3.4.1.2. All communities with vessels with landings of South Atlantic rock shrimp in order of number of vessels by homeport, 2019-2023.

State	Community
AL	Bayou La Batre
NC	Beaufort
FL	Jacksonville
FL	Panama City
MS	Pascagoula
AL	Grand Bay
FL	Fernandina Beach
FL	Southport
NC	Cape Carteret
AL	Mobile
FL	Mayport
FL	Port Canaveral
GA	Savannah
LA	Clearwater
LA	Venice
NC	Lowland
NC	New Bern
TX	Freeport
VA	Newport News

Source: ACCSP, September 2024 and SERO Permits Office, October 1, 2025.

Regional Quotient

The descriptions of communities include information about the top communities based on a “regional quotient” (RQ) of commercial landings for rock shrimp. The RQ is the proportion of landings out of the total landings of the species for the region and year, and is a relative measure. The RQ is reported individually only for the top five communities by total landings because these communities make up nearly all landings (average of 99% from 2019 to 2023). Communities are presented in the order of their total landings combined for all years. All other communities that landed rock shrimp are grouped as “Other Communities.” Communities from the South Atlantic and Gulf are included because landings of rock shrimp from South Atlantic waters could be landed at dealers in Gulf states. Figure 3.4.1.1 shows the RQ in percentage of pounds from 2019 to 2023. The top rock shrimp communities are located in Florida, North Carolina, and Georgia. The top four rock shrimp communities (Titusville, Jacksonville, Atlantic Beach, and Fernandina Beach) are located along the east coast of Florida, and are in relatively close proximity to the OHAPC. A variation in annual landings and the location of those landings is evident in Figure 3.4.1.1.

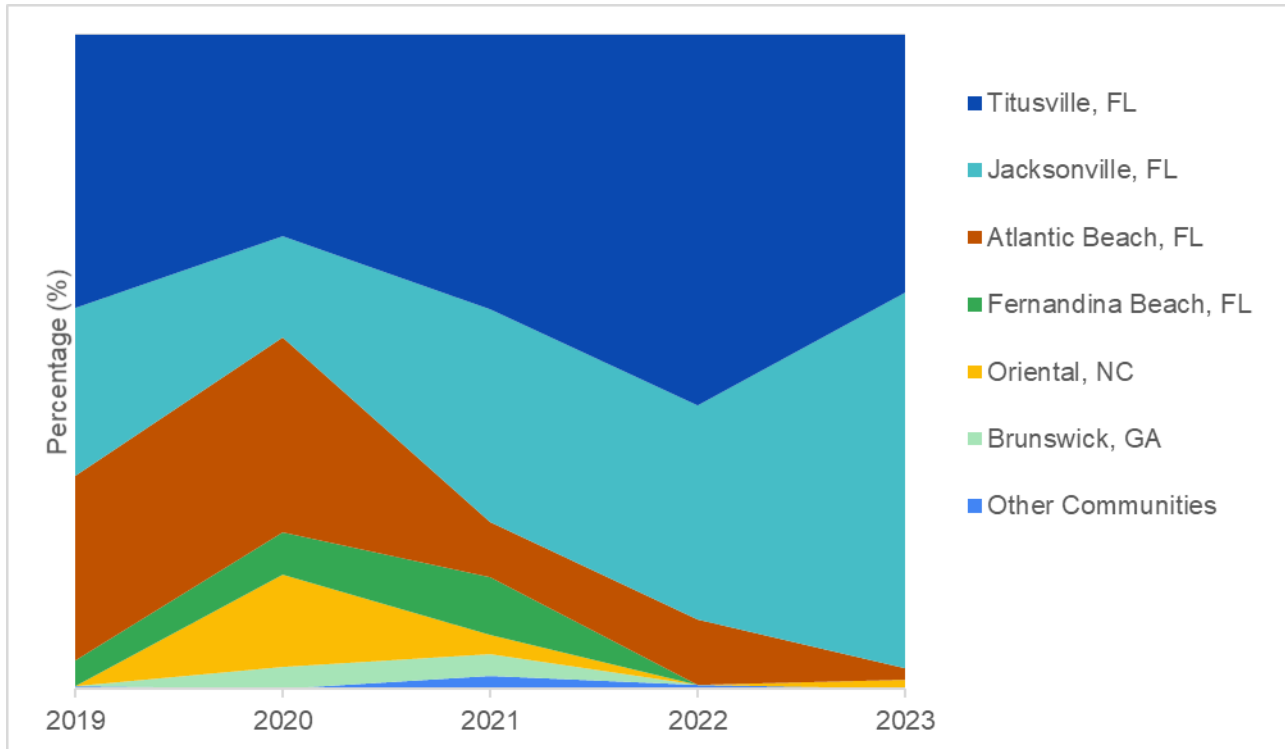


Figure 3.4.1.1. Top communities by pounds RQ of rock shrimp (2019-2023). The actual RQ values (y-axis) are omitted from the figure to maintain confidentiality. Communities are presented in order of their summed total landings for all years. Source: SERO, Community ALS 2019-2023.

Engagement and Reliance

In order to understand how communities are engaged and reliant on fishing, indices were created using secondary data from permit and landings information for the commercial sector (Jepson and Colburn 2013 and Jacob et al. 2013). Fishing engagement is primarily based on the absolute numbers of permits, landings, and value. The analysis used the number of vessels designated commercial by homeport and owner address, value of landings, and total number of commercial permits for each community. Fishing reliance includes the same variables as fishing engagement divided by population to give an indication of the per capita influence of this activity.

Taking the homeports with the greatest number of permits (Table 3.4.1.1), homeports with vessels with landings (Table 3.4.1.2), and communities with the highest RQs (Figure 3.4.1.1), factor scores of both engagement and reliance for commercial fishing were plotted. Two thresholds of one and one-half standard deviation above the mean are plotted onto the graphs to help determine a threshold for significance. The factor scores are standardized; therefore, a score above one is also above one standard deviation. A score above one-half standard deviation is considered engaged or reliant, with anything above one standard deviation to be very engaged or reliant.

Figure 3.4.1.2 is an overall measure of a community’s commercial fishing engagement and reliance and includes the communities with the strongest relationship to the commercial sector

for rock shrimp. Most of the communities in Figure 3.4.1.2 would be considered to be highly or moderately engaged in commercial fishing, as several are at or above 1 standard deviation of the mean factor score and one is above one-half standard deviation. Grand Bay, Alabama, and Cape Carteret, North Carolina, show the least amount of engagement in commercial fishing overall. Several communities would be considered highly or moderately reliant on commercial fishing (Bayou La Batre, Alabama; Fort Myers Beach, Florida; Venice, Louisiana; and Beaufort and Oriental, North Carolina).

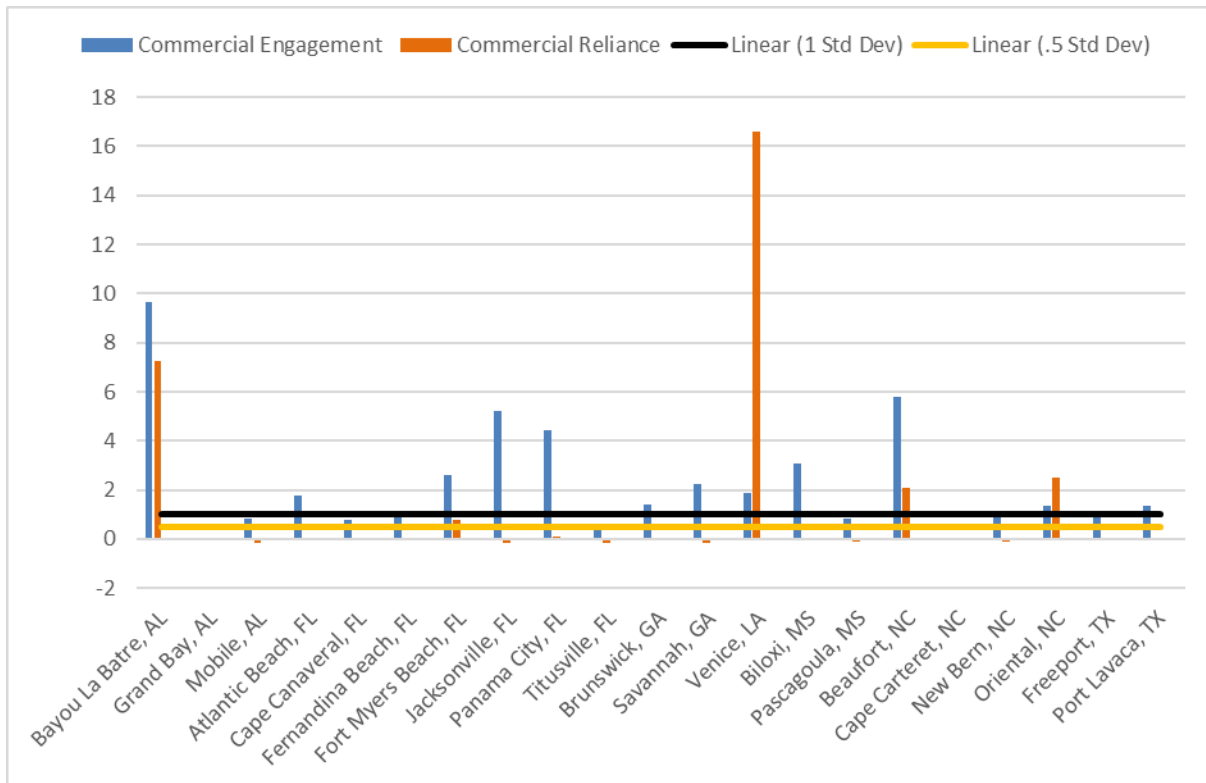


Figure 3.4.1.2. Commercial fishing engagement and reliance for top rock shrimp communities. Source: SERO, Community Social Vulnerability Indicators Database 2021.

Social Vulnerability

A suite of indices were created using census data to examine the social vulnerability of coastal communities within the region. The three indices are poverty, population composition, and personal disruption. The variables included in each of these indices have been identified through literature as being important components that contribute to a community’s vulnerability. Poverty includes poverty rates for different groups; population composition includes more single female-headed households, households with children under the age of five, minority populations, and those that speak English less than well; and personal disruption includes disruptions such as higher separation rates, higher crime rates, and unemployment. Increased rates in the indicators are signs of populations experiencing vulnerabilities. Again, for those communities that exceed the threshold it would be expected that they would exhibit vulnerabilities to sudden changes or social disruption that might accrue from regulatory change.

Figure 3.4.1.3 provides social vulnerability rankings for place-based communities identified as important to commercial fishing for rock shrimp. Several communities exceed the threshold of one standard deviation above the mean for at least one of the indices (Bayou La Batre, Alabama; Brunswick, Georgia; Venice, Louisiana; and Pascagoula, Mississippi). These communities would be the most likely to exhibit vulnerabilities to social or economic disruption resulting from regulatory change.

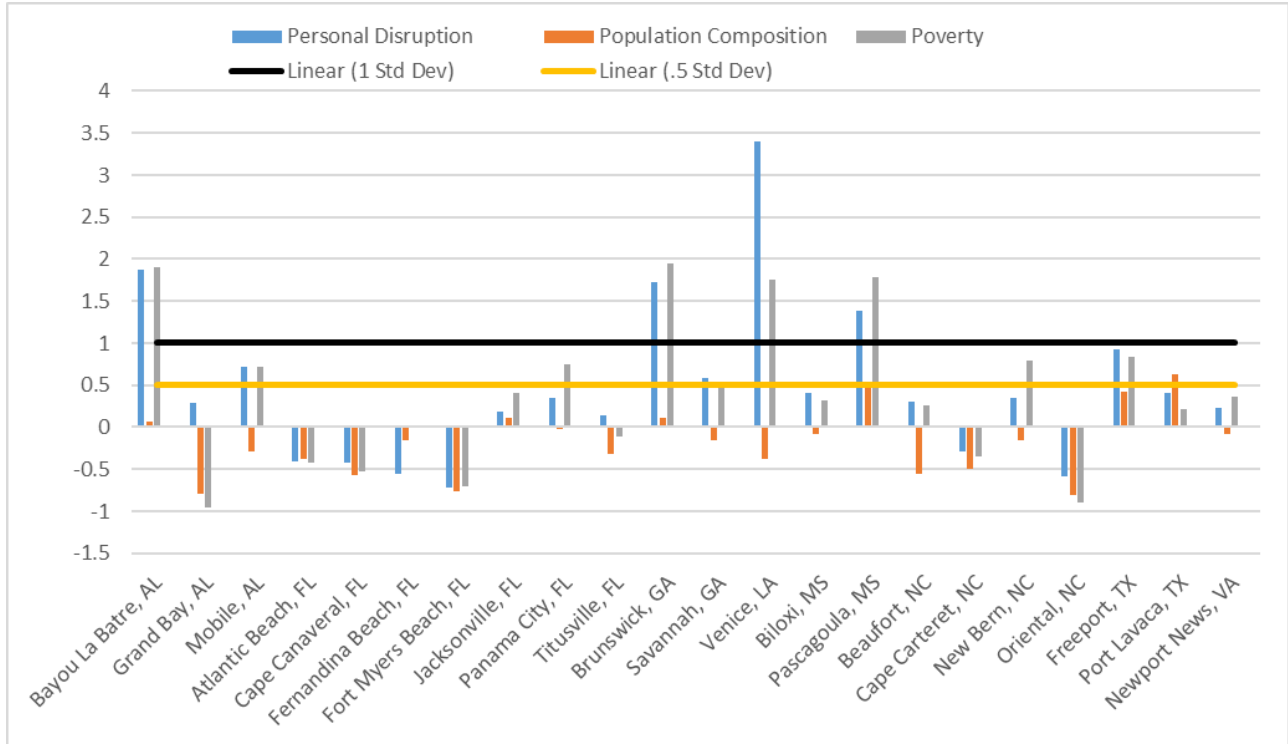


Figure 3.4.1.3. Social vulnerability indices for top South Atlantic rock shrimp communities. Source: SERO, Community Social Vulnerability Indicators Database 2022.

The description of fishing activities presented here highlights which communities may be most involved in South Atlantic rock shrimp fishing. It is expected that the impacts from the regulatory action in this amendment, whether positive or negative, will most likely affect those communities identified above.

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.

To assist the Secretary of Commerce (Secretary) in fishery management, the Magnuson-Stevens Act established eight Regional Fishery Management Councils that represent the expertise and interests of constituent states. Each Council has a Scientific and Statistical Committee (SSC) that provides ongoing scientific advice to that Council for fishery management decisions, as well as Advisory Panels (AP) to assist the Council in carrying out its functions under the Magnuson-Stevens Act. Councils, SSCs and APs conduct their business in public meetings, pursuant to procedures prescribed by the Magnuson-Stevens Act and written procedures established by each Council. NMFS, with the advice of the Regional Councils, manages fisheries needing conservation and management within each Council's jurisdiction. Regional Councils are responsible for preparing, monitoring, and revising management plans for fisheries needing management within their jurisdiction. The Secretary of Commerce is responsible for collecting and providing the data necessary for the Councils to prepare fishery management plans and for promulgating regulations to implement approved 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 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 the east coast of Florida to Key West. The 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 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 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. 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 Council uses its 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 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 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 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 <https://www.noaa.gov/general-counsel/gc-enforcement-section/penalty-policy-and-schedules>

Chapter 4. Environmental Effects

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

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. **Preferred Alternative 2** and **Alternative 3** would establish SFAAs of approximately 14.10 square nautical miles (NM²) and 18.87 NM², respectively, and would allow rock shrimp fishermen with a commercial limited access vessel permit for Rock Shrimp South Atlantic exclusive economic zone (EEZ) to trawl in the discrete area in which the fishery had previously operated until August 2015. However, use of all other bottom tending gear and anchoring would continue to remain prohibited within the SFAA.

Alternatives

1. (No Action). Do not establish a shrimp fishery access area.
2. **(Preferred) Establish a shrimp fishery access area that is 14.10 NM² along the eastern boundary of the northern extension of the Oculina Bank Habitat Area of Particular Concern.**
3. Establish a shrimp fishery access area that is 18.87 NM² along the eastern boundary 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.**

Direct Effects on Rock Shrimp

While rock shrimp are mostly found on sand bottom habitats, they also rely on deepwater coral ecosystems for protection from predators and to find food (See Chapter 3.2.2). Cobb et al. (1973) found the inshore distribution of rock shrimp to be associated with terrigenous and biogenic sand and only sporadically on mud; however, 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).

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 *Oculina* coral mounds near the eastern edge of SFAA. There is potential for direct and indirect negative impacts to *Oculina* coral from trawling, primarily from physical damage from the nets and doors. However, shrimpers utilize GPS and VMS tools to ensure there is a buffer between known *Oculina* coral pinnacles and shrimping activity so the potential for damage to occur is minimized.

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 a major cause of habitat destruction (Reed et al. 2007). The calico scallop (*Argopecten gibbus*) fishery was another major source of habitat degradation in this area. This fishery started before the rock shrimp fishery and operated in tandem in the 1980s until the resource was depleted in the early 2000s. As the resource was being depleted, scallop fishermen fishing on the scallop beds off of Cape Canaveral, Florida, began to use scallop dredges in between the *Oculina* pinnacles which resulted in damage to the reef. Local rock shrimp fishermen brought the damage to the reef from this fishery to the Council's attention at meetings in the early 1990s (SAFMC 2023).

Indirect Effects on Rock Shrimp

While targeted fishing would likely occur in the SFAA under both **Preferred Alternative 2** and **Alternative 3**, any potential negative biological impacts to the rock shrimp population are prevented by the fishery's maximum sustainable yield and accountability measures (a closure will occur if the maximum fishing mortality threshold (MFMT) is landed for two consecutive years), which are designed to prevent overfishing. The presence of rock shrimp in the proposed areas is highly variable due to the species' migratory nature and changes in water conditions; however, according to fishermen, access to these areas is very important in years when rock shrimp are present. Historical fishing effort in the northern extension of the OHAPC and the proposed SFAA was low, averaging less than 1.8% of the total number of VMS fishing points, a proxy for fishing activity (SAFMC 2021). Additionally, the rock shrimp fishery has not achieved its optimum yield (OY) (4.912927 million lbs. heads on) target since 2004.

Expected Effects on Snapper Grouper Species

Preferred Alternative 2 and **Alternative 3** are expected to have minimal or no impact on snapper grouper species caught as bycatch in the rock shrimp fishery. The Bycatch Practicability Analysis (BPA) (Appendix D) also highlights that only one managed snapper grouper species, black sea bass, was in the top 30 bycatch species in the South Atlantic rock shrimp fishery from 2018-2022 and at a very low amount (5 kilograms, Table D.1.2.1). Additionally, historical fishing effort in the proposed area has been low, and the impacts on snapper grouper are expected to be minimal. Lastly, the Southeast Fisheries Science Center's (SEFSC) 2022 visual survey described the area as containing "very little biota of any species" (Appendix G).

Expected Effects on 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).

Direct Effects on Deepwater Coral and Essential Fish Habitat (EFH)

Coral is defined as Essential Fish Habitat (EFH) for species managed under the snapper grouper FMP and the shrimp FMP. Additionally, the area that will be impacted has been identified as a

HAPC therefore, all impacts listed below affect both coral, shrimp, snapper groupers, and EFH. The direct effects possible under both **Preferred Alternative 2** and **Alternative 3** are the direct interaction of shrimp trawl gear and *Oculina* coral pinnacles. However, the SFAA is located where *Oculina* coral presence is not indicated. In 2022, the SEFSC conducted a visual survey of the area proposed in the preferred alternative. The survey 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, although only 2 of those dives were able to classify bottom type. No *Oculina* coral – living, dead or rubble, was detected during any of the dives in or adjacent to the SFAA. However, results of the survey could not definitely rule out presence of live *Oculina* colonies within the proposed SFAA. Based on existing multibeam bathymetry of the entire proposed SFAA, however, which shows only low or no relief, the study predicted that the likelihood of live *Oculina* is very low (Appendix G).

In June 2022, the National Centers for Coastal Ocean Science (NCCOS) published a report describing a model to predict the distribution of deepwater corals off the southeastern US (Poti et al 2022). The study area included waters 150-3,500 meters (m) off the east coast of Florida. The predictive model synthesized observations of coral presence-absence from still images and video transects from 20 field studies and measures of seafloor topography and physical oceanography to predict the presence and relative richness for 23 genera of corals. The model predicted low relative genus richness for the proposed SFAAs (Poti 2022, Figure 4.1.1.1). This predictive model was presented to the Council's Science and Statistical Committee (SSC). The SSC reviewed this model and found it suitable to use in management in April 2023.

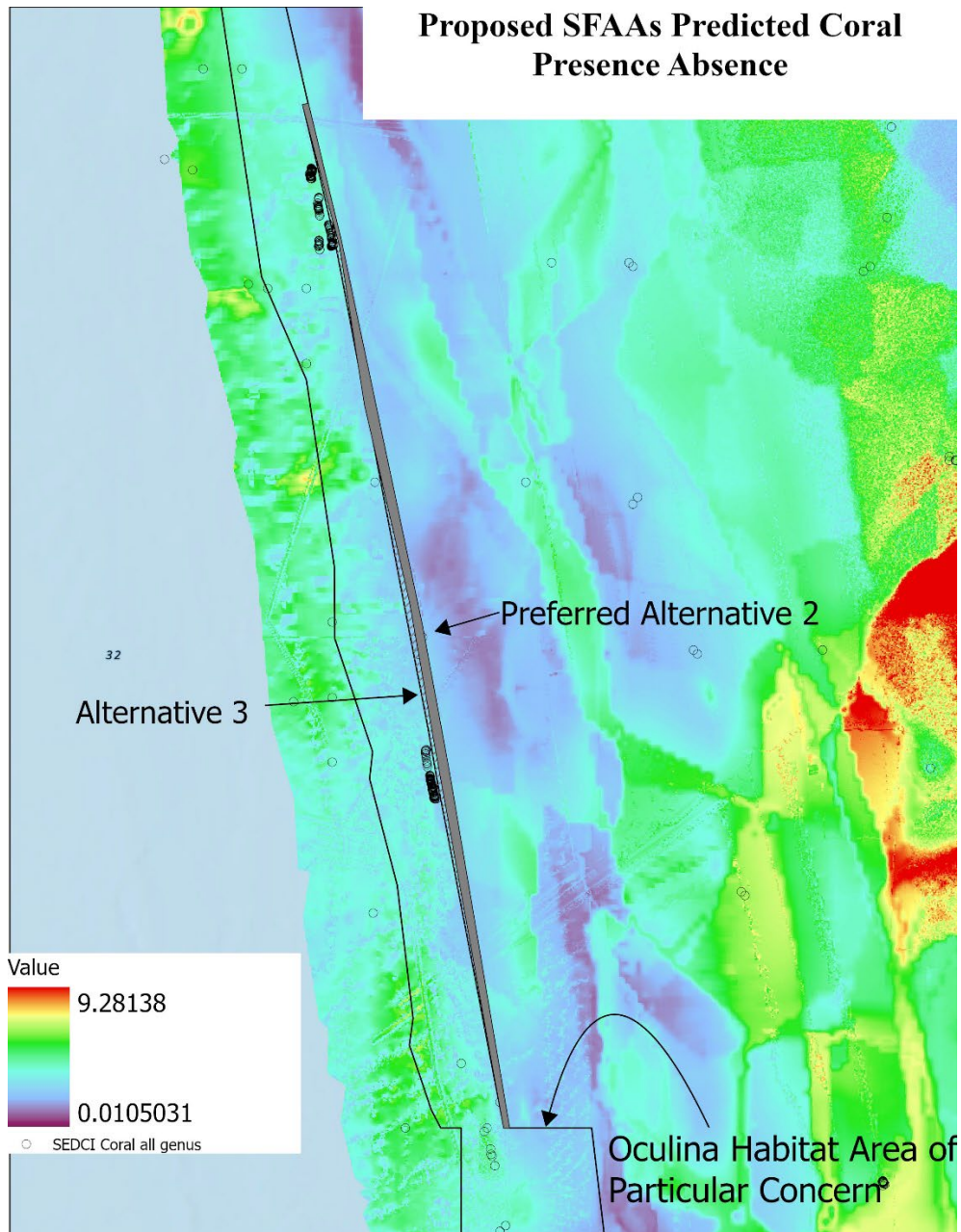


Figure 4.1.1.1. Predictability analysis of coral genus richness within the proposed SFAA. Red and Yellows are areas of higher predicted genus richness for corals. Purples and blues are areas of lower predicted genus richness for coral (Poti, 2022). Circles are known coral locations identified by the [Southeast Deep Coral Initiative](#).

In April 2025, the National Oceanic and Atmospheric Administration (NOAA) Ship *Nancy Foster* performed a mapping trip in the proposed SFAAs. This mapping trip collected bathymetry and backscatter data at 2 m resolution across a 14.10 NM² area, coordinating closely with **Preferred Alternative 2** and **Alternative 3** (Figure 4.1.1.2). *Oculina varicosa* colonies were observed 360-1,580 m west of the proposed SFAA boundary. Mapping showed that mound

features formed by *Oculina* corals were not evident in the proposed SFAA (Appendix F). Neither the 2022 visual survey nor the 2025 acoustic survey reported live or dead *Oculina* coral within the proposed SFAAs.

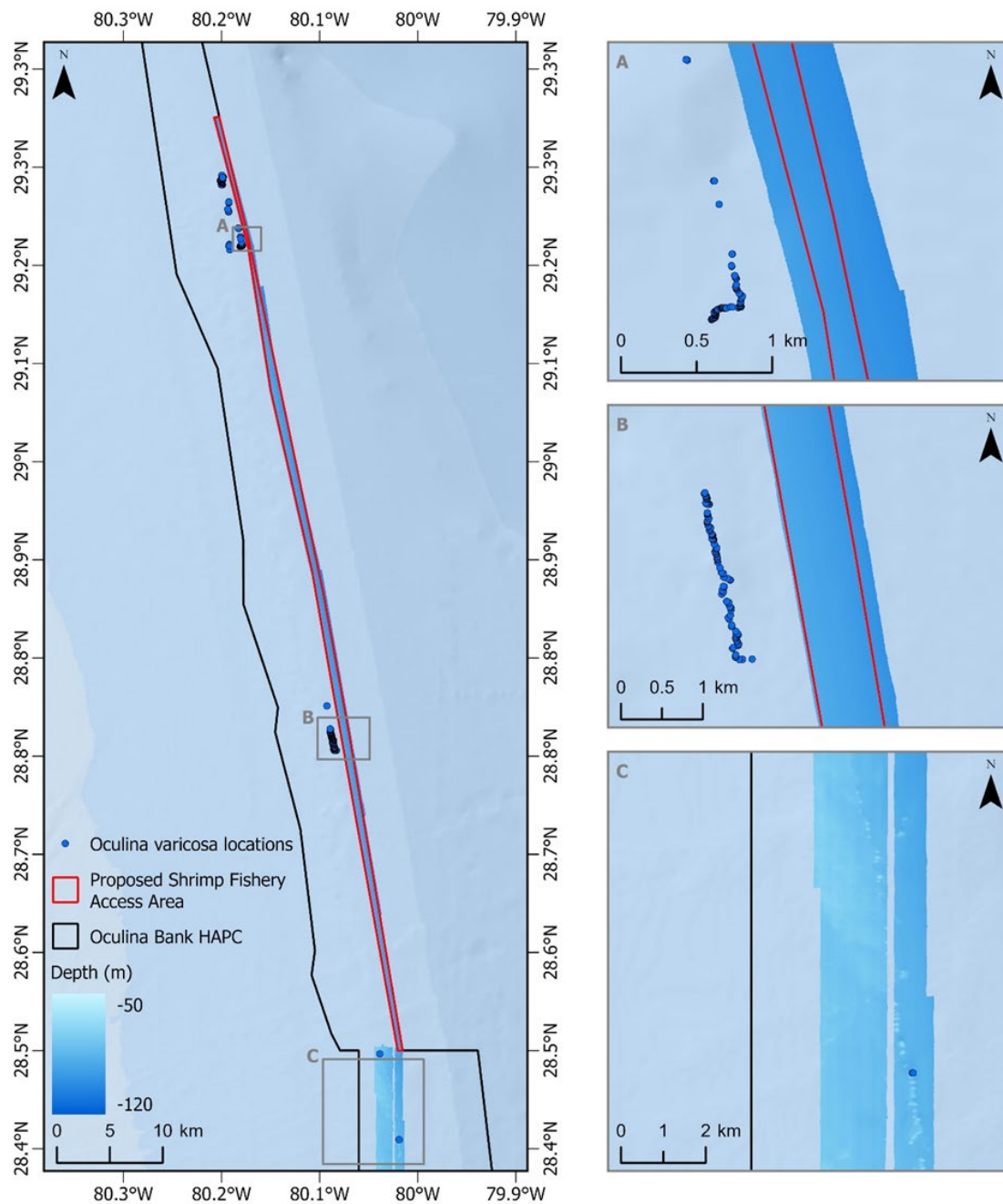


Figure 4.1.1.2. Backscatter data at 2 m resolution of the proposed SFAA from the Nancy Foster in April 2025.

The degree and likelihood of potential direct biological impacts from bottom tending fishing gear on deepwater coral in the SFAA as a result of **Preferred Alternative 2** and **Alternative 3** are low based on the current habitat mapping, predictive modeling, 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.

In addition to a lack of evidence of *Oculina* coral pinnacles present in the proposed SFAA under **Preferred Alternative 2**, rock shrimp vessels that would be allowed to fish in the proposed SFAAs are required to carry a vessel monitoring system (VMS) to fish for rock shrimp. VMS data are a source of vessel operating information, and VMS positions 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 Amendment 8 in 2015, rock shrimping predominantly occurred east of the northern boundary of the OHAPC implemented in Coral Amendment 8. Rock shrimp fishing inside the edge of the boundary accounted for 1.76% of all fishing points from VMS from 2003 through 2014, 2.20% of positions during 2013, and 8.50% of positions during 2014, based on historic trawling operations as represented by VMS data (SAFMC 2021).

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 2013). 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 positioning 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 transmission rate of 1 ping per 5 minutes whether transiting through the OHAPC or fishing within the proposed SFAA.

Indirect Effects on Deepwater Coral and Essential Fish Habitat (EFH)

As of the development of this amendment, no definitive studies on the impacts of trawling and associated sedimentation have been conducted in the vicinity of the proposed SFAA.

Indirect effects on *Oculina* coral, which is defined as EFH for the coral and snapper grouper fishery management plans, could result from suspended benthic sediments created while trawling the bottom for rock shrimp. Increased sedimentation could cause smothering and burial of *Oculina* coral polyps, shading, tissue necrosis, population explosions of bacteria in *Oculina* coral mucus, and generally reduced recruitment, survival, and settlement of *Oculina* coral larvae (Erftemeijer et al. 2012). *Oculina* coral recruits are particularly susceptible to sedimentation and an increase in fine sediment could significantly reduce *Oculina* coral recruit survival (Fourney and Figueiredo 2017); however, little is known about the exact effects of sedimentation on *Oculina* and other sensitive species in the OHAPC ecosystem from trawling.

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 that are found within the southern portion of the OHAPC 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

(Council) Coral Advisory Panel (AP) and Habitat and Ecosystem AP suggested that establishing a protective buffer between known *Oculina* coral habitat and fishing grounds would be prudent to prevent adverse impacts to *Oculina* coral colonies and the Preferred Alternative provides a 350-1580 m buffer between the proposed SFAA and known coral pinnacles. However, research has not established what the optimal buffer distance should be.

Depending on the direction and magnitude of water currents in the affected area, shrimp trawls could create sediment plumes during fishing operations that could be transported to *Oculina* coral habitats. Reed (2006) describes the current flow for the southern half of the *Oculina* Habitat Area of Particular Concern (OHAPC) as: “the northerly flowing Florida Current in the region of the *Oculina* reefs typically only extends down to a depth of 50-60 ms. The reefs are often inundated with a turbid, bottom nepheloid layer, and bottom currents average 8.6 cm s^{-1} but may exceed 50 cm s^{-1} (1 knot), with currents of $50\text{-}100 \text{ cm s}^{-1}$ also occurring.”

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). Seafloor current direction, strength, and particle size/weight would affect the prediction of a sediment plume swath created by trawling activities, and ultimately inform decisions regarding trawl distance from known *Oculina* corals. Based on similar research done in Scotland by O’Neill et. al., an initial trawling plume can be around 10 meters high and 42 meters wide, resulting in elevated turbidity. While the plume disperses and its turbidity decays within hours, the fine particles can linger and contribute to elevated background turbidity levels. A study using a multibeam echosounder demonstrated that sediment plumes behind a trawl door and a roller clump decrease in concentration with distance, but the plumes themselves can be detected at distances greater than 100 m (O’Neill et al 2013).

The western boundaries of the proposed SFAA are approximately 360-1,580 m from known *Oculina* pinnacles (Appendix F). The current is presumably similar to the consistently strong south to north current that exists within the southern region of the OHAPC (Reed 2006 and Scanlon 1999). Given the previously referred to studies on how trawling plumes could move in the area, sediment would be expected to move parallel to known *Oculina* coral pinnacles and have a minimal impact on the *Oculina* coral itself unless upwellings push the water inland (towards the pinnacles) thus damage by sediment should be limited.

In a review of the frequency of upwelling events mentioned in National Weather Service and Surf Reports, it was noted that only four upwelling events were mentioned in the Cape Canaveral area from 2014 to 2024¹². When analyzing the National Data Buoy Center, buoy number 41009¹³ showed that the sea surface temperature (SST) only dropped under 75 degrees F (indicating an upwelling event) on average 1.5 days per year during the months of May – September from 2015 – 2024. The low frequency of upwellings plus the 360-1,580 m buffer from where trawling could occur and known coral pinnacles are expected to decrease the chances of sediment plumes causing damage to the *Oculina* coral pinnacles, while balancing the rock

¹² <https://www.surflines.com/surf-reports-forecasts-cams-map/@28.44846826804955,-80.58445930480958,13z>
<https://www.weather.gov/mlb/>

¹³ https://www.ndbc.noaa.gov/station_page.php?station=41009

shrimp fishery's need for access to its historical shrimping area. Potential negative biological impacts to the affected *Oculina* coral habitat relative to **Alternative 1 (No Action)** would be greatest under **Alternative 3**, which offers less of a buffer (up to .25 nautical miles less in the widest area) between the *Oculina* coral pinnacles and the western boundary of the SFAA than **Preferred Alternative 2**.

4.1.2. Economic Effects

Alternative 1 (No Action) would continue to prohibit access to rock shrimp vessels within a discrete area along 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 effects. **Alternative 1 (No Action)** would result in potential forgone landings of rock shrimp and thus forgone 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 approximately 14.10 NM² area. 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 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,¹⁴ thus resulting in net economic benefits. An increase in catches of rock shrimp would also help achieve OY. 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 (Table 3.3.1.2), 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 (Section 3.3.4). 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 4.7 NM² area 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 data and models. Additionally, while fishing in the SFAA, vessels accessing the area under **Preferred Alternative 2** or **Alternative 3** would be required to have vessel monitoring system ping rates that are higher than what is required in areas outside of the OHAPC. Specifically, VMS onboard vessels fishing the areas in **Preferred Alternative 2** or **Alternative 3** would require a ping rate of 12 pings per hour rather than 1 ping

¹⁴ 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.

per hour that is required when outside of the OHAPC. The exact cost to the vessel would vary, depending on how much time was spent fishing within the SFAA and the cost of the VMS service that the vessel employs. The potential increase in cost associated with VMS ping rates is expected to be negligible since the overall cost of a temporary increased ping rate is expected to be very low, particularly when compared to other operating costs. Also, the vessel would be fishing in an area previously closed to bottom trawling gear and thus would be incurring a potential net economic benefit from access to this area. To provide a scale of the number of vessels that may be affected, on average, 23 vessels with a valid limited access Commercial Vessel Permit for Rock Shrimp (South Atlantic exclusive economic zone) harvested rock shrimp from the South Atlantic annually from 2019 through 2023 (Table 3.3.1.2).

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. On average, eight dealers purchased rock shrimp from the South Atlantic annually from 2019 through 2023 (Table 3.3.2.1).

4.1.3. Social Effects

Fishing communities highly engaged in the commercial rock shrimp fishery are most likely to experience effects from the proposed action. The top four rock shrimp communities (Titusville, Jacksonville, Atlantic Beach, and Fernandina Beach) are all located along the east coast of Florida in relatively close proximity to the proposed SFAA. Additionally, those communities are moderately reliant on commercial fishing, generally (Section 3.4). Closed areas can have negative social effects on fishermen if important fishing grounds are no longer open to harvest. Closed areas can also provide positive social effects if they result in increased production/catches by protecting key areas, or life stages (e.g., spawning adults). 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 area. 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. 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.

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 area proposed under **Alternative 3** could have more benefits than the smaller proposed area under **Preferred Alternative 2** 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. The Shrimp and Deepwater Shrimp Advisory Panels have expressed 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** was supported by the Council's Deepwater Shrimp Advisory Panel.

Preferred Alternative 2 and **Alternative 3** directly address stakeholder concerns regarding access to historically important fishing grounds. Additionally, **Preferred Alternative 2** and **Alternative 3** would directly address Executive Order 14276: Restoring American Seafood Competitiveness, which requested that the Regional Fisheries Management Councils identify actions that would improve access to fishing opportunities and enhance economic profitability. Responding to stakeholder concerns and taking action that would promote domestic seafood may improve stakeholder perceptions of the management process and result in positive social effects associated with increased participation in the management process and more local ecological knowledge available to aid in decision-making. **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.

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 component 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 related to enforcement could differ between the alternatives relative to the amount of area they cover.

Expected enforcement costs would increase initially as costs associated with monitoring the increased VMS reporting. However, it is unclear how often the area will be used by the rock shrimp fishery. Associated costs with maintaining increased reporting during fishing may be incurred by NOAA and industry, depending on vendor capabilities. The administrative impacts associated with these alternatives relate to at-sea enforcement and increased VMS staff monitoring.

Chapter 5. Council's Rationale for the Preferred Alternatives

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

5.1.1. Deep-Water Shrimp Advisory Panel Comments and Recommendations

The South Atlantic Fishery Management Council's (Council) Deepwater (DW) Shrimp Advisory Panel (AP) discussed Coral Amendment 10 at their November 10, 2020, meeting via webinar. Their comments are included because the **Preferred Alternative 2** SFAA is the same area as that proposed in Coral Amendment 10... The DW Shrimp AP had the following comments:

- The proposed shrimp fishery access area (SFAA) includes an area rock shrimp fishermen historically fished, and since they are using vessel monitoring systems (VMS), the buffer between the known high relief *Oculina* coral habitat and proposed western SFAA boundary could be reduced to give them access to this area.
- An industry representative provided coordinates used in the proposed SFAA indicating it was an important area.
- The eastern boundary of the northern extension of the *Oculina* Bank Habitat Area of Particular Concern (OHAPC) was important fishing grounds considering the variability of where rock shrimp are available to the fishery from year to year.
- The area is extremely variable from year to year and therefore, it is hard to assign a monetary value or productivity value.
- Multiple AP members stated their support for re-opening the proposed SFAA.
- Fishermen responded to a question from Coral AP members on the positioning of the boat versus the trawl indicating they always know precisely where the rigs are relative to the vessel. Fishermen are requesting additional allowable fishing area stating their intent is not to destroy any habitat and they acknowledge its benefit to harvesting rock shrimp.
- According to fishermen, fishing in 300 feet (ft) of water results in 1,000 ft of cable out, and the rigs are approximately 500 ft straight down behind the boat.
- Fishermen indicate they 1) often drag very close to obstructions; 2) know how to keep equipment safe and not damage bottom habitat; and 3) want to fish in areas where there is no *Oculina* coral.
- Dragging takes place east of and parallel to the pinnacles, so sediment should drop back down onto the bottom and not cause any detriment to habitat.

MOTION¹⁵: To adopt the 2014 coordinates eastern boundary of the northern extension of the OHAPC developed by industry and staff as a SFAA as represented in Alternative 2a. SFAA

¹⁵ The Preferred Alternative in the amendment is the same as the **Preferred Alternative** in Coral Amendment 10.

boundaries based on coordinates presented by fishermen as part of the March 2014 public comment.

Both the Shrimp and DW Shrimp APs received an update on Coral Amendment 11 and Shrimp Amendment 12 amendment during their meeting in April 2024 meeting. The APs noted the following:

- Regular use of the area would be variable due to the nature of the fishery but if open, the area would be very important in years when the rock shrimp are present in the area.
- Shrimpers noted that they did not interact with *Oculina* coral when the area was previously open.
- Due to conditions in the area, only experienced fishermen tend to trawl within the area and are experienced in avoiding the *Oculina* coral and trawling responsibly.
- Trawls tend to be roughly 3 football fields away from the *Oculina* coral pinnacles.

At its March 2025 meeting, the Council decided not to reconvene its advisory panels to review the current amendment because the Council had already received feedback from the Shrimp and DW Shrimp APs on establishing a SFAA within the OHAPC in 2020 and 2024. Since then, the AP members have been kept abreast of opportunities for public comment via email and at Council meetings during which this amendment was discussed.

5.1.2. Coral AP Comments and Recommendations

The Council's Coral AP discussed Coral Amendment 10 at their November 10, 2020, meeting via webinar. Their comments are included because the **Preferred Alternative 2** SFAA is the same area as the preferred alternative proposed in Coral Amendment 10. The Coral AP members had the following comments:

- Commenters emphasized the need for an adequate protective buffer around *Oculina* coral habitat to reduce impacts from nearby fishing activity.
- Sediment plumes created by fishing gear interacting with muddy bottoms can travel long distances and potentially affect coral habitat, even when fishing occurs outside the reef area.
- There is uncertainty in gear position relative to vessels and currents, suggesting that a precautionary buffer (often suggested around 1,000 m) may be necessary to account for sediment transport and gear scope.
- Protection should include the broader *Oculina* ecosystem, including low-relief hardbottom and the bases of pinnacles, which provide important habitat for snapper–grouper species and areas where coral recovery may occur.
- Mapping of *Oculina* habitat is incomplete, reinforcing the need for precautionary management and improved habitat mapping.
- Some comments noted that marine protected areas that are too small can concentrate fishing along boundaries, reducing effectiveness.
- The Advisory Panel concluded that the current boundary already provides a buffer and supported the No Action Alternative.

MOTION¹⁶: Consider Option 1 status quo. (Do not develop an action to address the issue).

At its March 2025 meeting, the Council decided not to convene its advisory panels to review the current amendment because the Council had already received feedback from the Coral AP on establishing a SFAA within the OHAPC. All AP members have been kept abreast of opportunities for public comment via email and at Council meetings during which this amendment was discussed.

5.1.3. Habitat and Ecosystem AP Comments and Recommendations

The Council’s Habitat and Ecosystem AP (HEAP) discussed Coral Amendment 10 at their October 22, 2020, meeting via webinar. Their comments are included in this amendment because the **Preferred Alternative 2** SFAA is the same as the preferred alternative proposed in Coral Amendment 10. The Habitat and Ecosystem AP members had the following comments:

- Generally expressed concerns regarding modification of the existing boundary.
- Given the proximity to the OHAPC boundary, the low percentage of historical effort in the area, and the fact that there is some “low relief” *Oculina* coral habitat in the area, questioned the need to open the area.
- Need to define low relief and to put the area in proper context.
- Some members advocated supporting the fishing industry given the historical extent of fishing in the area, narrow width of the proposal and the desire to provide a buffer zone adjacent to *Oculina* coral pinnacles.
- Secure VMS data for before and after the establishment of the OHAPC. If the area was reopened, and therefore represented “new” ground for fishing, it could be heavily used.
- Looking at the effort data, perhaps consider narrowing the area in those areas which were lightly fished.
- While socioeconomic concerns are not the purview of the Habitat AP, they should at least consider them.
- Request to keep AP informed with regard to any Council action on this item, and especially with respect to future opportunities to put additional conservation measures in place for the additional area of continuous *Oculina* coral pinnacles.

The HEAP received an update on this amendment during their meeting in April 2024. AP members offered the following:

- The proximity of the proposed SFAA to the known coral pinnacles is concerning.
- The sediment resuspension and bycatch should be addressed in the amendment.
- The bycatch reduction device (BRD) works so the rock shrimp bycatch is small.

¹⁶ The no action (status quo) alternative in the amendment is the same as the no action (status quo) alternative in Coral Amendment 10.

- The historical catch was about 1.6 - 8% of total rock shrimp catch. The percentage varies by year dependent on the Gulf Stream.
- Staff should investigate alternative SFAA sizes.
- The scientific team believes that due to the strong current and only having two successful tows, that there is a chance that *Oculina* coral was missed in the 2022 study.
- They also believe that there probably was some *Oculina* coral prior to the fishery, and that *Oculina* coral could grow in this area if it remains closed.
- The HEAP feels that more research should be conducted prior to the opening of the SFAA.
- The impact of sedimentation on *Oculina* coral reproduction timing is unknown. Even extremely small sediment plumes at the wrong time could kill *Oculina* coral larvae.
- The HEAP felt there was a need for balance in decision making. The HEAP would prefer to have a more reliable survey prior to opening the area up. Additionally, any information on known restructuring of the habitat and habitat quality would be helpful. They noted that the structures are incredibly old (oldest known reef in the world), and it's not just the *Oculina* corals, but many species that will be affected.
- The Council should consider what advancing this amendment means and what needs to be adjusted to make certain we are appropriately managing all of the affected resources.

At its March 2025 meeting, the Council decided not to reconvene its Coral and Habitat and Ecosystem Advisory Panels to review the current amendment because the Council had already received feedback from the Habitat and Ecosystem AP on establishing a SFAA within the OHAPC. Since then, the AP members have been kept abreast of opportunities for public comment via email and at Council meetings during which this amendment was discussed.

5.1.4. Law Enforcement AP Comments and Recommendations

The Law Enforcement AP was given a brief update on this amendment at their February 1, 2021, meeting and provided no comments.

5.1.5. Scientific and Statistical Committee (SSC) Comments and Recommendations

Amendment development updates were provided as part of Amendment Overviews for SSC meetings since 2018, but no specific comments were provided.

The SSC also reviewed the National Center for Coastal Ocean Science (NCCOS) Deepwater coral predictive model of the area during their April 2023 meeting and made the following statements.

- The distribution model of deep-sea corals is deemed adequate to describe the probability of occurrence.
- The use of occupancy models is likely an improvement over the previous models used.
- The SSC deems this analysis consistent with the best scientific information available (BSIA) and appropriate for use in management.

5.1.6. Public Comments and Recommendations

Summary of Scoping comments for Coral Amendment 10:

Coral 10 was approved by the Council in 2021. During scoping and public hearings for Coral 10, the following comments were received. These are included here because Preferred Alternative 2 in Coral 11/Shrimp 12, is the same as the preferred alternative in Coral 10.

Summary of Public Hearing Comments for Coral Amendment 10:

Public hearings for Coral Amendment 10 were held by webinar on May 14, 2021, and May 15, 2021, and the public comment period ran from April 28, 2021, through 5 PM on May 14, 2021. Comments received during the Public Hearing Webinar on May 13, 2021, are summarized as follows:

- One commenter supported the action in the amendment and felt the South Atlantic Council had done a good job developing the amendment.
- One commenter indicated the preferred alternative included traditional bottom, which has been fished and is verified by the many VMS fishing points occurring in the area over the years.
- Area under consideration has been fished and was just something that came up late when Coral Amendment 8 was first put into place.
- One commenter noted fishermen requested the South Atlantic Council revisit the area and appreciated the fact that there was a good, preferred alternative.
- One commenter noted that opening an area for a shrimp fishery only defeats the purpose of conservation and your role to protect environment and fishery.
- A commenter was concerned that the South Atlantic Council was playing into the hands of the commercial industry, the action would set a precedent and did not support the action.

Summary of Public Hearing Comments for Coral Amendment 11/Shrimp Amendment 12:

Two public hearings were held for this amendment in August 2025, one via webinar and one in-person. The webinar hearing was held on August 5th. This hearing had 34 attendees and 10 comments. The in-person hearing was held in St. Augustine, Florida, on August 7th. The in-person meeting had 15 attendees and 10 comments. Full transcripts of comments are available upon request from the Council office.

Public comment was also solicited online via the Council's website from July 22 through August 12. There were 125 comments submitted via the online form which can be accessed [HERE](#). There were 21 comments submitted via email or attachment, which are included in the Council's [briefing book](#) for the September 2025 meeting (Table 5.1.6.1).

Table 5.6.1.1. The characteristics of online commenters.

Affiliation	Number of Respondents^{1,2}	Supportive of Alternative 1 (No Action)	Supportive of Preferred Alt. 2 or Alt. 3
Fishermen (commercial and recreational) and dealers	76	47	29
Non-Gov't Organization ³ or University	3,143	3,142	1
Other	49	47	2
Totals	3,268	3,236	32

¹Includes online respondents and individuals who provided state and sector affiliation.

²Some respondents chose more than one affiliation.

³Two NGOs resubmitted letters with 3098 signatures in support of Alternative 1 (No Action) that were gathered in 2022 and originally submitted as comments for Coral Amendment 10.

Comments Supporting Alternative 1 (No Action)

Those in support of **Alternative 1 (No Action)** included recreational fishers, environmental groups, scientists, and concerned citizens. Most commenters emphasized irreversible ecological damage, limited economic benefit, lack of scientific information, and risks to biodiversity. These comments are summarized as follows:

- **Ecological harm**
 - Rock shrimp bottom trawling damages or destroys fragile deep-water coral reefs, which grow very slowly and provide critical habitat for over 2,000 species (including shrimp, snappers, and groupers).
 - *Oculina* coral already faces compounding stressors (warming, acidification, disease) that make it more vulnerable.
- **Sedimentation risks**
 - Trawling stirs up silt and clay, smothering *Oculina* coral polyps and larvae.
 - Currents can carry sediment onto reefs despite proposed buffer zones.
- **Loss of biodiversity & fisheries impacts**
 - *Oculina* coral habitat supports spawning and juvenile stages of commercially and recreationally important species (snappers, groupers).
 - Bycatch in the southeastern shrimp fisheries remains a concern despite turtle excluder devices (TEDs) and bycatch reduction devices (BRDs).
- **History of damage**
 - Up to 90% of *Oculina* coral was destroyed before protection in 1984; recovery has been limited. The true cause of the destruction is unknown, but supporters of **Alternative 1 (No Action)** commented that they believe the shrimpers are responsible.
 - Past use by the shrimp fishery does not justify reopening the area.
- **Lack of Scientific information**
 - Scientists and NGOs criticized the seeming exclusion of the Coral Advisory Panel and disregard for decades of research.

- Lack of new sediment/trawling studies; data gaps remain.
- **Economic skepticism**
 - The rock shrimp fishery is small and has not historically met optimal yield (OY) without the area; there is a large gap between the current landings and OY; the shrimpers admit that they would use this small area sporadically; reopening the proposed SFAA to shrimping would likely provide minimal benefit and not allow shrimpers to achieve optimum yield.
 - Could undermine Florida’s investments in coral restoration and harm broader fisheries and tourism.
- **Precedent concerns**
 - Reopening protected areas could weaken conservation commitments and set damaging precedents.
- **Additional points raised by those supporting Alternative 1**
 - It was suggested that monitoring should occur for at least a year if the area is opened to track *Oculina* coral impacts.
 - Benefits to shrimpers do not outweigh risks to rare *Oculina* coral ecosystems.

Comments Supporting Preferred Alternative 2 and Alternative 3

Support of **Preferred Alternative 2 and Alternative 3** came mostly from rock shrimp fishermen, processors, and trade groups such as the Southeastern Fisheries Association. Their comments focused on emphasizing historical use, lack of *Oculina* coral in the SFAA, protective measures, and economic relief. These comments are summarized as follows:

- **Historic fishing grounds**
 - The SFAA was traditionally used before Coral Amendment 8 closures in 2015.
 - Fishermen do not think that fishing activities in the area will have negative effects on the *Oculina* coral because when the original OHPAC was created, the *Oculina* coral did not show damage from fishing activities in the area when it was open.
- **No coral present**
 - NOAA mapping in 2025 and a 2022 camera-based survey found no reported live or dead *Oculina* coral within the proposed SFAA.
- **Protective measures**
 - Shrimpers avoid *Oculina* coral due to gear costs and allow an additional buffer when deploying/retrieving gear.
 - VMS monitoring ensures compliance, reducing risk of illegal trawling.
 - Bycatch has been significantly reduced through TEDs and BRDs, with industry compliance.
- **Economic need**
 - Closures have harmed small fishing businesses and coastal economies; reopening would support livelihoods.
 - Amendment supports Executive Order 14276 on “Restoring American Seafood Competitiveness” by reducing burdens on the industry.

- While use the of area is expected to be variable, due to the “annual-crop” nature of the rock shrimp fishery, it would be beneficial during years of lower harvest in other areas.
- **Challenges to scientific claims**
 - Some historical damage attributed to shrimping was inaccurate, unfeasible, or caused by other fisheries (e.g., scallops).
 - Exact causes of past *Oculina* coral death remain uncertain.
 - Shrimpers have argued that there are not bottom currents that would move trawl sediment onto the *Oculina* coral mounds.
- **Other greater threats to *Oculina* corals**
 - Gray water releases from Lake Okeechobee, cruise ship pollution from Cape Canaveral, and space industry impacts are more significant threats than shrimping.

Summary of Public Comments made during the December 2025 Council meeting

During the December 2025 Council meeting, six comments were [written in](#) (five by private/recreational fishermen and one by an individual who identified as other) and four were verbally given, all supporting **Alternative 1 (No Action)**. Commenters referenced the proximity of the SFAA to the *Oculina* coral mounds, the safety buffer required to protect the *Oculina* coral, the biodiversity of the *Oculina* habitat, the impacts of trawling sediment on *Oculina* coral health, and the moral and ecological responsibility to protect the *Oculina* deep-sea coral ecosystem.

Summary of Public comments made during the January 2026 Council meeting

Finally, the Council received public comment on this amendment during the January 2026 Council meeting that was held via webinar. Commenters submitted public comments [via email](#), [the public comment forum](#), and [verbally](#).

Table 5.6.1.2. A count of public comments and the method of submission for the January 2026 Council meeting.

Type of comment	Supportive of Alternative 1 (No Action)	Supportive of Preferred Alternative 2 or Alternative 3
Email	3350	28
Public Forum	7	1
Verbal	10	3

3,367 comments were received that supported **Alternative 1 (No Action)**, highlighting that they felt there could be *Oculina* coral within the area. Commenters do not believe that the Council has accurately addressed the issues identified in the rejection letter from Coral Amendment 10. Commenters noted that since the area was rarely used by rock shrimp fishermen when it was open to shrimping, establishing a SFAA will not provide a large economic benefit. Some commenters stressed that the Magnuson Stevens Act emphasizes using a precautionary approach. A few commenters expressed concerns over possible conflicts of interest between Council members and the proposed action. Finally, comments were submitted that highlighted this area as unique, ancient, slow-growing and fragile and the potential for tremendous damage both directly by the use of trawlers or indirectly from sedimentation.

32 comments were received that supported **Preferred Alternative 2 or Alternative 3**. They highlighted the need for access to historically important fishing grounds and the economic need for the rock shrimp fishery. Comments from the shrimp industry stressed reliance on a healthy *Oculina* coral reef that supports a healthy shrimp population. They also noted that they are aware of the reef locations and avoid them so as not to incur thousands of dollars in gear damage. Many comments reiterated that this is a technical correction from a closure that had inaccurate coordinates during the development of Coral Amendment 8 and emphasized the numerous visual studies that showed no known *Oculina* coral in the area. Finally, comments were received that highlight **Preferred Alternative 2** fairly balances the economic survival of small fishing families while still protecting core *Oculina* coral habitat.

5.1.8. South Atlantic Council’s Conclusion

The Council determined that the **Preferred Alternative 2** best meets the amendments stated purpose and need because it best optimizes yield for the rock shrimp fishery, allows rock shrimpers access to historically commercially important shrimping grounds, while providing protections to *Oculina* coral from negative effects with a 360 – 1,580 m protective buffer between known pinnacles and the western SFAA boundary. **Preferred Alternative 2** also meets the objectives of the Fishery Management Plan for the Coral, Coral Reefs and Live/Hard Bottom Habitat of the South Atlantic Region and the Fishery Management Plan for the Shrimp Fishery of the South Atlantic Region, as explained below.

In selecting **Preferred Alternative 2**, the Council considered that future trawling activity would likely occur where rock shrimp have been previously harvested, in areas already impacted by past fishing activities. Surveys in 2022 and 2025 (Section 4.1.1 and Appendices F and G) did not detect evidence of *Oculina* coral in this area or in the immediate adjacent areas so direct damage to *Oculina* coral is expected to be unlikely.

Council members also considered the possible impacts of sedimentation from rock shrimp trawling on *Oculina* coral. The Council noted that research has not established what the optimal buffer distance should be to prevent adverse effects on *Oculina* coral from activities that suspend bottom sediments. **Preferred Alternative 2** provides a larger buffer between the western boundary of the proposed SFAA and the known *Oculina* coral pinnacles than **Alternative 3** (Section 4.1.1). Additionally, existing research suggests that the current south of the proposed SFAA moves primarily northward. Upwellings are infrequent in the area but may occasionally push water shoreward toward the *Oculina* coral pinnacles. The reefs are often inundated with a turbid, bottom nepheloid layer, so any additional cross-shelf transport from upwelling would result in limited sediment impacts (Reed, 2006). The low frequency of upwellings plus the 360 - 1,580 m buffer are expected to decrease the chances of sediment plumes causing damage to the *Oculina* coral pinnacles while balancing the rock shrimp fishery's need for access to its historical shrimping area. These reasons led the Council to determine that the **Preferred Alternative 2** would likely minimize damage to EFH while increasing access for the rock shrimp fishery.

The Council acknowledges the rock shrimp industry's efforts to avoid damage to *Oculina* coral, as they rely on healthy *Oculina* coral reef habitat to support the shrimp population and trawling over *Oculina* coral can lead to thousands of dollars in damaged gear. Rock shrimp fishermen maintain that they would use the proposed SFAA sporadically, as rock shrimp aren't present in the area consistently, and that only experienced fishermen have the ability to navigate the area. The Council acknowledged that while targeting rock shrimp is challenging, vessel operators are experienced professionals who are required to have a limited access permit and to carry a VMS, and that the VMS requirement reduces the likelihood of direct impacts on the deepwater *Oculina* coral habitat by allowing for precise navigation, tracking documentation and vessel accountability. The Council, during its September 2025 meeting, also reiterated their intent to require that rock shrimp vessels maintain a VMS communication rate (1 ping per 5 minutes) while shrimping or transiting the SFAA. This communication rate would provide good tracking resolution and enhance the ability of the NOAA Office of Law Enforcement to track those vessels.

The Council concluded that **Preferred Alternative 2** is the best alternative to help optimize yield in the rock shrimp portion of the South Atlantic shrimp fishery while balancing the concerns over protection for nearby important habitats. The Council expects **Preferred Alternative 2** to increase economic and social benefits to rock shrimp fishermen by increasing access to a very specific and historic rock shrimp fishing area along the eastern boundary of the northern extension of the OHAPC, while maintaining protection of the *Oculina* coral ecosystem. Creating the SFAA will continue to protect the areas with identified *Oculina* coral while balancing fishery access in areas with no identified *Oculina* corals.

Preferred Alternative 2 is viewed by some Council members as a technical correction to the eastern boundary of the northern extension of the OHAPC established by the Council in Coral Amendment 8 in 2014. Information on the concentrated fishing effort in this area and its economic value to the fishery was discussed very late in the development of Coral Amendment 8. Therefore, the action proposed in this plan amendment is effectively an adjustment to implement the boundary requested by rock shrimp fishermen in 2014. Council members acknowledged the rock shrimp industry's statements that the monetary value of shrimping along the eastern edge of the northern extension of the OHAPC is greater than was previously

communicated to the Council. Through the Deepwater Shrimp AP, the industry stated that the area in question had produced a substantial amount of revenue in 2013 and in 2014, just prior to the effective date of the closure of that area implemented through Coral Amendment 8.

Therefore, the Council has determined that it is optimizing the benefits generated from the coral resources, while minimizing the impacts of the shrimp industry on *Oculina* coral, **Preferred Alternative 2**. Lastly, **Preferred Alternative 2** meets the directives of the Executive Orders 13921 and 14276 while also complying with the requirements of the Magnuson-Stevens Act and other applicable law.

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 (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 Fishery of the South Atlantic Region (Shrimp FMP), the effects analyses include data from 2015 through 2023. Additionally, these 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 on the SAFMC website.

Past Actions

The Coral FMP (SAFMC 1982) established the OHAPC. Within the OHAPC, 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 1998a), expanded the OHAPC and incorporated two adjacent areas within the OHAPC.

Amendment 5 to the Shrimp FMP established a limited access system for portions of the rock shrimp fishery and required the use of a vessel monitoring system (VMS) by vessels with a limited access endorsement fishing for rock shrimp on a trip 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 2009b), established Deepwater Coral HAPCs (CHAPC), prohibited the use of bottom tending gear in the Deepwater CHAPCs, and established shrimp fishery access areas (SFAA) within the Stetson-Miami Terrace Deepwater CHAPC.

Amendment 8 to the Coral FMP (SAFMC 2013) 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 SFAA along the eastern boundary of the northern extension of the OHAPC. The area was a historically important fishing ground for rock shrimpers, but access was restricted with the implementation of Coral Amendment 8 in 2014. However, in July 2022, Coral Amendment 10 was disapproved by the Secretary of Commerce. In this FMP amendment (Coral Amendment 11 and Shrimp Amendment 12), the Council is addressing the reasons for the disapproval and re-evaluating whether to establish an SFAA in the OHAPC.

Present Actions

Effects of the action in these plan amendments are discussed in Chapter 4.

Reasonably Foreseeable Future Actions

There are no reasonably foreseeable future actions that would amend the Coral or Shrimp FMPs.

Expected Impacts from Past, Present, and Future Actions

The intent of the Council in Coral Amendment 11 and Shrimp Amendment 12 is to create a SFAA within the OHAPC, which contains the historic fishing grounds of rock shrimp fishermen that were lost when the OHAPC was expanded in 2015. 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 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). The degree and likelihood of potential direct biological impacts from bottom-tending fishing gear on deepwater coral habitat are considered low based on current habitat mapping and characterization.

6.3. Consideration of Other Changes and Other Non-Fishery Related Issues

The Environmental Protection Agency's climate variation webpage (<https://www.epa.gov/climate-change>), and NOAA's Office of Science and Technology climate webpage (<https://www.fisheries.noaa.gov/topic/climate>), provides background information on climate variation, 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 Sixth Assessment Report (IPCC 2023). provides an updated compilation of scientific information on the impacts of climate variation on the

marine environment. It highlights that widespread and rapid changes have occurred in the ocean and biosphere due to human influence, with a notable increase in the frequency and intensity of weather and climate extremes globally.

The report notes that human-caused climate variation has exposed ocean and coastal ecosystems to conditions unprecedented for millennia, with ongoing ocean warming, sea-level rise, acidification, and deoxygenation. These changes are affecting organism metabolism and altering ecological processes, such as productivity, species interactions, migration, range, and distribution. Marine heatwaves have become more frequent and are projected to continue to increase in frequency, placing pressure on marine species and ecosystems, including leading to more frequent coral bleaching events.

The document also emphasizes that marine ecosystems are increasingly vulnerable to the combined effects of climate variation and other human pressures like overfishing and pollution. As these ecosystems, such as coral reefs and mangroves, disappear, so do the fish and other organisms that depend on them. This degradation affects not only marine life but also human societies that rely on these ecosystems for food and livelihoods. The report is unequivocal that without a drastic reduction in greenhouse gas emissions, the risks of species extirpation and ecosystem collapse will escalate rapidly.

These changes may impact *Oculina* 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 will compound or exacerbate the ongoing effects of these changes.

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.

Space Industry Impacts

The proposed SFAA is located off the coast of Cape Canaveral, Florida which is the home of space industry development. Currently there is a Draft Environmental Impact Statement¹⁷ that estimates that SpaceX alone could begin launching and landing rockets upwards of 244 days per year (DAF, 2025). Each launch and landing will have an associated hazard zone that will close off fishing grounds for all types of fishermen, including rock shrimp fishermen. These closures could make fishing off the east coast of Cape Canaveral and maintaining an economically viable fishery impossible, making the eastern boundary of the OHAPC an even more important fishing ground. The effect will not be predictable until the new development is finished and launches begin.

¹⁷ <https://spaceforstarshipeis.com/>

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

The proposed action would establish a 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 for rock shrimp and calico scallops had caused a dramatic decline in fish populations and 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 direct biological impacts to the deepwater coral habitat in the OHAPC, as it would allow bottom trawling for rock shrimp in areas that are not known to contain *Oculina* pinnacles and where historically fishing had already occurred.

In 2022, the Southeast Fisheries Science Center (SEFSC) conducted a visual survey of the preferred alternative 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 two of those dives were able to classify bottom type. The study 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 standing live or dead colonies of *Oculina* have never been found on low relief areas. This survey found no live, standing dead, or rubble in or immediately adjacent to the proposed SFAA. The survey did note, however, that it could not be stated definitively that no live *Oculina* colonies existed within the proposed SFAA. Based on existing multibeam bathymetry of the entire proposed SFAA, which shows only low or no relief, the study predicted that the likelihood of live *Oculina* is very low (Appendix G).

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 limited access 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 transmission rates, store equipment and maintain a direct and non-stop continuous course. Additionally, VMS would continue to be required on rock shrimp vessels while fishing in the proposed SFAA at the higher transmission rates that are currently in place while transiting the OHAPC. 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

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Matthew Walia	SERO/OLE	Compliance Liaison Analyst
Christopher Liese	SEFSC	SEFSC Economist
Jennifer Lee	SERO/PR	Fishery Biologist, Protected Resources Division
Natasha Mendez-Ferrer	SERO/SF	NEPA Coordinator
Quinn Bernier	SERO/SF	Social Scientist

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

8.1. 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)

8.2. 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

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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 (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 National Oceanic and Atmospheric Administration (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 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 (E.O.) 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

Executive Order (EO) 14276 was signed on April 17, 2025, to reduce burdens on domestic fishing and increase production. The EO requires the Secretary of Commerce, with each Regional Fishery Management Council, 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 EO 14276.

Appendix B. Regulatory Impact Review

B.1. Introduction

The National Marine Fisheries Service (NMFS) requires a Regulatory Impact Review (RIR) for all regulatory actions that are of public interest to satisfy the obligations under Executive Order (E.O.) 12866, as amended. In conjunction with the analysis of direct and indirect effects in the “Environmental Consequences” section of this Amendment, the RIR: 1) provides a comprehensive review of the level and incidence of impacts associated with a regulatory action; 2) provides a review of the problems and policy objectives prompting the regulatory proposals and an evaluation of the major alternatives which could be used to solve the problem; and 3) ensures that the regulatory agency systematically and comprehensively considers all available alternatives so that the public welfare can be enhanced in the most efficient and cost effective way. The RIR also serves as the basis for determining whether any proposed regulations are a “significant regulatory action” under certain criteria provided in E.O.12866. In addition, the RIR provides some information that may be used in conducting an analysis of the effects on small entities pursuant to the Regulatory Flexibility Act (RFA). This RIR analyzes the effects this regulatory action would be expected to have on the recreational and commercial sectors of the South Atlantic rock shrimp fishery.

B.2. Problems and Objectives

The problems and objectives for the proposed actions are presented in Section 1.4 of this amendment and are incorporated herein by reference.

B.3. Description of Fisheries

A description of the commercial rock shrimp portion of the shrimp fishery in the South Atlantic is provided in Section 3.3 of this plan amendment and is incorporated herein by reference.

B.4. Effects of Management Measures

A detailed analysis and discussion of the expected economic effects of the proposed action is included in Section 4.1.2. The following discussion summarizes the expected economic effects of the South Atlantic Fishery Management Council (Council) preferred alternative relative to the no action alternative (i.e., the status quo).

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 14.10 NM² area in which rock shrimp harvest was allowed prior to the implementation of Coral Amendment 8 in 2015. Based on historical vessel monitoring system (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 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, thus resulting in net economic benefits. An increase in catches of rock shrimp would also help achieve optimum yield (OY). 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 on individual vessel owners from **Preferred Alternative 2** 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 data and models. Additionally, while fishing in the shrimp fishery access area (SFAA), vessels accessing the area under **Preferred Alternative 2** would be required to have VMS ping rates that are higher than what is required in areas outside of the Oculina Habitat Area of Particular Concern (OHAPC). Specifically, VMS onboard vessels fishing the areas in **Preferred Alternative 2** would require a ping rate of 12 pings per hour rather than 1 ping per hour that is required when outside of the OHAPC. The exact cost to the vessel would vary, depending on how much time was spent fishing within the SFAA and the cost of the VMS service that the vessel employs. The potential increase in cost associated with VMS ping rates is expected to be negligible since the overall cost of a temporary increased ping rate is expected to be very low, particularly when compared to other operating costs. Also, the vessel would be fishing in an area previously closed to bottom trawling gear and thus would be incurring a potential net economic benefit from access to this area. To provide a scale of the number of vessels that may be affected, on average, 23 vessels with a valid limited access Commercial Vessel Permit for Rock Shrimp (South Atlantic exclusive economic zone) harvested rock shrimp from the South Atlantic annually from 2019 through 2023.

Net economic benefits for commercial rock shrimp vessels would be higher under **Preferred Alternative 2** compared to **Alternative 1 (No Action)**. In general, rock shrimp dealers are indirectly affected whenever gross revenues to commercial fishing vessels are expected to change because 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 comparison of net economic benefits to dealers would be the same as for commercial fishing vessels. On average, eight dealers purchased rock shrimp from the South Atlantic annually from 2019 through 2023.

B.5. Net Benefits of Regulatory Action

It is important to specify the time period being considered when evaluating benefits and costs. According to the Office of Management and Budget's Circular A-4,¹⁸ "The stream of annualized estimates should begin in the year in which the final rule will begin to have effects, even if the rule does not take effect immediately...The time frame for your analysis should cover a period long enough to encompass all the important benefits and costs likely to result from the rule." For current purposes, the reasonably "foreseeable future" is considered to be the next 5 years. There are two primary reasons for considering the next 5 years the appropriate time period for evaluating the benefits and costs of this regulatory action rather than a longer (or shorter) time

¹⁸ See <https://www.whitehouse.gov/wp-content/uploads/2025/08/CircularA-4.pdf>

period. First, this regulatory action does not include a predetermined sunset provision. Second, based on the history of management in the snapper grouper fishery in the South Atlantic, regulations such as those considered in this amendment are often revisited within approximately 5 years.

The analyses of the estimated changes in economic benefits indicates an increase in annual net economic benefits to the commercial sector and an increase in annual total net economic benefits. These effects would be recurring annually.

B.7. Determination of Significant Regulatory Action

Pursuant to E.O. 12866, a regulation is considered a “significant regulatory action” if it is likely to result in: 1) an annual effect of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; 2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; 3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights or obligations of recipients thereof; or 4) raise novel legal or policy issues arising out of legal mandates, the President’s priorities, or the principles set forth in this executive order. Based on the information provided above, this action has been determined to not be economically significant for the purposes of E.O. 12866.

Appendix C. Regulatory Flexibility Act Analysis

C.1. Introduction.

The purpose of the Regulatory Flexibility Act (RFA) is to establish a principle of regulatory issuance that agencies shall endeavor, consistent with the objectives of the rule and of applicable statutes to fit regulatory and informational requirements to the scale of businesses, organizations, and governmental jurisdictions subject to regulation. To achieve this principle, agencies are required to solicit and consider flexible regulatory proposals and to explain the rationale for their actions to assure such proposals are given serious consideration. The RFA does not contain any decision criteria; instead the purpose of the RFA is to inform the agency, as well as the public, of the expected economic effects of various alternatives contained in the regulatory action and to ensure the agency considers alternatives that minimize the expected economic effects on small entities while meeting the goals and objectives of the applicable statutes (e.g., the Magnuson-Stevens Fishery Conservation and Management Act [Magnuson-Stevens Act]).

With certain exceptions, the RFA requires agencies to conduct an initial regulatory flexibility analysis (IRFA) for each proposed rule. The IRFA is designed to assess the effects various regulatory alternatives would have on small entities, including small businesses, and to determine ways to minimize those effects. An IRFA is primarily conducted to determine whether the proposed regulatory action would have a significant economic effect on a substantial number of small entities. In addition to analyses conducted for the Regulatory Impact Review (RIR), the IRFA provides: 1) a description of the reasons why action by the agency is being considered; 2) a succinct statement of the objectives of, and legal basis for, the proposed regulatory action; 3) a description and, where feasible, an estimate of the number of small entities to which the proposed regulatory action will apply; 4) a description of the projected reporting, record-keeping, and other compliance requirements of the proposed regulatory action, including an estimate of the classes of small entities which will be subject to the requirements of the report or record; 5) an identification, to the extent practicable, of all relevant federal rules, which may duplicate, overlap, or conflict with the proposed rule; and 6) a description of any significant alternatives to the proposed regulatory action which accomplish the stated objectives of applicable statutes and would minimize any significant economic effects of the proposed regulatory action on small entities.

In addition to the information provided in this section, additional information on the expected economic effects of the proposed action is included in the RIR (Appendix B).

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

A discussion of the reasons why action by the agency is being considered is provided in Chapter 1. In summary, the need for this proposed regulatory action is to help achieve optimum yield in the rock shrimp portion of the South Atlantic shrimp fishery and increase economic and social benefits to rock shrimp fishermen by increasing access to historic rock fishing grounds, while maintaining protection of the *Oculina* deepwater coral ecosystems. The objective of this

proposed regulatory action is to establish a shrimp fishery access area (SFAA) along the eastern edge of the northern extension of the Oculina Bank Habitat Area of Particular Concern (OHAPC) where holders of a valid limited access Commercial Vessel Permit for Rock Shrimp (South Atlantic exclusive economic zone [EEZ]) (RSLA) would be able to fish for and possess rock shrimp. The Magnuson-Stevens Act serves as the legal basis for this proposed regulatory action.

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

This proposed regulatory action would allow vessels with a valid RSLA permit to harvest and possess rock shrimp in the eastern edge of the northern extension of the OHAPC. Thus, this proposed regulatory action is expected to directly regulate all vessels with a valid or renewable RSLA permit.

From 2019 through 2023, the average number of vessels with a valid RSLA permit per year was 101. During this time, the average number of vessels with a valid RSLA permit that harvested rock shrimp from the South Atlantic EEZ (i.e., were active in the fishery) was 23, with a maximum of 35 vessels harvesting rock shrimp from the South Atlantic EEZ in 2022. As of December 17, 2025, there were 100 vessels with a valid or renewable RSLA permit. Thus, this proposed regulatory action is assumed to directly regulate 100 vessels with valid or renewable RSLA permits, though it would be expected to only directly affect those 14-35% of permitted vessels that have harvested rock shrimp from the South Atlantic EEZ in recent years.

The National Marine Fisheries Service (NMFS) does not possess complete ownership data for businesses that own vessels with RSLA permits. Therefore, it is not currently feasible to accurately determine affiliations between these particular businesses. Because of the incomplete ownership data, for purposes of this analysis, it is assumed each of these vessels is independently owned by a single business, which is expected to result in an overestimate of the actual number of businesses directly regulated by this proposed action. Thus, this proposed regulatory action is estimated to directly regulate 100 businesses in the commercial South Atlantic rock shrimp fishing industry. All monetary estimates in the following analysis are in 2024 dollars.

In 2021/22, for vessels with a valid RSLA permit that were active in the South Atlantic rock shrimp fishery, total gross seafood revenue per vessel was about \$869,012 on average per year. Approximately \$219,358 came from South Atlantic rock shrimp landings on average, or about 25% of total gross revenue per year. Most trips that harvest rock shrimp also harvest penaeid shrimp, and most vessels also harvest penaeid shrimp on separate trips in the South Atlantic. Average annual gross revenue per vessel from South Atlantic penaeid shrimp landings was \$383,137, or about 44% of these vessels' total gross revenue per year. Many vessels are also relatively dependent on revenue from the Gulf of America shrimp fishery, which accounted for \$260,006, or about 30% of these vessels' total gross revenue per year. Based on economic return estimates for these vessels in 2021/22 (C. Liese, pers. comm., December 18, 2025), net revenue from commercial fishing operations is estimated to be \$70,919 per year on average, or a profit margin of 8.2% of total gross revenue per year. From 2019 through 2023, the maximum rock shrimp revenue earned by a single vessel (business) was approximately \$813 thousand, while

maximum total revenue of one vessel was \$3.49 million (though only 4% of that was from rock shrimp).

On December 29, 2015, NMFS issued a final rule establishing a small business size standard of \$11 million in annual gross receipts (revenue) for all businesses primarily engaged in the commercial fishing industry (NAICS code 11411) for RFA compliance purposes only (80 FR 81194, December 29, 2015). In addition to this gross revenue standard, a business primarily involved in commercial fishing is classified as a small business if it is independently owned and operated and is not dominant in its field of operations (including its affiliates). Based on the information above, all businesses directly regulated by this proposed regulatory action are determined to be small businesses for the purpose of this analysis.

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

This proposed regulatory action would not establish any new reporting or record-keeping requirements.

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

No duplicative, overlapping, or conflicting federal rules have been identified.

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

Substantial number criterion

This proposed regulatory action, if implemented, would be expected to directly regulate all 100 businesses with a valid or renewable RSLA permit. All directly regulated businesses have been determined, for the purpose of this analysis, to be small entities. Based on this information, the proposed regulatory action is expected to affect a substantial number of small businesses.

Significant economic effects

The outcome of “significant economic impact” can be ascertained by examining two factors: disproportionality and profitability.

Disproportionality: Do the regulations place a substantial number of small entities at a significant competitive disadvantage to large entities?

All entities directly regulated by this regulatory action have been determined to be small entities. Thus, the issue of disproportionality does not arise in the present case.

Profitability: Do the regulations significantly reduce profits for a substantial number of small entities?

This proposed regulatory action would establish a SFAA along the eastern edge of the northern extension of the OHAPC where holders of a valid RSLA permit would be able to fish for and possess rock shrimp. The proposed SFAA is an approximate 14.1 nautical mile area in which rock shrimp harvest was allowed prior to implementation of Coral Amendment 8 in 2015. Participants in the fishery have reported, and vessel monitoring system (VMS) data from years prior to 2015 confirm that rock shrimp were historically caught in the proposed access area. VMS data also indicate that use of the area varied from year to year. However, the composition of the active, permitted fleet has changed since vessels were allowed to harvest rock shrimp from this proposed access area. Given the change in fleet composition, variability in the size of the active, permitted fleet, and historical variability in use of the area, the economic effects of allowing currently permitted vessels to harvest rock shrimp from the proposed access area cannot be quantified. However, it is reasonable to assume that allowing these vessels to harvest rock shrimp from this area once again would lead to an increase in rock shrimp landings and gross revenue and thereby increase the potential for profits for these vessels. It should be noted that a slight increase in the VMS ping rate requirement in the proposed SFAA might initially increase costs associated with VMS reporting as vessels need to reconfigure VMS instrumentation. Again, it is reasonable to assume that vessels will only incur this additional cost if the benefits of fishing in the SFAA exceed the costs.

Based on the information above, this proposed action would not be expected to have a significant economic impact 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

This proposed action, if implemented, would not be expected to have a significant economic impact on a substantial number of small entities. As a result, the issue of significant alternatives is not relevant.

Appendix D. Bycatch Practicability Analysis

This bycatch practicability analysis evaluates the potential impacts of 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) on bycatch and bycatch mortality.

The proposed action in these amendments would establish a shrimp fishery access area (SFAA) along the eastern boundary of the northern extension of the *Oculina* Habitat Area of Particular Concern (OHAPC).

D.1. Population Effects for the Bycatch Species

Background

The OHAPC was established in 1982 (49 FR 29607, August 22, 1984) with anchoring prohibited within the OHAPC in 1996 (60 FR 66926, December 27, 1995) and the area was expanded in 2014 through Coral Amendment 8 (80 FR 42423, July 17, 2015). The northern extension of the OHAPC was closed to rock shrimp trawling with the implementation of Coral Amendment 8. Under the regulations in 50 C.F.R. § 622.224(b)(1)(i), no person in the OHAPC is permitted to use bottom longlines, bottom trawls, dredges, pots, or traps. Additionally, while aboard a fishing vessel, a person may not anchor, or use an anchor and chain, or a grapple and chain. Fishing for or possessing rock shrimp in or from the OHAPC is also prohibited; however, a shrimp vessel with a valid commercial vessel permit for rock shrimp can transit through the area if its gear is appropriately stowed. "Transit" is defined as a direct, continuous, and non-stop course through the area, maintaining a minimum speed of five knots as determined by an operating vessel monitoring system (VMS) with a minimum ping rate of 1 ping per 5 minutes. Appropriately stowed gear means that the doors and nets are out of the water.

Coral Amendment 11 and Shrimp Amendment 12 propose to establish a SFAA within the OHAPC in a discrete location where rock shrimp fishermen historically fished. This analysis evaluates the potential impacts the SFAA action may have on deepwater coral, particularly the potential for incidental capture, or "bycatch," of *Oculina* coral. As discussed in Section D.4, scientific surveys have indicated a very low likelihood of live *Oculina* coral within the proposed SFAA due to the low-relief, sandy bottom in the area. As such, the bycatch of *Oculina* coral during the operation of this fishery is not expected to occur.

The bycatch practicability analysis also focuses on the rock shrimp fishery and its potential indirect impacts on other species caught incidentally, noting that historical fishing effort in the area was low and impacts on commercially important species are expected to be minimal.

The proposed action could result in negative direct impacts to the rock shrimp species within the SFAA as targeted fishing would occur. Access to the area can be important to the rock shrimp fishermen in years when rock shrimp are present in the area. Past fishing effort in the proposed SFAA has been 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 reached the optimum yield (OY) target since 2004.

There may also be a negative impact on snapper grouper species caught as bycatch in the rock shrimp fishery. Fish taken in rock shrimp trawls are generally small and young. Juveniles often exhibit extremely high natural mortality rates, meaning that a large portion of young fish would naturally perish before reaching reproductive age. The reproductive potential of a stock can be further compromised if fishing mortality from bycatch is added to the high natural mortality, preventing enough fish from reproducing before they are exposed to fishing or bycatch mortality. However, as mentioned above, the historical rock shrimp fishing effort in this area was low and the impacts on species in the area is expected to be low.

Some commercially valuable deepwater species congregate around deepwater coral habitat. Various crabs, for instance, are abundant on the deep reefs. Other invertebrates, particularly ophiuroids (brittle stars), populate the deepwater coral matrix in high numbers. There could be potential for bycatch of these species, however more research on abundance and type is needed to quantify potential impacts.

Bycatch Data for South Atlantic Rock Shrimp Fishery

A mandatory observer program for the commercial shrimp fishery in the Gulf was implemented in 2007 and expanded to include the South Atlantic penaeid and rock shrimp fisheries through Amendment 6 to the Shrimp Fishery Management Plan (70 FR 73383, December 12, 2005).

Annually, between July and November, the South Atlantic Rock Shrimp Observer Program randomly selects 10 vessels with active permits and reported rock shrimp landings in the prior three years. There are 158 unique South Atlantic Rock Shrimp permits, with an average of 90-100 active in any given year, 33 of those are permits with home ports in the South Atlantic that landed rock shrimp from 2019-2023.

The South Atlantic rock shrimp observer data was provided from the National Marine Fisheries Service (NMFS) Southeast Fisheries Science Center (SEFSC) in April of 2025. There were no observer data in the South Atlantic rock shrimp fishery in 2023 because the 10 vessels selected either did not fish in 2023 or failed to respond to the selection letter. Monitoring of the rock shrimp fishery occurs through VMS and a mandatory observer program, though observer coverage for rock shrimp trips has been less than 1%. The 2024 South Atlantic rock shrimp observer bycatch estimates are not available in the format necessary for publication. As of 2023, only four-net configurations were sampled in this fishery, with observers generally sampling two nets per vessel. Formal bycatch estimates expanded to the entire fleet are not currently available; however, the bycatch is summarized by numbers of individuals and by weight. (Table D.1.2.1)

Table D.1.2.1. Species documented from bycatch characterization samples, based on observer coverage of the South Atlantic rock shrimp fishery from 2018 through 2022. The bycatch is summarized by numbers of individuals and by weight (kilograms).

Species	Numbers	Species	Weight (kg)
Longspine Swimming Crab	668,181	Inshore Lizard Fish	5,518
Brown Shrimp	85,404	Longspine Swimming Crab	5,420
Iridescent Swimming Crab	60,354	Dusky Flounder	2,676
Dusky Flounder	48,531	Brown Shrimp	2,421
Inshore Lizard Fish	41,241	Iridescent Swimming Crab	1,276
Rock Sea Bass	20,830	Spot	903
Bank Sea Bass	9,184	Rock Sea Bass	721
Spot	7,041	Atlantic Croaker	521
Atlantic Croaker	3,576	Bank Sea Bass	317
Pink Shrimp	3,222	Summer Flounder	286
Summer Flounder	1,081	Pink Shrimp	197
Southern Flounder	183	Atlantic Sharpnose Shark	161
Seatrout	90	Southern Flounder	48
Atlantic Sharpnose Shark	81	Black Sea Bass	5
Florida Pompano	69	Red Lionfish	5

The data from observer coverage reveals the dominant bycatch species in the fishery. Longspine swimming crab was the most common bycatch by number and the second most common by weight. Inshore lizardfish were the most common species by weight and were also in the top five by numbers. Other significant bycatch species, appearing in the top five by both numbers and weight, included brown shrimp, dusky flounder, and iridescent swimming crab.

Of the species listed in the bycatch table, brown shrimp, pink shrimp, and black sea bass are managed by the SAFMC under the Shrimp and Snapper Grouper Fishery Management Plans, respectively. However, remaining finfish and invertebrate species in the bycatch table are not targeted in Southeast commercial or recreational fisheries and have not undergone formal stock assessments. Although bycatch reduction devices are mandated for the rock shrimp fishery and are believed to be sufficient for stock protection, data are inadequate for a formal, coast-wide assessment of these species (SAFMC 2005). The continued prohibition on the use of bottom longline, dredge, pot, or trap gear within the proposed SFAA is expected to provide ongoing biological benefits to bottom-dwelling species.

D.2. Practicability of Management Measures in Directed Fisheries Relative to their Impact on Bycatch and Bycatch Mortality

The proposed action in this amendment aims to allow access to an historic rock shrimp fishing area that was closed with the implementation of Coral Amendment 8 in 2015. **Preferred Alternative 2** and **Alternative 3** would establish SFAAs of approximately 14.10 square nautical miles (NM²) or 18.87 NM², respectively, allowing commercial rock shrimp vessels to bottom trawl within these areas. Other bottom-tending gear and anchoring would remain prohibited. The establishment of a SFAA could result in negative indirect biological impacts to deepwater coral via plumes of sediment resulting from trawling.

Both **Preferred Alternative 2** and **Alternative 3** may have negative impacts on finfish species caught as bycatch. However, historical fishing effort in the area was low, and impacts on commercially or recreationally important species are expected to be low.

D.3. Ecological Effects Due to Changes in Bycatch

The ecological effects of bycatch mortality are similar to those of fishing mortality from directed efforts; if not properly managed, they can reduce stock biomass to unsustainable levels. Currently, bycatch estimates within the proposed SFAA are likely to be based on historic fishing activity in this area. The proposed SFAA is in a location where *Oculina* coral presence is not indicated.

In addition, the rock shrimp vessels with a limited access endorsement for South Atlantic rock shrimp would be allowed to fish in the SFAA, and these vessels must ensure that they have an operating vessel monitoring system (VMS). The VMS requirements include a communication rate of 1 ping per 5 minutes within the OHAPC. This requirement would continue if the vessel is fishing within the SFAA and is expected to facilitate enforcement and protect the *Oculina* coral habitat.

D.4. Changes in Bycatch of Other Fish Species and Resulting Population and Ecosystem Effects

The proposed action to establish a SFAA is intended to restore access to historically fished grounds where there is no known *Oculina* coral. While this reopens an area to fishing in the OHAPC, the historical fishing effort in this area was low. The action is not expected to significantly increase overall fishing effort or change the overall spatial/temporal distribution of current fishing effort within the South Atlantic region.

There is some concern that the establishment of the SFAA could result in negative biological impacts to deepwater coral habitat due to intermittent bottom trawling. However, trawling is expected to occur in areas of low relief and predominately sand bottom, which have already been impacted by past fishing activities. Historical fishing effort in the proposed area was low,

averaging less than 1.8% of total VMS fishing points, suggesting the impact is expected to be minimal. Fishermen tend to avoid hard bottom habitat to prevent snags and gear loss. In 2022, the SEFSC conducted a visual survey of the proposed SFAAs, utilizing a towed camera system to classify bottom types as live (standing), dead (standing), rubble, or sand. Out of 14 dives, only two successfully classified bottom type. The survey concluded that all live *Oculina* coral colonies have historically been found on medium and high-relief habitat, with rubble at the perimeter, and no standing live or dead colonies have been observed in low-relief areas. Based on the successful tows, no live, standing dead, or rubble was observed in or immediately adjacent to the SFAA. While the SEFSC could not definitively state the absence of live *Oculina* within the SFAA, they predicted a very low likelihood based on existing multibeam bathymetry showing only low or no relief.

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 proposed SFAA. Mapping showed that mound features formed by *Oculina* corals were not evident in the proposed SFAA. Both studies indicate that there is no live or dead *Oculina* coral within the proposed SFAA and that since the area was closed to rock shrimp fishing in 2014 there has been no *Oculina* coral growth within the area.

Therefore, the degree and likelihood of potential direct biological impacts from bottom-tending fishing gear on *Oculina* coral habitat as a result of **Preferred Alternative 2** and **Alternative 3** are low based on current habitat mapping and characterization. While no high relief mounds are present, low-relief hard bottoms and *Oculina* coral rubble could be providing substrate for *Oculina* coral recruitment and recovery from previous trawling events. Sedimentation from trawling could also negatively affect *Oculina* corals by smothering polyps, shading, and reducing recruitment and survival of larvae. Fine sediments, which are present in higher concentrations near *Oculina* reefs, tend to have greater negative effects. Sediment plumes from trawling can spread for hundreds of meters laterally. The western boundary of the proposed SFAA is approximately 360-1,580 m east from known *Oculina* pinnacles (Appendix F). **Preferred Alternative 2** provides a larger buffer from known *Oculina* coral pinnacles compared to **Alternative 3**.

D.5. Effects on Marine Mammals and Birds

Under Section 118 of the Marine Mammal Protection Act (MMPA), NMFS must publish, at least annually, a List of Fisheries (LOF) that places all U.S. commercial fisheries into one of three categories based on the level of incidental serious injury and mortality of marine mammals that occurs in each fishery.

The Southeastern U.S. Atlantic and Gulf shrimp trawl fishery, which includes the rock shrimp fishery, continues to be listed as a Category II fishery under the Marine Mammal Protection Act (MMPA) proposed List of Fisheries (LOF) for 2025 (September 24, 2024, 89 FR 77789). The categorization as Category II is supported by ongoing reviews of information, including Marine Mammal Stock Assessment Reports (SARs), injury determination reports, observer data, logbook data, stranding data, disentanglement network data, fishermen self-reports, and anecdotal reports. While specific recent take numbers for rock shrimp trawls exclusively in the

South Atlantic are not always disaggregated from the other shrimp fishing in the area, the overall shrimp trawl fishery in the region (South Atlantic and Gulf) has documented marine mammal interactions.

The Bermuda petrel and roseate tern occur within the action area. Bermuda petrels are occasionally seen in the waters of the Gulf Stream off the coasts of North and South Carolina during the summer. Sightings are considered rare and only occurring in low numbers (Alsop 2001). Roseate terns occur widely along the Atlantic coast during the summer but in the southeast region they are found mainly off the Florida Keys (unpublished U.S. Fish and Wildlife Service data). Interaction with South Atlantic fisheries has not been reported as a concern for either of these species.

D.6. Changes in Fishing, Processing, Disposal, and Marketing Costs

Detailed descriptions of any expected changes associated with fishing, processing, disposal, and marketing costs are contained in **Section 4.0**. The action contained within this amendment is expected to result in net economic benefits by allowing vessels to potentially increase rock shrimp landings. The economic effects are difficult to quantify due to variability in area usage and overall participation in the fishery. However, **Alternative 3**, being larger, would likely offer comparatively higher economic benefits than **Preferred Alternative 2**. Increased landings would be expected to increase gross revenue and producer surplus for vessels and indirectly benefit dealers.

D.7. Changes in Fishing Practices and Behavior of Fishermen

Detailed descriptions of any expected changes associated with fishing practices and the behavior of fishermen are contained in **Chapter 4**. **Preferred Alternative 2** and **Alternative 3** would impact the rock shrimp fleet by reopening some historic fishing grounds. The size and location of the SFAA are the most significant factors that would positively impact fishermen. Access to these areas is particularly important to these fishermen in years when rock shrimp are present, despite variable regular use in these areas in the past. **Preferred Alternative 2** represents the most recent recommendation by rock shrimp fishermen and is supported by the Deepwater Shrimp Advisory Panel.

The establishment of a transit provision through the Oculina HAPC in Coral Amendment 8 for rock shrimp fishermen with rock shrimp onboard had a positive effect on shrimp operations by reducing travel distance and enhancing safety in poor weather conditions. The transit provision allows shrimp fishermen with rock shrimp onboard to traverse the OHAPC to reach fishing grounds on the western side under the following conditions: fishing gear must be appropriately stowed, meaning the doors and nets are out of the water, and the vessel must maintain a minimum speed of 5 knots as determined by the VMS system¹⁹. To ensure this speed is maintained the VMS communication rate is required to increase from the baseline requirement of one communication per hour to one communication per five minutes when the vessel is within the OHAPC. These amendments do not modify that transit provision, and fishermen must

¹⁹ [https://www.ecfr.gov/current/title-50/part-622#p-622.224\(b\)\(1\)\(i\)\(C\)](https://www.ecfr.gov/current/title-50/part-622#p-622.224(b)(1)(i)(C))

continue to maintain the gear stowage and speed requirements when transitioning the OHAPC. While executing the fishery in the proposed SFAA, vessels will continue to be required to maintain the communication rate of 1 communication per five minutes, but not the 5 knot speed requirement. Maintaining this communication rate will aid law enforcement in monitoring the area to protect *Oculina* coral.

D.8. Changes in Research, Administration, and Enforcement Costs and Management Effectiveness

The establishment of an SFAA would have minimal administrative impacts. Existing VMS requirements in the rock shrimp fishery enhance enforcement and help protect the *Oculina* coral habitat within the OHAPC. Administrative impacts would be incurred through the rulemaking process, outreach, and enforcement, with potential initial costs for VMS reconfiguration for NOAA and industry. However, these are expected to be minimal given the small size of the proposed SFAAs.

Research is ongoing to discover additional deepwater coral areas, and the South Atlantic Council actively provides protection for these areas. More information can be found at the Deep Sea Coral Program website: <https://deepseacoraldata.noaa.gov/index.php/data>

Cooperative research projects (CRP) between science and industry are being used to a limited extent to collect bycatch information from fisheries in the Gulf and South Atlantic. Research funds for observer programs, as well as gear testing and testing of electronic devices are also available each year in the form of grants from the Marine Fisheries Initiative, Saltonstall-Kennedy program, and the CRP. Efforts are made to emphasize the need for observer and logbook data in requests for proposals issued by granting agencies. A condition of funding for these projects is that data are made available to the Councils and NMFS upon completion of a study.

Stranding networks have been established in the Southeast Region. The NMFS SEFSC is the base for the Southeast United States Marine Mammal Stranding Program (<http://sero.nmfs.noaa.gov/pr/strandings.htm>). NMFS authorizes organizations and volunteers under the MMPA to respond to marine mammal strandings throughout the United States. These organizations form the stranding network whose participants are trained to respond to and collect samples from live and dead marine mammals that strand along southeastern United States beaches. The SEFSC is responsible for: coordinating stranding events; monitoring stranding rates; monitoring human caused mortalities; maintaining a stranding database for the southeast region; and conducting investigations to determine the cause of unusual stranding events including mass strandings and mass mortalities (<http://www.sefsc.noaa.gov/species/mammals/strandings.htm>).

The NMFS Southeast Regional Office (SERO) and the SEFSC participate in a wide range of training and outreach activities to communicate bycatch related issues. The NMFS SERO issues public announcements, Southeast Fishery Bulletins, or News Releases on different topics, including use of turtle exclusion devices, bycatch reduction devices, use of methods and devices

to minimize harm to turtles and sawfish, information intended to reduce harm and interactions with marine mammals, and other methods to reduce bycatch for the convenience of constituents in the southern United States. These are mailed out to various organizations, government entities, commercial interests and recreational groups. This information is also included in newsletters and publications that are produced by NMFS and the various regional fishery management councils. Announcements and news releases are also available on the internet and broadcasted over NOAA weather radio.

Additional administrative and enforcement efforts would help to implement and enforce fishery regulations. NMFS established the South East Fishery-Independent Survey in 2010 to strengthen fishery-independent sampling efforts in southeast U.S. waters, addressing both immediate and long-term fishery-independent data needs, with an overarching goal of improving fishery-independent data utility for stock assessments. Meeting these data needs are critical to improving scientific advice to the management process, ensuring overfishing does not occur, and successfully rebuilding overfished stocks on schedule.

D.9. Changes in the Economic, Social, or Cultural Value of Fishing Activities and Non-Consumptive Uses of Fishery Resources

The proposed action is expected to result in net economic and social benefits by allowing increased rock shrimp landings through access to the SFAA. These benefits address stakeholder concerns regarding access to historically important fishing grounds and may improve perceptions of the management process. Discussion associated with effects, costs, and benefits associated with various alternatives are described in **Chapter 4.0**.

D.10. Changes in the Distribution of Benefits and Costs

The distribution of benefits and costs expected from the proposed actions in this amendment are discussed in the economic and social effects analysis in Chapter 4. These effects are discussed in relation to the baseline economic and social conditions of the fishery and fishing communities outlined in Chapter 3 of the document. Additionally, the Regulatory Impact Review (Appendix B) and Regulatory Flexibility Act Analysis (Appendix C) provide additional information on changes in the distribution of benefits and costs. The proposed actions are expected to provide greater opportunities for rock shrimp fishermen in the SFAA. None of the actions and alternatives are likely to change the current level of bycatch of target or non-target species in the South Atlantic.

D.11. Social Effects

The baseline social environment and social effects of the proposed actions are described in Chapters 3 and 4 of this document, respectively. In general, fishermen become frustrated as waste of the resource increases due to regulatory bycatch of target and non-target species. This often results in a distrust of science in that regulations are intended to protect stocks and rebuild overfished stocks by reducing such bycatch. However, none of the actions and alternatives in these amendments are likely to change the current level of bycatch of non-target species in the South Atlantic and thus are unlikely to result in the negative social effects described. The proposed actions are expected to provide greater opportunities for rock shrimp fishermen in the

SFAA. The transit provision (Section D.7) through the OHAPC, established through Coral Amendment 8, is expected to continue providing socio-economic benefits and enhance safety for rock shrimp fishermen. Additionally, any fishing in the SFAA will be documented with VMS as an added protection to ensure fishing does not occur in areas outside the SFAA. The social effects of all the proposed management measures are described in **Chapter 4.0**.

D.12. Conclusion

This analysis evaluates the practicability of minimizing bycatch and bycatch mortality under the proposed action. The core action of establishing an SFAA along the eastern boundary of the northern extension of the OHAPC aims to restore historic fishing grounds for the rock shrimp fishery. While bottom trawling inherently carries a risk of bycatch and habitat impact, current information suggests that the proposed SFAA areas have low or no relief and a very low likelihood of live *Oculina* coral. Historical fishing effort in these specific areas was also low.

The management measures, including VMS requirements, are intended to mitigate potential negative biological impacts by ensuring fishing occurs within designated areas and that transit provisions are followed. Ongoing research and monitoring efforts aim to improve data collection for bycatch and ecosystem health.

Overall, the proposed action is anticipated to have minimal biological impacts on deepwater coral, protected species and other species in the SFAA, given the current understanding of the habitat. They are expected to result in net economic and social benefits by improving access to the rock shrimp fishery in historically utilized areas. Therefore, the proposed action is deemed, to the extent practicable, to minimize bycatch and bycatch mortality while achieving the purpose and need of the amendment.

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 C.F.R Part 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 webpage: <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 I 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 meters (m) depth, subtropical (15°-35° Celsius [°C]), oligotrophic waters with high (30-35 o/oo (part per thousand)) 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 (30-35 o/oo) salinity waters in depths exceeding 18 m (54 feet (ft)), 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 m; 0-12 ft) hard bottom off the east coast of Florida from Cape Canaveral to Broward County); offshore (5-30 m; 15-90 ft) 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 (SAFMC 2012).

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 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 intermingled with sand, mud, or shell hash bottom. Mud-clay bottoms in depths of 150-300 m are HAPC.

Golden tilefish are generally found at 80-540 m, but most commonly found at 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;

mangroves²⁰, 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 m in depth with the highest concentrations occurring between 34 and 55 m. 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 includes the upper regions of the continental slope from 180 m (590 ft) to about 730 m (2,395 ft), with concentrations found at depths of between 250 m (820 ft) and 475 m (1,558 ft) 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. 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.

Clarifications to Designations for *Rock Shrimp*:

No clarifications of these designations have been requested during EFH consultations.

²⁰ 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 *Royal Red Shrimp*:

No clarifications of these designations have been requested during EFH consultations.

E.8. 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 14.10 square nautical miles proposed shrimp fishery access area (SFAA) in the *Oculina* Bank Habitat Area of Particular Concern (OHAPC). Figure F.1.1.1 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. F.1.1.2).

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 *Oculina* corals are not evident in the NF2501 multibeam bathymetry data collected in April 2025 inside the SFAA. Relatively large *Oculina* 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.F.1.1.3).

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 *Oculina* corals or mounds; it suggests the presence of relatively large aggregations of mounds. No large areas of *Oculina* coral mounds are visible in BlueTopo within the proposed SFAA (Fig. F.1.1.4).

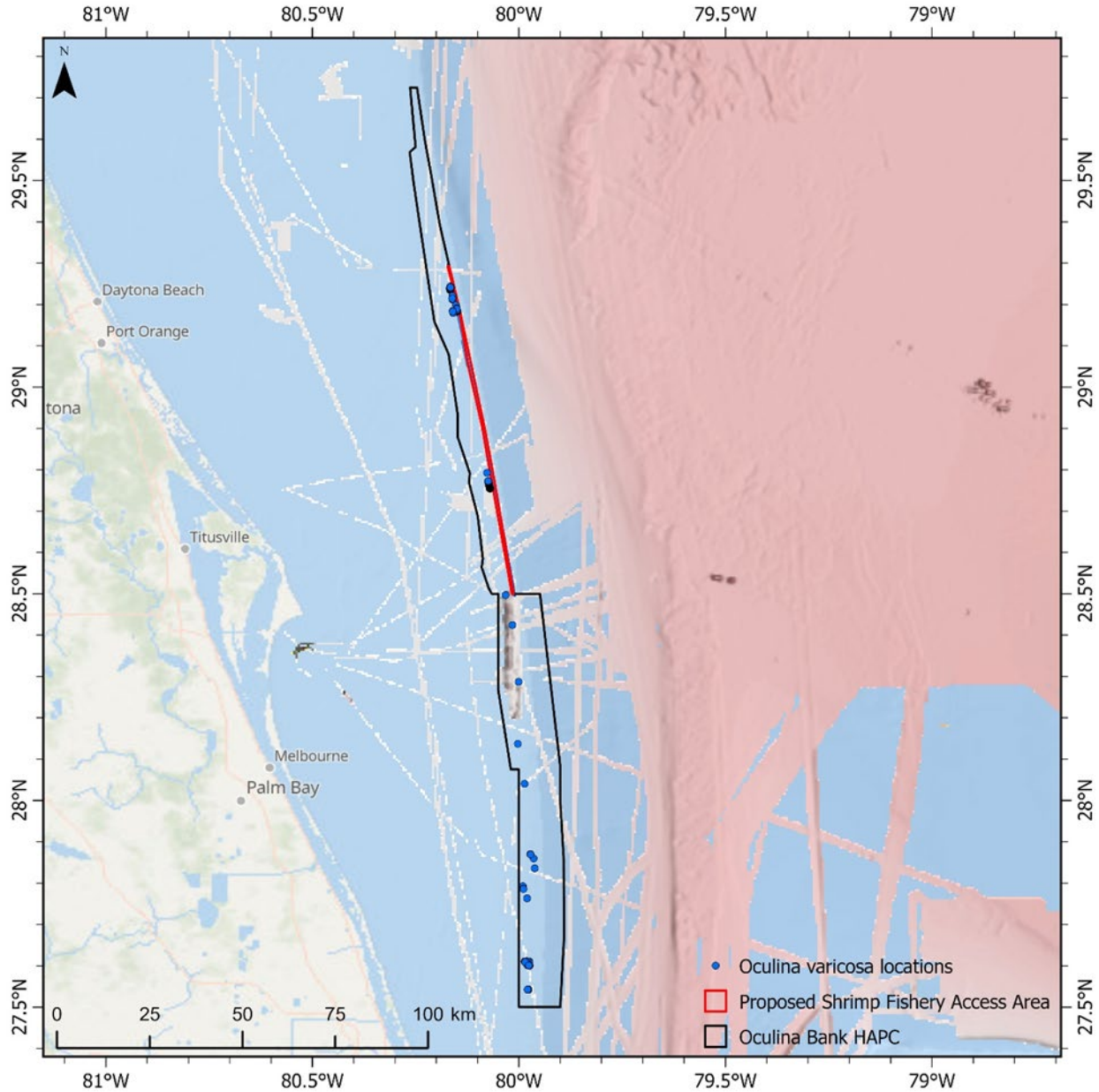


Figure F.1.1. Locations of the Oculina Bank Habitat Area of Particular Concern (HAPC, outlined in black) and proposed SFAA (outlined in red) offshore South Florida. Spatially precise (± 20 m) known locations of *Oculina varicosa* occurrence (blue circles) are included from the NOAA National Database 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.

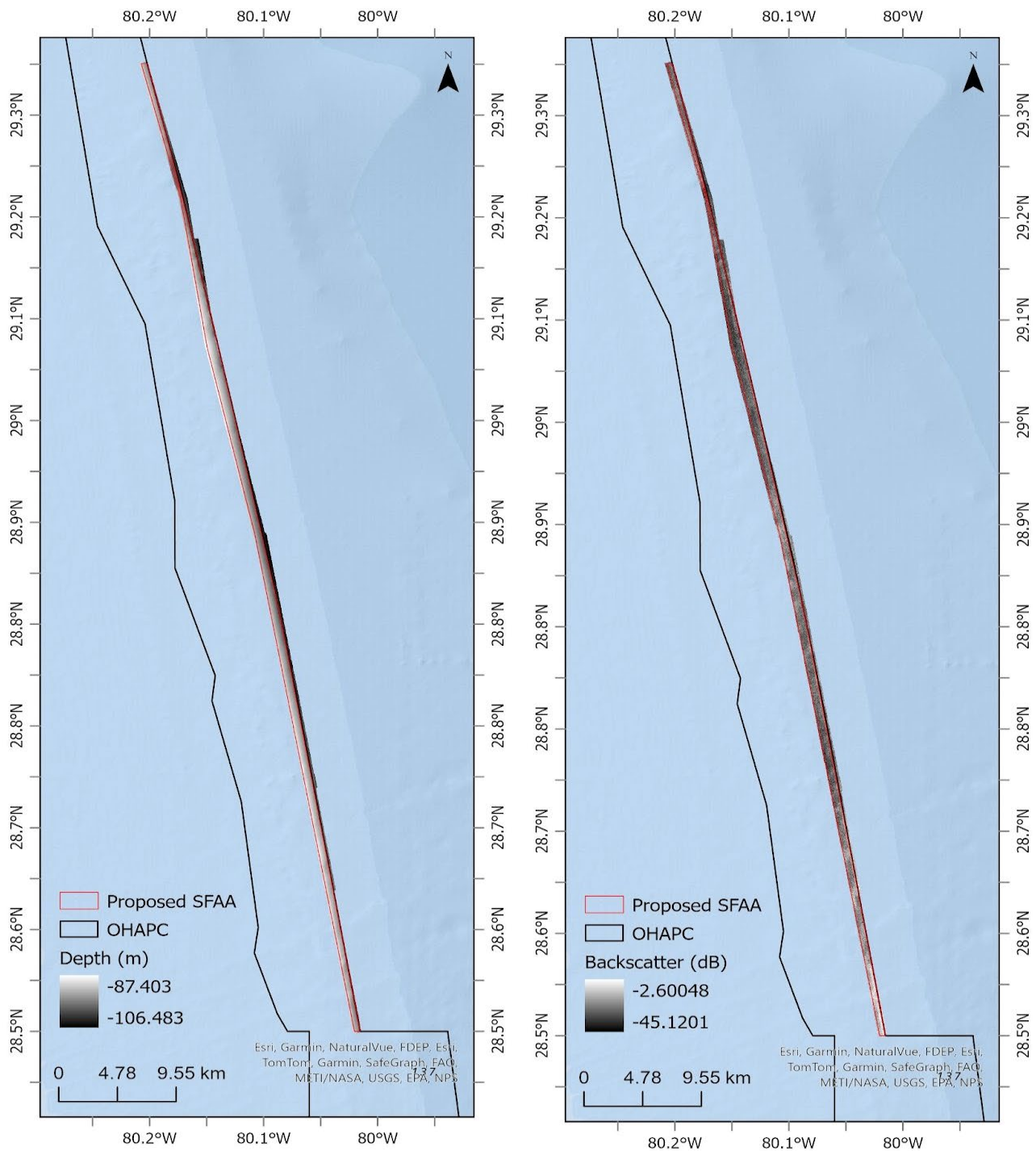


Figure F.1.2. Bathymetry (left) and backscatter (right) in the proposed SFAA collected in 2025 demonstrate depth ranges and substrate hardness suitable to support *Oculina varicosa* colonies.

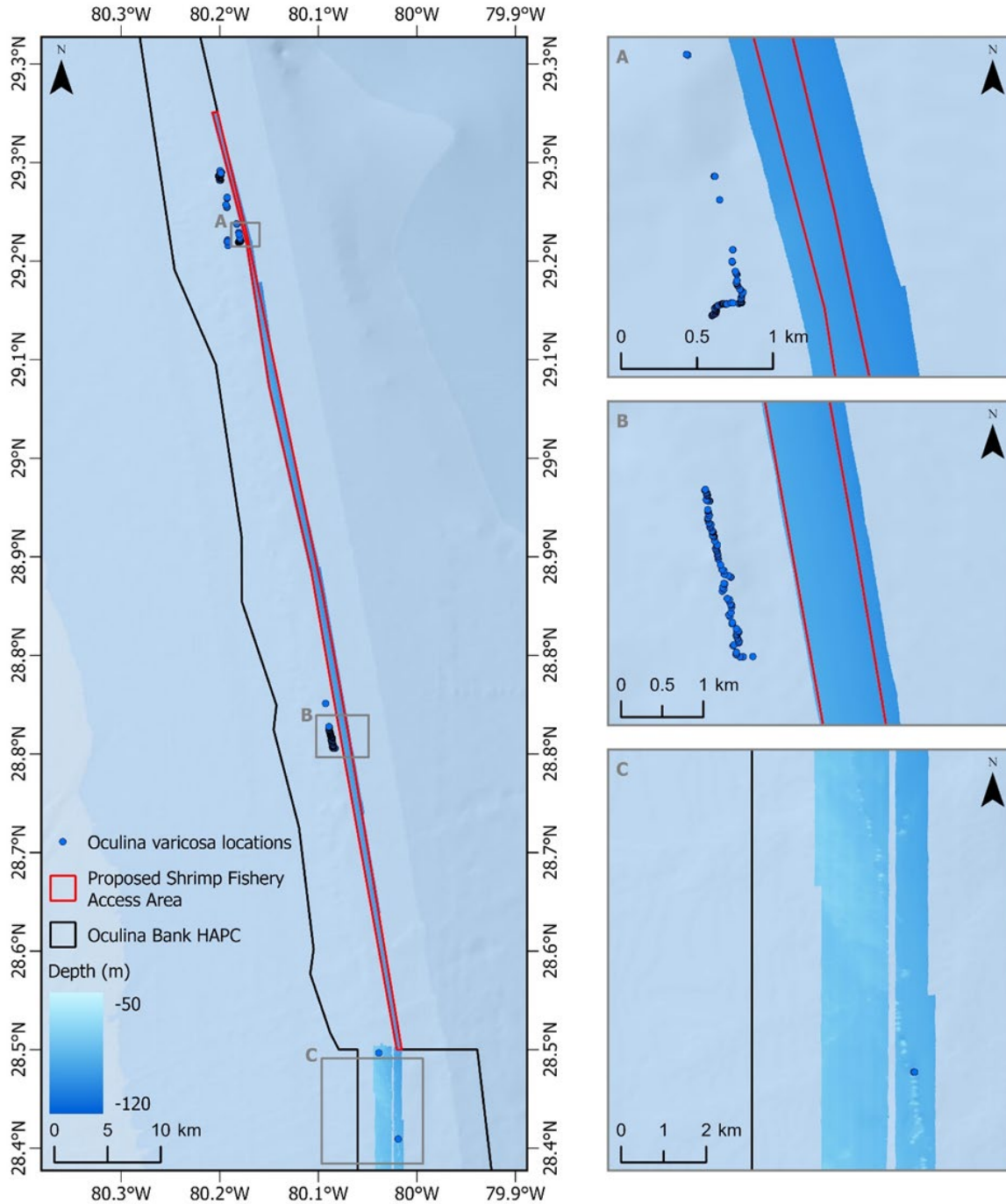


Figure F.1.3. *Oculina varicosa* colonies have been observed 360-1580 m west of the proposed SFAA. *Oculina* mounds are not evident in multibeam bathymetry collected by NOAA Ship *Nancy Foster* in April 2025 inside the proposed SFAA (e.g., panels A and B). In contrast, coral mounds are visible as lighter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

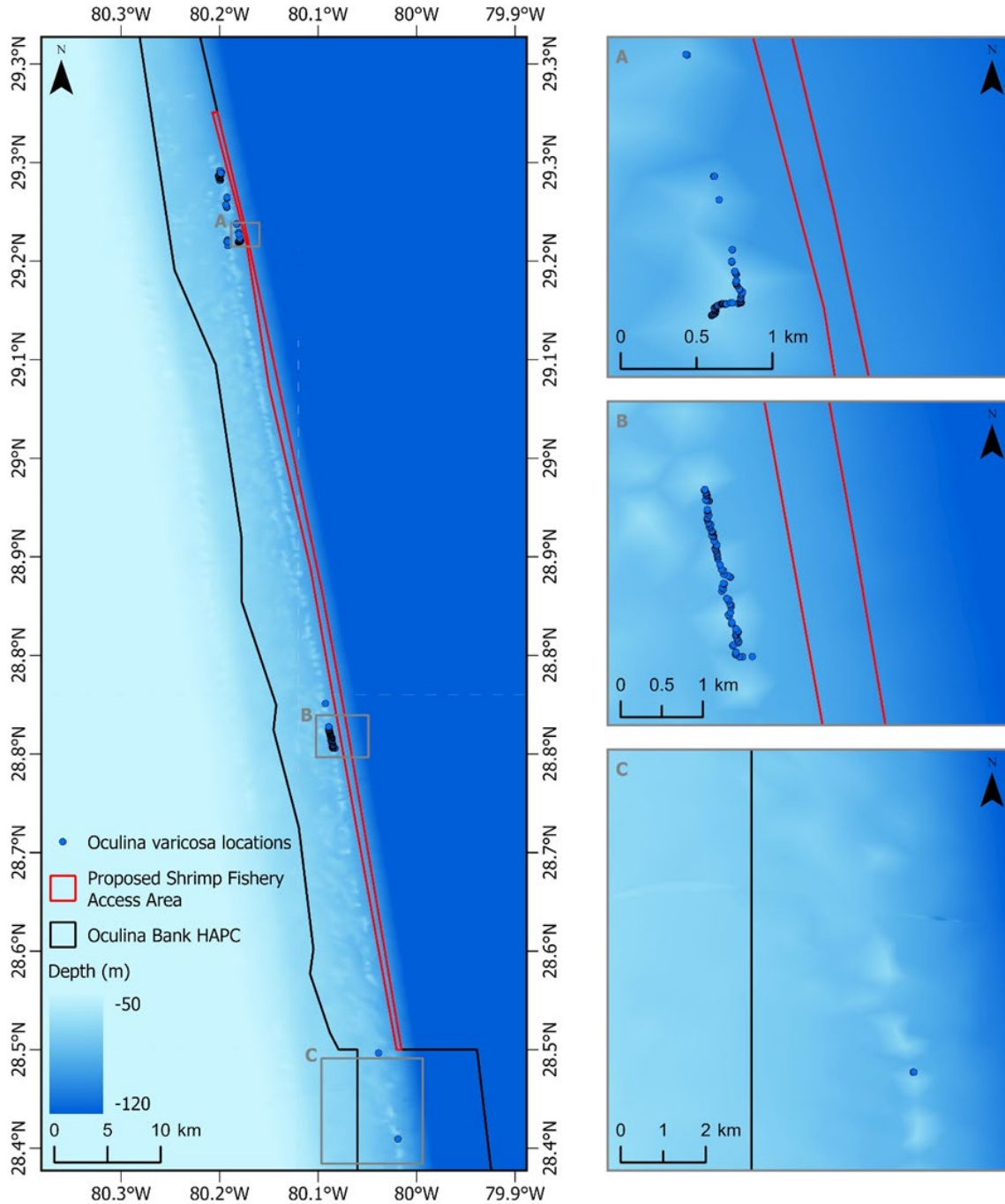


Figure F.1.4. Coral mounds are shown as small, elevated (i.e., lighter colored) shapes in the NOAA BlueTopo layer, visible in the background of this figure. Because underlying low resolution bathymetry data were collected primarily in the 1960s, individual coral mounds are not discernable, but aggregations 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 Southeast Fishery Science Center (SEFSC) was tasked with generating a quick-turnaround survey to provide visual data on the presence or absence of *Oculina* coral in the shrimp fishery access area (SFAA) to the SEFSC, Southeast Regional Office (SERO) and National Oceanic Atmospheric Administration (NOAA) Fisheries.

- The SEFSC used a towed camera system as our observation platform. 14 dives were made but with currents between 4 and 5 knots (kts), only 2 dives were successful.
- The data revealed no *Oculina* coral, live, dead or rubble, observed in the ~35 kilometers (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* coral 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 centimeters (cm).

Appendix H. Fishery Impact Statement

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.

Detailed discussion of the expected effects for all proposed changes is provided in Chapters 1 and 2. The FIS provides a summary of these effects. Actions Contained 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 historic rock shrimp fishing area within the northern extension of the *Oculina* Bank Coral Habitat Area of Particular Concern (OHAPC) through establishment of a shrimp fishery access area (SFAA). Preferred Alternative 2 would establish an SFAA that is 14.10 nm² in area along the eastern edge of the northern extension of the OHAPC and allow a shrimp vessel with a valid commercial South Atlantic Rock Shrimp limited access permit to bottom trawl within the established area.

H.1. Assessment of Biological Effects

Preferred Alternative 2 would not result in negative direct impacts to *Oculina* coral since, in the multiple mapping studies that have been conducted in the area observed no live, standing dead, or rubble in or immediately adjacent to the SFAA.

Indirect effects on *Oculina* coral could result through influx of suspended benthic sediments created while trawling the bottom. Increased sedimentation can cause smothering and burial of *Oculina* coral polyps, shading, tissue necrosis, population explosions of bacteria in *Oculina* coral mucus, and generally reduces recruitment, survival, and settlement of coral larvae (Erftemeijer et al. 2012). *Oculina* coral recruits are particularly susceptible to sedimentation and an increase in fine sediment can significantly reduce *Oculina* coral recruit survival. Depending on direction and magnitude of water currents in the affected area, shrimp trawls could create sediment plumes during fishing operations and the plumes could be transported to *Oculina* coral habitats. Reed (2006) describes the current flow for the southern half of the *Oculina* Habitat Area of Particular Concern (OHAPC) as: “ the northerly flowing Florida Current in the region of the *Oculina* reefs typically only extends down to a depth of 50-60 meters (m). The reefs are often inundated with a turbid, bottom nepheloid layer, and bottom currents average 8.6 centimeters⁻¹ (cm) but may exceed 50 cm s⁻¹ (1 knot), with currents of 50-100 cm s⁻¹ also occurring.”

Given the western boundaries of the SFAA are approximately 360-1580 m from known *Oculina* pinnacles (Appendix F) and we assume that the current is the consistently strong south to north current that exists within the southern half of the OHAPC (Reed, 2006 and Scanlon, 1999), sediment would be expected to move parallel to known *Oculina* coral pinnacles and have a minimal impact on the *Oculina* coral itself unless upwellings push the water inland (towards the pinnacles) so damage by sediment should be limited.

In a review of the frequency of upwelling events mentioned in National Weather Service and Surf Reports, it was noted that only four upwelling events were mentioned in the Cape Canaveral, Florida area from 2014 to 2024²¹. When analyzing the National Data Buoy Center, Bouy number 41009²², the buoy offshore of Cape Canaveral, showed that the sea surface temperature (SST) only dropped under 75 degrees Fahrenheit(F) (indicating an upwelling event) on average 1.5 days per year during the months of May – September (when upwelling events are more likely to occur (Reed, 2007)) from 2015 – 2024.

H.2. Assessment of Economic Effects

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 14.10 nautical mile (nm²) area. Increases in catches of rock shrimp would be expected to allow shrimpers to increase revenue and profits and the fishery to get closer to attaining optimum yield.

H.3. Assessment of the Social Effects

Preferred Alternative 2 would directly address stakeholder concerns regarding access to historically important fishing grounds and may improve stakeholder perceptions of the management process, thus this proposed action would be expected to positively impact fishermen.

H.4. Assessment of Effects on Safety at Sea

The establishment of an SFAA (**Preferred Alternative 2**) is not expected to result in direct impacts to safety at sea. The proposed action would not force vessels to participate in the rock shrimp portion of the shrimp fishery under adverse weather or ocean conditions. The existing requirement of VMS would continue to provide real-time vessel location in the case of emergencies.

²¹ <https://www.surflines.com/surf-reports-forecasts-cams-map/@28.44846826804955,-80.58445930480958,13z>
<https://www.weather.gov/mlb/>

²² https://www.ndbc.noaa.gov/station_page.php?station=41009

Appendix I. Actions and Alternatives Removed from Consideration

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

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

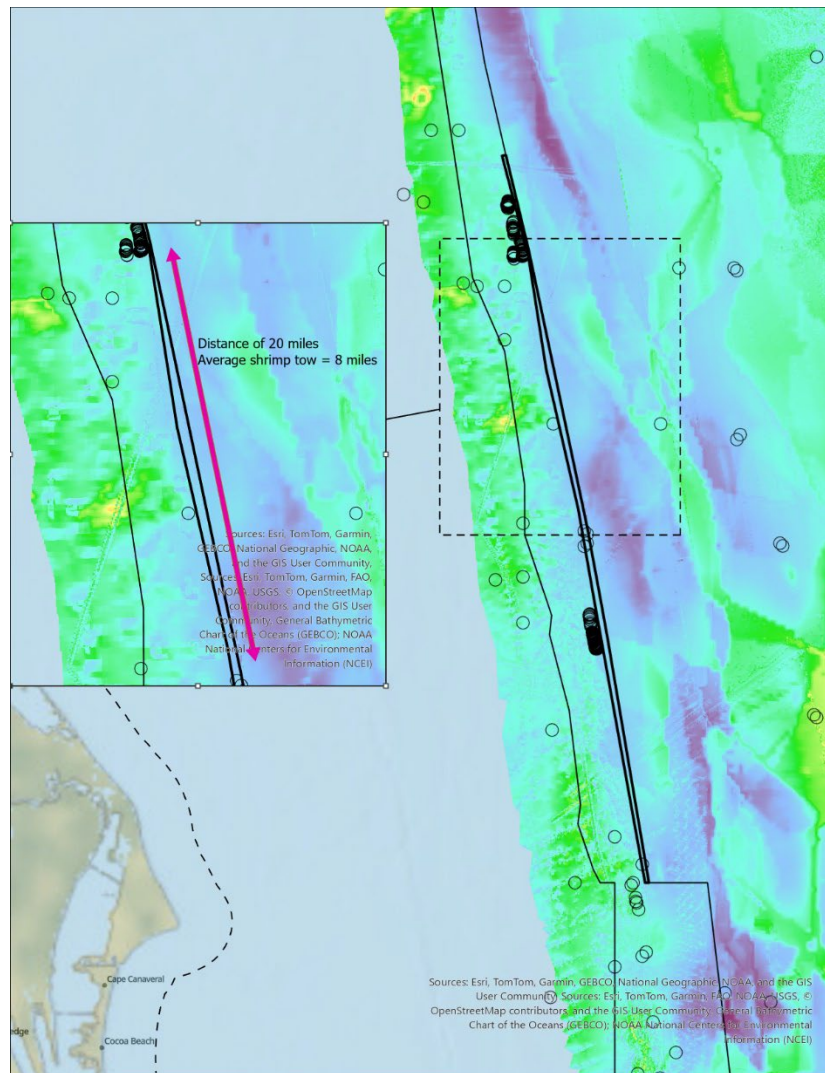


Figure I.1.1. The “Heat map” from Saldago et. al. (2022) based on a predictive algorithm. Blue denotes the least likely occurrence of coral; red/yellow denotes a high probability of coral. The circles indicate visually identified coral that have been observed and appear in the Deep-Sea Coral Data Portal (DSCRTP, 2024). The thicker black line denotes the boundary from Preferred Alternative 2. The thinner black line is the Oculina Bank Habitat Area of Particular Concern (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 (**Preferred 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 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, the interdisciplinary planning team (IPT) did not explore this as an alternative. After this meeting, a sub-group of the IPT met with staff from Southeast Regional Office (SERO), the Deep Sea Coral Research and Technology Program, National Center for Coastal Ocean Science, and the Habitat Conservation Division, which provided a heat map of predicted coral locations in and around the OHAPC as well as visually identified *Oculina* coral locations mapped in the Deep Sea Coral Data (SEDCI) Portal (Figure I.1.1).

Based on the locations of known *Oculina* coral pinnacles (based on SEDCI's data) and the lower likelihood of *Oculina* coral within a 20-mile stretch of the proposed SFAA in **Preferred Alternative 2**, the IPT presented a brief outline for **Proposed Alternative 4** to the Council. This alternative would shorten the proposed SFAA (from **Preferred 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.

At the March 2025 meeting, the Council considered whether this alternative should be included in the amendment for additional analysis. Council members stated that they 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 they felt were closed in error. Ultimately, the Council directed staff not to include this proposed alternative within the amendment for further consideration.