Status Determination Criteria for the Penaeid Shrimp

Draft Amendment 20

to the Fishery Management Plan for the Shrimp Fishery of the Gulf, U.S. Waters

May 2026

This is a publication of the Gulf Council Pursuant to National Oceanic and Atmospheric Administration Award No. NA25NMF4410007C.

This page intentionally blank

Responsible Agencies and Contact Persons

Gulf Fishery Management Council (Council)
4107 W. Spruce Street, Suite 200
Tampa, Florida 33607
Matthew Freeman (matt.freeman@gulfcouncil.org)

813-348-1630
813-348-1711 (fax)
gulfcouncil@gulfcouncil.org
http://www.gulfcouncil.org

National Marine Fisheries Service (Lead Agency)
Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701
Frank Helies (frank.helies@noaa.gov)

727-824-5305
727-824-5308 (fax)
http://sero.nmfs.noaa.gov

Type of Action

( ) Administrative
(X) Draft

( ) Legislative
( ) Final

ABBREVIATIONS USED IN THIS DOCUMENT

ABC	acceptable biological catch
ACL	annual catch limit
AM	accountability measure
BiOp	biological opinion
BRD	bycatch reduction device
CFR	code of federal regulations
Council	Gulf Council
DPS	distinct population segments
E.O.	Executive Order
EA	Environmental Assessment
EEZ	exclusive economic zone
EFS	essential fish habitat
EIS	economic impact statement
ELB	electronic logbook
FMP	Fishery Management Plan
GMFMC	Gulf of Mexico Fishery Management Council
Gulf	Gulf of America (Formerly Gulf of Mexico)
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act
MFMT	maximum fishing mortality threshold
mp	million pounds
mpt	million pounds of tails
MSST	minimum stock size threshold
MSY	maximum sustainable yield
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
OMB	Office of Management and Budget
OY	optimum yield
RA	Regional Administrator
RFA	Regulatory flexibility analysis
RIR	Regulatory Impact Review
SEDAR	Southeast Data, Assessment, and Review
SEFSC	Southeast Fisheries Science Center
SERO	Southeast Regional Office
TED	turtle excluder device

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

No table of figures entries found.

CHAPTER 1. INTRODUCTION

1.1 Background

The Gulf of America (Gulf) shrimp fishery is managed by the Gulf Council (Council) through the Fishery Management Plan (FMP) for the Shrimp Fishery of the Gulf, U.S. Waters (Shrimp FMP). Four species are included under the Shrimp FMP: brown shrimp, *Farfantepenaeus aztecus*; pink shrimp, *Farfantepenaeus duorarum*; white shrimp, *Litopenaeus setiferus*; and royal red shrimp, *Pleoticus robustus*. This action addresses the results of the recent stock assessment for penaeid shrimp (brown, pink, and white shrimp). Royal red shrimp will not be addressed in this amendment.

Statutory Requirements

National Standard 1 of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) states that conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield (OY) from each fishery. Optimum yield is the amount of fish that will provide the greatest overall benefit to the nation, particularly with respect to food production and recreational opportunities, while considering the protection of marine ecosystems. The Magnuson-Stevens Act establishes maximum sustainable yield (MSY) as the basis for fishery management. Each FMP must specify MSY, which is the largest long-term average catch that can be taken from a stock under prevailing conditions. Each FMP must also specify objective and measurable status determination criteria (SDC) for identifying when the fishery is overfished or undergoing overfishing. Overfishing occurs whenever the rate of removal (fishing mortality rate) is too high. A stock or stock complex is considered overfished when its population abundance (biomass) is too low.

The National Standard 1 Guidelines also require setting an acceptable biological catch (ABC) and annual catch limits (ACL). The ABC is an annual catch level that considers scientific uncertainty, and may be set as equal to or less than the MSY value. For species that exhibit a life cycle of less than one year (includes penaeid shrimp), the Magnuson-Stevens Act includes a provision at 50 CFR 600.310(h)(1)(i), excluding these species from the ACL and accountability measures requirements. However, SDC and other biological reference points must still be included in the FMP:

> Exceptions from ACL and AM requirements —(i) Life cycle. Section 303(a)(15) of the Magnuson-Stevens Act "shall not apply to a fishery for species that have a life cycle of approximately 1 year unless the Secretary has determined the fishery is subject to overfishing of that species" (Pub. L. 109-479 104(b)(2)). This exception applies to a stock for which the average age of spawners in the population is approximately 1 year or less. While exempt from the ACL and AM requirements, FMPs or FMP amendments for these stocks must have SDC, MSY, OY, ABC, and an ABC control rule.

Penaeid Shrimp Stock Assessments

Over the years, Gulf shrimp stocks have been assessed using various model types that produced different outputs (virtual population analysis - parent stock numbers [Hart and Nance 2010]; stock synthesis model – spawning biomass [Methot and Wetzel 2013]). For brown and white

shrimp, these assessments concluded that the stocks were not overfished or undergoing overfishing. However, these models had issues assessing pink shrimp abundance due to low fishing effort for the species (Nance 2008). Unfortunately, these issues continue to the present.

A Southeast Data, Assessment, and Review (SEDAR) process was completed in 2025 for the three Gulf penaeid shrimp stocks. This stock assessment was reviewed by the Council's Scientific and Statistical Committee (SSC) in February 2026.[1] Based on the SEDAR 87 assessment, the SSC recommended values for MSY and stock status determination criteria for white and brown shrimp based on the empirical dynamic modeling approach. This approach allowed stock assessment analysts to make better use of the limited data available, while still being able to provide estimates of MSY for white and brown shrimp. While all of the penaeid assessments considered the use of a fishery-independent trawl index (summer and fall trawls from the Southeast Area Monitoring and Assessment Program), the EDM model did not fit for pink shrimp due to the short time series of data (12 years, 2010-2022 with summer 2020 missing) and no observed trend in the index time series (SEDAR 87 2025). For these reasons, the SSC considered and recommended an alternate approach for setting SDC values for pink shrimp based on the third highest landings estimate until such time that the empirical dynamic modeling approach could be used.

The SDC parameters required under the Magnuson-Stevens Act for managed species are difficult to calculate for penaeid shrimp (brown, pink, and white) because they are short-lived and population dynamics are influenced by environmental factors more than fishing effort and catch rates. For Gulf penaeid shrimp stocks, Amendment 13 to the Shrimp FMP (GMFMC 2005a) established OY as equal to MSY for each of the penaeid shrimp stocks. The Shrimp Stock Assessment Panel made this recommendation for OY because there does not appear to be any biological reason to set OY at a level below MSY since these are annual stocks whose abundance in a given year is dictated primarily by environmental conditions. Amendment 15 to the Shrimp FMP (GMFMC 2015) used data from a stock synthesis model to establish MSY values and SDC values for each of these stocks.

The actions in this amendment would update the MSY and SDC values for the three penaeid shrimp species based on the new science. This amendment would also establish an ABC for each stock based on Magnuson-Stevens Act requirements.

1.2 Purpose and Need

The purpose of this action is to establish or modify MSYs, ABCs, overfishing thresholds, and overfished thresholds for the Gulf shrimp penaeid shrimps.

The need is to have biological reference points that can be used for determining status of the Gulf shrimp penaeid stocks.

[1] The Standing and Special Shrimp SSCs made these recommendations at its February 2026 meeting. https://gulf-council-media.s3.amazonaws.com/uploads/2026/03/Gulf-Standing-and-Shrimp-SSC-Summary-Feb-2026.pdf

1.3 History of Management

The **Shrimp FMP** (GMFMC 1981a) defined the shrimp fishery management unit to include brown shrimp, white shrimp, pink shrimp, royal red shrimp, seabobs (*Xiphopenaeus kroyeri*), and brown rock shrimp (*Sicyonia brevirostris*). The purpose of the plan was to enhance yield in volume and value by deferring harvest of small shrimp to provide for growth. The main actions included: 1) establishing a cooperative Tortugas Shrimp Sanctuary with Florida to close a shrimp trawling area where small pink shrimp comprise the majority of the population most of the time; 2) a cooperative 45-day seasonal closure with Texas to protect small brown shrimp emigrating from bay nursery areas; and 3) a seasonal closure of an area east of the Dry Tortugas to avoid gear conflicts with stone crab fishermen.

Amendment 1 (GMFMC 1981b) provided the Regional Administrator (RA) with the authority (after conferring with the Council) to adjust by framework action the size of the Tortugas Sanctuary or the extent of the Texas closure, or to eliminate either closure for one year.

Amendment 2 (GMFMC 1981b) established mandatory reporting of statistical data by shrimp vessel owners and operators, dealers, and processors.

Amendment 3 (GMFMC 1982) resolved a shrimp-stone crab gear conflict on the west-central coast of Florida.

A **National Marine Fisheries Service (NMFS) Endangered Species Act (ESA) Rule** (50 CFR 24244; June 22, 1987) required all shrimp trawlers 25 ft and longer in offshore waters to use qualified turtle excluder devices (TED) and all shrimp trawlers smaller than 25 ft to restrict tow times to 90 minutes or less. In inshore waters, at specified times, all shrimp trawlers were required to restrict tow times to 90 minutes or less. In both inshore and offshore waters, shrimp trawlers using TEDs were exempt from the tow time restrictions. The rule specified criteria and procedures for qualifying additional TEDs; specified vessel sizes, areas and seasons for which qualified TEDs or 90-minute tow times must be used; established reporting requirements; continued measures for resuscitation and release of captured sea turtles; and continued designated critical habitat. Initially, only four TED designs were approved: the NMFS' TED, the Cameron TED, the Matagorda TED, and the Georgia TED. The Morrison soft-TED was authorized later in the year.

Amendment 4 (GMFMC 1988) identified problems that developed in the fishery and revised the objectives of the FMP accordingly. The annual review process for the Tortugas Sanctuary was simplified, and the Council and RA review for the Texas closure was extended to February 1. A provision that white shrimp taken in the exclusive economic zone (EEZ) be landed in accordance with a state's size/possession regulations to provide consistency and facilitate enforcement with Louisiana was to have been implemented at such time when Louisiana provided for an incidental catch of undersized white shrimp in the fishery for seabobs. This provision was disapproved by NMFS with the recommendation that it be resubmitted after Louisiana provided for that bycatch. This resubmission was made in February 1990 and applied to white shrimp taken in the EEZ and landed in Louisiana. It was approved and implemented in May 1990.

Amendment 5 (GMFMC 1991) defined overfishing for Gulf brown, pink, and royal red shrimp and provided measures to restore overfished stocks if overfishing should occur. Action on the definition of overfishing for white shrimp was deferred, and seabobs and rock shrimp were removed from the management unit. The duration of the seasonal closure to shrimping off Texas was changed from June 1 through July 15 to May 15 through July 15 to conform to changes in state regulations.

Amendment 6 (GMFMC 1992) eliminated the annual reports and reviews of the Tortugas Shrimp Sanctuary in favor of monitoring and an annual stock assessment. Three seasonally opened areas within the sanctuary continue to open seasonally, without need for annual action. A proposed definition of overfishing of white shrimp was rejected by NMFS because it was not based on the best available data.

Amendment 7 (GMFMC 1994) defined overfishing for white shrimp and provided for future updating of overfishing indices for brown, white, and pink shrimp as new data became available. A total allowable level of foreign fishing for royal red shrimp was eliminated; however, a redefinition of overfishing for royal red shrimp was disapproved.

Amendment 8 (GMFMC 1995), implemented in early 1996, addressed management of royal red shrimp. It established a procedure that would allow total allowable catch for royal red shrimp to be set up to 30% above maximum sustainable yield (MSY) for no more than two consecutive years so that a better estimate of MSY could be determined. This action was subsequently negated by the 1996 Sustainable Fisheries Act amendment to the Magnuson-Stevens Act that defined overfishing as a fishing level that jeopardizes the capacity of a stock to maintain MSY and does not allow optimum yield (OY) to exceed MSY.

Amendment 9 (GMFMC 1997) required the use of a NMFS certified bycatch reduction device (BRD) in shrimp trawls used in the EEZ from Cape San Blas, Florida to the Texas/Mexico border, and provided for the certification of BRDs and specifications for the placement and construction. The purpose of this action was to reduce the bycatch mortality of juvenile red snapper by 44% from the average mortality for the years 1984 through 1989. This amendment exempted shrimp trawls fishing for royal red shrimp seaward of the 100-fathom contour, as well as groundfish and butterfish trawls, from the BRD requirement. It also excluded small try nets and no more than two ridged frame roller trawls of limited size. Amendment 9 also provided mechanisms to change the bycatch reduction criterion and to certify additional BRDs.

Amendment 10 (GMFMC 2002) required BRDs in shrimp trawls used in the Gulf east of Cape San Blas, Florida. Certified BRDs for this area were required to demonstrate a 30% reduction by weight of finfish.

Amendment 11 (GMFMC 2001a) required owners and operators of all vessels harvesting shrimp from the EEZ of the Gulf to obtain a federal commercial vessel permit. This amendment also prohibited the use of traps to harvest royal red shrimp from the Gulf and prohibited the transfer of royal red shrimp at sea.

Amendment 12 (GMFMC 2001b) was included as part of the Generic Essential Fish Habitat (EFH) Amendment that established EFH for shrimp in the Gulf.

A **NMFS ESA Rule** (68 FR 8456; February 21, 2003) required the use of larger TED escape openings in otter trawl nets used to harvest shrimp to improve the exclusion of leatherback turtles, adult loggerheads, and green turtles. Also, the double-cover escape opening was introduced, which consists of two mesh flaps covering the escape hole and provides enhanced turtle exclusion, as well as improved shrimp retention.

Amendment 13 (GMFMC 2005) established an endorsement to the federal commercial shrimp vessel permit for vessels harvesting royal red shrimp; defined the overfishing and overfished thresholds for royal red shrimp; defined MSY and OY for the penaeid shrimp stocks in the Gulf; established bycatch reporting methodologies and improved collection of shrimping effort data in the EEZ; required completion of a Gulf Shrimp Vessel and Gear Characterization Form by vessels with federal shrimp permits; established a moratorium on the issuance of federal commercial shrimp vessel permits; and required reporting and certification of annual landings during the moratorium.

August 2006 Regulatory Amendment (GMFMC 2006) changed the BRD certification criterion for penaeid shrimp trawling in the EEZ from being based on the expected reduction in the mortality of red snapper to the expected reduction in finfish catch. The change in the BRD certification criterion addressed shrimp trawl bycatch more comprehensively and increased flexibility, promoted innovation, and allowed for a wider variety of BRDs, which allowed fishermen to choose the most effective BRD for fishing conditions, and therefore reduce overall finfish bycatch. This amendment also certified the Modified Jones-Davis BRD for use in the Gulf and South Atlantic shrimp fisheries, provisionally certified the extended funnel BRD for use in the Gulf shrimp fishery, and provisionally certified the composite panel BRD to be used in the Gulf and South Atlantic shrimp fisheries. The amendment also consolidated and made modifications to the BRD Testing Manuals for the Gulf and the South Atlantic regions.

Amendment 14 (GMFMC 2007) was a joint amendment with Reef Fish Amendment 27. It established a target red snapper bycatch mortality goal for the shrimp fishery in the western Gulf of 74% relative to the benchmark years of 2001-2003, reducing that target goal to 67% beginning in 2011 and eventually reducing the target to 60% by 2032. The amendment also defined seasonal closure restrictions that can be used to manage shrimp fishing effort in relation to the target red snapper bycatch mortality reduction goal. If necessary, a seasonal closure of the shrimp fishery in the 10 to 30-fathom zone of selected areas within statistical zones 10-21 in the Gulf will occur at the same time as the annual closure of federal waters, which occurs in conjunction with the Texas closure. The need for a closure will be determined by the RA based on an annual assessment by the SEFSC. The assessment will use shrimp effort data for the most recent 12-month period available and will include a recommendation regarding the geographical scope and duration of the closure. The SEFSC's assessment will be provided to the RA on or about March 1 of each year. It also established a framework procedure to streamline the management of shrimp fishing effort in the western Gulf.

A **NMFS Rule** (73 FR 68355; November 18, 2009) decertified the expanded mesh and Gulf Fisheye BRDs. This action also modified the allowable configuration for the Fisheye BRD, such that it could not be placed farther forward than 9 ft from the tie-off rings. The final rule was effective May 18, 2009.

The Generic Annual Catch Limit (ACL)/Accountability Measures (AM) Amendment (GMFMC 2011) set an ACL and AM for royal red shrimp. Penaeid shrimp were exempt from the ACL/AM requirements because of their annual life cycle.

A **NMFS Rule** (77 FR 21679; April 11, 2012) certified the two BRDs that were provisionally certified in 2010. It also lowered the effort reduction threshold established in Amendment 14 from 72% to 67%.

The Shrimp Electronic Logbook (ELB) Framework Action (GMFMC 2013) established a cost-sharing system for the ELB program and described new equipment and procedures for the program.

Amendment 16 (GMFMC 2014) eliminated duplicative AMs and the quota for royal red shrimp. The ACL was set equal to the acceptable biological catch and a post-season AM was established.

Amendment 15 (GMFMC 2015) redefined stock status criteria for the three penaeid species of shrimp including MSY and overfished/overfishing thresholds. The general framework procedure was also updated.

Amendment 17A (GMFMC 2016) extended the Gulf commercial shrimp vessel permit moratorium for 10 more years through October 26, 2026.

Amendment 17B (GMFMC 2017) defined the aggregate MSY of 112,531,374 pounds of tails for all shrimp species and an aggregate OY of 85,761,596 pounds of tails for all shrimp species. This amendment allows for the creation of a reserve permit pool when certain conditions are met, and mandates that the Council convene a review panel to review the details of a permit pool if the number of permits reaches 1,175. This amendment also allows vessels possessing shrimp to transit through federal waters without a federal permit if their trawl doors and nets are out of the water and bag straps are removed.

Amendment 18 (GMFMC 2019) reduced the target reduction goal for juvenile red snapper mortality in the federal Gulf penaeid shrimp trawl fishery from 67% to 60% and modified the FMP framework procedures to allow changes to the target reduction goal for juvenile red snapper mortality through the abbreviated framework documentation process.

A **NMFS ESA Rule** (84 FR 70048; December 20, 2019) required skimmer trawl vessels 40 feet and greater in length that are rigged for harvesting shrimp to install and use TEDs designed to exclude small turtles in their nets. The space between the deflector bars of the new TEDs must not exceed 3 inches and escape openings must be oriented at the top of the net. There are webbing restrictions on the escape opening flap depending on the type of TED grid and escape opening configuration.

The Council submitted a **Framework Action** (GFMC 2025a) for NMFS review and implementation in January 2026. A cellular ELB requirement for archiving and transmitting vessel position data when on a shrimp fishing trip in the Gulf would be implemented to replace the current process where NMFS collects the memory cards from the previous ELB units via mail.

The Council submitted **Amendment 19** (GFMC 2025b) for NMFS review and implementation in March 2026. The current moratorium on new federal Gulf commercial shrimp vessel permits, set to expire on October 26, 2026, would be extended for 10 years.

CHAPTER 2. MANAGEMENT ALTERNATIVES

2.1 Action 1: Modify the Maximum Sustainable Yield (MSY) for Penaeid Shrimp

Alternative 1: No Action. Maintain the current MSY values for the penaeid shrimp stocks as follows:

- Brown shrimp: MSY is 146,923,100 pounds (lb) of tails
- White shrimp: MSY is 89,436,907 lb of tails
- Pink shrimp: MSY is 17,345,130 lb of tails

Alternative 2: Revise the MSY values for the penaeid shrimp stocks based on the results of the Southeast Data, Assessment, and Review (SEDAR) 87 stock assessments and recommendations of the Gulf Council's (Council) Scientific and Statistical Committee (SSC) as follows:

- Brown shrimp: MSY is 215,070,000 lb of tails
- White shrimp: MSY is 87,800,000 lb of tails
- Pink shrimp: MSY is 19,300,000 lb of tails

Discussion:

Alternative 1 would maintain the MSY values established in Amendment 15 to the Shrimp Fishery of the Gulf (Shrimp FMP; GMFMC 2015). These values were estimated using a Stock Synthesis model and are not based on the best scientific information available. **Alternative 1** is not a viable alternative. The MSY values for brown and white shrimp in **Alternative 2** are estimated through the use of the empirical dynamic modeling (EDM) approach and were recommended as consistent with the best scientific information available by the SSC. As pink shrimp have a shorter time series of fishery-independent trawl data than brown or white shrimp (2010 – 2022 for pink shrimp, compared to 1980 – 2022 for brown and white shrimp), the EDM approach was not informative. Once a longer time series of trawl data is available, application of the EDM approach for pink shrimp can be reconsidered. The SSC considered use of the third highest catch or the average from a reference time series as a justified alternative approach to the ABC Control Rule since the ABC Control Rule was not designed with annual crop species in mind. The SSC noted that use of recent years for the reference time series may not be appropriate since recent landings may be biased by the contraction of shrimping effort driven by economic factors, and therefore not representative of what the pink shrimp stock is capable of producing. The SSC recommended using the third highest catch of pink shrimp, which occurred in 1996, for informing management advice. After 1998, the highest year of pink shrimp landings was in 2018 with 12.7 million pounds of tails (mpt), as seen in Table 2.1. In comparison with **Alternative 1**, the MSY values in **Alternative 2** increase for brown shrimp by 68.1 mpt, decrease for white shrimp by 1.6 mpt, and increase for pink shrimp by 2.0 mpt. For any of the penaeid shrimp stocks using the EDM approach for MSY values, the models could be updated if the fishery begins to approach MSY levels of harvest.

Table 2.1. Landings of Gulf penaeid shrimp (heads off lb) from 1960-2025.

Year	Brown Shrimp	White Shrimp	Pink Shrimp
1960	61,787,343	28,128,567	20,658,592
1961	29,337,308	13,286,812	9,457,389
1962	26,620,055	18,376,826	15,329,969
1963	44,595,570	37,911,412	17,998,991
1964	33,170,644	35,949,464	20,986,099
1965	49,586,453	26,353,833	14,106,139
1966	50,881,790	23,698,216	12,986,068
1967	83,993,526	19,877,150	8,972,168
1968	63,881,322	26,363,949	10,168,061
1969	56,516,843	39,441,753	9,891,776
1970	68,679,925	40,579,303	11,929,699
1971	75,525,205	38,176,369	10,124,270
1972	75,945,513	32,809,046	10,811,607
1973	47,873,467	30,722,335	13,992,645
1974	50,759,468	26,874,478	14,374,393
1975	48,279,340	25,742,846	13,747,431
1976	77,863,267	36,518,116	13,021,513
1977	96,919,453	46,209,815	16,204,603
1978	87,508,037	48,036,180	16,011,393
1979	71,403,312	34,856,133	13,846,691
1980	68,269,927	42,705,545	12,877,492
1981	99,508,484	46,108,156	18,773,126
1982	74,804,488	39,219,608	11,644,028
1983	61,352,577	42,189,194	12,628,671
1984	82,204,088	55,958,235	14,698,527
1985	87,155,338	58,854,018	15,930,980
1986	100,564,407	70,052,138	11,723,343
1987	94,070,956	52,833,598	10,486,082
1988	82,840,325	44,638,937	9,135,939
1989	96,348,265	36,117,305	8,622,144
1990	105,912,096	43,701,941	7,454,083
1991	89,467,559	45,244,280	6,790,159
1992	70,831,209	47,342,282	6,341,170
1993	69,832,922	38,577,835	9,488,603
1994	68,881,037	45,334,632	10,088,773
1995	78,839,517	48,662,618	14,058,321
1996	76,339,327	35,430,587	19,341,126
1997	68,274,442	38,566,210	12,688,112
1998	81,615,721	54,187,635	17,164,094
1999	83,684,364	54,098,203	8,029,582
2000	98,915,715	70,635,889	7,453,209
2001	91,687,919	53,882,461	9,701,158
2002	77,081,963	52,542,091	7,976,185

2003	86,744,282	59,863,329	7,982,908
2004	76,551,766	66,544,100	8,483,883
2005	60,203,058	63,820,247	7,126,421
2006	89,980,622	85,096,181	6,269,021
2007	73,808,197	65,029,884	3,340,186
2008	52,738,758	64,904,720	4,792,855
2009	77,521,931	73,674,720	3,929,138
2010	45,794,802	57,976,051	5,366,146
2011	74,472,991	56,978,888	4,387,888
2012	66,114,439	66,350,697	3,628,168
2013	67,556,105	55,537,885	3,799,340
2014	67,936,991	60,046,485	6,128,795
2015	64,710,562	53,664,229	5,327,272
2016	49,174,362	69,041,766	5,160,508
2017	56,933,324	68,755,567	11,345,340
2018	71,088,440	51,580,415	12,876,965
2019	40,952,047	65,686,250	7,635,077
2020	41,552,518	58,825,117	7,616,625
2021	42,857,319	62,800,466	7,872,307
2022	32,381,740	68,192,117	9,895,287
2023	38,637,388	59,664,751	8,440,463
2024	21,254,844	59,389,239	5,750,507

Source: SEFSC Gulf Shrimp Database (1965-2025), accessed May 2026.

2.2 Action 2: Establish an Acceptable Biological Catch (ABC) for Penaeid Shrimp

Alternative 1: No Action. Do not establish ABC values for Gulf penaeid shrimp stocks.

Alternative 2: Establish an ABC for each Gulf penaeid shrimp stock that is equal to MSY for that stock.

Discussion:

Alternative 1 would not set an ABC for each of the penaeid shrimp stocks. Because ABCs are required for managed species, this not a viable alternative. **Alternative 2** would establish an ABC for each stock, consistent with the guidance in the National Standard 1 Guidelines at 50 CFR 600.310(h)(1)(i). This provision recognizes that the Magnuson-Stevens Act does not require annual catch limits (ACL) and accountability measures (AM) for species that have a life cycle of less than 1 year, but notes that status determination criteria (SDC), including optimum yield (OY), and other biological reference points must still be included in the FMP:

> ***Exceptions from ACL and AM requirements*** —(i) *Life cycle.* Section 303(a)(15) of the Magnuson-Stevens Act "shall not apply to a fishery for species that have a life cycle of approximately 1 year unless the Secretary has determined the fishery is subject to overfishing of that species" (Pub. L. 109-479 104(b)(2)). This exception applies to a stock for which the average age of spawners in the population is approximately 1 year or less. While exempt from the ACL and AM requirements, FMPs or FMP amendments for these stocks must have SDC, MSY, OY, ABC, and an ABC control rule.

The SSC noted that the MSY values already contain constraints, so no buffer to account for uncertainty between MSY and ABC would be necessary. The SSC also accounted for the annual lifespan of penaeid shrimp when discussing the appropriateness of setting ABC equal to MSY.

For **Alternative 2**, if a penaeid shrimp stock is determined to be undergoing overfishing through a future assessment, the exemption from the ACL requirement would no longer apply.

2.3 Action 3: Modify the Overfishing Threshold for Penaeid Shrimp

Alternative 1: No Action. Maintain the current overfishing threshold values for the penaeid shrimp stocks, defined as the maximum fishing mortality threshold (MFMT). The MFMT for each penaeid shrimp stock is defined as the fishing mortality rate at MSY (F_{MSY}). Species-specific F_{MSY} values are as follows:

- Brown shrimp: 9.12^{y-1}
- White shrimp: 3.48^{y-1}
- Pink shrimp: 1.35^{y-1}

Alternative 2: Revise the overfishing threshold values for the penaeid shrimp stocks based on the results of the SEDAR 87 stock assessments and recommendations of the Council's SSC. The overfishing thresholds for brown and white shrimp are defined as the MFMT, and the MFMT is defined as the fishing mortality rate at MSY (F_{MSY}). The values are as follows:

- Brown shrimp: 0.460^{y-1}
- White shrimp: 0.592^{y-1}
- Pink shrimp: annual landings relative to the MSY proxy. If this ratio exceeds 1, the stock status is overfishing.

Discussion:

The National Standard 1 Guidelines require one of two thresholds be developed to determine if a stock is undergoing overfishing: the MFMT or the overfishing limit (OFL). The MFMT is the maximum rate of fishing mortality above which the stock is considered to be undergoing overfishing. The OFL is the catch level associated with fishing at MFMT. Because Stock Synthesis and EDM produce outputs in terms of fishing mortality rates, MFMT is the appropriate threshold to use for penaeid shrimp species.

Alternative 1 would maintain the overfishing threshold values established in Shrimp Amendment 15 (GMFMC 2015). **Alternative 1** maintains F in terms of MSY produced using data from fishing years 1984-2012 and are not based on the best scientific information available. **Alternative 1** is not a viable alternative. **Alternative 2** would revise the overfishing threshold values for brown and white shrimp. The data limitations for pink shrimp discussed in Action 1 apply in this action also. Therefore, the overfishing threshold for pink shrimp considers a ratio of annual landings relative to the MSY proxy set in Action 1, such that if annual landings are greater than the MSY proxy (the ratio exceeds 1), the stock status is overfishing. In the Sustainable Fisheries Act Amendment (GMFMC 1999), the response to possible overfishing was set to trigger only when overfishing persisted for two consecutive years. This was primarily in response to the biology of the shrimp stocks and the environmental influence on the stocks. Penaeid shrimp rarely live longer than 18 months, and stock size is driven by annual variability in environmental conditions. Therefore, this same provision for responding to fishery conditions is continued in the current amendment.

2.4 Action 4: Modify the Overfished Threshold for Penaeid Shrimp

Alternative 1: No Action. Maintain the current overfished threshold values for the penaeid shrimp stocks, which are defined as the minimum stock size threshold (MSST). The MSST for each penaeid shrimp stock is defined as the biomass at MSY (B_{MSY}). The overfished threshold values are as follows:

- Brown shrimp: B_{MSY} (6,098,824 lb of tails)
- White shrimp: B_{MSY} (365,715,146 lb of tails)
- Pink shrimp: B_{MSY} (23,686,906 lb of tails)

Alternative 2: Revise the overfished threshold values for the penaeid shrimp stocks based on the results of the SEDAR 87 stock assessments and recommendations of the Council's SSC as follows:

- Brown shrimp: B_{MSY} (405,390,000 lb of tails)
- White shrimp: B_{MSY} (148,350,000 lb of tails)
- Pink shrimp: B_{MSY} is undefined

Alternative 3: Revise the overfished threshold values for the penaeid shrimp stocks based on the results of the SEDAR 87 stock assessments and recommendations of the Council's SSC as follows:

- Brown shrimp: $0.90*B_{MSY}$ (364,851,000 lb of tails)
- White shrimp: $0.90*B_{MSY}$ (133,515,000 lb of tails)
- Pink shrimp: B_{MSY} is undefined

Alternative 4: Revise the overfished threshold values for the penaeid shrimp stocks based on the results of the SEDAR 87 stock assessments and recommendations of the Council's SSC as follows:

- Brown shrimp: $0.80*B_{MSY}$ (324,312,000 lb of tails)
- White shrimp: $0.80*B_{MSY}$ (118,680,000 lb of tails)
- Pink shrimp: B_{MSY} is undefined

Discussion:

The MSST is the level of biomass below which the stock is considered to be overfished. Fishery managers can determine the status of a fishery at any given time and assess whether management measures are maintaining healthy stocks and achieving optimum yield (OY)[2] by evaluating the biomass of a stock in relation to MSST.

Alternative 1 would maintain the overfished threshold values established in Shrimp Amendment 15 (GMFMC 2015). These values were estimated using data from 1984-2012 and are not based on the best scientific information available. **Alternative 1** is not a viable alternative.
Alternative 2 would revise the overfished threshold values for brown and white shrimp based on

[2] The Council established the OY for each penaeid shrimp stock as equal to stock MSY in Action 7 of Shrimp Amendment 13 (2005).

SEDAR 87 and the SSC's recommendations. The data limitations for pink shrimp discussed in Action 1 apply in this action also. Thus, the overfished threshold value for pink shrimp would be undefined with **Alternative 2**. In comparison with **Alternative 1**, the overfished threshold values in **Alternative 2** increase for brown shrimp by 399.3 mpt and decrease for white shrimp by 217.4 mpt. **Alternatives 3** and **4**, respectively, are set at 90% and 80% of B_{MSY}. The NS1 guidelines allow MSST to be set at a level below B_{MSY} but no lower than $0.50*B_{MSY}$ to allow for environmentally driven fluctuations in stock size. In comparison with **Alternative 2**, **Alternatives 3** and **4** reduce the likelihood that the overfished threshold would be met for brown and white shrimp.

Unlike for overfishing, the Sustainable Fisheries Act Amendment (GMFMC 1999) did not have a two-year provision for responding to an overfished determination. In the Magnuson-Stevens Act, if a stock is determined to be overfished, NMFS must notify the Council, and the Council must begin developing conservation and management measures to rebuild the stock. The Council is required to implement management measures within two years of being notified. Because of the biology of the shrimp stock, variability in environmental conditions, and the two-year timeframe to implement these measures, the stock may no longer be considered overfished by the time management measures are in effect. However, if the spawning biomass is below MSST for a second consecutive year, then the Council would already have management measures in development.

CHAPTER 3. LIST OF PREPARERS

PREPARERS

Name	Expertise	Responsibility	Agency
Matthew Freeman	Economist	Co-Team Lead – Amendment development, economic analyses	Gulf Council
Frank Helies	Fishery Biologist	Co-Team Lead – Amendment development, biological analyses	SERO
Christina Package-Ward	Anthropologist	Social analyses	SERO
David Records	Economist	Economic analyses	SERO
Annabelle Suitor	Anthropologist	Social analyses	Gulf Council
John Froeschke	Fishery Biologist	Biological analyses	Gulf Council
Jessica Stephen	Fishery Biologist	Data analyses	SERO
Mike Larkin	Fishery Biologist	Data analyses	SERO

REVIEWERS (Preparers also serve as reviewers)

Name	Expertise	Responsibility	Agency
Mara Levy	Attorney	Legal review	NOAA GC
Matt Walia	Law Enforcement	Review	OLE
Adam Bailey	Technical writer and editor	Regulatory writer	SERO
Jennifer Lee	Biologist	Protected Resources review	SERO
David Dale	Biologist	Essential Fish Habitat review	SERO
Carrie Simmons	Biologist	Review	Gulf Council
John Froeschke	Biologist	Review	Gulf Council
Molly Stevens	Survey statistician	Review	SEFSC
Lisa Ailloud	Research mathematical statistician	Review	SEFSC
Christopher Liese	Economist	Review	SEFSC

NOAA GC = National Oceanic and Atmospheric Administration General Counsel; SEFSC = Southeast Fisheries Science Center; SERO = Southeast Regional Office of the National Marine Fisheries Service.

CHAPTER 4. REFERENCES

Gulf of Mexico Fishery Management Council (GMFMC). 1981a. Fishery management plan for the shrimp fishery of the Gulf of Mexico, United States waters. Gulf of Mexico Fishery Management Council, Tampa, FL, 246 pp.

GMFMC. 1981b. Fishery management plan for the shrimp fishery of the Gulf of Mexico, United States waters. (Includes Amendments 1 & 2). Gulf of Mexico Fishery Management Council, Tampa, FL, 250 pp.

GMFMC. 1982. Amendment 3 to the fishery management plan for the shrimp fishery of the Gulf of Mexico, U.S. waters. Gulf of Mexico Fishery Management Council, Tampa, FL. 5pp.

GMFMC. 1988. Amendment 4 to the fishery management plan for the shrimp fishery of the Gulf of Mexico, U.S. waters with environmental assessment and regulatory impact review. Gulf of Mexico Fishery Management Council, Tampa, Florida. 47 pp.

GMFMC. 1991. Amendment 5 to the fishery management plan for the shrimp fishery of the Gulf of Mexico, U.S. waters with environmental assessment. Gulf of Mexico Fishery Management Council, Tampa, Florida. 54 pp.

GMFMC. 1992. Amendment 6 to the fishery management plan for the shrimp fishery of the Gulf of Mexico, U.S. waters with environmental assessment and regulatory impact review. Gulf of Mexico Fishery Management Council, Tampa, Florida. 40 pp.

GMFMC. 1994. Amendment 7 to the fishery management plan for the shrimp fishery of the Gulf of Mexico, U.S. waters with environmental assessment and regulatory impact review. Gulf of Mexico Fishery Management Council, Tampa, Florida. 36 pp.

GMFMC. 1995. Amendment 8 to the fishery management plan for the shrimp fishery of the Gulf of Mexico, U.S. waters with environmental assessment and regulatory impact review. Gulf of Mexico Fishery Management Council, Tampa, Florida. 34 pp.

GMFMC. 1997. Amendment 9 to the fishery management plan for the shrimp fishery of the Gulf of Mexico, U.S. Waters, with supplemental environmental impact statement, regulatory impact review initial regulatory flexibility analysis and social impact assessment. Gulf of Mexico Fishery Management Council, Tampa, Florida. 516 pp.

GMFMC. 2001a. Amendment 11 to the fishery management plan for the shrimp fishery of the Gulf of Mexico, U.S. waters. Gulf of Mexico Fishery Management Council, Tampa, Florida. 48 pp.

GMFMC. 2001b. Amendment 12 to the fishery management plan for the shrimp fishery of the Gulf of Mexico, U.S. waters. Generic amendment addressing the establishment of the Tortugas Marine Reserves. Gulf of Mexico Fishery Management Council, Tampa, Florida. 194 pp.

GMFMC. 2002. Amendment 10 to the fishery management plan for the shrimp fishery of the Gulf of Mexico, U.S. Waters. Gulf of Mexico Fishery Management Council, Tampa, Florida. 142 pp.

GMFMC. 2005. Amendment 13 to the fishery management plan for the shrimp fishery of the Gulf of Mexico, U.S. waters, with environmental assessment, regulatory impact review, and regulatory flexibility analysis. Gulf of Mexico Fishery Management Council, Tampa, Florida. 273 pp.

GMFMC. 2006. A framework measure to address the bycatch reduction criterion for shrimp trawls in the Gulf of Mexico west of Cape San Blas, Florida, under the fishery management plan for the shrimp fishery of the Gulf of Mexico, including environmental assessment, regulatory impact review, and regulatory flexibility analysis. Gulf of Mexico Fishery Management Council, Tampa, Florida. 95 pp.

GMFMC. 2007. Final amendment 27 to the reef fish fishery management plan and Amendment 14 to the shrimp fishery management plan. Gulf Fishery Management Council, Tampa, Florida. Gulf Fishery Management Council, Tampa, Florida. 480 pp.

GMFMC. 2011. Generic annual catch limits/accountability measures amendment for the Gulf of Mexico fishery management council's red drum, reef fish, shrimp, coral and coral reefs fishery management plans, including environmental impact statement, regulatory impact review, regulatory flexibility analysis, and fishery impact statement. Gulf of Mexico Fishery Management Council, Tampa, Florida. 378 pp.

GMFMC. 2013. Framework action to establish funding responsibilities for the electronic logbook program in the shrimp fishery of the Gulf of Mexico. Gulf of Mexico Fishery Management Council, Tampa, Florida. 41 pp.

GMFMC. 2014. Amendment 16 to the fishery management plan for the shrimp fishery of the Gulf of Mexico, U.S. Waters. Adjustments to the annual catch limit and accountability measure for royal red shrimp. Gulf of Mexico Fishery Management Council, Tampa, Florida. 82 pp.

GMFMC. 2015. Amendment 15 to the fishery management plan for the shrimp fishery of the Gulf of Mexico, U.S. Waters. Status determination criteria for Penaeid shrimp and adjustments to the shrimp framework procedure. Gulf of Mexico Fishery Management Council, Tampa, Florida. 91 pp.

GMFMC. 2016. Amendment 17A to the fishery management plan for the shrimp fishery of the Gulf of Mexico, U.S. waters. Shrimp permit moratorium. Gulf of Mexico Fishery Management Council, Tampa, Florida. 107 pp.

GMFMC. 2017. Amendment 17B to the fishery management plan for the shrimp fishery of the Gulf of Mexico, U.S. Waters: Yield, threshold number of permits, and transit provisions. Gulf of Mexico Fishery Management Council, Tampa, Florida.176 pp.

GMFMC. 2018. Final amendment 9 to the fishery management plan for the coral and coral reefs of the Gulf of Mexico, U.S. Waters: Coral habitat areas considered for habitat area of particular concern designation in the Gulf of Mexico. Including final environmental impact statement. Gulf of Mexico Fishery Management Council, Tampa, Florida. 320 pp.

GMFMC. 2019. Amendment 18 to the fishery management plan for the shrimp fishery of the Gulf of Mexico, U.S. waters, including fishery impact statement, regulatory impact review, and regulatory flexibility act analysis. Gulf of Mexico Fishery Management Council, Tampa, Florida. 92 pp.

GFMC 2025a. Final framework action under the fishery management plan for the shrimp fishery in the Gulf, U.S. waters, including environmental assessment, regulatory impact review, and regulatory flexibility act analysis. Modification of the vessel position data collection program for the Gulf of America shrimp fishery. Gulf Fishery Management Council, Tampa, Florida. 100 pp.

GFMC 2025b. Amendment 19 to the fishery management plan for the shrimp fishery of the Gulf, U.S. waters. Gulf Fishery Management Council, Tampa, Florida. 64 pp.

SEDAR 87. 2025. Stock assessment reports of Gulf of America white, brown, and pink shrimp. Southeast Data, Assessment, and Review. North Charleston, South Carolina. https://sedarweb.org/assessments/sedar-87-gulf-of-mexico-white-pink-and-brown-shrimp/

APPENDIX A. OTHER APPLICABLE LAW

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) (16 U.S.C. 1801 et seq.) provides the authority for management of stocks included in fishery management plans (FMP) in federal waters of the exclusive economic zone (EEZ). However, management decision-making is also affected by a number of other federal statutes designed to protect the biological and human components of U.S. fisheries, as well as the ecosystems that support those fisheries. Major laws affecting federal fishery management decision-making include the Endangered Species Act (Section 1.4) and E.O. 12866 (Regulatory Planning and Review, Chapter 3). Other applicable laws are summarized below.

Administrative Procedure Act

All federal rulemaking is governed under the provisions of the Administrative Procedure Act (5 U.S.C. Subchapter II), which establishes a "notice and comment" procedure to enable public participation in the rulemaking process. Under the Act, 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 Act also establishes a 30-day waiting period from the time a final rule is published until it takes effect. Proposed and final rules will be published before implementing the actions in this amendment.

Coastal Zone Management Act

Section 307(c)(1) of the federal Coastal Zone Management Act of 1972 (CZMA), as amended, requires federal activities that affect any land or water use or natural resource of a state's coastal zone be conducted in a manner consistent, to the maximum extent practicable, with approved state coastal management programs. The requirements for such a consistency determination are set forth in the National Oceanic and Atmospheric Administration (NOAA) regulations at 15 CFR part 930, subpart C. According to these regulations and CZMA Section 307(c)(1), when taking an action that affects any land or water use or natural resource of a state's coastal zone, NMFS is required to provide a consistency determination to the relevant state agency at least 90 days before taking final action.

Upon submission to the Secretary of Commerce, NMFS will determine if this plan amendment is consistent with the Coastal Zone Management programs of the states of Alabama, Florida, Louisiana, Mississippi, and Texas to the maximum extent possible. Their determination will then be submitted to the responsible state agencies under Section 307 of the CZMA administering approved Coastal Zone Management programs for these states.

Data Quality Act

The Data Quality Act (Public Law 106-443) effective October 1, 2002, requires the government to set standards for the quality of scientific information and statistics used and disseminated by federal agencies. Information includes any communication or representation of knowledge such as facts or data, in any medium or form, including textual, numerical, cartographic, narrative, or

audiovisual forms (includes web dissemination, but not hyperlinks to information that others disseminate; does not include clearly stated opinions).

Specifically, the Act directs the Office of Management and Budget to issue government wide guidelines that "provide policy and procedural guidance to federal agencies for ensuring and maximizing the quality, objectivity, utility, and integrity of information disseminated by federal agencies." Such guidelines have been issued, directing all federal agencies to create and disseminate agency-specific standards to: (1 ensure information quality and develop a pre-dissemination review process; (2 establish administrative mechanisms allowing affected persons to seek and obtain correction of information; and (3 report periodically to Office of Management and Budget on the number and nature of complaints received.

Scientific information and data are key components of FMPs and amendments and the use of best available information is the second national standard under the Magnuson-Stevens Act. To be consistent with the Magnuson-Stevens Act, FMPs and amendments must be based on the best information available. They should also properly reference all supporting materials and data, and be reviewed by technically competent individuals. With respect to original data generated for FMPs and amendments, it is important to ensure that the data are collected according to documented procedures or in a manner that reflects standard practices accepted by the relevant scientific and technical communities. Data will also undergo quality control prior to being used by the agency and a pre-dissemination review.

National Historic Preservation Act

The National Historic Preservation Act (NHPA) of 1966, (Public Law 89-665; 16 U.S.C. 470 *et seq.*) is intended to preserve historical and archaeological sites in the United States of America. Section 106 of the NHPA requires federal agencies to evaluate the impact of all federally funded or permitted projects for sites on listed on, or eligible for listing on, the National Register of Historic Places and aims to minimize damage to such places.

Historical research indicates that over 2,000 ships have sunk on the Federal Outer Continental Shelf between 1625 and 1951; thousands more have sunk closer to shore in state waters during the same period. Only a handful of these have been scientifically excavated by archaeologists for the benefit of generations to come. Further information can be found at: http://www.boem.gov/Environmental-Stewardship/Archaeology/Shipwrecks.aspx

The proposed action does not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places nor is it expected to cause loss or destruction of significant scientific, cultural, or historical resources. In the Gulf of America (Gulf), the *U.S.S. Hatteras*, located in federal waters off Texas, is listed in the National Register of Historic Places. Fishing activity already occurs in the vicinity of this site, but the proposed action would have no additional adverse impacts on listed historic resources, nor would they alter any regulations intended to protect them.