Appendix H. History of shrimp management in the South Atlantic

The **Fishery Management Plan/EIS** for the Shrimp Fishery of the South Atlantic Region (SAFMC 1993) provided South Atlantic states with the ability to request concurrent closure of the EEZ adjacent to their closed state waters following severe winter cold weather and to eliminate fishing mortality on over-wintering white shrimp following severe winter cold kills. In addition it also established a buffer zone extending seaward from shore 25 nautical miles, inside of which no trawling would be allowed with a net having less than four-inch stretch mesh during an EEZ closure. Vessels trawling inside this buffer zone can not have a shrimp net aboard (i.e., a net with less than four-inch stretch mesh) in the closed portion of the EEZ. Transit of the closed EEZ with less than four-inch stretch mesh aboard, while in possession of penaeid species, is allowed provided that the nets are in an unfishable condition which is defined as stowed below deck. The plan provided an exemption for the royal red and rock shrimp fisheries to allow the rock shrimp fishery to be prosecuted with minimal disruption during a closure of federal waters for protection of white shrimp.

The Shrimp FMP defined MSY as the mean total landings for the southeast region:

White shrimp – 14.5 million pounds
Brown shrimp – 9.2 million pounds
Pink shrimp – 1.8 million pounds

Optimum yield (OY) for the white shrimp fishery was defined as the amount of harvest that could be taken by U.S. fishermen without reducing the spawning stock below the level necessary to ensure adequate reproduction. This level has been estimated only for the central coast of South Carolina, and only in terms of subsequent fall production (assumed to represent recruitment).

The Shrimp FMP established the overfishing criterion for white shrimp as “when the overwintering white shrimp population within a state’s waters declines by 80% or more following severe winter weather resulting in prolonged cold water temperatures.” Regulations implementing the Shrimp FMP were published October 27, 1993 and became effective on November 26, 1993.

Shrimp Amendment 1/EA (SAFMC 1996a) addressed measures pertaining to the rock shrimp fishery in the South Atlantic EEZ. In this amendment rock shrimp was added to the management unit. Trawling for rock shrimp was prohibited east of 80° W. longitude between 27° 30’ N. latitude and 28° 30’ N. latitude in depths less than 100 fathoms to limit the impact of the rock shrimp fishery on essential bottom fish habitat, including the fragile coral species existing in the *Oculina* Bank Habitat Area of Particular Concern (HAPC). This prohibition enhanced existing federal regulations for coral and snapper grouper by protecting essential live/hard bottom habitat including *Oculina* coral and the *Oculina* Bank HAPC from trawl-related damage. To address the need for better data, NOAA Fisheries was directed to require dealers to submit reports to accurately account for harvest of rock shrimp in the South Atlantic. Amendment 1 established OY for the

rock shrimp fishery as MSY in the South Atlantic EEZ. MSY is defined as the amount of harvest that can be taken by U.S. fishermen without reducing the spawning stock below the level necessary to ensure adequate reproduction. This amendment established MSY for rock shrimp as the mean total landings for the southeast region. Through this amendment, an overfishing threshold was established for rock shrimp; the rock shrimp resource was considered overfished when the annual landings exceeded the value which is two standard deviations above mean landings 1986-1994. This level was set at 6,829,449 pounds based on the more accurate state data. Shrimp Amendment 1 (SAFMC 1996a) was sent to NOAA Fisheries for formal review and implementation on January 17, 1996. Regulations implementing the actions in Amendment 1 became effective on October 9, 1996 (closure) and November 1, 1996 (remaining measures).

Shrimp Amendment 2/SEIS (SAFMC 1996b) added pink shrimp to the management unit, defined overfishing and OY for brown and pink shrimp, required the use of certified bycatch reduction devices (BRDs) in all penaeid shrimp trawls in the South Atlantic EEZ (the large mesh extended funnel and the fisheye) and established a framework for BRD certification specifying BRD certification criteria and testing protocol. OY for the brown and pink shrimp fisheries in the South Atlantic EEZ was defined as the amount of harvest that can be taken by U.S. fishermen without annual landings falling two standard deviations below mean landings 1957-1993 for three consecutive years (2,946,157 pounds [heads on] for brown shrimp and 286,293 pounds [heads on] for pink shrimp). When annual landings fall below this level, the resource is considered overfished. The amendment was sent to NOAA Fisheries for formal review and implementation on April 30, 1996. The Amendment was approved on February 24, 1997. Regulations implementing the actions in Amendment 2 became effective on April 21, 1997.

Shrimp Amendment 3/EIS was included in the Council's Comprehensive Amendment Addressing Essential Fish Habitat in Fishery Management Plans of the South Atlantic Region (SAFMC 1998a), which addressed the habitat requirements of the Magnuson-Stevens Act, as amended in 1996. Under Shrimp Amendment 3, Essential Fish Habitat for the South Atlantic shrimp resource was defined as follows (Note: Detailed information is presented in the Council's Habitat Plan [SAFMC 1998b]):

Penaeid shrimp: 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 (SAFMC 1998b). Inshore nursery areas include tidal freshwater (palustrine), estuarine, and marine emergent wetlands (e.g., intertidal marshes); tidal palustrine forested areas; mangroves; 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.

Rock shrimp: offshore terrigenous and biogenic sand bottom habitats from 18 to 182 meters in depth with highest concentrations occurring between 34 and 55 meters. This applies for all areas from North Carolina through the Florida Keys. Essential fish habitat 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.

Shrimp Amendment 3 also established Essential Fish Habitat-Habitat Areas of Particular Concern (EFH-HAPC) for penaeid shrimp in the South Atlantic. Areas that meet the criteria for EFH-HAPCs for penaeid shrimp include all coastal inlets, all state-designated nursery habitats of particular importance to shrimp, and state-identified overwintering areas. The Comprehensive Amendment was approved in June 1999; no regulations were required to make the designations of EFH and EFH-HAPCs effective. Regulations were implemented as part of this amendment, under the FMP for Corral, Coral Reefs, and Live Hard Bottom Habitats of the South Atlantic Region (Coral FMP, see below).

In addition, Shrimp Amendment 3 called for implementation of a voluntary Vessel Monitoring System (VMS) in the rock shrimp fishery. The voluntary pilot program was intended to provide information concerning the future use of transponders in the rock shrimp fishery. This voluntary program was not implemented because of logistical issues associated with the evolving VMS technologies at the time.

The Council's Comprehensive Habitat Amendment (including Shrimp Amendment 3) was sent to NOAA Fisheries for formal review and implementation on October 9, 1998. The Amendment was approved on June 3, 1999. Regulations implementing these actions were published on June 14, 2000 and became effective on July 14, 2000.

Amendment 4/EIS to the Coral FMP, included in the Comprehensive SFA Amendment (SAFMC 1998c) expanded the *Oculina* Bank HAPC to an area bounded to the west by 80°W. longitude, to the north by 28°30'N. latitude, to the south by 27°30'N. latitude and to the east by the 100 fathom (600 foot) depth contour. Amendment 4 expanded the *Oculina* Bank HAPC to include the area closed to rock shrimp harvest. The Draft Calico Scallop FMP proposes to close this area to calico scallop harvest. The expanded *Oculina* Bank HAPC is 60 nautical miles long by about 5 nautical miles wide although the width tracks the 100 fathom (600 foot) depth contour rather than a longitude line. Within the expanded *Oculina* Bank HAPC area the following regulations apply:

1. Fishing with a bottom longline, bottom trawl, dredge, pot or trap is prohibited.
2. A fishing vessel may not anchor, use an anchor and chain or use a grapple and chain.

Amendment 4 to the Coral FMP (SAFMC 1998c) also established two satellite *Oculina* HAPCs: Satellite *Oculina* HAPC #1 bounded on the north by 28°30'N. latitude, on the south by 28°29'N. latitude, on the east by 80°W. longitude and on the west by 80°3'W. longitude; and Satellite *Oculina* HAPC #2 is bounded on the north by 28°17'N. latitude, on the south by 28°16'N. latitude, on the east by 80°W. longitude and on the west by 80°3'W. longitude.

It is the Council's intent to prohibit the possession of calico scallops and rock shrimp within these areas to enhance enforceability of the prohibition of harvest and the prohibition on use of bottom-tending gear in these areas.

Shrimp Amendment 4/EA was included in the Council's Comprehensive Amendment Addressing Sustainable Fishery Act Definitions and Other Required Provisions in Fishery Management Plans of the South Atlantic Region (SAFMC 1998c), which addressed the Sustainable Fisheries Act requirements of the Magnuson-Stevens Act, as amended in 1996. Shrimp Amendment 4 included reporting requirements as specified in the Atlantic Coastal Cooperative Statistics Program (ACCSP). It was established that the Council staff would work with NOAA General Counsel to determine the appropriate procedure to remove all the varied data reporting requirements in individual FMPs and reference one comprehensive data reporting document. The Shrimp FMP was also amended to include available information on fishing communities (detailed discussion in the SFA Comprehensive Amendment; SAFMC 1998c). In addition, Amendment 4 designated biological reference points and status determination criteria (Table 1-2). The Council approved MSY for rock shrimp as 6,829,449 pounds, OY for rock shrimp as equal to MSY and the overfished definition for rock shrimp as two standard deviations above mean landings for the period 1986-1994.

The Council's Comprehensive SFA Amendment (including Shrimp Amendment 4) was sent to NOAA Fisheries for formal review and implementation on October 7, 1998. The final rule was published on November 2, 1999 and regulations became effective on December 2, 1999.

Amendment 5/EIS to the Shrimp Plan was developed to address issues in the rock shrimp fishery (SAFMC, 2002). Amendment 5 established a rock shrimp limited access program, required a vessel operator's permit, established a minimum mesh size for the tail bag of a rock shrimp trawl (at least 40 meshes of 1 and 7/8 inch stretched mesh above the 2 inch rings) and required use of an approved vessel monitoring system in the limited access rock shrimp fishery. Amendment 5 was sent for formal Secretary of Commerce review on February 25, 2002. The amendment was approved on October 23, 2002 and final regulations implementing the actions in Amendment 5 were published on February 18, 2003 and became effective on the dates as indicated in the following paragraphs:

Operator permits - effective May 16, 2003: "For a person to be an operator of a vessel fishing for rock shrimp in the South Atlantic EEZ or possessing rock shrimp in or from the South Atlantic EEZ, or to be an operator of a vessel that has a valid permit for South Atlantic rock shrimp, such person must have and carry on board a valid operator permit and one other form of personal identification that includes a picture (driver's license, passport, etc.). At least one person with a valid operator's permit for the South Atlantic rock shrimp fishery must be aboard while the vessel is at sea or offloading."

Limited access endorsement - effective July 15, 2003: "For a person aboard a vessel to fish for or possess rock shrimp in the South Atlantic EEZ off Georgia or off Florida, a limited access endorsement for South Atlantic rock shrimp must be issued to the vessel

and must be on board. A vessel is eligible for an initial limited access endorsement if the owner owned a vessel with a Federal permit for South Atlantic rock shrimp on or before December 31, 2000 and landed at least 15,000 pounds of South Atlantic rock shrimp in any one of the calendar years 1996 through 2000 from a vessel he/she owned."

VMS - effective October 14, 2003: Vessels that were issued a limited access endorsement for South Atlantic rock shrimp must have a NOAA Fisheries-approved, operating VMS on board when on a trip in the South Atlantic. An operating VMS includes an operating mobile transmitting unit on the vessel and a functioning communication link between the unit and NOAA Fisheries as provided by a NOAA Fisheries-approved communication service provider.

The rule for Amendment 5 was written such that a "Limited Access Endorsement" was required rather than the separate limited access permit identified in Amendment 5. Information included in Amendment 5 estimated that at least 168 vessels would qualify.

Control Date: At the December 2003 Council meeting, the Council set a control date of December 10, 2003 for the penaeid shrimp fishery operating in the South Atlantic EEZ. Publication of this control date (69 FR 10189; March 4, 2004) puts the industry on notice that the Council may develop a limited access program in the future. Should this occur there is no guarantee that vessels entering the fishery after this date will qualify for a limited access endorsement.

Shrimp Amendment 6/SEIS (December 2004) (1) transferred authority to make appropriate revisions to the BRD Testing Protocol to NMFS; (2) specified a reduction in the total weight of finfish of at least 30% for new BRDs to be certified; (3) adopted the ACCSP Release, Discard and Protected Species Module as the preferred methodology to monitor and assess bycatch and until this module is fully funded, require the use of a variety of sources to assess and monitory bycatch including, observers, logbooks, state cooperation, grants, and federal shrimp permits; (4) required BRDs on all rock shrimp trips in the South Atlantic; (5) required federal penaeid shrimp permits; (6) revised status determination criteria for penaeid shrimp; and (7) revised status determination criteria for rock shrimp (MSY/OY is the mean total landings for the South Atlantic 1986-2000 [4,912,927 pounds], overfishing is a rate that led to annual landings larger than two standard deviations above MSY [14,687,775 pounds] for two consecutive years, and overfished is a parent stock size less than ½ B_{MSY} for two consecutive years).

Amendment 7/ EA (November 2008) Shrimp Amendment 7 (1) Eliminated the landing requirement for rock shrimp limited access endorsements, reinstated rock shrimp endorsements lost due either to not meeting the landing requirement in one of four consecutive calendar years or not renewing the endorsement on time; (2) renamed the permit/endorsement system to minimize confusion; (3) required verification of a VMS to renew, reinstate or transfer a limited access endorsement; and (4) required of economic data be provided by federal shrimp permit holders.

Comprehensive Ecosystem-Based Amendment 1 (CE-BA1) including (Shrimp Amendment 8)/EIS (October 2009) Action in CE-BA1 protected specific areas of sensitive habitat, deemed Coral Habitat Areas of Particular Concern (CHAPCs) that house an invaluable array of deepwater coral species living in waters ranging from 400 meters (1200 ft.) to 700 meters (2300 ft.) deep. The South Atlantic region is home to what may be the largest contiguous distribution of deepwater corals in the world, including the common *Lophelia* coral, largely responsible for reef mound construction in these cold water areas. The parameters defined within the amendment aim to shield these areas from impacts associated with bottom-tending fishing practices while preserving the crab and shrimp fisheries in the area. Therefore, actions to create "Allowable Golden Crab Fishing Areas" and "Shrimp Fishery Access Areas" within two of the proposed CHAPCs are included to ensure the continued existence of these fisheries and the communities they support.