

# Shrimp Permit Moratorium



## **Draft Amendment 19** **to the Fishery Management Plan for** **the Shrimp Fishery** **of the Gulf, U.S. Waters**

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**Type of Action**

Administrative  
 Draft

Legislative  
 Final

## ABBREVIATIONS USED IN THIS DOCUMENT

ACL	annual catch limit
AM	accountability measures
BRD	bycatch reduction device
BiOp	biological opinion
CFR	code of federal regulations
CZMA	Coastal Zone Management Act
Council	Gulf Council
DPS	distinct population segments
E.O.	Executive Order
EA	environmental assessment
EEZ	exclusive economic zone
EFH	Essential Fish Habitat
EIS	environmental impact statement
ELB	electronic logbook
ESA	Endangered Species Act
FMP	Fishery Management Plan
GDP	gross domestic product
Gulf	Gulf of America (Formerly Gulf of Mexico)
HAPC	habitat areas of particular concern
MMPA	Marine Mammal Protection Act
MSY	maximum sustainable yield
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
OY	optimum yield
PAH	polycyclic aromatic hydrocarbons
SEDAR	Southeast Data, Assessment, and Review
SEFSC	Southeast Fisheries Science Center
SEIS	Supplemental Environmental Impact Statement
SERO	Southeast Regional Office
SPGM	Gulf of Mexico shrimp moratorium permit
Secretary	Secretary of Commerce
TED	turtle excluder device
mp	million pounds
ww	whole weight

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# FISHERY IMPACT STATEMENT

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) requires that a fishery impact statement (FIS) be prepared for all amendments to fishery management plans. The FIS contains: 1) an assessment of the likely biological/conservation, economic, and social effects of the conservation and management measures on fishery participants and their communities; 2) an assessment of any effects on participants in the fisheries conducted in adjacent areas under the authority of another Fishery Management Council; and 3) the safety of human life at sea. A detailed discussion of the expected effects is provided in Chapter 1. The FIS provides a summary of these effects.

## **Action Contained in Amendment 19 to the Fishery Management Plan (FMP) for the Shrimp Fishery of the Gulf, U.S. Waters (Shrimp FMP)**

This action addresses the expiration of the federal shrimp permit moratorium in the Gulf of America (Gulf). The moratorium, first established for 10 years through Amendment 13 to the Shrimp FMP (GMFMC 2005) and then renewed for another 10 years through Amendment 17A to the Shrimp FMP (GMFMC 2016), is set to expire on October 26, 2026. The moratorium was implemented to create stability and prevent overcapacity in the Gulf shrimp fishery. **Preferred Option 3** would extend the moratorium indefinitely by creating a federal limited access permit for commercial shrimp vessels in the Gulf. Permits would continue to be transferrable, allowing for entry to and exit from the shrimp fishery. Review of the limited access permit would occur ten years after implementation of the amendment or as otherwise deemed necessary by the Gulf Council.

## **Assessment of Biological Effects**

Shrimp fishing effort is largely driven by environmental and market conditions. Effort in the shrimp fishery is closely monitored to not exceed established bycatch limits for red snapper and sea turtles. If the moratorium is lifted and the number of permits increased from the status quo, additional measures to limit effort to keep bycatch to acceptable levels could be considered. However, **Preferred Option 3** would extend the moratorium by creating a limited access permit and is not expected to have substantial effects on the biological environment. It is expected that the number of renewable shrimp permits and active fishing vessels will continue to decline until conditions in the fishery improve.

## **Assessment of Economic Effects**

**Preferred Option 3** would maintain federal shrimp permits' value as an asset, which current permit holders could sell. From 2022-2024, the median price of a federal Gulf shrimp permit was \$5,250 (SERO Permit Database, accessed June 14, 2025).<sup>1</sup> A limited access permit system under **Preferred Option 3** would continue to serve as a barrier to entry by limiting the total number of permits and, thereby, shrimping effort in the Gulf. In the Gulf, shrimping effort is at

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<sup>1</sup> Outliers were excluded (e.g. prices under \$10 and prices indicative of a package deal of the vessel with the permit). From 2022-2024, the mean price was \$13,228, and the mode was \$5,000.

an all-time low; however, should market conditions improve in the future, a limited access permit would help maintain historical limits on shrimping effort in the Gulf. This could potentially assist in the avoidance of increases in sea turtle takes and juvenile red snapper bycatch. Furthermore, the limited access permit system would prevent costs associated with overcapitalization that would reduce profitability under open access.

### **Assessment of Social Effects**

**Preferred Option 3** would create a federal limited access permit for Gulf commercial shrimp vessels, effectively continuing the status quo, but without an expiration date. The creation of a limited access permit could contribute to continuing to help with the stability of the fishery, which has been negatively affected by increasing fuel prices, decreasing shrimp prices, and increased competition with foreign imports. If economic conditions for the shrimp fishery were to improve, **Preferred Option 3** would be expected to result in positive impacts for those who hold federal limited access Gulf commercial shrimp permits and their associated communities through the ability of those permitted fishermen to catch and land the fish for a higher profit. In addition, permit holders could be expected to be positively impacted by the creation of a limited access permit under **Preferred Option 3** because their permits would retain their value because of the limited nature of these permits. However, under **Preferred Option 3**, the decline in the number of federal Gulf commercial shrimp permits is expected to continue unless economic conditions improve. A limited access permit under **Preferred Option 3** could continue and result in some forgone opportunities for participation for new entrant fishermen because they would be required to purchase a valid permit from an existing permit holder, likely including a sizable purchase price; however the cost of a vessel vastly exceeds the recent costs of a federal shrimp permit and consequently the costs to engage in the federal shrimp fishery extend well beyond the permit price for new entrants. Existing permits would remain renewable and transferable, allowing new entrants to replace shrimpers exiting the fishery. The communities that could benefit from or be negatively impacted to the greatest degree under **Preferred Option 3** are those with the greatest involvement in the federal Gulf commercial shrimp fishery (Section 1.6).

### **Assessment of Effects on Safety at Sea**

This action is not expected to result in direct impacts to safety at sea. The action is not anticipated to force vessels to participate in the shrimp industry under adverse weather or ocean conditions.

# CHAPTER 1. INTRODUCTION

## 1.1 Background

The Gulf Council (Council) and the National Marine Fisheries Service (NMFS) began managing the shrimp fishery in the Gulf of America (Gulf) in 1981. The Fishery Management Plan (FMP) for the Shrimp Fishery of the Gulf, U.S. Waters (Shrimp FMP) includes four species: brown shrimp, *Farfantepenaeus aztecus*; pink shrimp, *Farfantepenaeus duorarum*; white shrimp, *Litopenaeus setiferus*; and royal red shrimp, *Pleoticus robustus*.

In 2001, the Council established a federal commercial permit for all vessels harvesting shrimp from federal waters of the Gulf through Amendment 11 to the Shrimp FMP (GMFMC 2001). Approximately 2,951 vessels had been issued these permits by 2006. After the establishment of the permit, the shrimp fishery experienced economic losses, primarily because of high fuel costs and reduced shrimp prices caused by competition from imports. These economic losses resulted in the exodus of vessels from the fishery, and consequently, reduction of fishing effort. The Council determined that the number of vessels in the offshore shrimp fleet would likely decline to a point where the fishery again became profitable for the remaining participants, and new vessels might want to enter the fishery. That additional effort could negate, or at least lessen, profitability for the fleet as a whole. Consequently, the Council established a 10-year moratorium on the issuance of new federal commercial shrimp vessel permits through Amendment 13 to the Shrimp FMP (GMFMC 2005). The final rule implementing the moratorium was effective October 26, 2006; permits became effective in March 2007.

To be eligible for a commercial shrimp vessel permit under the initial moratorium, vessels must have been issued a valid permit by NMFS prior to and including December 6, 2003. An exception was made for owners who lost use of a qualified vessel, but obtained a valid commercial shrimp vessel permit for the same vessel or another vessel prior to the date of publication of the final rule. NMFS estimated 285 of the 2,951 vessels would not meet the control date; thus, the number of permitted vessels under the moratorium would be 2,666. Of those 285 ineligible vessels, 126 were inactive during 2002 (the last year of data available during the time the Council deliberated on this issue). Of the remaining 159 active vessels, only 72 operated in federal waters and were excluded under the moratorium. Vessel owners had one year to obtain the new permit; NMFS issued 1,933 moratorium permits in that time.

The Council reviewed the 10-year moratorium from Amendment 13 and established a 10-year continuation of the moratorium through Amendment 17A to the Shrimp FMP (GMFMC 2016). The final rule implementing the continuation of the 10-year moratorium was effective August 22, 2016, and extended the moratorium such that it would expire on October 26, 2026. In 2024, 1,287 moratorium permits were valid or renewable (within one year of expiration); therefore, the number of permits has decreased by 646 since the moratorium's full conversion of permits in 2008 (Table 1.1.1). These permits have been permanently removed and are no longer available to the fishery. A permit is valid if it has been renewed; a permit is renewable for one year from

its expiration. After a year with no renewal, a permit is terminated and permanently removed from the permit pool. Only a valid permit can be used to harvest shrimp.

**Table 1.1.1.** Number of valid or renewable federal Gulf commercial shrimp vessel permits as of December 31 each year since implementation of the moratorium. Valid permits are those that were fishable at least one day each year.

Year	Number of Valid or Renewable Permits Each Year*	Cumulative Number of Permits Lost from the Fishery	Number of Active Vessels**	% of Active Permits* *
2008	1,933	N/A		
2009	1,907	26		
2010	1,723	184		
2011	1,632	91		
2012	1,582	50		
2013	1,534	48		
2014	1,501	33		
2015	1,471	30		
2016	1,454	17	1093	75%
2017	1,442	12	1104	77%
2018	1,426	16	1079	76%
2019	1,418	8	1041	73%
2020	1,400	18	995	71%
2021	1,384	16	980	71%
2022	1,360	24	949	70%
2023	1,335	25	807	60%
2024	1,287	48	691	54%

Source: NMFS Southeast Regional Office (SERO) Permits Database; NMFS SEFSC, Trip Ticket Landings, Accessed September 29,2025.

\*The number of valid or renewable permits listed is the number of permits throughout a given year, in contrast to the number of permits that are valid or renewable on a specific date in a given year.

\*\*Active means landing at least one pound of shrimp each year, and shrimp landings from trip tickets may include landings in both inshore and offshore waters.

The moratorium on federal commercial shrimp permits will expire on October 26, 2026. The Council may: 1) allow the moratorium to expire and revert all federal Gulf commercial shrimp permits to open access; 2) extend the moratorium for another period of time; or 3) establish a limited access permit for federal Gulf commercial shrimp vessel moratorium permits that would not have an expiration date. Fishing permits traditionally move from open access, to a moratorium for a limited period time in order to evaluate the moratorium success, before converting either to a limited access permit or back to an open access permit.

Compliance with the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act)

Section 303 (b) (6) of the Magnuson-Stevens Act requires the Council to consider several factors when establishing a limited access program. These factors were discussed in Amendment 13

(GMFMC 2005), which originally established the federal shrimp permit moratorium, and in Amendment 17A (GMFMC 2016). Below is a summary of those factors.

### **(a) Present participation in the fishery**

Prior to the implementation of the federal commercial shrimp vessel permit in Amendment 11 to the Shrimp FMP (GMFMC 2001), approximately 4,000 vessels fished in federal waters of the Gulf at least some portion of the year. An estimated 2,951 vessels obtained a permit sometime within the period from implementation of Amendment 11 (December 2002) and May 5, 2005. NMFS estimated 2,666 vessels were eligible for a permit when the moratorium was implemented through Amendment 13 (GMFMC 2005); 1,933 vessels applied for and were issued permits by March 2017. In 2024, 1,287 permits were valid or renewable.

At the time of the implementation of the moratorium, economic projections indicated that the number of vessels participating in the Gulf shrimp fishery would continue to decline until at least 2012, primarily due to high fuel costs and competition with imports. Therefore, the decrease in participation is likely the result of the economic climate of the fishery. Furthermore, shrimp permits under the moratorium are fully transferable. Consequently, persons wishing to enter the fishery can freely do so by finding a willing seller from whom they can purchase a permit. 124 and 73 permits were transferred in 2023 and in 2024, respectively.<sup>2</sup>

### **(b) Historical fishing practices and the dependence on the fishery**

Downward trending shrimp prices over decades, driven by increased imports of farmed shrimp, has impacted historical fishing practices and dependence on the shrimp fishery. Due to a large (permanent) slide in the average shrimp price from 2001 through 2003, many vessels were forced out of the fishery in subsequent years, leading to a big consolidation of the Gulf shrimp fleet by about 2009. Since then, attrition of vessels has been more gradual. Another large slide in the price of shrimp from 2022 through 2024 has led to a large fraction of the fleet currently being idle, though it is too early to tell if this leads to a further permanent consolidation of the fleet. As stated in (a) above, these impacts have resulted from economic conditions within the fishery that would not be changed as a result of continuation of a moratorium.

### **(c) Economics of the fishery**

The dynamics of the shrimp fishery and resulting economic conditions are primarily determined by factors largely beyond the control of shrimp harvesters and fishery managers in the Gulf. Primary determinants of the economic conditions in the industry are environmental conditions, shrimp prices, and fuel prices. For penaeid shrimp, abundance, and therefore catch per unit effort, are primarily dependent on environmental conditions. Fuel prices constitute a key factor in the economic conditions in the fishery because they typically account for a significant portion of shrimp harvesters' total costs. Imports have resulted in very low prices for shrimp that have been good for consumers but have forced many vessels in the commercial fishery to cease operations due to not being profitable. Again, these impacts have resulted from factors not

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<sup>2</sup> Permit transfers are inclusive of when the vessel, the permit holder, or both changes.

related to the imposition of a moratorium, and continuing the moratorium is not likely to change the economic climate in the near future.

**(d) Capability of vessels in the fishery to engage in other fisheries**

Most of the vessels in the offshore shrimp fishery in the Gulf are large, specialized otter-trawl vessels, with an average length of 70 feet long and average weight of 111 gross tons. Other fisheries in the Gulf require very different gear, require smaller vessels to operate profitably, or are themselves limited entry or managed by an individual fishing quota program. Also, the scale of other Gulf fisheries is a fraction of the Gulf shrimp fishery, so it would be impossible to absorb even a fraction of Gulf shrimp vessels. As a result of the adverse economic conditions in the shrimp fishery, many vessels have already left the Gulf shrimp fishery, with some being scrapped, some entering other fisheries on the East Coast, and some being sold out of the country. Many remaining vessels also remain idle because they cannot operate profitably under the present economic conditions. It is currently unknown as to whether and to what extent these vessels will be able to reenter the shrimp fishery if profitably improves.

**(e) Cultural and social framework relevant to the fishery and any affected fishing communities**

Fishing communities that rely on shrimp have been heavily impacted by high fuel costs and competition from imports, with many participants electing to exit the fishery because of these conditions. The institution of a moratorium has provided some protection for the individuals and communities still involved in the fishery against even less favorable conditions as a result of new entrants and protection against a return to unprofitable conditions if economic conditions were to improve. The creation of a limited access permit could be expected to continue the protections for those engaged in the fishery and their related fishing communities without the threat of an expiration.

**(f) The fair and equitable distribution of access privileges in the fishery**

The current distribution of access privileges in the fishery would be maintained through the creation of a federal limited access permit. This distribution has resulted from a variety of opportunities for participation in the fishery, including an open opportunity to obtain permits during the initial issuance and open access period followed by the moratorium years, during which permits remained renewable and transferable and allowed for new entrants to replace shrimpers exiting the fishery. The number of permits has decreased over time due to challenging economic conditions and those remaining in the fishery have endured a difficult period in the fishery while many others have exited. Access for new entrants would continue to be allowed through the purchase and transfer of an existing permit.

**(g) Other relevant considerations**

Effort in the shrimp fishery is closely monitored to not exceed juvenile red snapper bycatch limits. Amendment 14 (GMFMC 2007) established a target effort level in specific areas of the western Gulf (statistical zones 10-21 in 10-30 fathoms) to protect juvenile red snapper caught as

bycatch. This target was originally set at 74% less than the effort in the benchmark years of 2001-2003. That target was reduced in 2012 to 67% less than the benchmark years because the red snapper rebuilding plan was proceeding as planned. Amendment 18 to the Shrimp FMP (GMFMC 2020) further reduced the target to 60% less than the benchmark years, as analyses conducted by the NMFS Southeast Fisheries Science Center (SEFSC) indicated that the reduction was unlikely to affect the rebuilding timeline of red snapper. If effort in the area increases above this target, selected areas of federal waters must be closed to shrimp fishing. Also, the 2021 Biological Opinion (Opinion) analyses the effects of southeast shrimp fisheries on ESA-listed species based on effort data through 2015. The Opinion requires NMFS to conduct shrimp effort monitoring at equivalent (or greater) levels as conducted over the past 10 years and to use this information, along with observed catch per unit effort rates, to complete new bycatch estimates for affected ESA-listed species every 5 years (NMFS 2021). If bycatch estimates are higher than anticipated in the Opinion, NMFS must reinstate consultation to determine if the higher bycatch level is likely to jeopardize any of the species and, if so, take action to reduce bycatch. The moratorium on permits indirectly controls shrimp effort in federal waters and thereby bycatch levels. Allowing the moratorium to expire would remove this control.

## 1.2 Purpose and Need

The purpose of this action is to determine if limiting access to federal permits is necessary on a temporary or permanent basis to maintain the biological, social, and economic benefits to the shrimp fishery achieved under the moratorium.

The need is to protect federally managed Gulf shrimp stocks while promoting catch efficiency, economic efficiency and stability, and obtain the best available information with which to manage the fishery.

## 1.3 History of Management

The Shrimp Fishery Management Plan, implemented in May 1981, 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/Environmental Assessment (EA), implemented in April 1983, 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/EA, implemented in May 1981, established mandatory reporting of statistical data by shrimp vessel owners and operators, dealers, and processors.

Amendment 3/EA, implemented in 1984, resolved a shrimp-stone crab gear conflict on the west-central coast of Florida.

A NMFS Endangered Species Act (ESA) Rule (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/EA** (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/EA** (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/EA** (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/EA** (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/EA** (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/supplemental EIS** (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/EA** (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/EA** (2001) 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/EA** (2001) was included as part of the Generic Essential Fish Habitat (EFH) Amendment that established EFH for shrimp in the Gulf.

A **NMFS ESA rule** (2003) required the use of larger TED escape openings in otter trawl nets used to harvest shrimp to improve the exclusion leatherback turtles and 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/EA** (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** (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/EIS** (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 areas (add areas) 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 Framework Action** (2008) made revisions to BRD specifications and testing protocols, including lowering the needed bycatch reduction for BRDs in the western Gulf from 44% to 30% to be consistent with the eastern Gulf and the South Atlantic.

**A Framework Action** (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 Generic Annual Catch Limit (ACL)/Accountability Measures (AM) Amendment/EIS** (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 Framework Action** (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** (2013) established a cost-sharing system for the ELB program and described new equipment and procedures for the program.

**Amendment 15/EA** (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 16/SEIS** (2015) 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 17A/EA** (2017) extended the Gulf commercial shrimp vessel permit moratorium for 10 more years through October 26, 2026.

**Amendment 17B/EA** (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/Categorical Exclusion (CE)** (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 (EIS)** (2019, effective 2021) 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.

## 1.4 Description of the Physical, Biological, and Ecological Environment

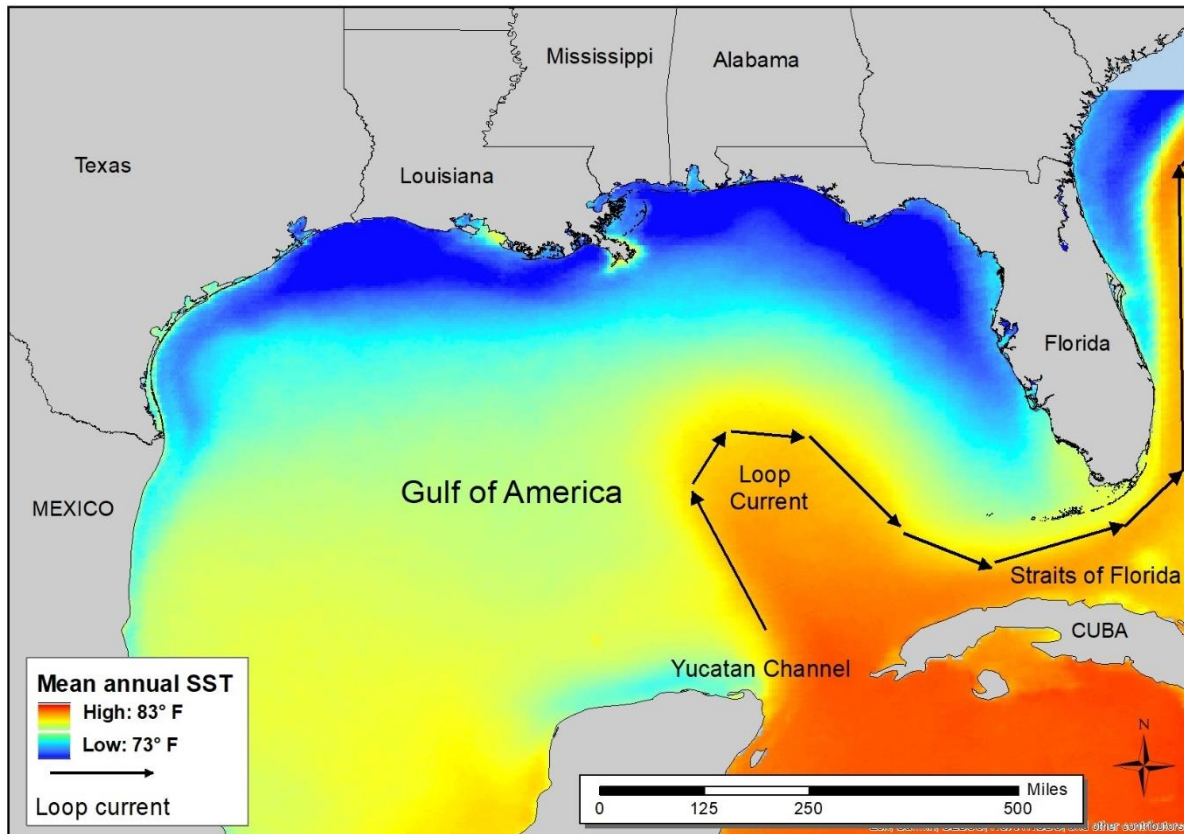
### Physical Environment

The original Shrimp FMP (GMFMC 1981a) and the FMP as revised in 1981 (GMFMC 1981b) contains a description of the physical environment. The physical environment for penaeid shrimp is also detailed in the Generic EFH Amendment (GMFMC 2005b). This material is incorporated herein by reference and is not repeated here in detail.

The Gulf has a total area of approximately 600,000 square miles (1.5 million km<sup>2</sup>), including state waters (Gore 1992). It is a semi-enclosed, oceanic basin connected to the Atlantic Ocean by the Straits of Florida and to the Caribbean Sea by the Yucatan Channel (Figure 1.4.1). Oceanographic conditions are affected by the Loop Current, discharge of freshwater into the northern Gulf, and a semi-permanent, anti-cyclonic gyre in the western Gulf. The Gulf includes both temperate and tropical waters (McEachran and Fechhelm 2005). Gulf surface water temperatures range from 54° F to 84° F (12° C to 29° C) depending on time of year and depth of water. Mean annual sea surface temperatures ranged from 73° F through 83° F (23-28° C) including bays and bayous (Figure 1.4.1) between 1982 and 2009, according to satellite-derived measurements (NODC 2011<sup>3</sup>). Daily mean temperatures in the Gulf ranged from approximately 70° F--88° F from 1984 – 2023, with an average annual temperature ranging from approximately 79° F--81° F with no discernable trend over the same time period (NOAA Physical Oceanography Division of the Atlantic Oceanographic and Meteorological Laboratory, data from June 13, 2023). In general, mean sea surface temperature increases from north to south with large seasonal variations in shallow waters.

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<sup>3</sup> <https://www.ncei.noaa.gov/access/metadata/landing-page/bin/iso?id=gov.noaa.nodc:0072888>



**Figure 1.4.1.** Physical environment of the Gulf, including major feature names and mean annual sea surface temperature as derived from the Advanced Very High-Resolution Radiometer Pathfinder Version 5 sea surface temperature data set (<http://accession.nodc.noaa.gov/0072888>)

In the Gulf, adult penaeid shrimp are found nearshore and offshore on silt, mud, and sand bottoms; juveniles are found in estuaries. Primary fishing grounds for royal red shrimp are: the Desoto Canyon about 75 miles off Mobile, Alabama; offshore of Tampa Bay, Florida; and the Dry Tortugas northwest of the Florida Keys.

Detailed information pertaining to habitat areas of particular concern (HAPC) is provided in Generic EFH Amendment (2005) and Amendment 9 to the FMP for the Coral and Coral Reefs of the Gulf, U.S. Waters (GMFMC 2018). These reef and bank areas in the northwestern Gulf include: East and West Flower Garden Banks, Stetson Bank, Sonnier Bank, MacNeil Bank, 29 Fathom, Rankin Bright Bank, Geyer Bank, McGrail Bank, Bouma Bank, Rezak Sidner Bank, Alderice Bank, and Jakkula Bank, Florida Middle Grounds HAPC and Pulley Ridge HAPC.

Additional area closures, some that include gear restrictions, may affect targeted and incidental harvest of penaeid shrimp species in the Gulf. The areas include:

- Cooperative Texas Shrimp Closure
- Tortugas Shrimp Sanctuary
- Southwest Florida Seasonal Closure
- Central Florida Seasonal Closure

- Longline/Buoy Gear Area Closure
- Madison-Swanson and Steamboat Lumps Marine Reserves
- The Edges Marine Reserve
- Tortugas North and South Marine Reserves
- Alabama Special Management Zone

### **Northern Gulf Hypoxic Zone**

Every summer in the northern Gulf, a large hypoxic zone forms. It is the result of allochthonous materials and runoff from agricultural lands resulting in increasing nutrient inputs to multiple rivers. These tributaries feed into the Mississippi River, which disperses to the Gulf, and creates a temperature and salinity dependent layering of waters. The nutrient rich fresh waters from the Mississippi create seasonal, large algal blooms at the surface that eventually die, sink to the bottom, and decompose. This creates the oxygen-poor, hypoxic, bottom water layer unless front or storm events occur, which allows for mixing of the layers (Rabalais and Turner 2019).

NOAA-supported scientists announced that the 2025 Gulf “[dead zone](#)” is approximately 4,402 square miles, the 15th smallest zone on record in 39 years of measurement. This equates to more than 2.8 million acres of habitat potentially unavailable to fish and bottom-dwelling species. For 2024, the dead zone was estimated to be 6,705 square miles and in 2023 was estimated to be 3,058 square miles. In 2022, the extent of the hypoxic area was 3,275 square miles, almost double what it was in 2020 (2,116 square miles), but still less than the extent of the 2017 hypoxic area (8,776 square miles). The changes in hypoxic area can be attributed to changing amounts of river discharge and its associated nutrient load and storm events. The major factor for the reduced size in 2020 was the active storm season with Hurricane Hanna passing right over the zone, allowing for mixing of the waters. The 2022 hypoxia area was lower than the 5-year hypoxic area average (5,408 square miles), but larger than the 1,930 square mile goal set by the Interagency Mississippi River/Gulf of America Hypoxia Task Force to be reached by 2035. The hypoxic conditions in the northern Gulf directly impact less mobile benthic macroinvertebrates (e.g., polychaetes) by influencing density, species richness, and community composition (Baustian and Rabalais 2009; Breitburg et al. 2018). However, more mobile macroinvertebrates and demersal fishes are able to detect lower dissolved oxygen levels and move away from hypoxic conditions. Therefore, these organisms are indirectly affected by limited prey availability and constrained available habitat (Baustian and Rabalais 2009; Craig 2012).

### **Deepwater Horizon MC252 Oil Spill**

The presence of polycyclic aromatic hydrocarbons (PAH), which are highly toxic chemicals that tend to persist in the environment for long periods of time, in marine environments can have detrimental impacts on marine finfish, especially during the more vulnerable larval stage of development (Whitehead et al. 2012). The future reproductive success of fish species may be negatively affected by episodic events resulting in high-mortality years or low recruitment. These episodic events could leave gaps in the age structure of the population, thereby affecting future reproductive output (Mendelssohn et al. 2012). Other studies have described the vulnerabilities of various marine finfish species, with morphological and/or life history characteristics similar to species found in the Gulf, to oil spills and dispersants (Hose et al. 1996; Carls et al. 1999; Heintz et al. 1999; Short 2003).

In addition to the crude oil, over a million gallons of the dispersant, Corexit 9500A®, was applied to the ocean surface and an additional hundreds of thousands of gallons of dispersant was pumped to the mile-deep wellhead (National Commission 2010). No large-scale applications of dispersants in deep water had been conducted until the Deepwater Horizon MC252 oil spill. Thus, no data exist on the environmental fate of dispersants in deep water. Twenty-first century dispersant applications are thought to be less harmful than their predecessors. However, the combination of oil and dispersants has proven to be more toxic to marine fishes than either dispersants or crude oil alone. Marine fish which are more active (e.g. a pelagic species versus a demersal species) appear to be more susceptible to negative effects from interactions with weathered oil/dispersant emulsions. These effects can include mobility impairment and inhibited respiration (Swedmark et al. 1973). The effect of oil, dispersants, and the combination of oil and dispersants on fishes of the Gulf remains an area of concern.

### **Environmental Variability**

Projections predict increases in sea-surface temperature and sea level; decreases in sea-ice cover; and changes in salinity, wave climate, and ocean circulation (Intergovernmental Panel on Climate Change). These changes are likely to affect plankton biomass and fish larvae abundance that could adversely impact fish, marine mammals, seabirds, and ocean biodiversity. Kennedy et al. (2002) and Osgood (2008) have suggested global climate change could affect temperature changes in coastal and marine ecosystems that can influence organism metabolism and alter ecological processes such as productivity and species interactions; change precipitation patterns and cause a rise in sea level which could change the water balance of coastal ecosystems; altering patterns of wind and water circulation in the ocean environment; and influence the productivity of critical coastal ecosystems such as wetlands, estuaries, and coral reefs. The National Oceanic and Atmospheric Association (NOAA) Climate Change Web Portal predicts the average sea surface temperature in the Gulf will increase by approximately 2°C for 2006-2100 compared to the average sea surface temperature from 1956-2005.

### **Biological / Ecological Environment**

The original Shrimp FMP and the FMP as revised in 1981 contains a description of the biology of the shrimp species. In its appendix, the February 1981 EIS includes the habitats, distribution, and incidental capture of sea turtles. Amendment 9 (GMFMC 1997) updated this information, which has essentially remained unchanged, except with respect to protected species as discussed below. This material is incorporated herein by reference and is not repeated here in detail.

### **Target Species**

Brown, white, and pink shrimp use a variety of habitats as they grow from planktonic larvae to spawning adults (GMFMC 1981a). Brown shrimp eggs are demersal and occur offshore. Post-larvae migrate to estuaries through passes on flood tides at night mainly from February until April; there is another minor peak in the fall. Post-larvae and juveniles are common in all U.S. estuaries from Apalachicola Bay, Florida to the Mexican border. Brown shrimp post-larvae and juveniles are associated with shallow, vegetated, estuarine habitats, but may occur on silt, sand, and non-vegetated mud bottoms. Adult brown shrimp occur in marine waters extending from mean low tide to the edge of the continental shelf and are associated with silt, muddy sand, and

sandy substrates. More detailed discussion on habitat associations of brown shrimp is provided in Nelson (1992) and Pattillo et al. (1997).

White shrimp eggs are demersal and larval stages are planktonic in nearshore marine waters. Post-larvae migrate through passes mainly from May until November with peaks in June and September. Juveniles are common in all Gulf estuaries from Texas to the Suwannee River in Florida. Post-larvae and juveniles commonly occur on bottoms with large quantities of decaying organic matter or vegetative cover such as mud or peat. Juvenile migration from estuaries occurs in late August and September and is related to juvenile size and environmental conditions (e.g., sharp temperature drops in fall and winter). Adult white shrimp are demersal and inhabit nearshore Gulf waters to depths of 16 fathoms (96 feet) on soft bottoms. More detailed information on habitat associations of white shrimp is available from Nelson (1992) and Pattillo et al. (1997).

Pink shrimp eggs are demersal, early larvae are planktonic, and post-larvae are demersal in marine waters. Juveniles inhabit almost every U.S. estuary in the Gulf but are most abundant in Florida. Juveniles are commonly found in estuarine areas with seagrass where they burrow into the substrate by day and emerge at night. Adults inhabit offshore marine waters, with the highest concentrations in depths of 5 to 25 fathoms (30 to 150 feet).

Royal red shrimp occur exclusively in the EEZ and live longer than penaeid shrimp; however, their detailed life history is poorly known. Royal red shrimp become mature at three years, do not fully recruit to the fishery until they are 2-3 years old, and many year classes may occur in the same location (i.e., fishing grounds) (Reed and Farrington 2010). Royal red shrimp decrease in size with increasing depth; juveniles likely occur in deeper habitats (Paramo and Saint-Paul 2011), and females are larger than males (Tavares 2002; Paramo and Saint-Paul 2011).

The three species of penaeid shrimp harvested by the shrimp fishery are short-lived and provide annual crops while royal red shrimp live longer (2-5 years). The condition of each shrimp stock is monitored annually, and none has been classified as overfished or undergoing overfishing (Hart 2016a, 2016b, 2016c). The most recent stock assessment (SEDAR 87) was completed in 2025 with a terminal year of data being 2022 and revealed that no overfishing was occurring and the species were not overfished (<https://sedarweb.org/assessments/sedar-87-gulf-of-mexico-white-pink-and-brown-shrimp>).

### **Bycatch**

Most bycatch in the shrimp fishery are discards of no value to the vessel, with a limited amount being regulatory discards. Scott-Denton et al. (2020) found that about 27.4% of catch in the Gulf penaeid shrimp fishery was targeted shrimp (i.e. brown, white, pink). Between 2011 and 2016, 148 species were observed as bycatch in the shrimp fishery (Scott-Denton et al. 2020). The majority of catch and bycatch was composed of unspecified fish, Atlantic croaker, other arthropods and invertebrates, and sea trout (Table 1.4.1). The species composition is spatially and bathymetrically dependent, but overall, for the Gulf, Atlantic croaker, sea trout, and longspine porgy are the dominant finfish species taken in trawls (approximately 26% of the total catch by weight). Other commonly occurring species include: portunid crabs, mantis shrimp, spot, inshore lizardfish, sea robins, and Gulf butterfish. Although red snapper comprise a very

small percentage (0.3% by weight) of overall bycatch. The bycatch mortality of red snapper associated with the shrimp fishery is estimated to affect the recruitment of fish (age-2 and above) to the directed fishery and ultimately the recovery of the red snapper stock. Until the next Gulf red snapper assessment is completed (SEDAR 98), it is unknown if red snapper has been rebuilt.

**Table 1.4.1.** Most common catch and bycatch species from observed Gulf shrimp fisheries from 2011-2024. Values in percentage of observed catch.

<b>COMMON NAME</b>	<b>GULF PENAEID SHRIMP PERCENTAGE</b>	<b>GULF ROCK SHRIMP PERCENTAGE</b>	<b>GULF SKIMMER TRAWL PERCENTAGE</b>
<b>FISH (UNSPECIFIED)</b>	<b>29.29</b>	<b>18.28</b>	<b>32.19</b>
<b>ATLANTIC CROAKER</b>	<b>17.03</b>	<b>-</b>	<b>10.0</b>
<b>BROWN SHRIMP</b>	<b>13.08</b>	<b>-</b>	<b>28.84</b>
<b>WHITE SHRIMP</b>	<b>13.09</b>	<b>0.07</b>	<b>15.32</b>
<b>ARTHROPOD OTHER</b>	<b>6.0</b>	<b>8.24</b>	<b>4.41</b>
<b>SEATROUT</b>	<b>5.4</b>	<b>0.17</b>	<b>1.47</b>
<b>INVERTEBRATES</b>	<b>4.33</b>	<b>7.59</b>	<b>0.62</b>
<b>PINK SHRIMP</b>	<b>4.93</b>	<b>4.65</b>	<b>-</b>
<b>LONGSPINE PORGY</b>	<b>2.18</b>	<b>-</b>	<b>-</b>
<b>ROCK SHRIMP</b>	<b>0.14</b>	<b>42.67</b>	<b>-</b>
<b>RED SNAPPER*</b>	<b>0.3</b>	<b>0.0</b>	<b>0.0</b>
<b>SPANISH MACKEREL</b>	<b>0.18</b>	<b>0.01</b>	<b>0.28</b>
<b>RED DRUM</b>	<b>0.21</b>	<b>-</b>	<b>0.1</b>
<b>LANE SNAPPER</b>	<b>0.17</b>	<b>0.06</b>	<b>0.01</b>

Source: SEFSC Observer Database (data pulled August 8, 2025)

\*Red snapper estimate taken from Scott-Denton et al. 2020

To address finfish bycatch issues, especially bycatch of red snapper, the Council initially established regulations requiring bycatch reduction devices (BRD) specifically to reduce the bycatch of juvenile red snapper. In 1998, all shrimp trawlers operating in the EEZ, inshore of the 100-fathom contour, west of Cape San Blas, Florida were required to use BRDs; later BRDs were required in the eastern Gulf (GMFMC 2002). Only three Gulf states (Florida, Louisiana, and Texas) require the use of BRDs in state waters. Shrimp trawls fishing for royal red shrimp seaward of the 100-fathom (600 feet) contour are exempt from the requirement for BRDs. Current BRD use is estimated to reduce finfish bycatch by 30% (GSAFF 2010). Bycatch is currently considered to be reduced to the extent practicable in the Gulf shrimp fishery.

### **Protected Species and Protected Species Bycatch**

NMFS manages marine species in the Southeast region protected under the ESA and the Marine Mammal Protection Act (MMPA). A brief summary of these two laws and more information is

available on NMFS Office of Protected Resources website.<sup>4</sup> Species in the Gulf protected under the ESA include: marine mammal species (blue, sperm, sei, fin, and Rice’s whales, and manatees); sea turtles (Kemp’s ridley, loggerhead (North Atlantic distinct population segment (DPS)), green (North Atlantic DPS), leatherback, and hawksbill); fish species (Gulf sturgeon, smalltooth sawfish, giant manta ray, oceanic whitetip shark, and Nassau grouper); and coral species (elkhorn coral, lobed star coral, boulder star coral, and mountainous star coral).

The impacts of the Gulf shrimp fishery on ESA-listed species were evaluated in the most recent “Reinitiation of ESA Section 7 Consultation on the Implementation of the Sea Turtle Conservation Regulations under the ESA and the Authorization of the Southeast U.S. Shrimp Fisheries in Federal Waters under the Magnuson-Stevens Fishery Management and Conservation Act” (Biological Opinion [BiOp]; NMFS 2021). The BiOp, which was based on the best available commercial and scientific data, concluded the continued authorization of the southeast U.S. shrimp fisheries in federal waters (including the Gulf shrimp fishery) is not likely to jeopardize the continued existence of threatened or endangered species (NMFS 2021). NMFS is preparing to reinitiate ESA section 7 consultation on the fishery for unanticipated observed lethal incidental take of giant manta rays and new information revealing effects of the fishery on smalltooth sawfish and giant manta rays not considered in the 2021 BiOp.

#### *Sea Turtles*

Five species of sea turtles (Kemp’s ridley, loggerhead (Northwest Atlantic Ocean DPS), green (North Atlantic), leatherback, and hawksbill) occur in the Gulf. Green, hawksbill, Kemp’s ridley, leatherback, and loggerhead sea turtles are all highly migratory and are known to occur in areas subject to shrimp trawling. Bycatch of the species by commercial fisheries is a major contributor to past declines and a potential threat to future recovery (NMFS and USFWS 1991, 1992a, 1992b, 2008; NMFS 2011a). Historically, southeastern U.S. shrimp fisheries (both Gulf and South Atlantic) have been the largest threat to benthic sea turtles. Regulations requiring turtle excluder devices (TEDs) have reduced mortalities from trawl fisheries on sea turtles. NMFS (2021), using data from 2007-2015, estimated the combined southeastern U.S. otter trawl shrimp fisheries results in 27,509 annual estimated captures in trynets and standard nets combined, and 1,085 sea turtle mortalities in trynets and standard nets combined.

#### *Fish*

Five species of fish (Gulf sturgeon, smalltooth sawfish, Nassau grouper, oceanic whitetip shark and giant manta ray) occur in the Gulf. Of these, only smalltooth sawfish and giant manta ray are adversely affect by the shrimp trawl fishery. Otter trawls may directly affect smalltooth sawfish that are foraging within or moving through an active trawling location via direct contact with the gear. The long toothed rostrum of the smalltooth sawfish causes this species to be particularly vulnerable to entanglement in any type of netting gear, including the netting used in shrimp trawls. Giant manta rays also are entangled and entrapped in shrimp trawl nets. Babcock et al. (2025) estimated bycatch in the Gulf shrimp fishery for sawfish for 2015 to 2023 and for giant manta rays from 2019 to 2023. Bycatch estimates for smalltooth sawfish in the Gulf shrimp fishery ranged from 30 animals (CI: 6-74) in 2013 to 123 animals (CI: 47-258) in 2020.

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<sup>4</sup> <https://www.fisheries.noaa.gov/about/office-protected-resources>

Mean model-based bycatch estimates for giant manta ray in the Gulf ranged from 385 animals (CI: 144-781) in 2021 to 863 animals (CI: 357-1643) in 2023.

### *Coral*

Six species of coral (elkhorn, staghorn, lobed star, mountainous star, boulder star, and rough cactus) occur in the Gulf. Adverse effects from the shrimp fishery on these corals are extremely unlikely to occur, given differences between shrimp and coral preferred habitats, and protective regulations in place prohibiting or limiting trawling in areas where corals are most likely to occur (NMFS 2021).

### *Marine Mammals*

The five whale species that may be present in the Gulf (blue, sperm, sei, fin, and Rice's) are all listed as endangered under the ESA. Rice's and sperm whales are the only endemic populations of whales in the Gulf. Rice's whales are the only resident baleen whales in the Gulf. Manatees, listed as threatened under the ESA, also occur in the Gulf and are the only marine mammal species in this area managed by the U.S. Fish and Wildlife Service. NMFS (2021) concluded the shrimp fishery is extremely unlikely to adversely affect any whale protected by the ESA.

The shrimp fishery is classified in the proposed 2025 List of Fisheries as a Category II fishery (89 FR 77789; September 24, 2024). This classification indicates the annual mortality and serious injury of a marine mammal stock is greater than 1% but less than 50% of the stocks potential biological removal, not including natural mortalities, which may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population. The classification is based on interactions reported through observer reports, stranding data, and fisheries research data, with multiple strategic and non-strategic marine mammal stocks of dolphins. NMFS observed 12 dolphin takes (of which 11 were serious injuries or mortalities) since 1993; 11 of which were taken since 2002.

## **1.5 Description of the Economic Environment**

Descriptions of the Gulf shrimp fishery are contained in previous amendments, as well as NMFS regulatory actions, and are incorporated herein by reference [see Shrimp Amendment 17b (GMFMC 2017) and Shrimp 18 (GMFMC 2019)]. The following discusses certain key characteristics of the Gulf shrimp fishery.

The Gulf shrimp fishery consists of three major sectors: harvesting sector, dealer/wholesaler sector, and processing sector. The following discussion provides summary statistics and selected characteristics for the harvesting sector, shrimp dealers, and the processing sector. Imports are also presented. All monetary values presented throughout this section have been adjusted to 2023 dollars using the annual, not seasonally-adjusted GDP implicit price deflator provided by the U.S. Bureau of Economic Analysis.

The harvesting sector is composed of two types of fleets: 1) a small vessel fleet that is predominantly active in inshore and state offshore waters and very diverse with respect to gear and other operating characteristics; and 2) a large vessel fleet predominantly active in offshore waters, particularly the EEZ, and almost always using otter trawl gear. In 2003, a federal shrimp

permit was instituted requiring vessels to possess the permit when fishing for penaeid shrimp in the Gulf EEZ. A moratorium on the issuance of new federal shrimp permits became effective in March 2007, with full conversion of open access permits to shrimp moratorium permits (SPGM) by 2008. Currently, vessels must possess a SPGM when fishing for penaeid shrimp in the Gulf EEZ. In addition, a royal red shrimp endorsement, which is an open access permit for those holding a SPGM, is required for harvesting royal red shrimp in the Gulf.

### **Selected Characteristics of Participating Vessels in the Shrimp Fishery**

Selected characteristics of participating vessels in the Gulf shrimp fishery during 2019 through 2023 are summarized in Table 1.5.1. Estimates of the total number of active shrimp vessels are based on the number of unique vessels landing shrimp as recorded in the state trip ticket (STT) data. The number of active permitted vessels was generated by cross referencing STT landings data with the NMFS permits database.

The number of permitted and non-permitted active vessels (i.e., vessels with reported landings in the Gulf shrimp fishery) steadily declined from 2019 through 2023 (Table 1.5.1). While shrimp landings over this period remained relatively stable, with an average of 111 million lbs, gross revenue decreased by 51%, driven by a steep reduction in average price from \$3.65 to \$1.91. Despite being fewer in number, federally permitted vessels accounted for 68% of shrimp landings and 78% of shrimp revenue in the fishery on average from 2019 through 2023 (Table 1.5.1). The average annual price received per lb of shrimp was also significantly higher for vessels with a SPGM permit than those without one. On average (2019 through 2023), each active shrimp vessel with a SPGM permit earned approximately \$301,000 in gross revenue per year. The percent of all vessels with a SPGM permit that were active decreased over time, as did the average number of months that each active vessel fished (Table 1.5.1).

**Table 1.5.1.** Selected characteristics of participation in the Gulf shrimp fishery, 2019-2023.\*

	2019	2020	2021	2022	2023	Average
<b>Total Gulf shrimp fishery</b>						
Number of active vessels	3,558	3,348	3,154	2,971	2,467	3,100
Landing (lbs, heads off)	115,092,015	108,521,986	114,217,843	110,844,516	107,021,123	111,139,497
Gross revenue (2023 \$)	\$419,971,258	\$385,240,167	\$471,294,385	\$341,043,074	\$204,439,084	\$364,397,594
Average Price (2023 \$)	\$3.65	\$3.55	\$4.13	\$3.08	\$1.91	\$3.26
<b>Gulf shrimp vessels WITH federal SPGM permit</b>						
Number of vessels	1,416	1,399	1,377	1,356	1,332	1,376
Number of active vessels	1,020	981	950	919	790	932
Percent active	72%	70%	69%	68%	59%	68%
Average active months per vessel	6.0	6.0	5.9	4.8	4.7	5.5
Landing (lbs, heads off)	76,012,854	76,382,286	79,937,847	74,093,166	72,160,111	75,717,253
Gross revenue (2023 \$)	\$318,966,619	\$306,505,939	\$372,958,493	\$259,860,103	\$161,231,726	\$283,904,576
Average Price (2023 \$)	\$4.20	\$4.01	\$4.67	\$3.51	\$2.23	\$3.72
<b>Gulf shrimp vessels WITHOUT federal SPGM permit</b>						
Number of active vessels	2,538	2,367	2,204	2,052	1,677	2,168
Average active months per vessel	4.3	4.1	4.1	3.8	3.9	4.1
Landing (lbs, heads off)	39,079,161	32,139,700	34,279,996	36,751,350	34,861,013	35,422,244
Gross revenue (2023 \$)	\$101,004,639	\$78,734,228	\$98,335,892	\$81,182,971	\$43,207,358	\$80,493,018
Average Price (2023 \$)	\$2.58	\$2.45	\$2.87	\$2.21	\$1.24	\$2.27

Source: C. Liese, pers. comm. 2024. STT data processed using SEDAR87 conventions. Permit data from SERO.

\*These results are preliminary.

Note: Active in the context of this table means a vessel that landed at a Gulf port at least 1 lb of shrimp from offshore or inshore waters in the Gulf in a given year (or month, for active months).

### **Key Economic and Financial Characteristics of Federally Permitted Shrimp Vessels**

The following descriptions are based on economic performance metrics of the federal Gulf shrimp fishery for the years 2019 through 2023 (C. Liese, SEFSC, pers. comm. 2024). These data are collected via the Annual Economic Survey of Federal Gulf Shrimp Permit Holders. The first survey, which was administered in 2007, collected data for the 2006 fishing year, and these surveys have been conducted every year since.

The type of economic data the survey collects is based on an accounting framework of money flows and values associated with the productive activity of commercial shrimping. With these data, three financial statements (the balance sheet, the cash flow statement, and the income statement) are prepared to give a comprehensive overview of the financial and economic situation of the offshore shrimp fishery. Table 1.5.2 shows a preliminary summary of these financial statements. Dollar values are averages in 2023 dollars.

From 2019 through 2023, owner's equity in the average active shrimp vessel was substantial and stable over time (Table 1.5.2). This resulted from a combination of a relatively high market value of the assets (vessel and permits being the main assets) and low liabilities (mainly loans). Net cash flows and net revenue from operations for the average active vessel were positive and increasing through 2021, but both turned negative in 2022 and remained so in 2023. This corresponds with the reduction in shrimp price seen in recent years (Table 1.5.1). Negative cash flows are troublesome and if they persist could lead to solvency issues for shrimp businesses. Approximately half of total expenses incurred by shrimp fishing businesses were non-labor costs (fuel and supplies) in 2022 and 2023, with the other half being split across labor and fixed costs (e.g., maintenance, repair, insurance, overhead, and vessel depreciation). Active shrimp vessels experienced losses, on average, in 2022 and 2023, which may affect the long-term viability of these businesses. Average government payments and non-operating revenue also shrank in 2022 and 2023, which exacerbated the overall decrease in profit before tax during those years. Individual businesses may be more or less profitable than others, depending on their operating characteristics.

**Table 1.5.2.** Economic and financial characteristics of an average active vessel with a federal Gulf commercial shrimp permit (SPGM), 2019–2023. Parentheses indicate negative values and all dollar values are averages in 2023 dollars.\*

	2019	2020	2021	2022	2023	Average
Number of observations	268	274	271	238	204	251
<b>Balance Sheet</b>						
Assets	\$370,112	\$346,222	\$389,621	\$364,444	\$331,303	\$360,341
Liabilities	\$20,076	\$35,215	\$32,871	\$32,899	\$22,321	\$28,676
Equity	\$350,036	\$311,007	\$356,751	\$331,545	\$308,982	\$331,664
<b>Cash Flow</b>						
Inflow	\$356,777	\$332,748	\$447,461	\$313,750	\$242,796	\$338,706
Outflow	\$329,665	\$301,212	\$387,039	\$321,688	\$247,682	\$317,457
Net cash flow	\$27,112	\$31,537	\$60,422	(\$7,938)	(\$4,885)	\$21,249
<b>Income Statement</b>						
Revenue (commercial fishing operations)	\$342,207	\$324,548	\$441,829	\$313,347	\$241,334	\$332,653
Expenses						
Variable costs – Non-labor	47.36%	40.38%	44.80%	51.71%	50.53%	46.96%
Variable costs – Labor	30.03%	33.85%	33.72%	26.35%	25.12%	29.81%
Fixed costs	22.61%	25.78%	21.48%	21.94%	24.35%	23.23%
Net revenue from operations	\$918	\$9,887	\$43,497	(\$15,616)	(\$14,635)	\$4,810
Net receipts from non-operating activities	\$13,905	\$7,236	\$5,022	(\$314)	\$311	\$5,232
Profit or loss (before tax)	\$14,824	\$17,122	\$48,519	(\$15,930)	(\$14,324)	\$10,042
<b>Returns</b>						
Economic return on asset value	0.2%	2.9%	11.2%	(4.3%)	(4.4%)	1.1%
Return on equity	4.2%	5.5%	13.6%	(4.8%)	(4.6%)	2.8%

Source: C. Liese, pers. comm. 2024, as based on The Annual Economic Survey of Federal Gulf Shrimp Permit Holders, NMFS-SEFSC.

\*These results are preliminary.

## Dealers

The information in Table 1.5.3 illustrates the purchasing activities of seafood dealers that bought Gulf shrimp from vessels during 2019 through 2022, with preliminary data for 2023.<sup>5</sup> During this period, the number of shrimp dealers, as well as total shrimp purchases, trended downwards modestly. On average, from 2019 through 2022, annual shrimp purchases accounted for around 84% of all purchases made by these dealers, suggesting a high level of specialization. The median annual value of Gulf shrimp purchases and total seafood purchases per Gulf shrimp dealer experienced an increasing trend from 2019 through 2021 and then a dip in 2022 (Table 1.5.3). Although the median values of Gulf shrimp and total seafood purchases per dealer appear

<sup>5</sup> Because 2023 is preliminary and partial year data, trends will only be discussed for 2019–2022.

relatively small, \$18,143 and \$25,594, respectively on average, Gulf shrimp dealers are a very heterogeneous group. Many if not most “dealers” are actually vessel owners and fishermen who have chosen to act as their own dealers and bypass so-called “middlemen” so they can reduce costs and retain more of their net revenue (profit). A much smaller number of these dealers are also shrimp processors, and their operations generate much larger revenues, on average. Although not shown in the table, the maximum annual value of all purchases made by a single Gulf shrimp dealer from 2019 through 2022 was approximately \$19.9 million (2023 dollars), which occurred in 2021.

**Table 1.5.3.** Dealer statistics for dealers that purchased Gulf shrimp landings by year, 2019-2023. Pounds (lbs) are in whole weight (ww). All dollar estimates are in 2023 dollars.

Year	Number of Dealers	Gulf Shrimp** landed lbs ww (millions)	Gulf Shrimp Purchases (millions)	Other Gulf Seafood Purchases (millions)	South Atlantic Seafood Purchases (millions)	Median Gulf Shrimp purchases value per dealer	Median total seafood purchases value per dealer
2019	743	187.9	\$429.7	\$46.7	\$21.2	\$14,851	\$22,801
2020	684	175.5	\$394.2	\$37.1	\$18.7	\$17,959	\$23,694
2021	601	183.4	\$479.1	\$46.0	\$29.2	\$22,133	\$33,335
2022	642	178.0	\$346.6	\$32.0	\$22.1	\$17,630	\$22,545
2023*	420	105.6	\$157.5	\$34.4	\$16.6	\$25,458	\$36,508
Average (2019-2022)	668	181.2	\$412.4	\$40.5	\$22.8	\$18,143	\$25,594

Source: SEFSC Fishing Communities Web Query Tool (Version Feb 11, 2025 Years: 2014-2023).

\*The values presented for 2023 are preliminary and may be incomplete. Therefore, these values are excluded from the table averages and should be interpreted with caution.

\*\*Only shrimp species included in the STT database are included in these estimates.

Note: Medians, as opposed to means, are reported because the data distributions are highly skewed.

Selected characteristics for Gulf shrimp processors are provided in Table 1.5.4. The number of Gulf shrimp processors decreased steadily from 2019 through 2022, then rose slightly in 2023, averaging 49 during this time. The annual value of processed shrimp increased from 2019 through 2020, then declined steadily through 2023, with an overall decrease of 28% (Table 1.5.4). Like dealers, shrimp processors are also very specialized. Shrimp products accounted for more than 92% of the total value processed between 2019 and 2023. However, processors are much larger businesses on average (2019 through 2023) than dealers, with the value of processed shrimp and all processed products per processor having medians of \$4.92 million and \$5.64 million (2023 dollars), respectively. Economic trends in the processing sector do not exactly mirror trends in the harvesting and dealer sectors because processors process imported product in addition to domestic product.

**Table 1.5.4.** Selected characteristics of the Gulf shrimp processing industry by year, 2019-2023. Pounds (lbs) are in whole weight (ww). All dollar estimates are in 2023 dollars.

Year	Number of Processors	Processed shrimp* in lbs ww (millions)	Value of processed shrimp (millions)	Total value of all products processed by Gulf shrimp processors (millions)	Median value of processed shrimp per processor (millions)	Median total value of all products processed per Gulf shrimp processor (millions)	Median number of employees per processor
2019	52	232.37	\$839.90	\$908.33	\$5.87	\$7.00	24
2020	51	198.27	\$902.34	\$974.54	\$4.06	\$4.16	22
2021	49	196.91	\$840.11	\$907.99	\$5.42	\$6.66	23
2022	46	167.47	\$677.23	\$738.77	\$6.22	\$6.89	30
2023	49	174.79	\$604.65	\$662.64	\$3.00	\$3.48	30
Average (2019-2022)	49	193.96	\$772.85	\$838.45	\$4.92	\$5.64	26

Source: Office of Science and Technology, pers. comm. Feb 11, 2025.

\*Includes all shrimp regardless of where harvested, but only includes shrimp processed for human consumption (i.e., shrimp processed for bait are excluded).

Note: Medians, as opposed to means, are reported because the data distributions are highly skewed.

### Imports

Imports of seafood products compete in the domestic seafood market and have in fact dominated many segments of the seafood market. Imports affect the price for domestic seafood products and tend to set the price in the market segments in which they dominate. Seafood imports have downstream effects on local markets. At the harvest level for shrimp, imports affect the returns to fishermen through the ex-vessel prices they receive for their landings. As substitutes to the domestic production of shrimp, imports tend to cushion the adverse economic effects on consumers resulting from a reduction in domestic landings. The following describes the imports of products that directly compete with the domestic harvest of shrimp.

On average, between 2019 and 2023, the United States imported more than 1.3 billion pounds (product weight) of shrimp products annually, worth approximately \$5.8 billion. There was an increasing trend in shrimp imports from 2019 through 2021 and then a modest cool down through 2023 (Table 1.5.5). Three nations, including India, Ecuador, and Indonesia, have been responsible for the vast majority of shrimp imports in recent years. The top ports for receiving shrimp imports were New York, New York, Los Angeles, California, and Miami, Florida.

**Table 1.5.5.** Annual pounds and value of shrimp imports and share of imports by country, 2019-2023.

	2019	2020	2021	2022	2023
Pounds of shrimp imports (product weight, million pounds)*	1,235.1	1,268.8	1,554.3	1,401.6	1,351.7
Value of shrimp imports (millions, 2023 \$)	\$5,607	\$5,613	\$6,890	\$5,989	\$4,837
<b>Share of Imports by Country</b>					
INDIA	49%	41%	43%	40%	41%
ECUADOR	14%	21%	25%	30%	32%
INDONESIA	18%	20%	17%	17%	15%
VIETNAM	2%	4%	5%	4%	4%
MEXICO	5%	4%	3%	3%	3%
ARGENTINA	2%	3%	2%	3%	2%
THAILAND	3%	3%	2%	2%	2%
PERU	1%	1%	1%	1%	0%
GUYANA	1%	1%	0%	0%	0%
all others	3%	2%	2%	2%	1%

Source: Fisheries trade data from the Foreign Trade Division of the U.S. Census Bureau, as purchased by NOAA Fisheries (available at: <https://www.fisheries.noaa.gov/national/sustainable-fisheries/foreign-fishery-trade-data>).

\*Excludes heavily processed shrimp products (e.g., frozen dinners).

### Business Activity

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 or served during restaurant visits. These expenditures spur additional business activity in the region(s) 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 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 effects may be distributed through regional markets and should not be interpreted to represent the impacts if these species are not available for harvest or purchase.

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 result 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.

Economic impact models are used to determine the current economic impacts of an industry or sector, as well as changes expected to occur if expenditures or gross revenues change in a particular industry or sector. Estimates of the U.S. average annual economic impacts associated with the commercial harvest of shrimp by federally permitted vessels in the Gulf were derived using the model developed for and applied in the Fisheries Economics of the United States 2022 Report (NMFS 2024) and are provided in Table 1.5.6.<sup>6</sup> These economic impacts are characterized as jobs (full- and part-time), output impacts (gross business sales), income impacts (wages, salaries, and self-employed income), and value-added impacts, which represent the contribution made to the U.S. Gross Domestic Product (GDP). 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. Average gross revenue from federally permitted shrimp vessels averaged about \$283.9 million (2023 dollars) between 2019 and 2023. This gross revenue generated employment, income, output impacts, and value-added impacts of approximately 29,297 jobs, \$1 billion, \$2.7 billion, and \$1.4 billion, respectively (Table 1.5.6).

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<sup>6</sup> A detailed description of the input/output model is provided in NMFS (2011b).

**Table 1.5.6.** Average economic impacts (2019 through 2023) associated with the commercial harvest of shrimp by federally permitted vessels in the Gulf. All monetary estimates are in thousands of 2023 dollars.

<b>Harvesters</b>	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>
Employment impacts	4,114	802	928	5,844
Income impacts	\$118,069	\$33,351	\$58,118	\$209,539
Total value-added impacts	\$125,856	\$119,513	\$100,365	\$345,733
Output Impacts	\$283,905	\$275,923	\$192,912	\$752,739
<b>Primary dealers/processors</b>	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>
Employment impacts	1,113	444	771	2,328
Income impacts	\$50,014	\$46,091	\$43,594	\$139,699
Total value-added impacts	\$53,312	\$58,811	\$82,074	\$194,198
Output impacts	\$160,974	\$121,248	\$160,434	\$442,656
<b>Secondary wholesalers/distributors</b>	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>
Employment impacts	281	62	272	615
Income impacts	\$16,201	\$4,818	\$17,039	\$38,059
Total value-added impacts	\$17,270	\$8,082	\$29,105	\$54,457
Output impacts	\$43,395	\$15,822	\$56,602	\$115,818
<b>Grocers</b>	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>
Employment impacts	1,731	195	382	2,308
Income impacts	\$47,972	\$15,832	\$23,915	\$87,720
Total value-added impacts	\$51,136	\$25,511	\$40,488	\$117,135
Output impacts	\$81,989	\$41,435	\$79,489	\$202,913
<b>Restaurants</b>	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>
Employment impacts	14,831	977	2,394	18,202
Income impacts	\$264,594	\$79,292	\$149,756	\$493,642
Total value-added impacts	\$282,044	\$141,735	\$252,321	\$676,100
Output impacts	\$515,722	\$221,795	\$497,904	\$1,235,422
<b>Harvesters and seafood industry</b>	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>
Employment impacts	22,070	2,480	4,748	29,297
Income impacts	\$496,851	\$179,385	\$292,422	\$968,658
Total value-added impacts	\$529,618	\$353,652	\$504,353	\$1,387,623
Output impacts	\$1,085,984	\$676,222	\$987,341	\$2,749,548

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

## 1.6 Description of the Social Environment

This amendment affects the commercial management of shrimp in the Gulf. The following description presents baseline information on fishing participants and fishing communities 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. Shrimp permits

are included by state to provide information on the geographic distribution of permit holders. Descriptions of the top-ranking communities by the number of commercial shrimp permits and commercial engagement and reliance for these top communities are included. Lastly, social vulnerability data are presented for all top-ranking communities. Community level data are presented in order to meet the requirements of National Standard 8 of the Magnuson-Stevens Act, which requires the consideration of the importance of fishery resources to human communities when changes to fishing regulations are considered.

### **Social Dimensions of the Shrimp Fishery**

SEDAR 87 includes an overview of the social dimensions of the Gulf shrimp fishery (Griffith 2023) and this description of the state and federal shrimp fishery is included herein by reference; however, some relevant portions are summarized here. The number of vessels and boats involved in shrimping in the Gulf in 1981, when the original Shrimp FMP was developed, was estimated at 4,585 vessels (displacing > 5 tons gross weight) and 5,475 boats (displacing < 5 tons gross weight). At that time, Texas included about 40% of the vessels and Louisiana comprised about 73% of the boats. Management and legislative efforts, such as limited entry and state buy-back programs to limit effort or added costs to shrimpers are noted as having been partially responsible for the reduction of the fleet. Most of the state and federal fishing management efforts have been focused on protecting shrimp stocks and sustaining commercial and recreational shrimping, but additional measures to protect sea turtles and other bycatch, such as TEDs have been implemented. Problems affecting Gulf shrimping include labor, on shrimp boats and in the processing sector, and imported shrimp, which drives down the prices of shrimp while influencing the consumer appreciation of shrimp quality. There have been recent efforts by shrimpers to influence state legislators to ban sales of or tax imported shrimp which have resulted from fears that imported shrimp will put shrimpers out of business. The destruction of coastal habitat from sources such as housing development, coastal erosion, sea level rise, industrial development, contamination, and pollution can influence shrimp spawning populations. The ethnic make-up of the Gulf shrimping industry has changed over time, starting in the 1970s and through today, from an influx of refugees from Vietnam who began moving into the area to take advantage of the region's fishing resources and the passing of immigration reform which authorized guest workers from Mexico, Central America, Caribbean, and other parts of the world to work in seasonal processing. It is estimated that the current proportion of Vietnamese shrimpers ranges from about 20% to 40% of the fleet.

### **Permits**

A Gulf shrimp moratorium (SPGM) permit is required for vessels to harvest shrimp in federal waters. The greatest proportion of Gulf shrimp moratorium permits are issued to vessels with homeports in Texas (average of 34.6% from 2019-2024), followed by Louisiana (28.6%), Florida (13.1%), Alabama (10.2%), and Mississippi (7.8%, Table 1.6.1). Vessels with homeports in other states (California, Georgia, Hawaii, Massachusetts, North Carolina, New Jersey, Oregon, South Carolina, Virginia, and Washington) also hold Gulf shrimp permits, but these states represent a small percentage of the issued permits (SERO Permit Office, 2019-2024).

The number of Gulf shrimp permits has decreased over time, with a recent loss of 131 permits from 2019 to 2024 (Table 1.6.1). During this time period, the number of permits decreased in the majority of Gulf states with Texas experiencing the greatest loss in the number of permits (-

54); whereas there was a slight gain in the number of permitted vessels with homeports in Alabama (+4). The total number of shrimp permits in Table 1.6.1 varies from the number of permits presented elsewhere in the document because it includes a total for each year, rather than a total for a particular date.

**Table 1.6.1.** Gulf shrimp permits by state and year, from 2019-2024.

	<b>AL</b>	<b>FL</b>	<b>LA</b>	<b>MS</b>	<b>TX</b>	<b>Other</b>	<b>Total</b>
<b>2019</b>	135	189	398	114	500	82	1418
<b>2020</b>	137	186	393	111	494	79	1400
<b>2021</b>	141	183	401	107	473	79	1384
<b>2022</b>	143	176	395	107	464	75	1360
<b>2023</b>	142	172	387	103	457	74	1335
<b>2024</b>	139	165	369	99	446	69	1287

Source: SERO Permits Office. Note: includes valid and renewable SPGM permits.

Gulf shrimp permits are held by those with homeports in 184 communities (SERO Permits Office, 2024). Communities with the most Gulf shrimp permits are located in Texas, Alabama, Louisiana, Mississippi, and Florida (Table 1.6.2). The communities with the most shrimp permits are Brownsville, Texas (8.6% of shrimp permits); Bayou La Batre, Alabama (7.5%); and New Orleans, Louisiana (7.2%).

**Table 1.6.2.** Top homeports by number of Gulf shrimp permits.

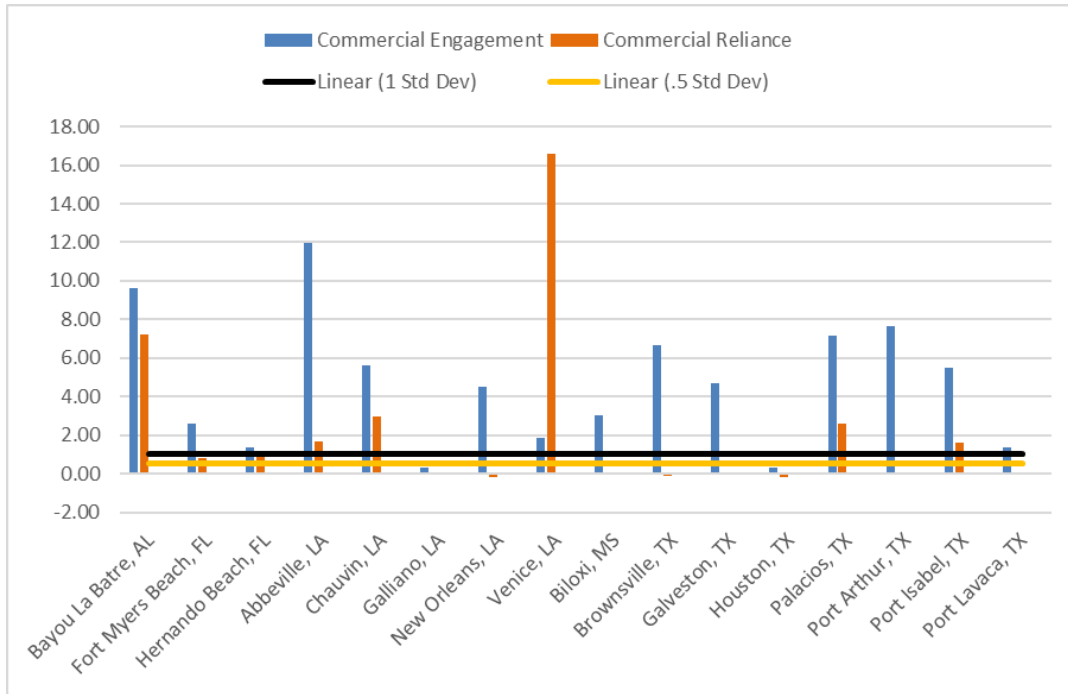
<b>State</b>	<b>Community</b>	<b>Permits</b>
TX	Brownsville	111
AL	Bayou La Batre	97
LA	New Orleans	93
MS	Biloxi	69
TX	Port Lavaca	64
TX	Port Isabel	47
TX	Palacios	44
LA	Chauvin	38
TX	Galveston	36
TX	Port Arthur	31
FL	Hernando Beach	29
FL	Fort Myers Beach	26
TX	Houston	22
LA	Abbeville	20
LA	Galliano	20
LA	Venice	20

Source: SERO Permits Office, 2024.

## 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 the absolute numbers of permits, landings, and value for all species. For commercial fishing, 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 for all species. Fishing reliance includes the same variables as fishing engagement divided by population to give an indication of the per capita influence of this activity. Using a principal component and single solution factor analysis, each community receives a factor score for each index to compare to other communities. Two thresholds of one and one-half standard deviation above the mean are plotted to help determine a threshold for significance. The factor scores are standardized; therefore, a score above a value of 1 is also above one standard deviation. A score above ½ standard deviation is considered engaged or reliant with anything above one standard deviation to be very engaged or reliant.

Figure 1.6.1 is an overall measure of a community's commercial fishing engagement and reliance and includes the communities with the top number of shrimp permits as depicted in Table 1.6.2. The majority of the communities in Figure 1.6.1.1 would be considered highly or moderately engaged in commercial fishing, as most are at or above 1 standard deviation of the mean factor score and a few are at or above ½ standard deviation. Galliano, Louisiana and Houston, Texas show the least amount of engagement in commercial fishing overall. A larger share of the included communities demonstrate low commercial reliance; however several included communities demonstrate high or moderate commercial reliance (Bayou La Batre, Alabama; Fort Myers Beach, Florida; Hernando Beach, Florida; Abbeville, Louisiana; Chauvin, Louisiana; Venice, Louisiana; Palacios, Texas; and Port Isabel, Texas).



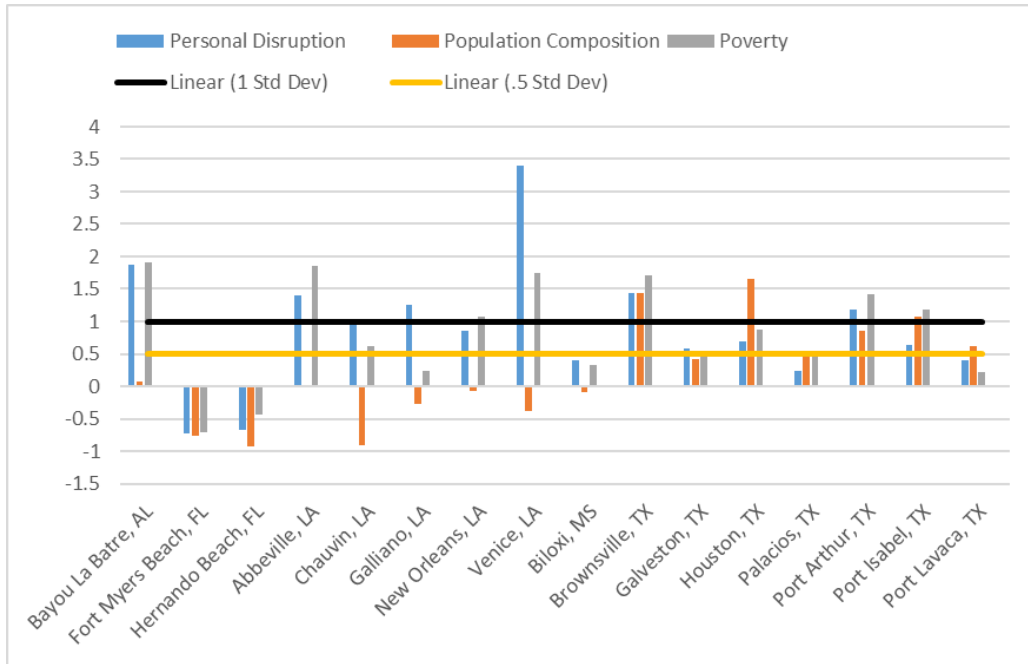
**Figure 1.6.1.** Commercial fishing engagement and reliance for top shrimp permitted communities.

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. The three indices are poverty, population composition, and personal disruption. The variables included in each of these indices have been identified through the 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 1.6.2 provides social vulnerability rankings for place-based communities identified in Table 1.6.2 as communities with the top number of shrimp permits. Several communities exceed the threshold of one standard deviation above the mean for at least one of the indices (Bayou La Batre, Alabama; Abbeville, Chauvin, Galliano, New Orleans, and Venice, Louisiana; and Brownsville, Houston, Port Arthur, and Port Isabel, Texas). These communities would be the most likely to exhibit vulnerabilities to social or economic disruption resulting from regulatory change.



**Figure 1.6.2.** Social vulnerability indices for top shrimp communities.  
 Source: SERO, Community Social Vulnerability Indicators Database 2022.

The description of fishing activities presented above highlights the communities most involved in Gulf shrimp fishing. It is expected that the impacts from the regulatory action in this amendment, positive or negative, will likely affect those communities.

## CHAPTER 2. MANAGEMENT OPTIONS

### 2.1 Action - Address the Expiration of the Federal Shrimp Permit Moratorium in the Gulf of America (Gulf)

**Option 1:** No Action. The moratorium on the issuance of new federal Gulf commercial shrimp vessel permits expires on October 26, 2026. With expiration of the federal Gulf commercial shrimp permit moratorium, the commercial shrimp vessel permits will become open access permits, as they were prior to the moratorium, and therefore will be available to any eligible applicants.

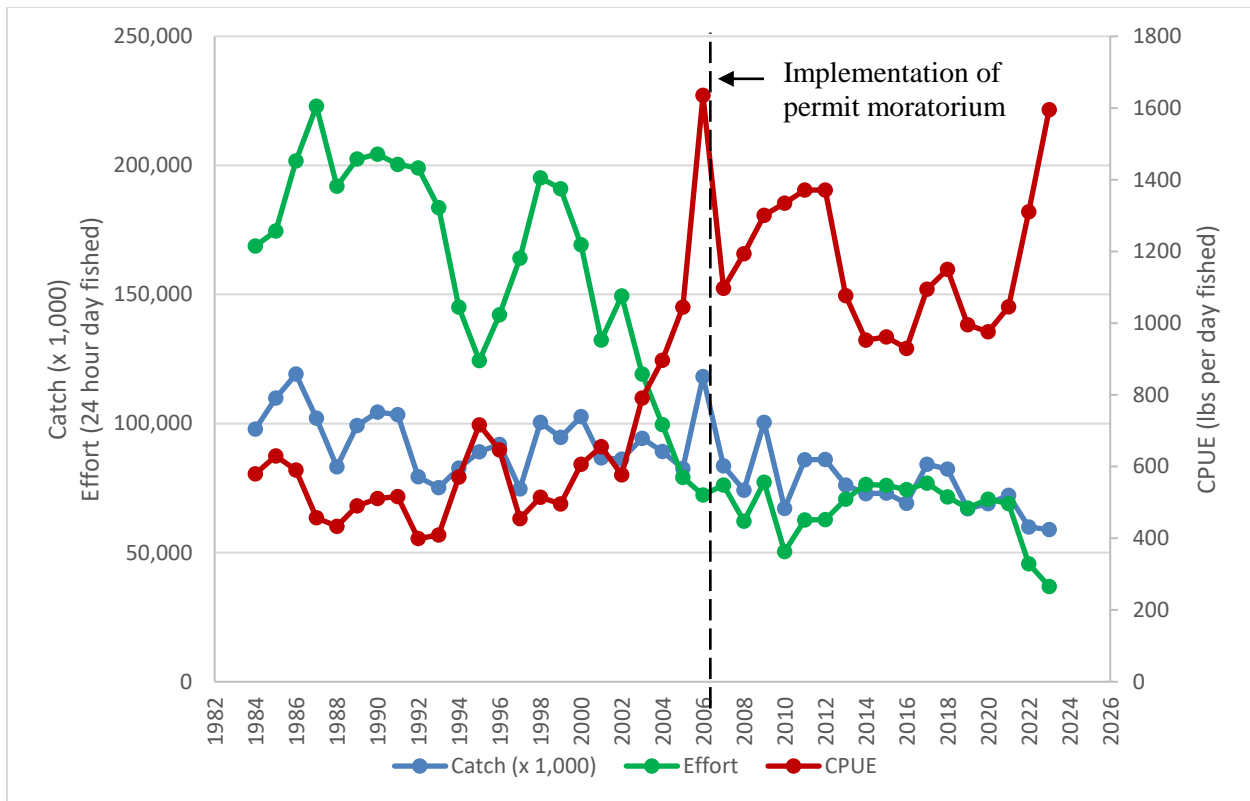
**Option 2:** Extend the moratorium on the issuance of federal Gulf commercial shrimp vessel permits. The moratorium would be extended for 10 years.

**Preferred Option 3:** Create a federal limited access permit for commercial shrimp vessels in the Gulf. To be eligible for a commercial shrimp vessel permit under the limited access system, vessels must have a valid or renewable federal Gulf commercial shrimp vessel permit on October 26, 2026. Federal Gulf commercial shrimp vessel permits would need to be renewed every year, and all previous renewal, transfer, and reporting requirements would still be in effect. Reviews of the limited access permit will occur ten years after implementation of this amendment or as otherwise deemed necessary by the Council.

#### **Discussion:**

The moratorium on the issuance of federal Gulf commercial shrimp permits was established in Amendment 13 to the Fishery Management Plan for the Shrimp Fishery of the Gulf (Shrimp FMP; GMFMC 2005a). The purpose of the moratorium was to help stabilize the shrimp fishery while still allowing for transferability of permits. Increasing fuel costs, decreasing shrimp prices, and increasing foreign shrimp imports all contributed to the overcapitalization of the commercial shrimp fleet. Since the implementation of the moratorium, the number of permits has decreased each year with terminations highest in 2010 (terminations = 184 permits) (Table 1.1.1). In recent years (2019-2023), permit terminations have been between 18 to 48 terminations per year. Vessels were expected to continue to exit the fishery until the reduced number of permits allowed the resource to be harvested profitably (GMFMC 2005a). Amendment 17A to the Shrimp FMP (GMFMC 2016) extended the moratorium an additional 10 years to continue stability in the fishery and prevent overcapacity.

Compared with pre-moratorium status, fishing effort in the offshore fishery has decreased, and landings have slightly declined (Figure 2.1.1). Additionally, the catch per unit effort (CPUE) for the offshore fishery has remained generally higher than that of the pre-moratorium status, excluding the 2006 year prior to moratorium (Figure 2.1.1).



**Figure 2.1.1.** Catch, effort and CPUE from 1984-2023 for all shrimp caught in offshore waters<sup>7</sup> and landed in Gulf ports.<sup>8</sup> Catch represents heads off poundage of shrimp. Source: NMFS SEFSC Fisheries Statistics Division, provided June 5, 2025.

**Option 1** would allow the moratorium to expire and federal Gulf shrimp moratorium permits would become open access. This could result in new entrants into the commercial shrimp fishery and could have negative effects if the fishery became overcapitalized. Overcapitalization and/or effort increases could lead to increases in bycatch of both protected resources and red snapper and potentially result in additional requirements for bycatch reduction or closures. In addition, permits would no longer be transferrable because they would be freely available from the National Marine Fisheries Service and therefore, would have no market value.

**Option 2** would extend the permit moratorium for 10 years. This could reduce the number of federal permits if additional permits are terminated. Extending the moratorium for 10 more years would allow for more data collection (with the recognition that 17 years of data under the permit moratorium exists from 2007-2023), in comparison to a shorter moratorium extension and

<sup>7</sup> Offshore waters are waters outside the COLREGS lines. The COLREGS lines are the set of demarcation lines that have been established by the Convention on the International Regulations for Preventing Collisions at Sea, 1972 (commonly called COLREGS). COLREGS define boundaries across harbor mouths and inlets for navigation purposes.

<sup>8</sup> Although landings information can be obtained from both the Gulf Shrimp System (GSS) and Annual Landings Form (ALF) databases, effort is not reported on the ALF, and it is not possible to determine whether the reported landings on the ALF came from offshore or inshore waters. Thus, landings estimates are based solely on GSS data, and only shrimp landed at Gulf ports are taken into account. Further, because separate permits are not required to harvest each of the penaeid species, and multiple species of shrimp may be harvested simultaneously, these estimates include all shrimp harvested from offshore waters, regardless of whether they are federally managed.

in recognition of the time required to complete work on an amendment, and may result in a stable number of permits if fewer fishermen exit the fishery. The number of permits that have terminated has continued to decline (Table 1.1.1) and is reaching the 1,072 minimum threshold number of Gulf shrimp permit vessels. Once the minimum number of valid or renewable Gulf shrimp permits reaches 1,175, the Gulf Council (Council) will form a review panel to review the details of a permit pool and other options (GMFMC 2017). The review panel is anticipated to form, and the Council will likely take subsequent action prior to expiration of the continued moratorium in **Option 2**. A permit pool or other option established by the Council may be ineffective if the moratorium subsequently expires, as compared to operating under a federal limited access permit system considered under **Preferred Option 3**.

**Preferred Option 3** would create a federal limited access permit for commercial shrimp vessels in the Gulf, which would extend the moratorium indefinitely. Current permit holders would receive the limited access permit if their vessel has a valid or renewable federal Gulf commercial shrimp permit on October 26, 2026. The new federal Gulf commercial shrimp vessel permits would still need to be renewed every year, and all previous renewal, transfer, and reporting requirements would still be in effect. This alternative would make the federal commercial shrimp fishery a limited access fishery until the Council took action to change that status, unlike the 10-year permit moratorium which acts like a limited access permit but has an expiration date. Additionally, the number of permits could continue to decline due to non-renewal of permits unless the Council implements other measures. For **Option 2** and **Preferred Option 3**, persons wishing to enter the fishery could purchase a valid permit from another permit holder. A permit must be valid to be transferred; permits that have expired but are still renewable cannot be transferred unless and until they are renewed prior to termination. **Preferred Option 3** follows the conventions of previous open access permits that go through a moratorium phase to evaluate the suitability of a limited access permit before converting to a limited access permit system. Currently, the federal Gulf shrimp permit moratorium is the longest time a southeast permit has remained in a temporary status after being placed in a moratorium. **Preferred Option 3** also ensures that a review of the continued suitability of a limited access permit system will occur ten years after implementation of this amendment or as otherwise deemed necessary by the Council. The addition of reviews addresses interests voiced by the shrimp industry that the Council be aware that changing economic conditions and other industry conditions may not warrant a limited access permit system in the future or may warrant changes to the program.

# CHAPTER 3. REGULATORY IMPACT REVIEW

## 3.1 Introduction

The National Marine Fisheries Service (NMFS) requires a Regulatory Impact Review (RIR) for all regulatory actions that are of public interest. The RIR does three things: 1) it provides a comprehensive review of the level and incidence of impacts associated with a proposed or final regulatory action; 2) it provides a review of the problems and policy objectives prompting the regulatory proposals and an evaluation of the major alternatives that could be used to solve the problem; and, 3) it 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 the regulations are a “significant regulatory action” under the criteria provided in Executive Order (E.O.) 12866. This RIR analyzes the impacts this action would be expected to have on the federal Gulf of America (Gulf) shrimp fishery.

## 3.2 Problems and Objectives

The problems and objectives addressed by this action are discussed in Section 1.2.

## 3.3 Description of Fisheries

A description of the economic environment of the federal Gulf shrimp fishery is provided in Section 1.5.

## 3.4 Impacts of Management Measures

### 3.4.1 Action: Address the Expiration of the Federal Shrimp Permit Moratorium in the Gulf

The following discussion analyzes the expected economic effects and impacts of the preferred alternative relative to the No Action option. **Option 1** would let the moratorium on federal commercial shrimp permits expire in October 2026. Therefore, **Option 1** would revert the commercial shrimp fishery to open access and would establish a management environment that could curtail the potential economic benefits of the moratorium.

Potential benefits expected to result from a moratorium on the issuance of new federal shrimp permits include a reduction in overcapitalization in the fishery and improvements in the economic profitability of shrimp harvesters. However, the dynamics of the shrimp fishery and resulting bio-economic conditions are primarily determined by factors largely beyond the control of shrimp harvesters and fishery managers in the Gulf.

Primary determinants of the economic conditions in the industry are environmental conditions, shrimp prices, and fuel prices. For annual species such as shrimp, abundance and therefore catch

per unit effort are primarily dependent on environmental conditions. Fuel prices constitute a key factor in the economic conditions in the fishery because they typically account for a significant portion of shrimp harvesters' total costs. For the federally permitted Gulf shrimp fleet, fuel costs are estimated to account for, on average, 37% of the total costs of shrimp harvesting (5-year average of 2019-2023; C. Liese, Southeast Fisheries Science Center, pers. comm. 2025). Finally, because shrimp prices are determined within a global integrated market, disruptions in the domestic market are mitigated by adjustments in the quantity of imports (and vice versa) without many changes in prices. The market integration between the domestic wild caught shrimp and farmed-raised imported shrimp is discussed in Asche et al (2012). The integration between the domestic, European, and Japanese shrimp markets is discussed in Vinuya (2007).

The overall economic climate faced by shrimp harvesters can be characterized by a bio-economic conditions index (BECI) that incorporates the three primary drivers: environmental conditions (shrimp abundance), fuel, and shrimp prices (Jones 2012). The BECI is calculated as the fleet-average shrimp revenue divided by the fleet-average fuel costs. It represents the dollars of revenue generated per dollar spent on fuel. An increase in shrimp price or productivity (e.g., abundance) increases the numerator, while an increase in fuel price or decrease in productivity increases the denominator. Therefore, larger BECI values correspond to more favorable bio-economic conditions for shrimp harvesters. Between 2006 and 2023, BECI estimates range from 2.0 (in 2008) to 3.6 (in 2020), with an average of 2.6 (C. Liese, Southeast Fisheries Science Center, pers. comm. 2025). For example, in 2023, shrimp harvesters in the Gulf generated only \$2.30 in shrimp revenues per dollar spent on fuel, which indicates that bio-economic conditions were relatively bad. Precarious bio-economic conditions have long prevailed in the shrimp industry and have resulted in a significant contraction of the fleet before the establishment of the moratorium. For example, Ran et al. (2014) reported that the number of vessels in the shrimp fleet decreased by 18% between 2001 and 2004.

Under **Option 1**, the moratorium would expire on October 26, 2026, and anyone would be able to acquire a federal shrimp permit by only paying administrative costs. Therefore, federal shrimp permits would no longer be valued as an asset and current permit holders would lose the opportunity to sell their permits. From 2022-2024, the median price of a federal Gulf shrimp permit was \$5,250 (SERO Permit Database, accessed June 14, 2025).<sup>9</sup> Although the number of potential permit buyers (individuals willing and able to acquire a federal shrimp permit) is not known, this loss in asset value would constitute added adverse economic effects borne by current permit holders, whereas **Preferred Option 3** would maintain that asset value as it would establish a limited access permit system. **Preferred Option 3** would also increase barriers to entry for new participants, compared with **Option 1**. However, factors such as increasing fuel prices, decreasing shrimp prices, and increased competition with imports are assumed to have a greater influence than the cost of a permit on the decision to enter the shrimp fishery.

In addition to these effects, **Option 1** could result in adverse economic effects stemming from the detrimental effects of increased sea turtle takes and juvenile red snapper bycatch if effort increases to historical levels following the expiration of the moratorium, whereas a limited access permit system under **Preferred Option 3** would continue to limit the total number of

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<sup>9</sup> Outliers were excluded (e.g. prices under \$10 and prices indicative of a package deal of the vessel with the permit). From 2022-2024, the mean price was \$13,228, and the mode was \$5,000.

permits and, thereby, effort. Increases in sea turtle takes and juvenile red snapper bycatch under **Option 1** would be expected to result in corrective measures that would likely place additional restrictions on shrimp effort, thereby resulting in adverse economic effects for the fleet. In summary, **Preferred Option 3** would be expected to prevent economic costs for federally permitted Gulf shrimpers.

### 3.5 Public and Private Costs

The preparation, implementation, enforcement, and monitoring of this or any federal action involves the expenditure of public and private resources, which can be expressed as costs associated with the regulations. Costs to the private sector and program-related administrative costs to the NMFS are discussed in the effects of management measures. Public costs associated with the development of this action, including Gulf Council costs of document preparation, meetings, public hearings, and information dissemination, as well as NMFS administrative costs of document preparation, meetings and review, are treated as sunk costs and excluded from this analysis per Office of Management and Budget (OMB) guidance. The Gulf Council and NMFS administrative costs directly attributable to the development of this amendment and the rulemaking process would be incurred prior to the effective date of the final rule implementing this amendment.

Additionally, this analysis does not include any additional law enforcement costs. Any enforcement duties associated with this action would be expected to be covered under routine enforcement costs rather than an expenditure of new funds.

### 3.6 Net Benefits of the 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,<sup>10</sup> "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." Ideally, analysis should include all future costs and benefits. Here as elsewhere, however, a 'rule of reason' is appropriate, and the agency should consider for how long it can reasonably predict the future and limit its analysis to this period. Thus, if a regulation has no predetermined sunset provision, the agency will need to choose the endpoint of its analysis on the basis of a judgment about the foreseeable future. For most agencies, a standard time period of analysis is 10 to 20 years. However, no time period is specified for this evaluation of net benefits as, given available data, the net benefits are qualitatively analyzed in this section.

The extension of the permit moratorium would preserve the asset value of the permits to existing commercial fishing business that currently hold federal shrimp permits, thereby allowing economic benefits to accrue to those businesses. The extension of the permit moratorium would also prevent costs associated with overcapitalization within the shrimp industry which would reduce profitability under open access. Although price information is available for sales

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<sup>10</sup> See <https://www.whitehouse.gov/wp-content/uploads/2025/08/CircularA-4.pdf>

transactions of federal Gulf shrimp permits, information regarding the number of potential buyers or for demand for such permits does not exist. The economic benefits of this action, which include preservation of federal shrimp permit asset values, prevention of overcapitalization, and enhanced profitability, are expected to outweigh the costs, which include greater barriers to entry for new participants in the federal shrimp fishery.

### **3.7 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, territorial, 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 E.O. Average total revenue for the Gulf shrimp fishery in 2023 was \$283,904,576, with producer surplus being a smaller percentage of that value. Thus, the associated annual effects of this action are unlikely to exceed the \$100 million threshold and subsequently be determined to be economically significant for the purposes of E.O. 12866.

## **CHAPTER 4. REGULATORY FLEXIBILITY ANALYSIS**

### **4.1 Introduction**

### **4.2 Statement of the need for, objectives of, and legal basis for the rule**

### **4.3 Description and estimate of the number of small entities to which the proposed action would apply**

### **4.4 Description of the projected reporting, record-keeping and other compliance requirements of the proposed rule, 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**

### **4.5 Identification of all relevant federal rules, which may duplicate, overlap or conflict with the proposed rule**

### **4.6 Significance of economic effects on small entities**

### **4.7 Description of significant alternatives to the proposed action and discussion of how the alternatives attempt to minimize economic impacts on small entities**

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

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## 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.