Modification to Location Reporting Requirements for For-Hire Vessels

Draft Framework Action to the Fishery Management Plans for the Reef Fish Resources of the Gulf of Mexico and Coastal Migratory Pelagic Resources in the Gulf of Mexico and Atlantic Region

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

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ENVIRONMENTAL ASSESSMENT COVER SHEET

Framework Action to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico and Coastal Migratory Pelagic Resources in the Gulf of Mexico and Atlantic Region: Modification to Location Reporting Requirements for For-Hire Vessels, including Environmental Assessment, Regulatory Impact Review, and Regulatory Flexibility Act Analysis.

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This Environmental Assessment is being prepared using the 2020 CEQ NEPA Regulations. The effective date of the 2020 CEQ NEPA Regulations was September 14, 2020, and reviews begun after this date are required to apply the 2020 regulations unless there is a clear and fundamental conflict with an applicable statute. 85 Fed. Reg. at 43372-73 (§§ 1506.13, 1507.3(a)). This Environmental Assessment began on [TBD], and accordingly proceeds under the 2020 regulations.

ABBREVIATIONS USED IN THIS DOCUMENT

ACL	Annual Catch Limit
AM	Accountability Measures
BiOp	Biological Opinion
CEQ	Council on Environmental Quality
CFpA	Cash Flow per Angler
CMP	Coastal Migratory Pelagic Fish
Council	Gulf of Mexico Fishery Management Council
DLM	Data Limited Monitoring
DPS	distinct population segments
EA	Environmental Assessment
eCFR	electronic Code of Federal Regulations
EEZ	Exclusive Economic Zone
EFE	Equipment Failure Exemption Form
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EJ	environmental justice
EMTU	enhanced mobile transceiver unit
EMTU-C	enhanced mobile transceiver unit - cellular
ESA	Endangered Species Act
FLEC	Florida East Coast
FMP	Fishery Management Plan
GDP	Gross Domestic Product
GMFMC	Gulf of Mexico Fishery Management Council
GPS	Global Positioning System
HAB	harmful algal bloom
HAPC	Habitat Areas of Particular Concern
HMS	Highly Migratory Species
IFQ	Individual Fishing Quota
IRFA	Initial Regulatory Flexibility Act Analysis
LDWF	Louisiana Department of Wildlife and Fisheries
MMPA	Marine Mammal Protection Act
MSST	Minimum Stock Size Threshold
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
OLE	Office of Law Enforcement
PAH	Polycyclic aromatic hydrocarbons
ppt	parts per thousand
ps	producer surplus
RIR	Regulatory Impact Review
SEFHIER	Southeast For-Hire Integrated Electronic Reporting Program
SEIS	Supplemental Environmental Impact Statement
SEFSC	Southeast Fisheries Science Center
SL	standard length

SRD	Science and Research Director
SRHS	Southeast Region Headboat Survey
SSC	Scientific and Statistical Committee
TNR	trip net revenue
TPWD	Texas Parks and Wildlife Division
ww	whole weight
VMS	Vessel Monitoring System

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CHAPTER 1. INTRODUCTION

1.1 Background

Use of electronic technology in the federally permitted for-hire component of the recreational sector (i.e., charter vessels and headboats), and commercial fleets has continued to expand in recent years; the available technology is improving and expanding in fisheries management in an attempt to collect more and better data. Electronic reporting, including the use of Vessel Monitoring Systems[1] (VMS), has been utilized in the commercial sector for over a decade. The first application of electronic technologies in the Gulf of Mexico (Gulf), occurred in 2007 under Amendment 18A (GMFMC 2005) that required all vessels with a Gulf Commercial Reef Fish permit, including dual-permitted vessels (i.e., both a charter vessel/headboat permit and a commercial reef fish permit), to have VMS units.

The Southeast Region Headboat Survey (SRHS) began requiring logbooks from selected vessels in the Gulf of Mexico in 1986 and is the longest continuous time series of recreational fisheries data in federal waters along the southeast coast[2]. While SRHS converted from a paper logbook to an electronic reporting logbook in 2013, the remainder of the for-hire fleet did not have logbook reporting requirements. An amendment to modify reporting requirements for charter vessels and headboats became effective on January 5, 2021, requiring declarations prior to leaving the dock, electronic logbooks, and VMS. The effective date to have an operating VMS permanently affixed to the vessel was delayed till March 1, 2022.[3] When referring to VMS units, it should be noted that, although the amendment (GMFMC 2017) referred to location-positioning equipment as "approved hardware/software with global positioning system (GPS) capabilities" to include both satellite and cellular devices, the published final rule referred to all type-approved units using the term "VMS". The National Marine Fisheries Service (NMFS) Office of Law Enforcement (OLE) modified the VMS type-approval regulations to allow for the approval of cellular units.[4] NMFS explained in the final rule for electronic reporting:

"The proposed rule for the Gulf for-hire reporting program distinguished between a satellite and cellular vessel location tracking device by referring to the former as a VMS unit and the latter as a GPS unit or GPS portion of the hardware. However, to be consistent with the NMFS OLE final rule, any cellular- or satellite-based vessel location tracking device is hereafter referred to as a cellular or satellite VMS" (85 FR 44005)[5].

These VMS requirements apply to all for-hire vessels with federal Gulf charter vessel/headboat permits for reef fish or coastal migratory pelagic (CMP) species. Upon implementation, vessels with these permits are required to be equipped with a type-approved satellite or cellular VMS unit that:

[1] Vessel Monitoring System means a satellite and/or cellular based system designed to monitor the location and movement of vessels using onboard VMS units that send Global Positioning System position reports to an authorized entity.
[2] https://spo.nmfs.noaa.gov/sites/default/files/pdf-content/mfr7911.pdf
[3] §§ 622.26(b)(5) and 622.374(b)(5)(ii) through (v)
[4] See 50 C.F.R.§ 600.1500 et seq.
[5] https://www.govinfo.gov/content/pkg/FR-2020-07-21/pdf/2020-15275.pdf

1. Is permanently affixed to the vessel,
2. Operates 24 hours a day,
3. Collects location data once an hour for transmission to NOAA Fisheries,
4. Has been properly installed by a certified and authorized installer (selected by the VMS vendor),
5. Has been activated though the NOAA Fisheries Help Desk (completed by the VMS vendor)

The purpose of electronic reporting, including VMS requirements, for the for-hire fleet is to improve accuracy and timeliness of landings, discards, effort, and socioeconomic data. Essentially, for-hire effort data can be validated through the onboard VMS, as it verifies vessel activity. Therefore, this equipment must be operating at all times, and if a vessel's VMS unit is not functioning, a power-down exemption must be requested and the vessel cannot move on water for a minimum of 72 hours, while the problem is remedied.

For-Hire VMS Requirements

The Gulf of Mexico Fishery Management Council (Council) and NMFS began work on an amendment in 2014 to modify reporting requirements for vessels issued Gulf charter vessel/headboat permits under the Fishery Management Plans (FMPs) for the Reef Fish Resources of the Gulf of Mexico (Reef Fish FMP) and CMP Resources in the Gulf of Mexico and Atlantic Region (CMP FMP). The Council considered alternatives that would require electronic reporting of information from vessels possessing a federal charter vessel/headboat permit for Gulf reef fish or CMP species. The intent of the amendments was to improve data reporting in these fisheries to reduce the likelihood of exceeding annual catch limits (ACLs) and triggering accountability measures. Further, gathering additional data elements may improve estimates of bycatch and discard mortality rates. The amendments required charter vessels and headboats to:

1. Notify NMFS through a trip declaration (also referred to as a "hail-out") before departing for any trip to identify the trip type and activity (i.e., if the trip will be for-hire, commercial, or other trip type). If the vessel will be operating as a for-hire vessel, additional trip information is required such as expected arrival time and landing location.
2. Submit an electronic fishing report via NMFS-approved hardware and software for each fishing trip before offloading fish from that fishing trip or within 30 minutes after the end of each trip if no fish were landed.
3. Use a NMFS-approved VMS unit with GPS location capabilities that, at a minimum, archives vessel position data hourly during a trip for transmission to NMFS.

Since NMFS issued the for-hire reporting final rule, discussions have occurred during Council meetings about the burdens of these requirements on permit holders, vessel owners, and operators, including concerns about the consequences if VMS equipment fails. Although there are multiple options to report the trip declaration and logbook information should one method fail to transmit the appropriate data, there are no alternative methods to provide the trip location data if the VMS unit fails. Permit holders, vessel owners, and operators have voiced their concern regarding potential loss of trips and revenue, as well as clients who may refuse to book

future trips due to trip cancellations, if the VMS equipment fails. Currently, federal regulations require the vessel owner or operator to contact NMFS (cellular VMS)[6] or OLE (satellite VMS)[7] if their equipment is not operating properly and follow the instructions provided. These instructions may include, but are not limited to, manually communicating to a location designated by NMFS the vessel's positions or returning to port until the VMS is operable. In the response to comments in the final rule implementing these requirements, NMFS further explained:

"If a vessel's location tracking system is not functioning, the vessel operator will need to contact the hardware vendor to see if the situation can be repaired. If the problem is not remedied, the vessel cannot leave the dock and the operator will need to notify NMFS of the situation. If a fishing trip is underway when the location tracking system ceases functioning, the owner or operator must immediately contact NMFS and follow NMFS' instructions. Such instructions may include, but are not limited to, manually communicating the vessel's positions to a location designated by NMFS, or returning to port until the GPS or VMS is operable. The operator may submit a VMS power-down exemption request to NMFS to provide time needed for equipment repair" (85 FR 44005).

Permit holders and operators of permitted for-hire vessels requested that the Council begin exploring options to allow vessels to start or continue fishing trips in the event of a VMS failure. This would allow vessels to move on water without an operating VMS unit for a pre-determined period, and provide time for repair of the VMS unit. Satellite VMS units have a low observed failure rate (Appendix D). As cellular VMS units are new, there is insufficient data to determine failure rates from continual operation at sea. Table 1.1.1 provides a list of NMFS type-approved units for the Southeast For-Hire Integrated Electronic Reporting Program (SEFHIER) in the Gulf. This list is compiled from information found at https://www.fisheries.noaa.gov/southeast/rules-and-regulations/approved-vessel-monitoring-system-vms-units-reporting-southeast-hire-integrated and is current as of March 8, 2022.

[6] See 50 C.F.R. § 622.26(b)(5)(ii)(G).
[7] See 50 C.F.R. § 622.28(h).

Table 1.1.1. NMFS type-approved VMS units for the SEFHIER Program by vendor, unit name, data transmission and form availability.

VMS Vendor	Unit Name	Data Transmission	With Forms?*
AddValue	IFleetONE	Satellite	Yes
Atlantic Radio Telephone	ZenVMS-LTE	Cellular	No
Faria Beede	WatchDog 750	Satellite	Yes
Faria Beede	FB Eterm-C	Cellular	Yes
MetOcean	OmniCom VMS EMTU	Satellite	Yes
MetOcean	OmniCom Global EMTU	Satellite	Yes
Nautic Alert	Insight X3 VMS	Satellite	No
Nautic Alert	Insight X3	Cellular	No
Skymate	m1600	Satellite	Yes
Skymate	I1500	Satellite	Yes
Woods Hole Group/CLS	NEMO EMTU-C	Cellular	No
Woods Hole Group/CLS	Triton Advanced	Satellite	Yes
Woods Hole Group/CLS	Leo**	Satellite	Yes
Woods Hole Group/CLS	Thorium TST***	Satellite	Yes

*With forms means that these approved VMS units satisfy the positioning requirement of the SEFHIER program, and have the capability to submit the required declaration and logbook forms. Without forms means that these units satisfy the positioning requirement of the SEFHIER program, but do not have the capability to submit the required reports.
**No longer available for purchase.
***No longer approved for new installations.

Vessel Permits

Requirements to maintain onboard operational VMS equipment apply to all for-hire vessels with Gulf Reef Fish or CMP permits, vessels with Commercial Reef Fish permits, and all dual-permitted vessels with a combination of these for-hire and commercial permits.

A federal charter vessel/headboat permit is required for vessels to take paying passengers to fish for reef fish and CMP species in Gulf federal waters. The federal permits do not distinguish between charter vessels and headboats; there is a charter vessel/headboat permit for reef fish, and a charter vessel/headboat permit for CMP fish. A permit is valid for one year after it has been renewed or transferred. If the permit is not renewed or transferred before the end of the year when it is valid, it expires. An expired permit may not be used for fishing, but the permit holder may still renew or transfer the permit during the year of renewable status. If the permit is not renewed or transferred by the end of the renewable period, the permit is terminated and may not be reissued. Completion of permit transfers required an operating VMS unit on the vessel that will be listed on the permit. As such, permit transfers stop any existing power-down exemptions or any equipment failure exemptions.

All vessels with a federal Gulf charter vessel/headboat permit were required to have an operational VMS unit onboard by March 1, 2022. Table 1.1.2 provides the number of vessel

permits, by vessel homeport state, that meet these requirements as of August 6, 2021. The data provided in Table 1.1.2 reflects vessels with valid or renewable Gulf charter vessel/headboat or commercial reef fish permits; some of the vessels included in the table may be dual-permitted. It should be noted that these VMS equipment failure exemptions would not apply to any vessels that have Commercial Reef Fish Permits. Therefore, these exemptions would not apply to dual-permitted vessels with charter vessel/headboat Reef Fish or CMP permits and a Commercial Reef Fish permit. Vessels with Commercial Reef Fish permits must have a VMS unit operating onboard the vessel at all times or they cannot move on the water. Additionally, these equipment failure exemptions would not apply to any vessels that have VMS requirements that do not allow this type of exemption, for example the Highly Migratory Species (HMS) permits with VMS requirements. Any HMS permitted vessel with pelagic longline gear onboard the vessel must have an operational VMS unit, or they cannot leave the dock[8]. HMS Charter/Headboat permitted vessels are not required to have VMS units on board, so a dual permitted Gulf charter/headboat vessel could still apply for a VMS equipment failure exemption.

Table 1.1.2. Number of permits by permit type and vessel homeport state, that may be affected by actions and alternatives in this framework action. Total number of permits does not equal the total number of vessels as many vessels have multiple permits.

Permit Type	AL	FL	LA	MS	TX	Non-Gulf*	Total
Commercial Reef Fish and Charter/Headboat	TBD	TBD	TBD	TBD	TBD	TBD	
Charter/Headboat CMP	147	796	105	24	193	14	1279
Charter/Headboat Reef Fish	148	801	105	23	183	7	1267
Historical Captain CMP	1	3		1		6	11
Historical Captain Reef Fish	1	3		1		0	5
Total	336	2259	245	54	442	0	2556

Source: Southeast Fisheries Permits Office, Personal Communication J. Dudley, August 6, 2021
* Non-Gulf refers to the vessel homeport state being outside of the Gulf region but the vessel permit is still a federal Gulf permit.

In this framework action, the Council is considering alternatives that would allow for-hire vessels with malfunctioning VMS equipment to continue to operate if the equipment failure is documented and the vessel owner or operator works with NMFS to remedy the situation within an established timeframe. Satellite VMS, which has been required on vessels with commercial Gulf reef fish permits since March 2007, has an observed low failure rate; however, there is still the potential for equipment failure. In the long-term, NMFS expects the type-approved units for the SEFHIER Program to perform similarly to the units used in the Gulf reef fish commercial fishery. However, in the near-term, unit performance and failure rates are unknown for the new cellular type-approved units that are expected to be installed in high numbers on vessels in the for-hire fleet. The choice of which unit to install, both cellular or satellite, and which manufacturer and unit model, is made by the permit holder. The vessel operators may be

[8] See 50 C.F.R §635.69.

unfamiliar with the VMS equipment and the vessel VMS unit types may be different than those used in the commercial fleet. The Council recognizes that owners and operators of for-hire vessels could incur loss of revenue and dissatisfied clients should a VMS unit malfunction and a for-hire vessel cannot leave the dock. The Council would like to mitigate potential loss to these for-hire permit holders while minimizing the loss of valuable data to NMFS and impacts to compliance with the program requirements.

1.2 Purpose and Need

The purpose of this action is to establish a mechanism for owners and operators of vessels with a federal charter vessel/headboat permit for Gulf reef fish or Gulf CMP species to report a malfunction with a vessel's location-positioning device and provide a limited exemption to location-positioning requirements.

The need is to mitigate trip delays or cancellations and subsequent loss of revenue due to the inability of onboard VMS equipment to record and transmit location-positioning information.

1.3 History of Management

The following actions pertain to the federal for-hire component of the recreational sector and the commercial reef fish component of the commercial sector. These actions include pertinent permit and reporting requirements, including use of VMS units in the commercial reef fish fleet.

Reef Fish Amendment 18A (2005) addressed issues involving grouper management but also included the requirement to have Vessel Monitoring Systems (VMS) units onboard all commercially permitted reef fish vessels, including charter vessels with commercial reef fish permits operating in the Gulf in order to improve enforcement of area restrictions. This requirement helped prevent excessive fishing pressure in stressed areas or on spawning aggregations of reef fish, and enhanced the ability of enforcement agencies to detect and prevent the use of fishing gear in areas where that gear is restricted because it could potentially damage sensitive habitat.

Reef Fish Amendment 26 (2006) established an individual fishing quota (IFQ) system for the commercial red snapper fishery and required all fishing vessels engaged in harvesting red snapper under the IFQ program be equipped with VMS to enhance enforcement of the red snapper fishery IFQ program.

Reef Fish Amendment 29 (2008) established an IFQ system for the commercial grouper and tilefish fishery and expanded use of VMS into this fishery. It allowed a permit holder to fully benefit from catch histories (s)he is entitled to while simplifying the permit renewal process and reducing costs. A permit holder could install a VMS unit on one of his vessels and transfer catch histories associated to his other permits. Preferred Alternative 2 could therefore contribute to a faster reduction in the number of permits and ease permit renewal requirements.

Reef Fish Amendment 30B (2008) required that all vessels with federal commercial or charter vessel/headboat permit for reef fish comply with federal reef fish regulations, if those regulations are stricter than state regulations, when fishing in state waters.

A **Framework Action** for Reef Fish and Coastal Migratory Pelagics (2013) modified the frequency of reporting, for selected headboat vessels, to a weekly basis (or at intervals shorter than a week if notified by the SRD) via electronic reporting, with reports due by 11:59 p.m., local time, the Sunday following a reporting week. If no fishing activity occurred during a reporting week, an electronic report so stating had to be submitted for that week.

The **Generic Amendment** for Reef Fish and Coastal Migratory Pelagics (2017) "Modifications to Charter Vessel and Headboat Reporting Requirements," modified charter vessel and headboat reporting requirements by requiring the owner or operator of a vessel with a federal charter vessel/headboat permit for Gulf Reef Fish or CMP fish to: 1) Notify NMFS (hail-out/ submit a trip declaration) before departing for any trip to identify trip type; 2) Submit an electronic fishing report via NMFS-approved hardware and software for each fishing trip before offloading fish from that fishing trip or within 30 minutes after the end of each trip if no fish were landed; 3) Use a NMFS-approved VMS unit with GPS location capabilities that, at a minimum, archives vessel position data during a trip for transmission

An **Abbreviated Framework Action** for Reef Fish and Coastal Migratory Pelagics (2019) allowed permit holders with historical captains permits, that were valid as of October 25, 2018, the option to replace them with standard federal charter vessel/headboat permits.

CHAPTER 2. MANAGEMENT ALTERNATIVES

2.1 Action 1: Modify VMS requirements for vessels with a Charter Vessel/Headboat permit for Reef Fish or a Charter Vessel/Headboat permit for Coastal Migratory Pelagic Fish to allow for an exemption to VMS requirements to address equipment failure.

Alternative 1: No Action. Maintain the requirement that vessels with Charter Vessel/Headboat permits for Reef Fish and/or Coastal Migratory Pelagic fish (CMP) have an approved vessel monitoring system (VMS) unit onboard, operating at all times, unless exempted by National Marine Fisheries Service (NMFS) under a power-down exemption.

Preferred Alternative 2: Create an exemption to the VMS requirement to address equipment failure and set a limit on the number of calendar days that the NMFS-approved exemption is valid, for vessels with Charter Vessel/Headboat permits for Reef Fish and/or CMP:

Option 2a: The exemption will be valid for up to 7 days from submittal date.
Preferred Option 2b: The exemption will be valid for up to 10 days from submittal date.
Option 2c: The exemption will be valid for up to 14 days from submittal date.

Preferred Alternative 3: Create an exemption to the VMS requirement to address equipment failure and set a limit on the number of times a permit holder can request the exemption each calendar year, per vessel:

Option 3a: The permit holder may not request more than one exemption per vessel per calendar year.
Preferred Option 3b: The permit holder may not request more than two exemptions per vessel per calendar year.
Option 3c: The permit holder may not request more than three exemptions per vessel per calendar year.

*Note: **Alternatives 2 and 3** can be selected concurrently.

Discussion:

Alternative 1 (No Action) would maintain the current requirement that vessels with charter vessel/headboat permits for reef fish and/or CMP have an approved VMS unit onboard, operating at all times, unless exempted by NMFS under a power-down exemption. These vessels may electronically submit a VMS Power-Down Exemption Request Form[9] (Appendix C) to power down onboard cellular- or satellite-based location-tracking equipment. After receiving approval from the Southeast Division, Office of Law Enforcement, the VMS unit may be turned off. Power-down exemptions require a minimum power-down period of 72 consecutive hours (3 days). During the time listed in the power-down exemption, the vessel is prohibited from moving on the water. Under **Alternative 1**, if a vessel's VMS unit malfunctions prior to leaving

[9] https://grunt.sefsc.noaa.gov/apex/fer/r/fer_forms/home

the dock, the vessel may not leave the dock and the operator must notify NMFS of the situation. If a fishing trip is underway when the location tracking system ceases functioning, the owner or operator must immediately contact NMFS and follow NMFS' instructions. The intent of having a VMS unit permanently affixed to the vessel and operational at all times is expected to improve effort information by improving the potential to validate for-hire trips (GMFMC 2017). Validation of fishing effort can be achieved through the transmission of VMS data in tandem with declaration of trip type. In the event of VMS equipment failure, **Alternative 1** only allows for submission of a VMS Power-Down Exemption Request Form (Appendix C), which could provide time needed for equipment repair, but would not allow the vessel to leave the dock if the VMS equipment is not functioning, and therefore could result in loss of trips and revenue.

Preferred Alternative 2 and **Preferred Alternative 3** would allow a permit holder, vessel owner or operator to continue to operate on the water if their VMS unit malfunctions, by requesting an equipment failure exemption. The Equipment Failure Exemption (EFE) form would be separate from the Power-Down Exemption Request Form, as they apply to distinct exemptions. The EFE will require submission of a request for exemption from the permit holder, an approval/denial process, including validation criteria, and later submission of the documentation of the equipment failure. This information will be included in the enforcement and permits database systems. Initial submission will most likely include, but not be limited to, information about the vessel. Prior to submission of an EFE form, the operator first must troubleshoot the unit for common, easily fixed actions (e.g., contact vendor, reboot unit, and ensure any wires are connected). Due to the need to respond rapidly to an EFE submission, provisional approval will be granted electronically upon completion of general validation checks (e.g., does not exceed selected number of submissions per year, is not dually-permitted with the commercial reef fish permit). Upon receipt of a provisional approval, the vessel may move on water without an operational VMS unit. Submission of documentation of the failure (e.g., receipt of repair, copy of installation checklist for replacement unit) will be required to move from a provisional to final approval of the EFE. Failure to submit documentation of approval within the established time frame will result in a referral to law enforcement and will invalidate the provisional approval. Regulations require that no person may interfere with, tamper with, alter, damage, disable, or impede the operation of the VMS, or attempt any of the same[10].

Preferred Alternative 2 would create an exemption to the VMS requirement to address equipment failure and set a limit on the number of days that each exemption would be valid. The VMS directly informs the effort estimate of the for-hire fleet and is therefore important to maintain the integrity of the Southeast For-Hire Integrated Electronic Reporting (SEFHIER) Program. If VMS data used for validation of trips and effort estimates is missing for a period of time, the resulting accuracy of the effort estimates for this component of the fishery could be reduced. **Option 2a**, **Preferred Option 2b**, and **Option 2c**, provide different lengths of time during which the exemption would be valid: 7, 10, or 14 calendar days from the submittal date. **Option 2a** would provide the shortest exemption period; seven calendar days may be reasonable time to have a VMS unit repaired or have a new unit shipped and installed if the vendor provides same day or expedited shipping, even if the failure occurs over a weekend or holiday. Installations and repairs to VMS units must be made by an approved vendor or

[10] See 50 CFR 622.26(b)(5)(ii)(F); 50 C.F.R §622.28 (g); 50 CFR 622.374(b)(5)(iv)(F).

technician. Vendors with type-approved VMS units have indicated they have adequate supplies of VMS units available to quickly ship throughout the Gulf region and are readily available to answer questions and offer repairs (Appendix D). **Preferred Option 2b** allows an exemption up to 10 calendar days from submittal date. This is the intermediate option, which would allow more flexibility to vessel owners while reducing the risk of significant data gaps. **Option 2c** would allow the exemption up to 14 calendar days from submittal date. **Preferred Option 2b and Option 2c** may ease the burden on the vessel owner or operator by providing a longer period of time to complete repairs without compromising business operations. However, these options may increase the risk of affecting the accuracy of the effort estimation for the for-hire fleet. The magnitude of this risk depends on the number of vessels that are operating under the exemption during any given time as well as over the long-term. For example, there is nothing that would prevent a permit holder or owner or operator from using more than one exemption consecutively, if more time for repairs or the installation of a new unit is needed. Multiple vessels using sequential exemptions could potentially lead to increased data gaps for longer periods of time.

Preferred Alternative 3 would create an exemption to the VMS requirement to address equipment failure by limiting the number of times a permit holder, vessel owner, or operator can request the exemption each calendar year, per vessel. **Option 3a** limits the permit holder to no more than one exemption per vessel per calendar year. NMFS has approved satellite units for the SEFHIER program that have been in use by the commercial fleet, and NMFS expects these units to perform similarly on for-hire vessels. NMFS also expects the newly type-approved satellite VMS units to perform similarly to those that have been operating in the commercial fishery; however, the long-term performance of the cellular VMS units on vessels is not known and allowing one exemption per vessel per calendar year would allow the permit holder, vessel owner, or operator an opportunity to either repair the VMS unit or consider installing a new one. This will be the first use of both satellite and cellular VMS units in the for-hire fleet. **Preferred Option 3b** limits the permit holder to no more than two exemptions per vessel per calendar year and **Option 3c** limits the permit holder to no more than three exemptions per vessel per calendar year. The "per vessel" exemption accounts for permit holders who own multiple vessels. It is expected, based on vendor responses, that observed satellite VMS failure rates in the commercial fleet range from less than 1% up to 5% depending on the unit (Appendix D). The three exemption requests within a calendar year should be adequate to account for any issues vessel operators may have with onboard VMS equipment, although failure rates of cellular and satellite VMS units are still unknown.

There are no stipulations preventing the request, or use of more than one exemption consecutively, if more time is needed for repairs or installation of a new unit, but this could lead to a prolonged gap in location data collection. With **Preferred Options 2b and 3b**, a vessel may use two exemptions consecutively for a total of twenty days, per calendar year. Because permit renewals do not all begin and end on fixed calendar year dates but instead, are valid for one year from the date the permit holder applies for the permit, it may be difficult for NMFS to track exemption requests based on individuals' permit renewal dates. The limit established under **Preferred Alternative 3** would be tracked from January 1 to December 31 of each year. The exemption is tied to the vessel and the permit holder at the time of submission. If either of these change through a permit transfer, the number of exemptions would be set to zero and any

existing EFEs will be ended. Note that changing the permit on a vessel would not restart the exemption count (e.g., permit transferred on Vessel-A from Permit-1 to Permit-2, but the permit holder remains the same).

The Council is not limited to choosing only **Preferred Alternative 2** or **Preferred Alternative 3**, and may choose an option under each Alternative to constrain each exemption to a set number of days and limit the number of uses per year. NMFS will determine how any exemption chosen by the Council would be requested, processed, and documented. On or before the effective date, these processes will be available on the SEFHIER website.

CHAPTER 3. AFFECTED ENVIRONMENT

The actions considered in this framework action with associated environmental assessment (EA) would affect fishing in federal waters of the Gulf of Mexico (Gulf). Descriptions of the physical, biological, economic, social, and administrative environments (affected environments) completed in the environmental impact statements (EIS) in the Generic Essential Fish Habitat (EFH) Amendment (GMFMC 2004a), and the Generic Annual Catch Limits/Accountability Measures (ACL/AM) Amendment (GMFMC 2011a) apply to the Fishery Management Plan (FMP) for Reef Fish Resources in the Gulf of Mexico (Reef Fish FMP). Descriptions of the affected environments for reef fish are further described in Reef Fish Amendments 30B (GMFMC 2008), 32 (GMFMC 2011b), 40 (GMFMC 2014), 28 (GMFMC 2015), and 50A (GMFMC 2019a). Below, information on each of these environments is summarized or updated, as appropriate.

3.1 Description of the Fishery

The proposed actions would be expected to affect federally permitted charter vessels and headboats in the Gulf reef fish and Gulf and Atlantic region coastal migratory pelagic (CMP) fisheries. Descriptions of the reef fish and CMP fisheries are contained in Sections 3.2-3.5 of this document as well as the Modifications to Charter Vessel and Headboat Reporting Requirements Generic Framework Action (GMFMC 2017), which is incorporated herein by reference.

A charter vessel/headboat permit (for-hire) is required when taking passengers for-hire fishing in federal waters for Gulf reef fish and CMP species. As described in Table 1.1.2, there were 1,290 vessels with at least one valid (non-expired) or renewable Gulf reef fish or CMP for-hire permit (including historical captain permits), as of August 2021. A permit in renewable status is an expired limited access permit that may not be actively fished, but is renewable for up to one year after expiration. Both the Gulf reef fish and CMP for-hire permits are limited access permits. Most for-hire vessels possess more than one permit. Among the 1,290 vessels with at least one Gulf for-hire permit, 1,261 had both a CMP and reef fish permit. Additionally, 167 of these vessels had a Gulf commercial reef fish permit. Finally, 402 of the vessels with at least one Gulf charter vessel/headboat permit had at least one South Atlantic for-hire permit.

The same charter vessel/headboat permit is issued to both charter vessels and headboats, though information on the primary method of operation is collected on the permit application form. Some vessels may operate as both a charter vessel and a headboat, depending on the season or purpose of a trip.

3.2 Description of the Physical Environment

The Gulf has a total area of approximately 600,000 square miles (1.5 million km^2), 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 3.2.1).

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 water temperatures range from 54º F to 84º F (12º C to 29º C) depending on time of year and depth of water. Mean annual sea surface temperatures ranged from 73º F through 83º F (23-28º C) including bays and bayous (Figure 3.2.1) between 1982 and 2009, according to satellite-derived measurements.[11] In general, mean sea surface temperature increases from north to south with large seasonal variations in shallow waters.

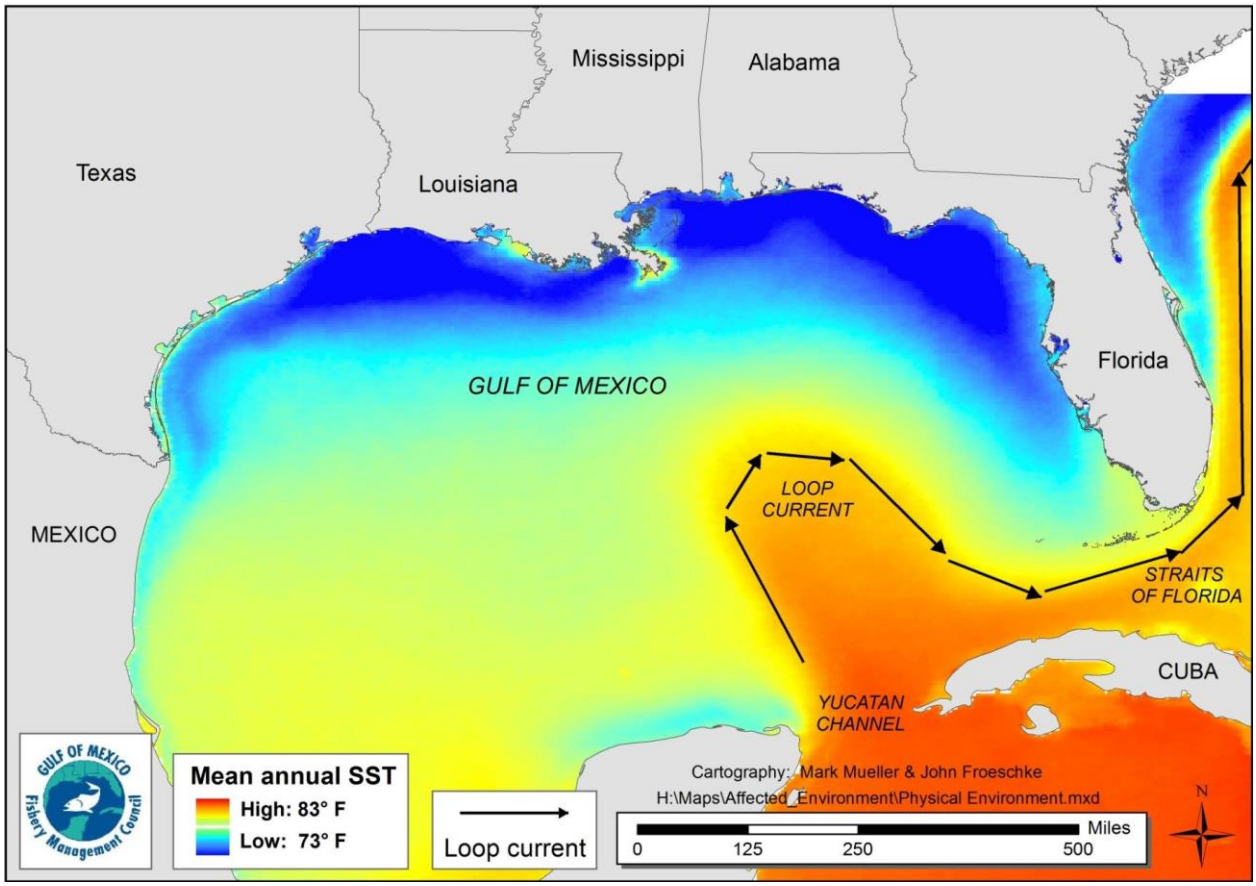

Figure 3.2.1. Physical environment of the Gulf including major feature names and mean annual sea surface temperature as derived from the Advanced Very High-Resolution Radiometer Pathfinder Version 5 sea surface temperature data set (http://accession.nodc.noaa.gov/0072888).

The physical environment for Gulf reef fish is also detailed in the Generic EFH Amendment, the Generic ACL/AM Amendment, and Reef Fish Amendment 40 (GMFMC 2004a; GMFMC 2011a; GMFMC 2014, respectively), and is incorporated by reference and further summarized below. In general, reef fish are widely distributed in the Gulf, occupying both pelagic and benthic habitats during their life cycle. A planktonic larval stage lives in the water column and feeds on zooplankton and phytoplankton (GMFMC 2004a). Juvenile and adult reef fish are typically demersal and usually associated with bottom topographies on the continental shelf (less

[11] NODC 2012: http://accession.nodc.noaa.gov/0072888

than 100 m) which have high relief, i.e., coral reefs, artificial reefs, rocky hard bottom substrates, ledges and caves, sloping soft-bottom areas, and limestone outcroppings.

The physical environment for Gulf CMP fish is detailed in the Generic EFH Amendment, the Generic ACL/AM Amendment, and Amendment 18 (GMFMC and SAFMC 2011), which discuss the Gulf habitat for CMP species, and is hereby incorporated by reference.

Cobia is distributed worldwide in tropical, subtropical and warm-temperate waters. Cobia is found in the western Atlantic Ocean from Nova Scotia, Canada, south to Argentina, including the Caribbean Sea, and is abundant in warm waters off the coast of the U.S. from the Chesapeake Bay south and throughout the Gulf of Mexico. Cobia prefers water temperatures between 68°F-86°F. As a pelagic fish, cobia is found over the continental shelf and around offshore rocky outcrops, coral reefs, and artificial reefs. Cobia prefers to reside near any structure that interrupts open water, including pilings, buoys, platforms, anchored boats, and flotsam. Cobia is also found inshore inhabiting bays, inlets, and mangroves (SEDAR 2018a).

King mackerel is a pelagic species that is found throughout the western Atlantic from the Gulf of Maine to Brazil, including the Gulf and Caribbean Sea, and from the shore to 200 m (656 ft) depths. Adults inhabit the coastal waters out to the edge of the continental shelf. Within that area, the occurrence of king mackerel is governed by temperature and salinity. It is seldom found in water temperatures less than 20°C; salinity preference varies, but it generally prefers high salinity, but less than 36 parts per thousand (ppt).

Adults are migratory, and the CMP FMP recognizes two migratory groups (Gulf and Atlantic). Typically, adult king mackerel is found in the southern climates (south Florida and extreme south Texas/Mexico) in the winter and farther north in the summer; however, some king mackerel overwinter in deeper waters off the mouth of the Mississippi River, and off the coast of North Carolina. Food availability and water temperature are likely causes of these migratory patterns. King mackerel live up to 26 years for females and 23 years for males (GMFMC and SAFMC 1985; MSAP 1996; Brooks and Ortiz 2004).

Spanish mackerel is also a pelagic species occurring in depths up to 75 meters (225 feet) but primarily found in depths of 20 meters (60 feet) or less. It occurs in coastal zones of the western Atlantic from southern New England to the Florida Keys and throughout the Gulf of Mexico (Collette and Russo 1979). Adults usually are found from the low-tide line to the edge of the continental shelf, and along coastal areas. They inhabit estuarine areas (especially higher salinity areas) during seasonal migrations, but are considered rare and infrequent in many Gulf estuaries.

Spawning occurs along the inner continental shelf from April to September (Powell 1975). Eggs and larvae occur most frequently offshore over the inner continental shelf at temperatures between 20°C (68°F) and 32°C (89.6°F) and salinities between 28 and 37 ppt. It is found frequently in water depths from 9 meters (27 feet) to about 84 meters (252 feet), but is most common in < 50 meters (150 feet).

Juveniles are most often found in coastal and estuarine habitats and at temperatures greater than 25°C (77°F) and salinities greater than 10 ppt. Although they occur in waters of varying salinity,

juveniles appear to prefer marine salinity levels and generally are not considered estuarine-dependent. Like king mackerel, adult Spanish mackerel are migratory, generally moving from wintering areas of south Florida and Mexico to more northern latitudes in spring and summer. Spanish mackerel generally mature at age 1 to 2 and have a maximum age of approximately 11 years (Powell 1975).

Detailed information pertaining to the Gulf area closures and marine reserves is provided in Amendment 32 (GMFMC 2011b). There are environmental sites of special interest that are discussed in the Generic Essential Fish Habitat (EFH) Amendment (GMFMC 2004a) that are relevant to this amendment and management. These include the longline/buoy area closure, the Edges Marine Reserve, Tortugas North and South Marine Reserves, individual reef areas and bank habitat areas of particular concern (HAPC) of the northwestern Gulf, the Florida Middle Grounds HAPC, the Pulley Ridge HAPC, and Alabama Special Management Zone. These areas are managed with gear restrictions to protect habitat and specific reef fish species. These restrictions are detailed in the Generic EFH Amendment (GMFMC 2004a).

With respect to the National Register of Historic Places, there is one site listed in the Gulf. This is the wreck of the *U.S.S. Hatteras*, located in federal waters off Texas. Historical research indicates that over 2,000 ships sunk on the Federal Outer Continental Shelf between 1625 and 1951, and thousands more sunk closer to shore in state waters during the same period. Only a handful of these have been scientifically excavated for archeological benefit.[12]

Northern Gulf of Mexico 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 by rivers to the Gulf, increasing nutrient inputs from the Mississippi River, and a seasonal layering of waters in the Gulf. The layering of the water is temperature and salinity dependent and prevents the mixing of higher oxygen content surface water with oxygen-poor bottom water. For 2019, the extent of the hypoxic area was estimated to be 6,952 square miles and ranks as the eighth largest event over the past 33 years the area has been mapped.[13] The hypoxic conditions in the northern Gulf directly affect less mobile benthic macroinvertebrates (e.g., polychaetes) by influencing density, species richness, and community composition (Baustian and Rabalais 2009). However, more mobile macroinvertebrates and demersal fishes (e.g., gray snapper) are able to detect lower dissolved oxygen levels and move away from hypoxic conditions. Therefore, although not directly affected, these organisms are indirectly affected by limited prey availability and constrained available habitat (Baustian and Rabalais 2009; Craig 2012). As mentioned above, red grouper is primarily distributed in the eastern Gulf and so is not generally affected by this hypoxic zone; however, some localized hypoxic conditions do arise (Alcock 2007; Gravinese et al. 2020). For example, red tide blooms in the eastern Gulf may cause fish kills and the decomposing biomass can result in the rapid depletion of dissolved oxygen in coastal and estuarine waters.

Greenhouse Gases

[12] Further information can be found at http://www.boem.gov/Environmental-Stewardship/Archaeology/Shipwrecks.aspx.

[13] http://gulfhypoxia.net

The Intergovernmental Panel on Climate Change has indicated greenhouse gas emissions are one of the most important drivers of recent changes in climate. Wilson et al. (2014) inventoried the sources of greenhouse gases in the Gulf from sources associated with oil platforms and those associated with other activities such as fishing. A summary of the results of the inventory are shown in Table 3.2.1 with respect to total emissions and from fishing. Commercial fishing and recreational vessels make up a small percentage of the total estimated greenhouse gas emissions from the Gulf (2.04% and 1.67%, respectively).

Table 3.2.1. Total Gulf greenhouse gas emissions estimates (tons per year) from oil platform and non-oil platform sources, commercial fishing, and percent greenhouse gas emissions from commercial fishing vessels of the total emissions*. Data are for 2011 only.

Emission source	CO_2	Greenhouse CH_4	Gas N_2O	Total CO_{2e}**
Oil platform	5,940,330	225,667	98	11,611,272
Non-platform	14,017,962	1,999	2,646	14,856,307
Total	**19,958,292**	**227,665**	**2,743**	**26,467,578**
Commercial fishing	531,190	3	25	538,842
Recreational fishing	435,327	3	21	441,559
Percent commercial fishing	2.66%	>0.01%	0.91%	2.04%
Percent recreational fishing	2.18%	>0.01%	0.77%	1.67%

*Compiled from Tables 6-11, 6-12, and 6-13 in Wilson et al. (2014). **The CO_2 equivalent (CO_{2e}) emission estimates represent the number of tons of CO_2 emissions with the same global warming potential as one ton of another greenhouse gas (e.g., CH_4 and N_2O). Conversion factors to CO_{2e} are 21 for CH_4 and 310 for N_2O.

3.3 Description of the Biological and Ecological Environment

The biological environment of the Gulf, including the species addressed in this amendment, is described in detail in the Generic EFH Amendment (GMFMC 2004a), Generic ACL/AM Amendment (GMFMC 2011a), Reef Fish Amendments 30B (GMFMC 2008a) and 32 (GMFMC 2011b), and in Reef Fish Amendment 53 (GMFMC 2021), and is incorporated here by reference and further summarized below.

3.3.1 General Information on Reef Fish Species

The National Ocean Service collaborated with the National Marine Fisheries Service (NMFS) and the Council to develop distributions of reef fish (and other species) in the Gulf (SEA 1998). Reef fish are widely distributed in the Gulf, occupying both pelagic and benthic habitats during their life cycle. In general, both eggs and larval stages are planktonic. Larval fish feed on zooplankton and phytoplankton.

Status of Reef Fish Stocks

The Fishery Management Plan for Reef Fish Resources in the Gulf of Mexico (Reef Fish FMP) currently encompasses 31 species (Table 3.3.2.1). The NMFS Office of Sustainable Fisheries updates its Status of U.S. Fisheries Report to Congress[14] on a quarterly basis. Stock assessments and status determinations have been conducted and designated for many reef fish stocks and can be found on the Council[15] and the SEDAR[16] websites.

Of the stocks for which stock assessments have been conducted, the last quarterly report of the 2021 Status of U.S. Fisheries classifies only one as overfished and undergoing overfishing (greater amberjack), and two stocks and one complex as undergoing overfishing (greater amberjack, the jacks complex, and lane snapper).

The status of both assessed and unassessed stocks, as of the most recent version of the Status of U.S. Fisheries Report, from 2021, is provided in Table 3.3.2.1. Reef Fish Amendment 44 (GMFMC 2017), was implemented December 2017, and modified the minimum stock size threshold (MSST) for seven species in the Reef Fish FMP to 50% of B_{MSY}. Red snapper and gray triggerfish, which were previously overfished, are now listed as not overfished but are still rebuilding, because the biomass for the stock is currently estimated to be greater than 50% of $B_{MSY,}$ but below B_{MSY}. Red snapper and gray triggerfish are not undergoing overfishing. Lane snapper is considered to be undergoing overfishing and the overfished status is unknown. Greater amberjack is currently overfished and undergoing overfishing, while lesser amberjack, almaco jack, and bander rudderfish are undergoing overfishing and their overfished status is unknown.

A stock assessment was conducted for Atlantic goliath grouper (SEDAR 47 2016). The Council's Science and Statistical Committee (SSC) accepted the assessment's general findings that the stock was not overfished nor experiencing overfishing. Although the SSC determined Atlantic goliath grouper to not be experiencing overfishing, the SSC deemed the assessment not suitable for stock status determination and management advice. Stock assessments were conducted for seven reef fish stocks using the Data Limited Methods Toolkit (DLM Toolkit; SEDAR 49 2016). This method allows the setting of the overfishing limit (OFL) and acceptable biological catch (ABC) based on limited data and life history information, but does not provide assessment-based status determinations. Several stocks did not have enough information available to complete an assessment even using the DLM Toolkit.

The remaining species within the Reef Fish FMP have not been assessed at this time. Therefore, their overfished status is unknown (Table 3.3.2.1). For those species that are listed as not undergoing overfishing, that determination has been made based on the annual harvest remaining below the OFL. No other unassessed species are scheduled for a stock assessment at this time.

[14] https://www.fisheries.noaa.gov/national/population-assessments/fishery-stock-status-updates
[15] www.gulfcouncil.org
[16] www.sedarweb.org

Table 3.3.2.1. Status of species in the Reef Fish FMP grouped by family.

Common Name	Scientific Name	Stock Status		Most recent assessment or SSC workshop
		Overfishing	Overfished	
Family Balistidae – Triggerfishes				
gray triggerfish	*Balistes capriscus*	N	N	SEDAR 43 2015
Family Carangidae – Jacks				
greater amberjack	*Seriola dumerili*	Y	Y	SEDAR 70 2020
lesser amberjack	*Seriola fasciata*	Y	Unknown	SEDAR 49 2016
almaco jack	*Seriola rivoliana*	Y	Unknown	SEDAR 49 2016
banded rudderfish	*Seriola zonata*	Y	Unknown	
Family Labridae – Wrasses				
hogfish	*Lachnolaimus maximus*	N	N	SEDAR 37 2014
Family Malacanthidae – Tilefishes				
tilefish (golden)	*Lopholatilus chamaeleonticeps*	N	N	SEDAR 22 2011a
blueline tilefish	*Caulolatilus microps*	N	N	
goldface tilefish	*Caulolatilus chrysops*	N	N	
Family Serranidae – Groupers				
gag	*Mycteroperca microlepis*	N	N	SEDAR 33 Update 2016b
red grouper	*Epinephelus morio*	N	N	SEDAR 61 2019
Scamp	*Mycteroperca phenax*	Unknown	Unknown	
black grouper	*Mycteroperca bonaci*	N	N	SEDAR 19 2010
yellowedge grouper	*Hyporthodus flavolimbatus*	N	N	SEDAR 22 2011b
snowy grouper	*Hyporthodus niveatus*	N	Unknown	SEDAR 49 2016
speckled hind	*Epinephelus drummondhayi*	N	Unknown	SEDAR 49 2016
yellowmouth grouper	*Mycteroperca interstitialis*	Unknown	Unknown	SEDAR 49 2016
yellowfin grouper	*Mycteroperca venenosa*	Unknown	Unknown	
warsaw grouper	*Hyporthodus nigritus*	N	Unknown	
*Atlantic goliath grouper	*Epinephelus itajara*	N	Unknown	SEDAR 47 2016
Family Lutjanidae – Snappers				
queen snapper	*Etelis oculatus*	N	Unknown	
mutton snapper	*Lutjanus analis*	N	N	SEDAR 15A Update 2015
blackfin snapper	*Lutjanus buccanella*	N	Unknown	
red snapper	*Lutjanus campechanus*	N	N	SEDAR 52 2018
cubera snapper	*Lutjanus cyanopterus*	N	Unknown	
gray snapper	*Lutjanus griseus*	N	N	
lane snapper	*Lutjanus synagris*	Y	Unknown	SEDAR 49 Update 2019
silk snapper	*Lutjanus vivanus*	N	Unknown	
yellowtail snapper	*Ocyurus chrysurus*	N	N	SEDAR 64 2020
vermilion snapper	*Rhomboplites aurorubens*	N	N	SEDAR 67 2020
wenchman	*Pristipomoides aquilonaris*	N	Unknown	SEDAR 49 2016

Note: *Atlantic goliath grouper is a protected grouper (i.e., ACL is set at zero) and benchmarks do not reflect appropriate stock dynamics. Species status based on the NOAA Quarter 4 2021 FSSI report. The most recent stock

assessment is provided for reference, and the stock status determination may reflect more current information than reported in the latest stock assessment. †The greater amberjack assessment (SEDAR 70) which determined the stock was overfished and undergoing overfishing was accepted by the SSC in January 2021.

Status of Coastal Migratory Pelagics Fish Stocks

Amendment 18 (GMFMC and SAFMC 2011) discusses the Gulf habitat for CMP species, and is hereby incorporated by reference. A summary of this information is provided below.

Both the Gulf and Atlantic king mackerel were assessed in SEDAR 38 (2014). The SEDAR 38 assessment determined that Gulf and Atlantic king mackerel were not overfished and were not experiencing overfishing. Both the Gulf and Atlantic Spanish mackerel were assessed in SEDAR 28 (2012, 2013). The assessments determined that Gulf and Atlantic Spanish mackerel were not overfished and were not experiencing overfishing. Both the Gulf and Atlantic migratory groups of cobia were assessed by SEDAR 28 in 2013. The SEDAR 28 stock assessment for Atlantic migratory group cobia (2013c) determined that the stock is not overfished or experiencing overfishing.

King Mackerel

King mackerel (*Scomberomorus cavalla*) is a marine pelagic species that is found throughout the western Atlantic from the Gulf of Maine to Brazil, including the Gulf and Caribbean Sea, and from the shore to 200 m (656 ft) depths. The habitat of adults is the coastal waters out to the edge of the continental shelf. Within the area, the occurrence of king mackerel is governed by temperature and salinity. They are seldom found in water temperatures less than 20°C and generally prefer higher salinity 36 parts per thousand (ppt) or less.

Adults are migratory, and the CMP FMP of the Gulf and Atlantic Region recognizes two migratory groups (Gulf and Atlantic). Typically, adult king mackerel are found in the southern climates (south Florida and extreme south Texas/Mexico) in the winter and farther north in the summer; however, some king mackerel overwinter in deeper waters off the mouth of the Mississippi River, and off the coast of North Carolina. Food availability and water temperature are likely causes of these migratory patterns. King mackerel live up to 26 years for females and 23 years for males (GMFMC and SAFMC 1985; MSAP 1996; Brooks and Ortiz 2004).

Adults are known to spawn in areas of low turbidity, with salinity and temperatures of approximately 30 ppt and 27°C, respectively. There are major spawning areas off Louisiana and Texas in the Gulf (McEachran and Finucane 1979); and off the Carolinas, Cape Canaveral, and Miami in the western Atlantic (Wollam 1970; Schekter 1971; Mayo 1973). Spawning occurs generally from May through October with peak spawning in September (McEachran and Finucane 1979). Eggs are believed to be released and fertilized continuously during these months. Fifty percent of females are sexually mature between 450 to 499 mm (17.7 to 19.6 inches standard length (SL) in length and most are mature by the time they are 800 mm (35.4 inches SL, or by about age 4. Fifty percent of males are sexually mature at age 3, at a length of 718 mm SL (28.3 inches). Females in U.S. waters, between the sizes of 446 – 1,489 mm SL

(17.6 to 58.6 inches) are estimated to release 69,000 – 12,200,000 eggs throughout the spawning season each year.

Larvae of king mackerel have been found in waters with temperatures between 26 – 31° C (79 – 88° F). This larval developmental stage has a short duration. King mackerel can grow up to 0.54 – 1.33 mm SL (0.02 to 0.05 inches) per day. This shortened larval stage decreases the vulnerability of the larvae, and is related to the increased metabolism of this fast-swimming species. Juveniles are generally found closer to shore than adults and occasionally in estuaries.

Spanish Mackerel

Spanish mackerel (*Scomberomorus maculatus*) are migratory and move into specific areas to spawn, and mature at age 1-2 years. They primarily eat other fish species (herring, sardines, and menhaden) and to a lesser extent crustaceans and squid at all life stages (larvae to adult). They are eaten primarily by larger pelagic predators like sharks, tuna, and bottlenose dolphin.

Spanish mackerel is also a pelagic species occurring in depths up to 75 meters (225 feet) but primarily found in depths of 20 meters (60 feet) or less. They occur in coastal zones of the western Atlantic from southern New England to the Florida Keys and throughout the Gulf of Mexico (Collette and Russo 1979). Adults usually are found from the low-tide line to the edge of the continental shelf, and along coastal areas. They inhabit estuarine areas (especially higher salinity areas) during seasonal migrations, but are considered rare and infrequent in many Gulf estuaries.

Spawning occurs along the inner continental shelf from April to September (Powell 1975). Eggs and larvae occur most frequently offshore over the inner continental shelf at temperatures between 20°C (68°F) and 32°C (89.6°F) and salinities between 28 and 37 ppt. They are found frequently in water depths from 9 meters (27 feet) to about 84 meters (252 feet), but are most common in less than 50 meters (150 feet).

Juveniles are most often found in coastal and estuarine habitats and at temperatures greater than 25°C (77°F) and salinities greater than 10 ppt. Although they occur in waters of varying salinity, juveniles appear to select marine salinity levels and generally are not considered estuarine-dependent. Like king mackerel, adult Spanish mackerel are migratory, generally moving from wintering areas of south Florida and Mexico to more northern latitudes in spring and summer. Spanish mackerel generally mature at age 1 to 2 and have a maximum age of approximately 11 years (Powell 1975).

Cobia

Cobia is a member of the family Rachycentridae, and is managed in the CMP FMP because of its migratory behavior. Currently, no commercial vessel permit is required for harvest or sale of cobia. For-hire vessels must have a charter vessel/headboat CMP permit to land cobia. The regulations in the FMP also apply to cobia in the Mid-Atlantic region. Two migratory groups of cobia were created through Amendment 18 (GMFMC and SAFMC 2011), with the division occurring at the Council boundary in Monroe County, Florida. However, the data workshop for

SEDAR 28 determined the division between migratory groups should be at the Florida/Georgia state line.

Cobia is distributed worldwide in tropical, subtropical and warm-temperate waters. Cobia is found in the western Atlantic Ocean from Nova Scotia, Canada, south to Argentina, including the Caribbean Sea, and is abundant in warm waters off the coast of the U.S. from the Chesapeake Bay south and throughout the Gulf of Mexico. Cobia prefers water temperatures between 68°F-86°F. As a pelagic fish, cobia is found over the continental shelf and around offshore rocky outcrops, coral reefs, and artificial reefs. Cobia prefers to reside near any structure that interrupts open water, including pilings, buoys, platforms, anchored boats, and flotsam. Cobia is also found inshore inhabiting bays, inlets, and mangroves (SEDAR 2018a).

Cobia is an opportunistic predator that feeds on crustaceans, cephalopods, shrimp, and small fish (Arendt et al. 2001; Franks et al. 1996). Gulf cobia can weigh up to a record 61 kilograms (kg) (135 lbs ww), but are more common at weights of up to 23 kg (50 lbs ww). They reach lengths of 50-120 centimeters (cm; 20-47 inches), up to a maximum of 200 cm (79 inches). Gulf cobia grow quickly and have a moderately long life span. Maximum ages observed for cobia in the Gulf were 9 and 11 years for males and females, respectively. Females reach sexual maturity at approximately three years of age and males at approximately two years (SEDAR 28 2013). During fall and winter months, cobia migrates south, offshore to warmer waters.

Bycatch

Many of the reef fish species co-occur with each other and can be incidentally caught when fishermen target certain species. In some cases, these fish may be discarded for regulatory reasons and thus are considered bycatch. Bycatch practicability analyses have been completed for red snapper (GMFMC 2004b, GMFMC 2007, GMFMC 2014, GMFMC 2015a), grouper (GMFMC 2008a, GMFMC 2010, GMFMC 2011a, GMFMC 2011b, GMFMC 2012a), vermilion snapper (GMFMC 2004d, GMFMC 2017a), greater amberjack (GMFMC 2008c, GMFMC 2012b, GMFMC 2015b), gray triggerfish (GMFMC 2012c), hogfish (GMFMC 2016a) and most recently in red grouper Amendment 53 (GMFMC 2021). These analyses examined the effects of fishing on these species.

The gillnet portion of the CMP fishery has no documented interaction with marine mammals; NMFS classifies gillnet portion of the CMP fishery as Category II based on analogy (similar risk to marine mammals) with other gillnet fisheries. Additional information on CMP Bycatch have been completed in Framework Amendment 7 to the CMP FMP (GMFMC 2019b), and is hereby incorporated by reference and summarized below.

In general, these analyses have found that reducing bycatch provides biological benefits to managed species, as well as benefits to the fishery through less waste, higher yields, and less forgone yield. However, in some cases, actions are approved that can increase bycatch through regulatory discards, such as increased minimum sizes and closed seasons. Under these circumstances, there is some biological benefit to the managed species that outweigh any increases in discards from the action.

Protected Species

NMFS manages marine protected species in the Southeast region under the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA). A very brief summary of these two laws and more information is available on NMFS Office of Protected Resources website[17]. There are 21 ESA-listed species of marine mammals, sea turtles, fish, and corals that may occur in the exclusive economic zone (EEZ) of the Gulf. There are 91 stocks of marine mammals managed within the Southeast region, plus the addition of the stocks such as North Atlantic right whales, humpback, sei, fin, minke, and blue whales, that regularly or sometimes occur in Southeast region managed waters for a portion of the year (Hayes et al. 2018). All marine mammals in U.S. waters are protected under the MMPA.

Of the four whale species that may be present in the Gulf (sperm, sei, fin, and Gulf Bryde's (now Rice's whale))[18], the sperm, sei, and Rice's whale are listed as endangered under the ESA. 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.

The gear used by the Gulf reef fish fishery is classified in the MMPA 2022 List of Fisheries as a Category III fishery (86 FR 43491). This classification indicates the annual mortality and serious injury of a marine mammal stock resulting from any fishery is less than or equal to 1% of the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population. Dolphins are the only species documented as interacting with the reef fish fishery. Bottlenose dolphins prey upon bait, catch, and/or released discards of fish from the reef fish fishery. They are also a common predator around reef fish vessels, feeding on the discards. Marine Mammal Stock Assessment Reports and additional information are available on the NMFS Office of Protected Species website.[19]

The gear used by the Gulf CMP fishery is classified in the MMPA 2022 List of Fisheries as a Category II fishery (86 FR 43491). This classification indicates the annual mortality and serious injury of a stock in a given fishery is greater than 1 percent and less than 50 percent of the PBR level (i.e., occasional incidental mortality and serious injury of marine mammals).

Sea turtles, fish, and corals that are listed as threatened or endangered under the ESA occur in the Gulf. These include the following: five species (six distinct population segments (DPS)) of sea turtles (Kemp's ridley, loggerhead (Northwest Atlantic Ocean DPS), green (North Atlantic and South Atlantic DPSs), leatherback, and hawksbill); five species of fish (Gulf sturgeon, smalltooth sawfish, Nassau grouper, oceanic whitetip shark and giant manta ray); and six species of coral (elkhorn, staghorn, lobed star, mountainous star, boulder star, and rough cactus).

[17] https://www.fisheries.noaa.gov/topic/laws-policies#endangered-species-act

[18] The Gulf of Mexico Bryde's whale has recently been identified as morphologically and genetically distinct from other whales under the Bryde's whale complex, and NMFS has revised the Enumeration of endangered marine and anadromous species for Bryde's Whale—Gulf subspecies, to revise the common name to Rice's whale, and the description of the listed entity to entire species (86 FR 47022).

[19] https://www.fisheries.noaa.gov/topic/marine-mammal-protection

Critical habitat designated under the ESA for smalltooth sawfish, Gulf sturgeon, and the Northwest Atlantic Ocean DPS of loggerhead sea turtles occur in the Gulf, though only loggerhead critical habitat occurs in federal waters.

The most recent biological opinion (BiOp) for the Reef Fish FMP was completed on September 30, 2011. The BiOp determined the operation of the Gulf reef fish fishery managed under the Reef Fish FMP is not likely to adversely affect ESA-listed marine mammals or coral, and was not likely to jeopardize the continued existence of sea turtles (loggerhead, Kemp's ridley, green, hawksbill, and leatherback) or smalltooth sawfish. Since issuing the opinion, in memoranda dated September 16, 2014, and October 7, 2014, NMFS concluded that the activities associated with the Reef Fish FMP are not likely to adversely affect critical habitat for the Northwest Atlantic Ocean loggerhead sea turtle DPS and four species of corals (lobed star, mountainous star, boulder star, and rough cactus). On September 29, 2016, NMFS requested re-initiation of Section 7 consultation on the operation of reef fish fishing managed by the Reef Fish FMP because new species (i.e., Nassau grouper [81 FR 42268] and green sea turtle North Atlantic and South Atlantic DPSs [81 FR 20057]) were listed under the ESA that may be affected by the proposed action. NMFS documented a determination that the operation of the fishery to continue during the re-initiation period is not likely to adversely affect these species.

On January 22, 2018, NMFS published a final rule (83 FR 2916) listing the giant manta ray as threatened under the ESA. On January 30, 2018, NMFS published a final rule (83 FR 4153) listing the oceanic whitetip shark as threatened under the ESA. In a memorandum dated March 6, 2018, NMFS revised the request for re-initiation of consultation on the Reef Fish FMP to address the listings of the giant manta and oceanic whitetip. In that memorandum, NMFS also determined that fishing under the Reef Fish FMP during the extended re-initiation period will not jeopardize the continued existence of the giant manta ray, oceanic whitetip shark, Nassau grouper, or the North Atlantic and South Atlantic DPSs of green sea turtles.

NMFS published a final rule on April 15, 2019, listing the Gulf Bryde's (Rice's) whale as endangered. In a memorandum dated June 20, 2019, NMFS revised the re-initiation request to include the Gulf Bryde's (Rice's) whale and determined that fishing under the Reef Fish FMP during the re-initiation period will not jeopardize the continued existence of any of the newly listed species discussed above.[20]

NMFS completed a biological opinion on June 18, 2015, evaluating the impacts of the CMP fishery on ESA-listed species. In the biological opinion (NMFS 2015), NMFS determined that the proposed continued authorization of the CMP fishery is not likely to adversely affect any ESA-listed whales, Gulf sturgeon, or corals. NMFS also determined that the CMP fishery is not likely to adversely affect designated critical habitat for elkhorn and staghorn coral or the Northwest Atlantic Distinct Population Segment (DPS) of loggerhead sea turtle, and will have no effect on designated critical habitat for the North Atlantic right whale. The 2015 biological opinion concluded that the CMP fishery's continued authorization is likely to adversely affect,

[20] The change to the taxonomic classification and nomenclature of this species has no effect on NMFS's conclusion that the activities associated with the Reef Fish FMP will not jeopardize the continued existence of the species during the re-initiation period.

but is not likely to jeopardize, green, hawksbill, Kemp's ridley, leatherback, or the Northwest Atlantic DPS of loggerhead sea turtles, as well as Atlantic sturgeon or smalltooth sawfish. An incidental take statement for sea turtles, smalltooth sawfish, and Atlantic sturgeon was issued. Reasonable and prudent measures to minimize the impact of these incidental takes were specified, along with terms and conditions to implement them.

On June 11, 2018, NMFS requested re-initiation of ESA Section 7 consultation on the continued authorization of the CMP fishery under the Magnuson-Stevens Act to address the listings of the giant manta ray and oceanic whitetip sharks. In this consultation request memorandum, NMFS developed ESA Section 7(a)(2) and Section 7(d) analyses that considered allowing the CMP fishery to continue during the re-initiation period. As a result of those analyses, NMFS determined that allowing the CMP fishery to continue during the re-initiation period is not likely to jeopardize any protected species, nor does it constitute an irreversible or irretrievable commitment of resources.

On April 15, 2019, NMFS published a final rule listing the Gulf Bryde's whale as endangered under the ESA.[21] In a memorandum dated July 8, 2019, NMFS determined that the very limited overlap between the CMP fishery and Gulf Bryde's whale habitat and the utilization of a gear types unlikely to pose an entanglement risk, the risk of adverse effects on the Gulf Bryde's whale from interactions with fishing under the CMP FMP were discountable. In that same July 8, 2019, memorandum, NMFS concluded that the activities associated with the CMP FMP were not likely to adversely affect the continued existence of the Gulf Bryde's whale during the revised re-initiation period.[22]

There is no information to indicate marine mammals and birds rely on CMP species for food, and they are not generally caught by fishermen harvesting cobia. The primary gear in the Gulf and South Atlantic CMP fishery used to harvest CMP species is hook-and-line. This gear is classified in the 2022 Marine Mammal Protection Act Proposed List of Fisheries as a Category III fishery (86 FR 43491), meaning the annual mortality and serious injury of a marine mammal resulting from the fishery is less than or equal to 1% of the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population. Additionally, there is no evidence that the CMP fishery is adversely affecting seabirds.

Red Tide

Red tide is a common name for harmful algal blooms (HAB) caused by species of dinoflagellates and other organisms that cause the water to appear to be red. Red tide blooms occur in the Gulf

[21] The Gulf Bryde's whale has recently been identified as morphologically and genetically distinct from other whales under the Bryde's whale complex, and NMFS has revised the Enumeration of endangered marine and anadromous species for Bryde's Whale—Gulf subspecies, to revise the common name to Rice's whale, and the description of the listed entity to entire species (86 FR 47022, Aug. 23, 2021).

[22] The changes to the taxonomic classification of this species and its common name have no effect on NMFS's conclusion that the activities associated with the CMP FMP will not jeopardize the continued existence of the species during the revised reinitiation period.

almost every year, generally in late summer or early fall. They are most common off the central and southwestern coasts of Florida between Clearwater and Sanibel Island, but may occur anywhere in the Gulf. More than 50 species capable of causing red tides occur in the Gulf, but one of the best-known species is *Karenia brevis*. This organism produces toxins capable of killing fish, birds and marine animals.[23] The factors causing red tide blooms are complex (Alcock 2007). Blooms are thought to begin to develop offshore at depth. When oceanic or wind currents push the bloom to the coast where nutrient levels increase, blooms are able to increase in size. The source of the coastal nutrients can come from natural or man-made sources. Optimum water temperature for *K. brevis* growth occurs between 72˚F and 82˚F (22˚C and 28˚C) and optimal salinities occur between 31 and 37 ppt. Although climate change has been predicted to increase likelihood of blooms of other HABs, the effects on *K. brevis* are less known. On one hand, increasing water temperatures may increase above the optimal range, hindering growth, but increased temperatures in conjunction with higher levels of CO_2 may promote growth causing higher concentrations of *K. brevis* in blooms (Errera et al. 2014).

The effects of red tide on fish stocks have been well established. After *K. brevis* cells die, they release brevetoxins. When these are absorbed through the gills or ingested, they affect the nervous and respiratory functions of fish and cause mortality. It is unknown whether mortality occurs via absorption of the brevetoxins across gill membranes (Abbott et al. 1975, Baden 1988), ingestion of toxic biota (Landsberg 2002), or from some indirect effect of red tide such as hypoxia (Walter et al. 2013). During severe *K. brevis* blooms, large fish kills can occur (e.g, Flaherty and Landsberg 2011, Smith 1975, Steidinger and Ingle 1972). This can add to fish mortality as the decaying biomass from the blooms create hypoxic conditions. In 2005, a severe red tide event occurred in the Gulf along with an associated large decline in multiple abundance indices for red grouper, gag, red drum, and other species thought to be susceptible to mortality from *K. brevis* bloom events. In 2018, a severe red tide event occurred off the southwest coast of Florida from Monroe County to Sarasota County that persisted for more than 10 months; the impacts on fish stocks will likely be considered in future stock assessments.

Climate Change

Climate change projections predict increases in sea-surface temperature and sea level; decreases in sea-ice cover; and changes in salinity, wave climate, and ocean circulation.[24] These changes are likely to affect plankton biomass and fish larvae abundance that could adversely affect 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. This 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

[23] http://myfwc.com/research/redtide/general/about/
[24] http://www.ipcc.ch/

Association (NOAA) Climate Change Web Portal[25] predicts the average sea surface temperature in the Gulf will increase by 1-3ºC for 2010-2070 compared to the average over the years 1950-2010. For reef fishes, Burton (2008) speculated climate change could cause shifts in spawning seasons, changes in migration patterns, and changes to basic life history parameters such as growth rates. The smooth puffer and common snook are examples of species for which there has been a distributional trend to the north in the Gulf. For other species, such as red snapper and the dwarf sand perch, there has been a distributional trend towards deeper waters. For other fish species, such as the dwarf goatfish, there has been a distributional trend both to the north and to deeper waters. These changes in distributions have been hypothesized as a response to environmental factors, such as increases in temperature.

The distribution of native and exotic species may change with increased water temperature, as may the prevalence of disease in keystone animals such as corals and the occurrence and intensity of toxic algae blooms. Hollowed et al. (2013) provided a review of projected effects of climate change on the marine fisheries and dependent communities. Integrating the potential effects of climate change into the fisheries assessment is currently difficult due to the time scale differences (Hollowed et al. 2013). The fisheries stock assessments rarely project through a time span that would include detectable climate change effects. However, some stocks have shown increases in abundance in the northern Gulf (Fodrie et al. 2010) and Texas estuaries (Tolan and Fisher 2009) during the interval between 1979 and 2006. This may be a result of increasing water temperatures in coastal environments.

Deepwater Horizon MC252 Oil Spill

The Deepwater Horizon oil spill occurred on April 20, 2010 and released large amounts of crude oil into the Gulf. Crude oil contains 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). When exposed to realistic, yet toxic levels of PAHs (1–15 μg/L), greater amberjack larvae develop cardiac abnormalities and physiological defects (Incardona et al. 2014). The future reproductive success of long-lived species, including red drum and many reef 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).

Increases in histopathological lesions were found in red snapper in the area affected by the oil, but Murawski et al. (2014) found that the incidence of lesions had declined between 2011 and 2012. The occurrence of such lesions in marine fish is not uncommon (Sindermann 1979; Haensly et al. 1982; Solangi and Overstreet 1982; Khan and Kiceniuk 1984, 1988; Kiceniuk and Khan 1987; Khan 1990). Red snapper diet was also affected after the spill. A decrease in

[25] https://www.esrl.noaa.gov/psd/ipcc/

zooplankton consumed, especially by adults (greater than 400 mm total length) over natural and artificial substrates may have contributed to an increase in the consumption of fish and invertebrate prey – more so at artificial reefs than natural reefs (Tarnecki and Patterson 2015). 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. The effect of oil, dispersants, and the combination of oil and dispersants on fishes of the Gulf remains an area of concern.

3.4 Description of the Economic Environment

3.4.1 Commercial Sector

The actions in this proposed amendment only pertain to the recreational for-hire sector (charter vessels and headboats). As a result, a description of the economic environment for the commercial sector is not provided.

3.4.2. Recreational Sector

The recreational sector is comprised of the private and for-hire modes. The private mode includes anglers fishing from shore (all land-based structures) and private/rental boats. The for-hire mode is composed of charter vessels and headboats. Charter vessels generally carry fewer passengers and charge a fee on an entire vessel basis, whereas headboats carry more passengers and payment is per person. The type of service, from a vessel- or passenger-size perspective, affects the flexibility to search different fishing locations during the course of a trip and target different species because larger concentrations of fish are required to satisfy larger groups of anglers.

Information on Gulf charter vessel and headboat operating characteristics is included in Savolainen et al. (2012) and is incorporated herein by reference.

Landings

This section contains landings data from the Southeast Fisheries Science Center (SEFSC) Marine Recreational Information Program (MRIP) ACL monitoring data set, with the addition of landings estimates provided by the Louisiana Department of Wildlife and Fisheries (LDWF), and the Texas Parks and Wildlife Department (TPWD). Gulf CMP and Reef fish species are managed under individual species stock ACLs. The ACL landings for each species group in this section is specified in terms of whole weight (ww).

Gulf landings of CMP species remained consistent from 2015-2019, ranging from a low of 7.02 million lbs in 2017 to a high of 8.19 million in 2019. Private/rental vessel trips accounted for

76% of all landings on average from 2015–2019 (Figure 3.4.2.1). Charter vessels landings made up about 20% of all recreational CMP species landings and headboats accounted for only 2% of all landings. Florida (63%) and Alabama (26%) accounted for the majority of landings on average in the gulf from 2015-2019 of CMP species. Louisiana, Texas, and Mississippi all accounted for 2% of the total landings respectively (Figure 3.4.2.2). Seasonal landings for CMP species have fluctuated from 2015-2019, but on average peak landings of CMP species occurred MRIP wave 4 (July/August) followed by MRIP wave 3(May/June) (Figure 3.4.2.3).

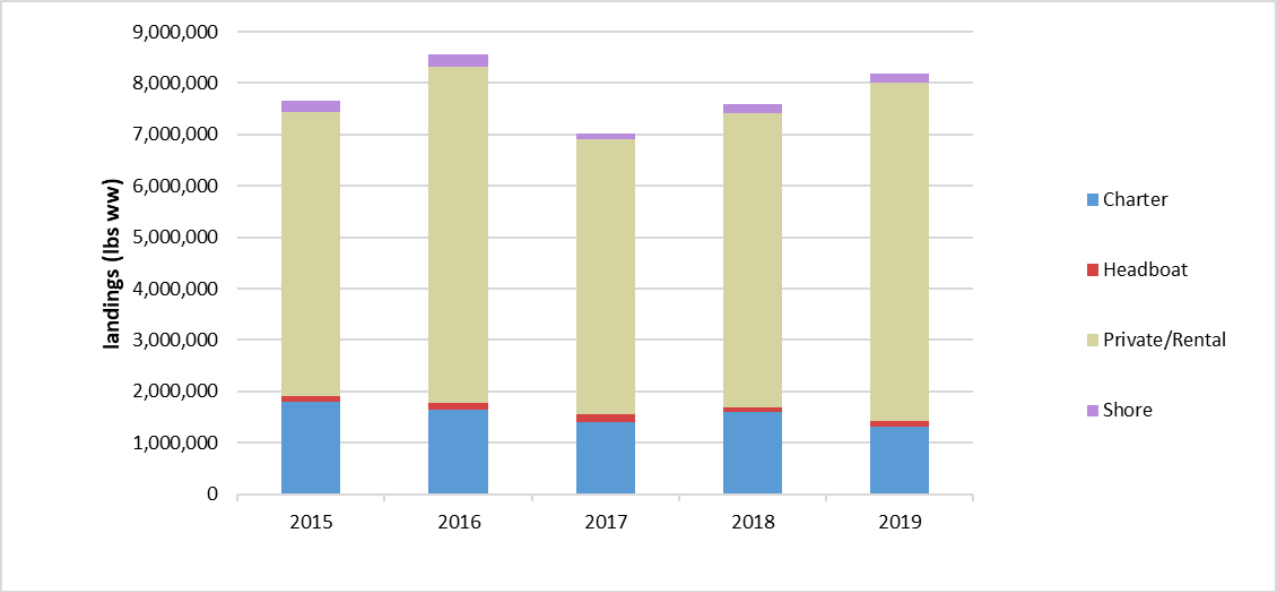

Figure 3.4.2.1. Recreational landings of Gulf CMP species (king mackerel, Spanish mackerel and cobia) by mode. Landings are in MRIP-FES.
Source: SEFSC MRIP ACL data set (Dec 2021)

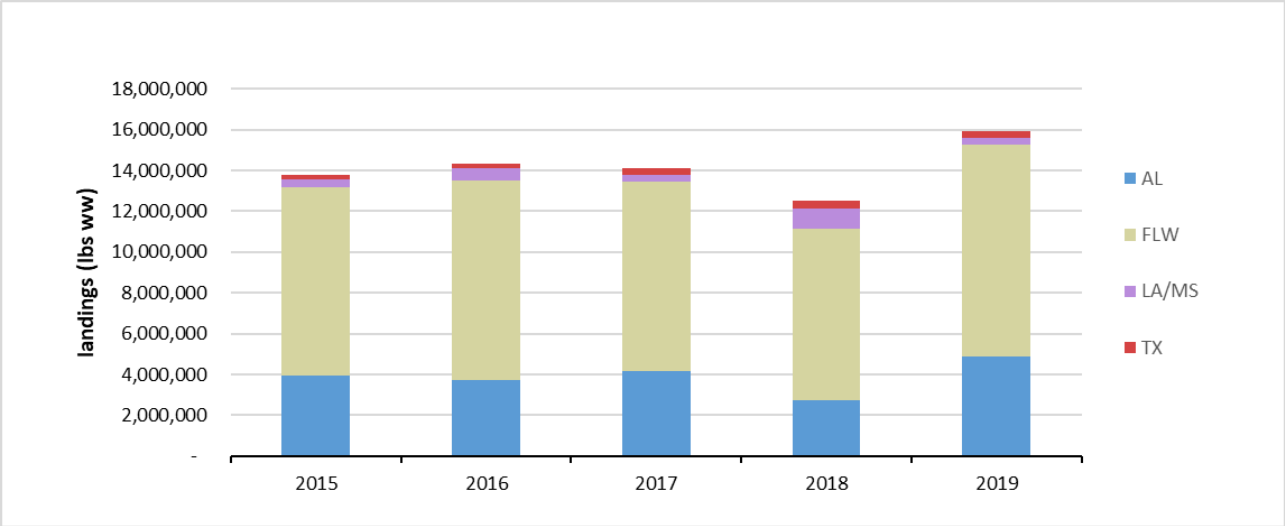

Figure 3.4.2.2. Recreational landings of Gulf CMP species (king mackerel, Spanish mackerel and cobia) by state.* Landings are in MRIP-FES.
Source: SEFSC MRIP ACL data set (July 2021).
*Louisiana and Mississippi are combined here to align with the way headboat landings were reported.

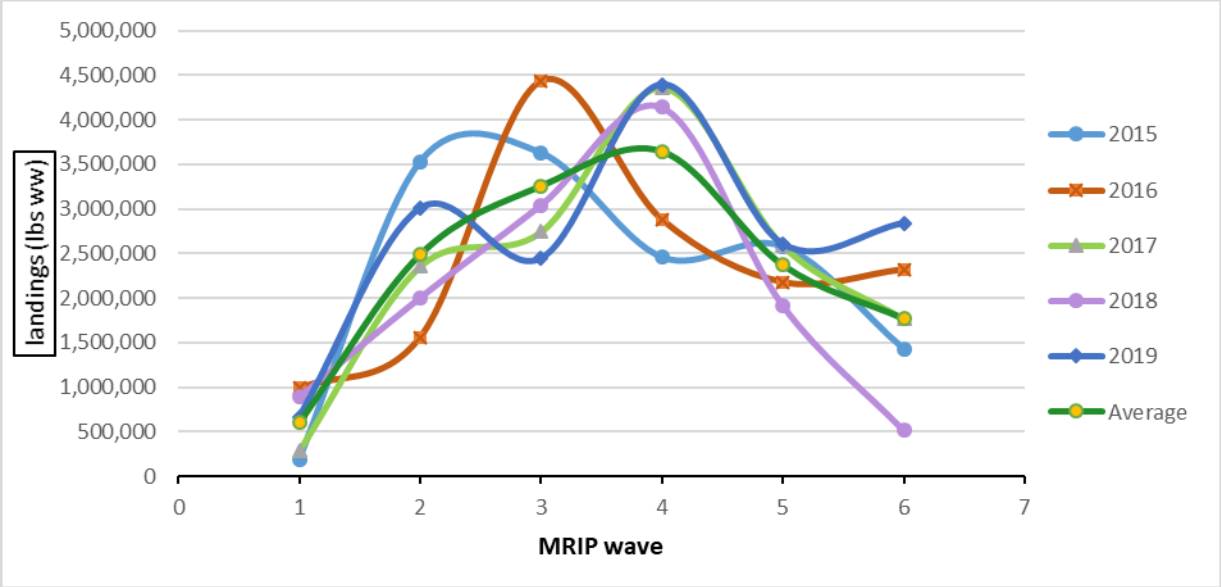

Figure 3.4.2.3. Recreational landings of Gulf CMP species (king mackerel, Spanish mackerel and cobia) by MRIP wave. Landings are in MRIP-FES.
Source: SEFSC MRIP ACL data set (Dec 2021).

Gulf landings of reef fish species overall remained consistent from 2015-2019, ranging from a low of 1.33 million lbs. in 2017 to a high of 1.57 million in 2019. Private/rental vessel trips accounted for 84% of all landings on average from 2015–2019 (Figure 3.4.2.4). Charter vessels landings made up about 10% of all recreational reef fish species landings and headboats accounted for only 1% of all landings. Florida (66%) and Alabama (24%) accounted for the

majority of landings on average in the Gulf from 2015-2019 of reef fish species. Louisiana, Texas, and Mississippi all accounted for 2% of the total landings respectively (Figure 3.4.2.5). Seasonal landings for reef fish species from 2015-2019, on average peaked during MRIP wave 3 (May/June) followed by MRIP wave 4 (July/August) (Figure 3.4.2.6).

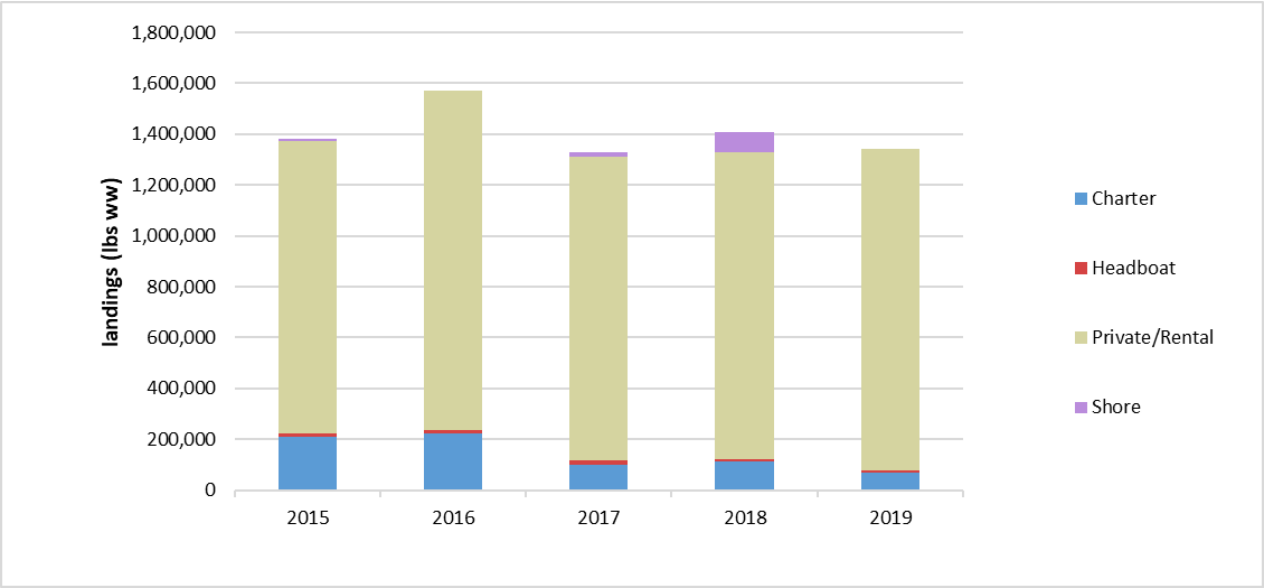

Figure 3.4.2.4. Recreational landings of Gulf reef fish by mode. Landings are in MRIP-FES.
Source: SEFSC MRIP ACL data set (July 2021).

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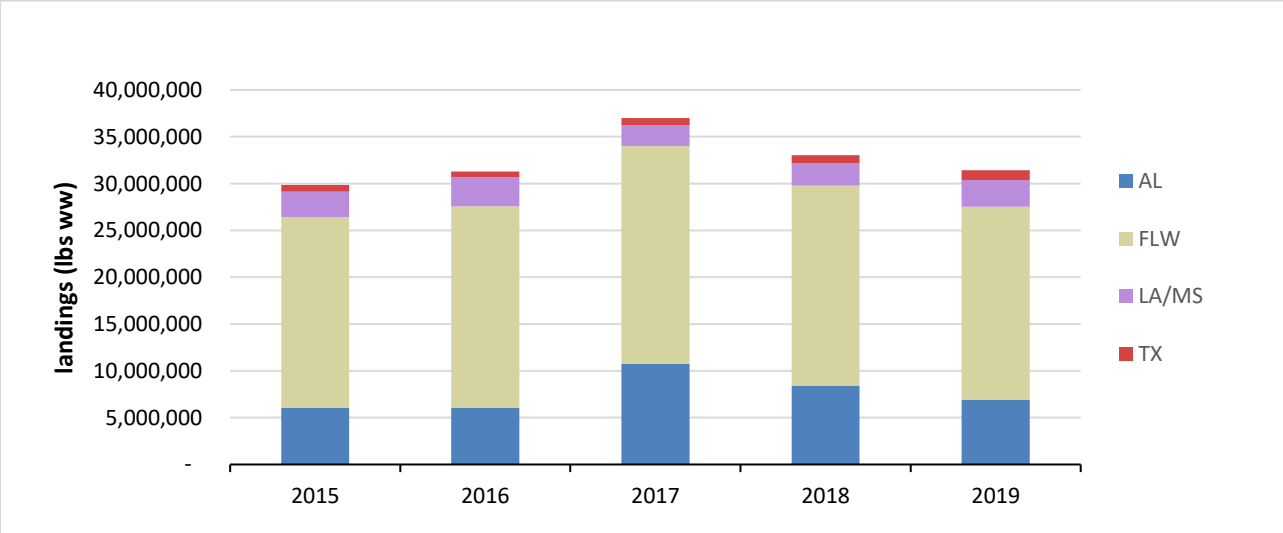

Figure 3.4.2.5. Recreational landings of Gulf reef fish by state. Landings are in MRIP-FES.
Source: SEFSC MRIP ACL data set (July 2021).

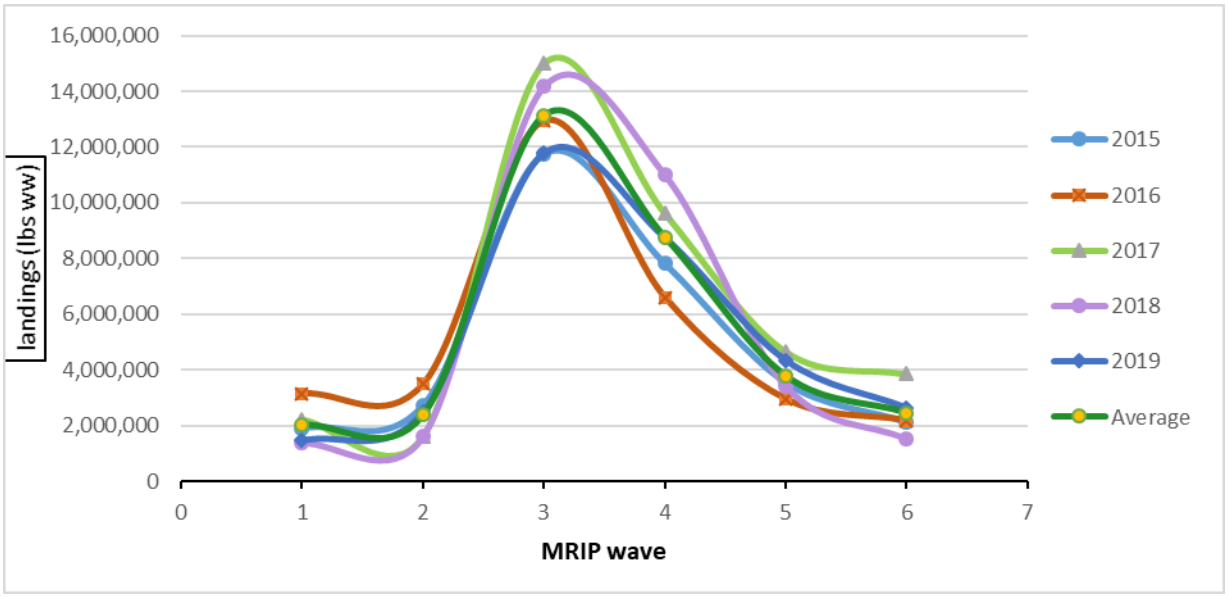

Figure 3.4.2.6. Recreational landings of Gulf reef fish by MRIP Wave. Landings are in MRIP-FES.
Source: SEFSC MRIP ACL data set (July 2021).

Permits

For-hire vessels in the Gulf are required to have a limited access Gulf charter vessel/headboat for Coastal Migratory Pelagic Fish permit (Gulf CHG for-hire permit) to fish for or possess CMP species in or from the Gulf EEZ. A shown in Table 3.4.2.1, the number of valid or renewable[26] Gulf CHG permits decreased from 2016, but increased in 2018 and had relatively little change in 2019 (Table 3.4.2.1). A historical captain permit for Gulf CMP species (HCHG) was established in Reef Fish Amendment 20/CMP Amendment 14 (GMFMC 2003) and also allows a for-hire vessel to fish for or possess CMP species in or from the Gulf EEZ. The number of HCHG permits has remained stable from 2015-2019 (Table 3.4.2.2).

Table 3.4.2.1. Number of valid or renewable CHG permits, 2015-2019.

Year	Number of Permits
2015	1274
2016	1260
2017	1260
2018	1267
2019	1266

Source: NMFS SERO SF Access Permits Database.

[26] A renewable permit is an expired permit that may not be actively fished, but is renewable for up to one year after expiration.

Table 3.4.2.2. Number of valid or renewable HCHG permits, 2015-2019.

Year	Number of Permits
2015	35
2016	34
2017	34
2018	34
2019	34

Source: NMFS SERO SF Access Permits Database.

A similar, but separate, permit is required to fish for or possess Gulf Reef fish species. Charter vessel/headboat vessels in the Gulf are required to have a limited access charter vessel/headboat for Reef fish permit (Gulf RCG for-hire permit) to fish for or possess coastal reef fish species. Similar to the Gulf CHG permits, the total number of valid or renewable RCG permits decreased from 2016, increased slightly in 2018 (Table 3.4.2.3. A historical captain permit was for Gulf Reef Fish species (HRCG) was established in Reef Fish Amendment 20/CMP Amendment 14 (GMFMC 2003) and also allows a for-hire also to fish for or possess Reef Fish species in or from the Gulf EEZ. The number of valid or renewable HRCG permits experienced little change from 2015-2019 (Table 3.4.3.4).

Table 3.4.2.3. Number of valid or renewable RCG 2015-2019.

Year	Number of Permits
2015	1278
2016	1263
2017	1263
2018	1269
2019	1268

Source: NMFS SERO SF Access Permits Database.

Table 3.4.2.4. Number of valid or renewable HRCG permits, 2015-2019.

Year	Number of Permits
2015	34
2016	33
2017	33
2018	33
2019	33

Source: NMFS SERO SF Access Permits Database.

Although the for-hire permit application collects information on the primary method of operation, the permit itself does not identify the permitted vessel as either a headboat or a charter vessel and vessels may operate in both capacities. However, only federally permitted headboats are required to submit harvest and effort information to the National Marine Fisheries Service (NMFS) Southeast Region headboat Survey (SRHS).[27] Participation in the SRHS is based on determination by the SEFSC that the vessel primarily operates as a headboat. As of March 9, 2021, 69 Gulf headboats were registered in the SRHS and another 39 operating in the FLEC Zone. The majority of these headboats were located in Florida (76 total), followed by Texas (16), Alabama (9), and Mississippi/Louisiana (5).

Angler Effort

Recreational effort derived from the MRIP database can be characterized in terms of the number of trips as follows:

- Target effort - The number of individual angler trips, regardless of duration, where the intercepted angler indicated that the species or a species in the species group was targeted as either the first or the second primary target for the trip. The species did not have to be caught.
- Catch effort - The number of individual angler trips, regardless of duration and target intent, where the individual species or a species in the species group was caught. The fish did not have to be kept.
- Total recreational trips - The total estimated number of recreational trips in the Gulf, regardless of target intent or catch success.

A target trip may be considered an angler's revealed preference for a certain species, and thus may carry more relevant information when assessing the economic effects of regulations on the subject species than the other two measures of recreational effort. Given the subject nature of this action, the following discussion focuses on target trips for CMP and reef fish in the Gulf.

The majority of estimated target trips for CMP species in the Gulf, on average (2015 through 2019), were taken in Florida and the dominant mode of fishing was the Shore mode (Table 3.4.2.5). Target trips for CMP species peaked in 2019 at approximately 4.62 million trips.

[27] All owners and operators of vessels issued Gulf of Mexico charter vessel/headboat permits are required to comply with the new Southeast For-Hire Integrated Electronic Reporting Program. Under this program, the vessel owner or operator must declare trips prior to departure and submit electronic fishing reports prior to offloading fish, or within 30 minutes after the end of a trip, if no fish are landed. Those vessels selected to report to the SRHS (i.e., federally permitted headboats) continue to submit their reports under the new requirements directly to the SRHS program. For more information, see: https://www.fisheries.noaa.gov/southeast/recreational-fishing-data/southeast-hire-electronic-reporting-program?utm_medium=email&utm_source=govdelivery

Table 3.4.2.5. Gulf CMP species (king mackerel, Spanish mackerel and cobia) recreational target trips, by mode and state, 2015–2019.*

-	Alabama	Florida	Mississippi	Total
	Shore Mode			
2015	288,365	586,330	0	874,695
2016	287,360	488,591	0	775,951
2017	285,870	466,667	0	752,537
2018	996,926	2,748,002	27377	3,772,305
2019	970,650	2,780,719	0	3,751,369
Average	565,834	1,414,062	5,475	1,985,371
	Charter Mode			
2015	6735	58,028	1297	66,060
2016	7852	42,589	430	50,871
2017	6371	61,046	355	67,772
2018	3224	80,460	895	84,579
2019	4950	61,483	783	67,216
Average	5826.4	60,721	752	67299.6
	Private/Rental Mode			
2015	53,053	317,540	41,839	412,432
2016	46,150	391,919	8,990	447,059
2017	51,355	244,333	12,241	307,929
2018	85,964	674,626	23,654	784,244
2019	79,382	711,942	9,271	800,595
Average	63,181	468,072	19,199	550,452
	All Modes			
2015	348,153	961,898	43,137	1,353,188
2016	341,362	923,098	9,420	1,273,880
2017	343,596	772,045	12,595	1,128,236
2018	1,086,114	3,503,088	51,926	4,641,128
2019	1,054,982	3,554,144	10,054	4,619,180
Average	634,841	1,942,855	25,426	2,603,122

Source: MRIP database, SERO, NMFS.
*LA and TX target trip estimates are unavailable at this time.

The majority of estimated target trips for reef fish species in the Gulf, on average (2015 through 2019), were also taken Florida and the dominant mode of fishing was the Private/Rental mode (Table 3.4.2.6). Target trips for reef fish species peaked in 2019 at approximately 4.57 million trips.

Table 3.4.2.6. Gulf Reef fish species recreational target trips, by mode and state, 2015–2019.*

-	Alabama	Florida	Mississippi	Total
	Shore Mode			
2015	8,665	158,377	0	167,042
2016	14,331	197,430	0	211,761
2017	2,758	235,796	0	238,554
2018	7,166	947,527	0	954,693
2019	5,138	1,295,032	0	1,300,170
Average	7,612	566,832	0	574,444
	Charter Mode			
2015	27299	158,214	366	185,879
2016	38975	158,450	1287	198,712
2017	36258	149,085	2990	188,333
2018	33891	172,933	326	207,150
2019	45793	186,830	2866	235,489
Average	36443.2	165,102	1567	203112.6
	Private/Rental Mode			
2015	140,490	844,223	4,199	988,912
2016	199,875	915,111	36,126	1,151,112
2017	219,031	827,766	20,030	1,066,827
2018	425,646	2,349,426	95,688	2,870,760
2019	620,723	2,298,409	115,904	3,035,036
Average	321,153	1,446,987	54,389	1,822,529
	All Modes			
2015	176,454	1,160,814	4,565	1,341,833
2016	253,182	1,270,992	37,413	1,561,587
2017	258,047	1,212,646	23,020	1,493,713
2018	466,702	3,469,886	96,014	4,032,602
2019	671,654	3,780,271	118,770	4,570,695
Average	365,208	2,178,922	55,956	2,600,086

Estimates of effort by the headboat mode are provided in terms of angler days, or the total number of standardized full-day angler trips.[28] Headboat angler days were fairly stable across the Gulf States from 2015 through 2019 (Table 3.4.2.7). There was, however, a downward trend in reported angler days in Florida from 2016 on. On average (2015 through 2019), Florida

[28] Headboat trip categories include half-, three-quarter-, full-, and 2-day trips. A full-day trip equals one angler day, a half-day trip equals .5 angler days, etc. Angler days are not standardized to an hourly measure of effort and actual trip durations may vary within each category.

accounted for the majority of headboat angler days reported, followed by Texas and Alabama; whereas, Mississippi and Louisiana combined, accounted for only a small percentage (Table 3.4.2.7). Headboat effort in terms of angler days for the entire Gulf was concentrated most heavily during the summer months of June through August on average (2015 through 2019; Table 3.4.2.8).

Table 3.4.2.7. Gulf headboat angler days and percent distribution by state (2015 through 2019).

	Angler Days				Percent Distribution			
	FL	**AL**	**MS-LA****	**TX**	**FL**	**AL**	**MS-LA**	**TX**
2015	176,375	18,008	3,587	55,135	69.7%	7.1%	1.4%	21.8%
2016	183,147	16,831	2,955	54,083	71.3%	6.5%	1.1%	21.0%
2017	178,816	17,841	3,189	51,575	71.1%	7.1%	1.3%	20.5%
2018	171,996	19,851	3,235	52,160	69.6%	8.0%	1.3%	21.1%
2019	161,564	18,607	2,632	52,456	68.7%	7.9%	1.1%	22.3%
Average	174,380	18,228	3,120	53,082	70.1%	7.3%	1.3%	21.3%

Source: NMFS SRHS (February, 2020).
*headboat data from Mississippi and Louisiana are combined for confidentiality purposes.

Table 3.4.2.8. Gulf headboat angler days and percent distribution by month (2015 – 2019).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Headboat Angler Days											
2015	9,444	10,594	22,827	20,684	20,973	44,731	45,192	26,637	15,114	17,246	9,757	9,906
2016	7,954	13,233	21,829	18,691	21,693	50,333	49,881	21,775	13,596	15,827	11,823	10,381
2017	8,998	14,007	21,032	19,383	19,186	47,673	54,028	22,984	10,289	11,054	11,299	11,488
2018	5,524	13,694	20,762	17,584	16,876	54,251	53,304	24,819	13,235	10,633	8,183	8,377
2019	2,330	12,819	21,796	16,299	18,271	46,046	47,594	24,212	11,369	13,687	10,389	10,447
Avg	6,850	12,869	21,649	18,528	19,400	48,607	50,000	24,085	12,721	13,689	10,290	10,120
	Percent Distribution											
2015	3.7%	4.2%	9.0%	8.2%	8.3%	17.7%	17.9%	10.5%	6.0%	6.8%	3.9%	3.9%
2016	3.1%	5.1%	8.5%	7.3%	8.4%	19.6%	19.4%	8.5%	5.3%	6.2%	4.6%	4.0%
2017	3.6%	5.6%	8.4%	7.7%	7.6%	19.0%	21.5%	9.1%	4.1%	4.4%	4.5%	4.6%
2018	2.2%	5.5%	8.4%	7.1%	6.8%	21.9%	21.6%	10.0%	5.4%	4.3%	3.3%	3.4%
2019	1.0%	5.4%	9.3%	6.9%	7.8%	19.6%	20.2%	10.3%	4.8%	5.8%	4.4%	4.4%
Avg	2.7%	5.2%	8.7%	7.4%	7.8%	19.5%	20.1%	9.7%	5.1%	5.5%	4.1%	4.1%

Source: NMFS SRHS (Feb, 2020)

Economic Value

According to Savolainen et al. (2012), the average charter vessel operating in the Gulf is estimated to receive approximately $90,000 (2019 dollars) in gross revenue and $27,000 in net income (gross revenue minus variable and fixed costs) annually. The average headboat is estimated to receive approximately $272,000 (2019 dollars) in gross revenue and $79,000 in net income annually. More recent estimates of average annual gross revenue for Gulf headboats are provided in Abbott and Willard (2017) and D. Carter (pers. comm., 2018). Abbott and Willard (2017) suggest that Savolainen, et al.'s estimate of average annual gross revenue for headboats may be an underestimate, as data in the former suggest that average gross revenue in 2009 for the vessels in their sample was about $480,000 (2019 dollars). Further, their data suggest average annual gross revenue per vessel had increased to about $580,000 (2019 dollars) by 2014. However, Abbott and Willard's estimates are based on a sample of 17 headboats that chose to participate in the headboat Collaborative Program in 2014, while Savolainen, et al.'s are based on a random sample of 20 headboats. The headboats that participated in the Collaborative may be economic highliners, in which case Abbott and Willard's estimates would overestimate average annual gross revenue for Gulf headboats. Carter (2018) recently estimated that average annual gross revenue for Gulf headboats were approximately $427,515 (2019 dollars) in 2017. This estimate is likely the best current estimate of annual gross revenue for Gulf headboats, as it is based on a relatively large sample of 63 boats, or more than 90% of the active fleet, and is more recent.

However, gross revenues overstate the annual economic value and profits generated by for-hire vessels. Economic value for for-hire vessels can be measured by producer surplus (PS) per passenger trip (the amount of money that a vessel owner earns in excess of the cost of providing

the trip). Estimates of revenue, costs, and trip net revenue trips taken by headboats and charter vessels in 2017 are available from Souza and Liese (2019). They also provide estimates of trip net cash flow per angler trip, which approximate PS per angler trip. According to Table 3.4.2.9, after accounting for transactions fees, supply costs, and labor costs, net revenue per trip was 42% of revenue for Gulf charter vessels and 54% of revenue for Southeast headboats, or $779 and $1,811 (2019 dollars), respectively. Given the respective average number of anglers per trip for each fleet, PS per trip is estimated to be $141 for charter vessels and $64 for headboats.

Table 3.4.2.9. Trip economics for offshore trips by South Atlantic charter vessels and Southeast headboats in 2017 (2019$).

	Gulf Charter Vessels	**Southeast Headboats**
Revenue	100%	100%
Transaction Fees (% of revenue)	3%	3%
Supply Costs (% of revenue)	27%	29%
Labor Costs (% of revenue)	27%	28%
Net Revenue per trip including Labor costs (% of revenue)	42%	54%
Net Revenue per Trip	$779	$1,844
Average # of Anglers per Trip	4.7	28.2
Trip Net Cash Flow per Angler Trip	$141	$64

Trip net revenue (TNR), which is the return used to pay all labor wages, returns to capital. When TNR is divided by the number of anglers on a trip, it represents cash flow per angler (CFpA). The estimated CFpA value for an average Gulf charter angler trip is $234 (2019 dollars) and the estimated CFpA value for an average Gulf headboat angler trip is $98 (Souza and Liese 2019). Estimates of CFpA for all individual CMP or Reef Fish species target trips, in particular, are not available.

Business Activity

The desire for recreational fishing generates economic activity as consumers spend their income on various goods and services needed for recreational fishing. This spurs economic activity in the region where recreational fishing occurs. It should be clearly noted that, in the absence of the opportunity to fish, the income would presumably be spent on other goods and services and these expenditures would similarly generate economic activity in the region where the expenditure occurs. As such, the analysis below represents a distributional analysis only.

Estimates of the business activity (economic impacts) associated with recreational angling for CMP and Reef Fish in the Gulf were calculated using average trip-level impact coefficients derived from the 2016 Fisheries Economics of the U.S. report (NMFS 2018) and underlying data provided by the National Oceanic and Atmospheric Administration (NOAA) Office of Science

and Technology. Economic impact estimates in 2016 dollars were adjusted to 2019 dollars using the annual, not seasonally adjusted GDP implicit price deflator provided by the U.S. Bureau of Economic Analysis.

Business activity (economic impacts) for the recreational sector is characterized in the form of jobs (full- and part-time), income impacts (wages, salaries, and self-employed income), output impacts (gross business sales), and value-added impacts (contribution to the GDP in a state or region). Estimates of the average annual economic impacts (2015–2019) resulting from Gulf Zone CMP and Reef fish species target trips are provided in Table 3.4.2.6 and Table 3.4.2.7. The average impact coefficients, or multipliers, used in the model are invariant to the "type" of effort (e.g., target or catch) and can therefore be directly used to measure the impact of other effort measures such as CMP and Reef Fish catch trips. To calculate the multipliers from Table 3.4.2.6 & Table 3.4.2.7, simply divide the desired impact measure (sales impact, value-added impact, income impact or employment) associated with a given state and mode by the number of target trips for that state and mode.

The estimates provided in Table 3.4.2.6 and Table 3.4.2.7 only apply at the state-level. Addition of the state-level estimates to produce a regional (or national) total may underestimate the actual amount of total business activity, because state-level impact multipliers do not account for interstate and interregional trading. It is also important to note that these economic impacts estimates are based on trip expenditures only and do not account for durable expenditures. Durable expenditures cannot be reasonably apportioned to individual species. As such, the estimates provided in Table 3.4.2.6 and Table 3.4.2.7 may be considered a lower bound on the economic activity associated with those trips that targeted CMP and Reef Fish.

Estimates of the business activity associated with headboat effort are not available. Headboat vessels are not covered in MRIP in the Southeast, so, in addition to the absence of estimates of target effort, estimation of the appropriate business activity coefficients for headboat effort has not been conducted.

Table 3.4.2.6. Estimated annual average economic impacts (2015–2019) from recreational trips that targeted Gulf CMP species by state and mode, using state-level multipliers. All monetary estimates are in 2019 dollars in thousands.*

	FL	AL	MS
	Charter Mode		
Target Trips	60,721	5,826	752
Value Added Impacts	$21,244	$2,427	$337
Sales Impacts	$35,675	$4,413	$636
Income Impacts	$12,414	$1,384	$194
Employment (Jobs)	328	48	7
	Private/Rental Mode		
Target Trips	468,072	63,181	19,199
Value Added Impacts	$16,874	$2,856	$419
Sales Impacts	$26,154	$4,420	$696
Income Impacts	$8,855	$1,112	$220
Employment (Jobs)	239	41	7
	Shore		
Target Trips	1,414,062	565,834	5,475
Value Added Impacts	$51,801	$39,936	$70
Sales Impacts	$80,953	$68,780	$108
Income Impacts	$27,287	$20,551	$38
Employment (Jobs)	742	702	1
	All Modes		
Target Trips	1,942,855	634,841	25,426
Value Added Impacts	$89,920	$45,219	$826
Sales Impacts	$142,782	$77,613	$1,440
Income Impacts	$48,556	$23,047	$452
Employment (Jobs)	1,310	791	16

Source: Effort data from MRIP; economic impact results calculated by NMFS SERO using NMFS (2018) and underlying data provided by the NOAA Office of Science and Technology.
*LA and TX Estimates are unavailable at this time.

Table 3.4.2.7. Estimated annual average economic impacts (2015–2019) from recreational trips that targeted Gulf Reef fish species, by mode, using state-level multipliers. All monetary estimates are in 2019 dollars in thousands.

	FL	AL	MS
	Charter Mode		
Target Trips	165,102	36,443	1,567
Value Added Impacts	$57,764	$15,179	$702
Sales Impacts	$97,001	$27,604	$1,326
Income Impacts	$33,755	$8,658	$404
Employment (Jobs)	893	301	15
	Private/Rental Mode		
Target Trips	1,446,987	321,153	54,389
Value Added Impacts	$52,165	$14,518	$1,187
Sales Impacts	$80,852	$22,465	$1,971
Income Impacts	$27,373	$5,651	$625
Employment (Jobs)	739	207	20
	Shore		
Target Trips	566,832	7,612	0
Value Added Impacts	$20,765	$537	$0
Sales Impacts	$32,450	$925	$0
Income Impacts	$10,938	$276	$0
Employment (Jobs)	298	9	0
	All Modes		
Target Trips	2,178,922	365,208	55,956
Value Added Impacts	$130,694	$30,234	$1,889
Sales Impacts	$210,304	$50,994	$3,297
Income Impacts	$72,066	$14,585	$1,029
Employment (Jobs)	1,930	518	35

Source: Effort data from MRIP; economic impact results calculated by NMFS SERO using NMFS (2018) and underlying data provided by the NOAA Office of Science and Technology.
*LA and TX Estimates are unavailable at this time.

3.5 Description of the Social Environment

This action affects the federally permitted for-hire component of the recreational sector in the Gulf, only. The proposed action would provide an exemption to the requirement for federally permitted charter vessels and headboats to carry a working VMS unit, as established through the Generic Amendment to the Reef Fish and CMP FMPs Modifications to Charter Vessel and Headboat Reporting Requirements (Generic Amendment; GMFMC 2017). The Generic Amendment included a description of for-hire communities and is incorporated by reference. Additional descriptions of for-hire communities fishing for reef fish (GMFMC 2019a) and CMP (GMFMC 2021) include updated permit information and are incorporated by reference.

A federal charter vessel/headboat permit is required for vessels to take paying passengers to fish for reef fish and CMP species in federal waters. The federal permits do not distinguish between charter vessels and headboats; there is a charter vessel/headboat permit for reef fish, and a charter vessel/headboat permit for CMP fish. In the Gulf, the charter vessel/headboat permits for reef fish and CMP are limited access; existing permits may be renewed or transferred, but no new permits are available. The respective charter vessel/headboat historical captain permits for reef fish and CMP are limited access and may be renewed by the permit holder, but may not be transferred to a new owner. They may only be transferred to another vessel owned or leased by the historical captain. Historical captain permits that are not renewed or transferred to another vessel are terminated. In 2019, the Council decided to allow historical captain permits to be exchanged for a standard charter/headboat permit for reef fish or CMP fish, respectively (GMFMC 2019b).

A permit is valid for one year after it has been renewed or transferred. If the permit is not renewed or transferred before the end of the year when it is valid, it expires but stays in renewable status for one year; the permit may not be used for fishing, but the permit holder may still renew or transfer the permit during the year of renewable status. If the permit is not renewed or transferred by the end of the renewable period, the permit is terminated and may not be reissued. The annual application fee for these permits is $25 for the first permit and $10 for each additional permit.

Table 1.1.2 provides the number of federal for-hire permits by state. Table 3.5.1 provides a list of communities for which the most federally permitted for-hire vessels are homeported, to provide information on the geographic distribution of recreational fishing involvement. Most vessels that have a federal for-hire permit possess both the reef fish and CMP fish permits, and the ranking of communities for each permit is similar, with the same nine communities occupying the top nine positions on both lists.

Table 3.5.1. Top ranking communities based on number of charter/headboat permits for reef fish and CMP fish, including historical captain permits.

Reef Fish			CMP Fish		
State	**Community**	**#Permits**	**State**	**Community**	**#Permits**
FL	Destin	67	**FL**	Destin	66
AL	Orange Beach	51	**FL**	Panama City	53
FL	Panama City	51	**AL**	Orange Beach	51
FL	Naples	46	**FL**	Naples	47
FL	Key West	42	**FL**	Key West	42
FL	Pensacola	26	**FL**	Pensacola	26
TX	Galveston	23	**TX**	Galveston	23
FL	St. Petersburg	22	**FL**	St. Petersburg	21
FL	Sarasota	20	**FL**	Sarasota	19
FL	Cape Coral	17	**TX**	Houston	18
FL	Clearwater	17	**FL**	Cape Coral	17
FL	Fort Myers	17	**FL**	Clearwater	17
LA	Metairie	17	**FL**	Fort Myers	17
TX	Houston	17	**TX**	Port Aransas	17
FL	Panama City Beach	15	**LA**	Metairie	16
MS	Biloxi	15	**FL**	Marco Island	15
TX	Port Aransas	15	**FL**	Panama City Beach	15
FL	Marco Island	14	**MS**	Biloxi	15
TX	Freeport	14	**TX**	Freeport	14

Source: NMFS SERO permit office, July 22, 2018 (reef fish permits) and July 30, 2018 (CMP fish permits). Communities with 14 or more active/renewable permits are included, based on permitholder address.

3.5.1. Environmental Justice Considerations

Executive Order 12898 requires federal agencies conduct their programs, policies, and activities in a manner to ensure individuals or populations are not excluded from participation in, or denied the benefits of, or subjected to discrimination because of their race, color, or national origin. In addition, and specifically with respect to subsistence consumption of fish and wildlife, federal agencies are required to collect, maintain, and analyze information on the consumption patterns of populations who principally rely on fish and/or wildlife for subsistence. The main focus of Executive Order 12898 is to consider "the disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories…" This executive order is generally referred to as environmental justice (EJ).

As discussed in GMFMC (2017), federally permitted for-hire fishing businesses participating in the Gulf reef fish and CMP fisheries were expected to be affected by the new requirements for reporting and vessel position monitoring, but these effects were expected to be minimal to non-existent in the short term and positive over the long term. Information on race, ethnicity, and income status of federally permitted for-hire business owners, and the captains, crew, and other

employees who work for these businesses is not available, because these data are not collected by NMFS or other agencies. Nevertheless, the proposed action is not expected to result in any disproportionate effects on low-income or minority populations and would not affect individuals differentially based on their race, ethnicity, or income status. Although no EJ concerns are expected to arise from the proposed actions, the lack of effects on EJ populations cannot be assumed.

3.6 Description of the Administrative Environment

3.6.1 Federal Fishery Management

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

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

The Gulf Council is responsible for fishery resources in federal waters of the Gulf. For reef fish, these waters extend 200 nautical miles offshore from the seaward boundaries of Alabama, Florida, Louisiana, Mississippi, and Texas, as those boundaries have been defined by law. The length of the Gulf coastline is approximately 1,631 miles. Florida has the longest coastline extending 770 miles along its Gulf coast, followed by Louisiana (397 miles), Texas (361 miles), Alabama (53 miles), and Mississippi (44 miles).

The Gulf Council consists of seventeen voting members: 11 public members appointed by the Secretary; one each from the fishery agencies of Texas, Louisiana, Mississippi, Alabama, and Florida; and one from NMFS. The public is also involved in the fishery management process.

3.6.2 State Fishery Management

The purpose of state representation at the Council level is to ensure state participation in federal fishery management decision-making and to promote the development of compatible regulations in state and federal waters. The state governments of Texas, Louisiana, Mississippi, Alabama,

and Florida have the authority to manage their respective state fisheries. Each of the five Gulf states exercises legislative and regulatory authority over their states' natural resources through discrete administrative units. Although each agency is the primary administrative body with respect to the states' natural resources, all states cooperate with numerous state and federal regulatory agencies when managing marine resources. Descriptions of individual state management and data collection programs can be found at the Web Pages shown in Table 3.6.2.1.

Table 3.6.2.1. Gulf state marine resource agencies and web pages.

State Marine Resource Agency	Web Page
Alabama Marine Resources Division	http://www.outdooralabama.com/
Florida Fish and Wildlife Conservation Commission	http://myfwc.com/
Louisiana Department of Wildlife and Fisheries	http://www.wlf.louisiana.gov/
Mississippi Department of Marine Resources	http://www.dmr.ms.gov/
Texas Parks and Wildlife Department	http://tpwd.texas.gov/

CHAPTER 4. ENVIRONMENTAL CONSEQUENCES

4.1 Action 1: Modify VMS requirements for vessels with a Charter Vessel/Headboat permit for Reef Fish or a Charter Vessel/Headboat permit for Coastal Migratory Pelagic Fish to allow for an exemption to VMS requirements to address equipment failure.

4.1.1 Direct and Indirect Effects on the Physical Environment

Alternative 1, (No Action) would maintain the requirement that as of March 1, 2022, vessels with charter vessel/headboat permits for Reef Fish or Coastal Migratory Pelagic Fish (CMP) have an approved vessel monitoring system (VMS) unit onboard, operating at all times, unless exempted by National Marine Fisheries Service (NMFS) under a power-down exemption. **Preferred Alternatives 2 and 3** would provide exemptions, with limitations, that would allow for vessels to continue fishing trips, in the event of VMS equipment failure. It is unlikely that this action would directly or indirectly affect the physical environment as requirements that allow for an equipment failure exemption would only allow intended fishing activity to occur as previously planned. However, the use of VMS units in the federal for-hire fishery, specifically in the Gulf SEFHIER program, to collect location data will provide NMFS with data on vessel movements and physical locations where fishing activity occurs, that was previously unavailable. These data will be used for verifying compliance with the program, fishing effort, and the number, and type, of trips taken by the industry. Exemptions provided in **Preferred Alternatives 2 and 3** would not result in an increase in effort or interactions with the physical environment. To the extent there are any effects on the physical environment, they would be minimal because the action would not change how the reef fish or CMP fishery is prosecuted overall.

4.1.2 Direct and Indirect Effects on the Biological Environment

While this action would not directly affect the biological environment, it may impact the quality of the data, which may have an indirect impact. **Alternative 1** could indirectly affect the biological environment, as it maintains the requirement for charter vessels/headboats with Reef Fish and/or Coastal Migratory Pelagic Fish (CMP) permits to have an approved vessel monitoring system (VMS unit onboard, operating at all times, unless exempted by NMFS under a power-down exemption. The use of VMS units in the federal for-hire fishery, specifically participants in the SEFHIER program in the Gulf, to collect location data will provide NMFS with continuous data on vessel movements and fishing locations that was previously unavailable. These data will be used for verifying compliance with the program, fishing effort, the number, and type, of trips taken by the industry. **Preferred Alternative 2 and Alternative 3** would allow for an exemption to the VMS requirement by providing a set number of exemptions, and days per exemption to be used in the event of VMS equipment failure, allowing for some flexibility to vessel owners while still attempting to mitigate the risk of significant data gaps.

However, compared to **Alternative 1**, as the number of trips completed without VMS increases, data gaps become wider thereby weakening data collection efforts and potentially adversely impacting management measures based on these data. **Options 2a** and **3a**, would provide only one exemption per year and be the most restrictive in the number of days allowed per exemption but would also likely decrease the chance of data gaps compared to the other options in **Preferred Alternatives 2 and 3**. The chance for data gaps to occur and therefore potentially increased indirect biological impacts increase for **Preferred Options 2b** and **3b** as they provide more exemptions per year and more days per exemption to move on the water without a functioning VMS. **Options 2c** and **3c** have the greatest potential for data gaps allowing for the highest number of exemptions per vessel per year and the maximum number of days per exemption. Therefore, the management measures considered in **Preferred Alternatives 2 and 3** could be associated with adverse biological effects due to the diminished effectiveness of data collection programs which support the design of fishery management policy. However, any impacts are expected to be minimal, especially if the occurrence of VMS failure is expected to be rare. Vessel owners or operators must still meet all other reporting requirements of the SEFHIER Program, and this action would not change how the reef fish or CMP fishery is prosecuted overall.

4.1.3 Direct and Indirect Effects on the Economic Environment

Alternative 1 (No Action) would not consider additional exemptions to the requirements that vessels with reef fish or CMP charter vessel/headboat permits have a NMFS-approved VMS unit onboard, operating at all times. Currently, vessels can only receive a power-down exemption from NMFS but cannot fish during that time. **Alternative 1** would maintain the status quo and would therefore not be expected to result in economic effects.

Preferred Alternative 2 would establish an exemption to the for-hire VMS requirements to account for equipment failure and set a maximum number of days for exemption. **Options 2a-c** would grant exemption valid for up to 7, 10, and 14 days from the submittal date. As opposed to the existing power-down exemptions, **Preferred Alternative 2** would allow vessels to continue to fish during the exemption period. **Option 2c**, which would grant the longest exemption period, would be associated with more flexibility for for-hire operators in the event of an equipment failure. Relative to **Alternative 1**, the added flexibility afforded by the exemption in **Preferred Alternative 2** would shield for-hire operators from potential economic losses that could result from trip cancellations and associated revenue losses due to equipment failures. Therefore, relative to **Alternative 1**, **Preferred Alternative 2** would be expected to result in economic benefits to the for-hire sector by allowing operators to run trips and collect revenues that would have been forgone without the exemptions due to equipment failure. Economic benefits to the for-hire sector cannot be quantified at this time due to insufficient information relative to potential revenue losses that would be associated with trip cancellations due to equipment failures. These potential losses would be determined by the expected value of the forgone trip revenues between the VMS failure incident and the resumption of usual business activities following the VMS repair. The expected value would be calculated based on the probability of equipment failure times the average revenue per trip times the number of trips that would be cancelled. Anecdotal evidence gathered from VMS failure incidents in the commercial

sector suggest that failure rates of approved VMS equipment are very low, suggesting that the expected value of potential for-hire revenue losses due to equipment failure may be relatively small. However, these potential economic shortfalls may not be negligible, especially if the VMS equipment fails during the high season. However, because the exemption would allow for-hire operators to run trips without proper functioning VMS, it may also result in data gaps. As the number of trips completed without VMS increases, data gaps become wider thereby weakening data collection efforts and potentially adversely impacting management measures based on these data. Therefore, under **Preferred Alternative 2**, increases in the number of exemptions granted could be associated with adverse economic effects due to the diminished effectiveness of data collection programs which support the design of fishery management policy.

Preferred Alternative 3 would limit the number of times an exemption from the VMS requirement could be requested for each vessel per calendar year. **Options 3a-c** would cap the number of exemptions per vessel per calendar year at one, two, or three, respectively. **Option 3c**, which would allow up to three exemptions per year, would provide for-hire operators more opportunities to avoid the adverse economic effects that would stem from revenue losses due to equipment failure. However, as discussed under **Preferred Alternative 2**, the more trips that are completed without a functioning VMS, the greater the impact on the data collection program, which could result in adverse economic effects due to the diminished effectiveness of resulting management measures.

4.1.4 Direct and Indirect Effects on the Social Environment

This action addresses the potential situation in which a federally permitted for-hire vessel is prepared to make a trip, or is already underway, and the vessel's required VMS unit fails. As of March 1, 2022, when the requirement for a vessel to carry a working VMS went into effect, under A**lternative 1** (No Action) the vessel cannot leave the dock until the problem is remedied. Direct negative effects would result for the vessel's operator and passengers in the event a trip is delayed (lesser effects) or canceled (greater effects). If such problems occur frequently among many vessels, negative indirect effects could result through loss of trust by and among for-hire operators, their passengers, and fishery managers. While the likelihood of a VMS failure impeding a trip departure is assumed to be low, the failure rate among the various NMFS-approved VMS units (Table 1.1.1) remains unknown. The amount of time that may be needed to repair or replace a malfunctioning unit also remains unknown. The failure rate of VMS units resulting in trip disruption for the commercial sector is unknown, but reported to be low. However, the effects from a VMS equipment failure on a commercial trip (e.g., trip delay) would be less severe than for the for-hire sector, which relies on scheduled departures.

Positive effects from **Preferred Alternatives 2** and **3** would occur in the event that a validly granted exemption allows a for-hire trip to proceed that would otherwise have been prevented from doing so as a result of a malfunctioning VMS unit. The effects would be direct for the operator who received the exemption and the trip's passengers. The extent of these effects would relate to the frequency of the occurrence among vessels in the fleet, which is assumed to be low. VMS units are assumed to be reliable and an equipment malfunction is assumed to occur

rarely. The time needed to repair a malfunctioning unit would vary depending on the problem. While some repairs could likely be addressed quickly, professional service would need to be scheduled and technicians may only be available on weekdays. Thus, the more time allowed for an operator to remedy a malfunctioning unit, the less likely it is for a scheduled for-hire trip to be disrupted. **Option 2c** would provide the longest time period to remedy the problem at 14 days, providing operators with the greatest flexibility and allowing vessels to continue fishing the longest under an exemption. **Preferred Option 2b** would provide an intermediary period of 10 days, and **Option 2a** would provide the shortest period of 7 days. At the same time, there is a tradeoff between the flexibility afforded from an exemption and the resulting loss of VMS data from trips taken under an exemption. The social effects of this potential data loss are unclear, but would be related to any diminished effectiveness of data collection programs.

Preferred Alternative 3 specifies the number of exemptions within a calendar year that may be requested. Similar to **Preferred Alternative 2**, positive effects would be realized to the extent that an exemption prevents the disruption of a scheduled for-hire trip. Allowing for one exemption request per year (**Option 3a**) would likely be sufficient to cover most occurrences of VMS failure, as the units are considered reliable. Allowing for up to three exemption requests per year, **Option 3c** would provide operators with the most flexibility to avoid negative effects from trip disruptions or cancelations in the event a vessel's VMS unit continues to malfunction. The effects of **Preferred Option 3b** would be intermediary. Similar to the duration of an exemption (**Preferred Alternative 2**), the more exemptions that are granted, the greater the potential for loss of VMS data.

4.1.5 Direct and Indirect Effects on the Administrative Environment

The Southeast region federal for-hire fleet has fourteen NMFS type-approved VMS units to choose from as options to comply with SEFHIER program VMS requirements. Implementation of the equipment failure exemption would directly affect the administrative environment because it would require NMFS to develop an electronic method to submit the equipment exemption request and maintain a list of those vessels operating under the equipment failure exemption. The equipment exemption would provide a benefit to the vessel operators by allowing them to continue operations without an operational VMS. However, vessel permit holders would be required to electronically submit the equipment exemption form prior to moving on the water.

As the number of trips completed without VMS increases, data gaps become wider thereby weakening data collection efforts, compliance, and the ability to calibrate new data collected to existing data collections. This delay will potentially adversely impact management measures relying on these data. The VMS data are used for verifying compliance with the program, fishing effort, the number taken, and the type of trips taken by the industry. NMFS would need to develop an analysis strategy for this missing data.

Alternative 1, no action would maintain the requirement that vessels with Reef Fish and/or CMP federal charter/headboat permits have an approved VMS unit onboard, operating at all times, unless exempted by NMFS under a power-down exemption. The burden on law enforcement would not change under **Alternative 1**, since VMS reporting requirements are already in effect.

Preferred Alternatives 2 and 3 would require NMFS to develop and implement the mechanism to complete the exemption request and approval process. These alternatives would also require NMFS to develop and maintain a list of vessels that request the exemption throughout the calendar year. The burden on law enforcement would also increase under **Preferred Alternatives 2 and 3**. Outreach and communication would be needed to notify and educate the public, as well as increased enforcement efforts to verify exemptions are valid.

Implementation of the equipment failure exemption would directly affect the administrative environment, because it would require NMFS to develop a method to securely obtain the exemption electronically, evaluate the exemption for automatic approval or denial, store the data, relate the data to existing permit and logbook data sets, and analyze equipment exemptions for impacts to management. NMFS does not currently have a system capable of this data collection and would need to build a process to collect, evaluate, store, and link the data collected from this equipment exemption. In addition, NMFS will need to build a process and records retention protocol for submission of information documenting the equipment failure, and link that information to the original request.

NMFS will need to determine evaluation criteria to determine automatic approval or denial. This will require complex interactions with the permit system and vessel monitoring system to ensure the vessel submitted has not changed owners, does not exceed the number of approved equipment exemptions, does not exceed the allowed exemption days, and has submitted documentation within expected timeframes. NMFS will also need to build a communications module for informing law enforcement of vessels operating under an equipment failure. Finally, the permit system will need to be modified to ensure that transferred permits automatically end any equipment failure exemption on a vessel. The work required is considerable and requires the use of developers, database architects, and subject matter experts to ensure that the system is built to meet these needs. The digital equipment exemption request form must be submitted and approved through the Paperwork Reduction Act protocols. NMFS will also be required to modify the for-hire location reporting requirements in 622.26(b)(5) and 622.374(b)(5)(ii) through (v). The administrative burden would be expected to increase with **Preferred Alternative 2, Option 2b and and Preferred Alternative 3, Option 3b**, respectively, for both permit holders, vessel owners, operators, and NMFS. **Options 2a** and **3a**, would be less of an administrative burden than **Preferred Options 2b** and **3b** as they allow fewer exemptions to be granted per vessel per year and a reduced time period for each exemption. **Options 2c** and **3c**, would increase the administrative burden compared to the **Preferred Option 2b** and **3b** as they provide more exemptions per vessel per year to be granted and a longer duration of time per exemption.

4.2 Cumulative Effects Analysis

While this environmental assessment (EA) is being prepared using the 2020 Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) Regulations, the cumulative effects discussed in this section meet the two-part standard for "reasonable foreseeability" and "reasonably close causal connection" required by the new definition of effects or impacts.

Below is a five-step cumulative effects analysis that identifies criteria that must be considered in an EA.

1. **The area in which the effects of the proposed action will occur.**
   The affected area of this proposed action encompasses the state and federal waters of the Gulf, as well as Gulf communities that are dependent on reef fish fishing. Most relevant to this proposed action is reef fish and CMP species and those who fish for them. For more information about the area in which the effects of this proposed action will occur, please see Chapter 3, Affected Environment that describes these important resources as well as other relevant features of the human environment.

2. **The impacts that are expected in that area from the proposed action.**
   The proposed action would modify electronic reporting requirements for federally-permitted charter vessels and headboats in the Gulf. The environmental consequences of the proposed action are analyzed in detail in Section 4.1. This action is not expected to have significant beneficial or adverse cumulative effects on the physical and biological/ecological environments because the action is not expected to alter the general manner in which these vessels operate or the manner in which the reef fish or the CMP fisheries as a whole are prosecuted (Sections 4.1.1 and 4.1.2). These actions would likely have some positive direct and indirect effects on the social and economic environments, due to the ability to continue charter fishing operations while the vessel's VMS unit is being repaired, but may also impact the quality of the data collected depending on the number of exemptions and length of time the exemptions are in effect (Sections 4.1.3 and 4.1.4). The action is expected to impact the administrative environment, but not to any significant level (Section 4.1.5).

3. **Other past, present and RFFAs that have or are expected to have impacts in the area.**

   Other fishery related actions –There are numerous actions taken in the Gulf annually. Many of these activities are expected to have impacts associated with them. Below is a discussion those actions that have the potential to combine with the proposed action to result in cumulative effects.

   The Council and the South Atlantic Fishery Management Council (South Atlantic Council) implemented ACLs and AMs to prevent and correct ACL overages for all federally managed species. Improvements in federally permitted for-hire vessel reporting requirements are needed to improve in-season monitoring of the ACLs, and to facilitate the expeditious implementation of AMs for federally managed species when needed. More effective in-season monitoring efforts for Gulf reef fish and CMP species are likely to reduce the risk of future overfishing in those fisheries and foster sustainable fishing practices.

   The cumulative effects from managing the reef fish and CMP fishery have been analyzed in other actions as listed in part three of this section. They include detailed analysis of the reef fish and the CMP fishery, cumulative effects on non-target species, protected

species, and habitats in the Gulf. In general, the effects of these actions are positive as they ultimately act to restore/maintain the stocks at a level that will allow the maximum benefits in yield and recreational fishing opportunities to be achieved. However, for actions that reduce allowable harvest, some short-term negative impacts on the fisheries' social and economic environments may occur due to the need to limit directed harvest and reduce bycatch mortality. These negative impacts can be minimized by using combinations of management measures that provide the least disruption to the fishery while holding harvest to sustainable levels. Because this action is not expected to effect catch levels, these negative effects are not expected to result for reef fish or CMP fishery.

With respect to non-fishery related actions, these may affect reef fish or CMP species. Reef fish and CMP species are mobile and are able to avoid hypoxic (i.e. the Northern Gulf Hypoxic Zone) and red tide conditions, so any effects from these disturbances on these fish species are likely minimal regardless of this action. However, with red tide, some localized red tide events in coastal and estuarine areas may adversely affect reef fish and CMP species that inhabit these areas. Impacts from the *Deepwater Horizon* MC252 oil spill are still being examined; however, as indicated in Section 3.2, the oil spill had some adverse effects on fish species.

There is a large and growing body of literature on past, present, and future impacts of global climate change induced by human activities. Some of the likely effects commonly mentioned are sea level rise, increased frequency of severe weather events, and change in air and water temperatures. The Intergovernmental Panel on Climate Change has numerous reports addressing their assessments of climate change. Global climate changes could affect the Gulf fisheries as discussed in Section 3.2. However, the extent of these effects cannot be quantified at this time.

The proposed action is not expected to significantly contribute to climate change through the increase or decrease in the carbon footprint from fishing, as these actions should not change how the fishery is prosecuted. As described in Section 3.2, the contribution to greenhouse gas emissions from fishing is minor compared to other emission sources (e.g., oil platforms).

Non-fishery related actions - Forces affecting the reef fish fishery have been described in previous cumulative effect analyses (e.g., Amendment 53 [GMFMC 2021]). Three important examples include impacts of the *Deepwater Horizon* MC252 oil spill, the Northern Gulf Hypoxic Zone, and climate change (See Sections 3.1 and 3.2). Reef fish and CMP species are mobile and are able to avoid hypoxic conditions, so any effects from the Northern Gulf Hypoxic Zone on these species are likely minimal regardless of this action. Impacts from the *Deepwater Horizon* MC252 oil spill are still being examined; however, as indicated in Section 3.2, the oil spill had some adverse effects on fish species.

Actions affecting the CMP fishery have been described in previous cumulative effect analyses (e.g., Amendment 26). Three important events include impacts of the *Deepwater Horizon* MC252 oil spill, the Northern Gulf Hypoxic Zone, and climate change (See Section 3.2). Impacts from the *Deepwater Horizon* MC252 oil spill are still

being examined; however, as indicated in Section 3.3.2, the oil spill had some adverse effects on fish species. Further, the impacts on the food web from phytoplankton, to zooplankton, to mollusks, to top predators may be significant in the future. Impacts to CMS species from the oil spill may similarly affect other species that may be preyed upon by CMP species or that might benefit from a reduced CMP species stocks. However, since the majority of the spawning biomass for CMP species occurs outside the main areas affected by the *Deepwater Horizon* MC252 oil spill plume, it is less likely that a direct effect on CMP species will be detected. CMP species are mobile and are able to avoid hypoxic conditions, so any effects from the Northern Gulf Hypoxic Zone on CMP species are likely minimal.

There is a large and growing body of literature on past, present, and future impacts of global climate change induced by human activities. Some of the likely effects commonly mentioned are sea level rise, increased frequency of severe weather events, and change in air and water temperatures. The Intergovernmental Panel on Climate Change has numerous reports addressing their assessments of climate change. Global climate changes could affect the Gulf fisheries as discussed in Section 3.2. However, the extent of these effects cannot be quantified at this time. The proposed action is not expected to significantly contribute to climate change through the increase or decrease in the carbon footprint from fishing, as these actions should not change how the reef fish or CMP fishery is prosecuted. As described in Section 3.1, the contribution to greenhouse gas emissions from fishing is minor compared to other emission sources (e.g., oil platforms).

4. **The impacts or expected impacts from these other actions.**
The cumulative effects from managing the reef fish and CMP fishery have been analyzed in other actions as listed in part three of this section. They include detailed analysis of the reef fish and CMP fishery, cumulative effects on non-target species, protected species, and habitats in the Gulf. In general, the effects of these actions are positive as they ultimately act to restore/maintain the stocks at a level that will allow the maximum benefits in yield and recreational fishing opportunities to be achieved.

5. **The overall impact that can be expected if the individual impacts are allowed to accumulate.**
This action, combined with other past actions, present actions, and RFFAs, is not expected to have significant beneficial or adverse effects on the physical and biological/ecological environments because this action would only minimally affect current fishing practices (Sections 4.1.1 and 4.1.2). For the social and economic environments, effects should be positive (Sections 4.1.3 and 4.1.4). The management measures in **Preferred Alternatives 2** and **3** could be associated with adverse effects, if large data gaps occur, due to the diminished effectiveness of data collection programs which support the design of fishery management policy. However, vessel owner/operators must still meet all other reporting requirements of the Southeast For-Hire Integrated Electronic Reporting Program. Most effects are likely minimal as the proposed action, along with other past actions, present actions, and RFFAs, are not expected to alter the manner in which the reef fish and CMP fishery is prosecuted. Because it is unlikely there would be any changes in how the fisheries are prosecuted,

this action, combined with past actions, present actions, and RFFAs, is not expected to have significant adverse effects on public health or safety.

6. **Summary**

The proposed action is not expected to have individual significant effects to the biological, physical, social, or economic environment. Any effects of the proposed action, when combined with other past actions, present actions, and RFFAs are not expected to be significant. The effects of the proposed action are, and will continue to be, monitored through collection of landings data by NMFS, stock assessments and stock assessment updates, life history studies, economic and social analyses, and other scientific observations. Landings data for the recreational sector in the Gulf are collected through MRIP, the Southeast Region Headboat Survey, the Texas Marine Recreational Fishing Survey, and the Louisiana Department of Wildlife and Fisheries Creel Survey. In addition, the Alabama Department of Conservation and Natural Resources, Mississippi Department of Marine Resources, and Florida Fish and Wildlife Conservation Commission have instituted programs to collect information on reef fish and CMP species, and in particular, recreational landings information. Although not affected by this action, commercial data are collected through trip ticket programs, port samplers, and logbook programs, as well as dealer reporting through the IFQ program.

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GMFMC = Gulf of Mexico Fishery Management Council; NOAA GC = National Oceanic and Atmospheric Administration General Counsel; SEFSC = Southeast Fisheries Science Center; SERO = Southeast Regional Office of the National Marine Fisheries Service

CHAPTER 6. LIST OF AGENCIES, ORGANIZATIONS, AND PERSONS CONSULTED

National Marine Fisheries Service
- Southeast Fisheries Science Center
- Southeast Regional Office
    - Protected Resources
    - Habitat Conservation
    - Sustainable Fisheries
    - Office of Law Enforcement

NOAA General Counsel
U.S. Coast Guard
Alabama Department of Conservation and Natural Resources/Marine Resources Division
Florida Fish and Wildlife Conservation Commission
Louisiana Department of Wildlife and Fisheries
Mississippi Department of Marine Resources
Texas Parks and Wildlife Department

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APPENDIX A. ACTIONS AND ALTERNATIVES AMENDED, OR CONSIDERED BUT REJECTED

At its October 2021 meeting, the Gulf Council removed Alternative 2, Options 2a in Actions 1 and 2, from further consideration. A subsequent motion was made to add an option, in Actions 1 and 2, for 14 calendar days. This changed the Alternative 2 Options from 3, 7, and 10 calendar days to 7, 10, and 14 calendar days. The Council then moved the entirety of Action 2 to considered but rejected.

Action 1 - Modify requirements for vessels with a Charter/Headboat Reef Fish and/or Charter/Headboat Coastal Migratory Pelagic permit to allow for an exemption to VMS requirements to address equipment failure.

Alternative 2: Create an exemption to the VMS requirement to address equipment failure and set a limit on the number of days that the NMFS-approved exemption method is valid, for vessels with Charter/Headboat permits for Reef Fish and/or CMP:

Option 2a: The exemption will be valid for up to 3 days from submittal date.

Action 2 - Modify requirements for vessels with a Commercial Reef Fish permit to allow for an exemption to VMS requirements to address equipment failure

Alternative 2: Create an exemption to the VMS requirement to address equipment failure and set a limit on the number of days that the NMFS-approved exemption method is valid, in order to address equipment failure for vessels with Commercial Reef Fish permits.

Option 2a: The exemption will be valid for up to 3 days from submittal date.

Action 2 - Modify requirements for vessels with a Commercial Reef Fish permit to allow for an exemption to VMS requirements to address equipment failure.

Alternative 1: (No Action): Maintain requirement that vessels with Commercial Reef Fish permits have an approved VMS unit operating on board at all times unless exempted by NMFS under a power-down exemption.

Alternative 2: Create an exemption to the VMS requirement to address equipment failure and set a limit on the number of days that the NMFS-approved exemption method is valid, in order to address equipment failure for vessels with Commercial Reef Fish permits.

Option 2a: The exemption will be valid for up to 3 days from submittal date.
Preferred Option 2b: The exemption will be valid for up to 7 days from submittal date.
Option 2c: The exemption will be valid for up to 10 days from submittal date.

Alternative 3: Create an exemption to the VMS requirement to address equipment failure and set a limit on the number of times a permit holder can request the exemption each calendar year, per vessel:

Option 3a: The permit holder may not request more than one exemption per vessel per calendar year.

Preferred Option 3b: The permit holder may not request more than two exemptions per vessel per calendar year.

Option 3c: The permit holder may not request more than three exemptions per vessel per calendar year.

APPENDIX B. 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. 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 3.2.2), E.O. 12866 (Regulatory Planning and Review, Chapter 5) and E.O. 12898 (Environmental Justice, Section 3.4.3). 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 action in this framework.

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 framework 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 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.[29]

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

[29] http://www.boem.gov/Environmental-Stewardship/Archaeology/Shipwrecks.aspx

Mexico (Gulf), the *U.S.S. Hatteras*, located in federal waters off Texas, is listed in the National Register of Historic Places.[30] 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.

Executive Orders (E.O.)

E.O. 12630: Takings

The E.O. on Government Actions and Interference with Constitutionally Protected Property Rights that became effective March 18, 1988, requires each federal agency prepare a Takings Implication Assessment for any of its administrative, regulatory, and legislative policies and actions that affect, or may affect, the use of any real or personal property. Clearance of a regulatory action must include a takings statement and, if appropriate, a Takings Implication Assessment. The NOAA Office of General Counsel will determine whether a Taking Implication Assessment is necessary for this amendment.

E.O. 12962: Recreational Fisheries

This E.O. requires federal agencies, in cooperation with states and tribes, to improve the quantity, function, sustainable productivity, and distribution of U.S. aquatic resources for increased recreational fishing opportunities through a variety of methods including, but not limited to, developing joint partnerships; promoting the restoration of recreational fishing areas that are limited by water quality and habitat degradation; fostering sound aquatic conservation and restoration endeavors; and evaluating the effects of federally-funded, permitted, or authorized actions on aquatic systems and recreational fisheries, and documenting those effects. Additionally, it establishes a seven-member National Recreational Fisheries Coordination Council (NRFCC) responsible for, among other things, ensuring that social and economic values of healthy aquatic systems that support recreational fisheries are considered by federal agencies in the course of their actions, sharing the latest resource information and management technologies, and reducing duplicative and cost-inefficient programs among federal agencies involved in conserving or managing recreational fisheries. The NRFCC also is responsible for developing, in cooperation with federal agencies, States and Tribes, a Recreational Fishery Resource Conservation Plan - to include a five-year agenda. Finally, the E.O. requires NMFS and the United States Fish and Wildlife Service to develop a joint agency policy for administering the ESA.

E.O. 13089: Coral Reef Protection

The E.O. on Coral Reef Protection requires federal agencies, whose actions may affect U.S. coral reef ecosystems, to identify those actions, utilize their programs and authorities to protect and enhance the conditions of such ecosystems, and, to the extent permitted by law, ensure actions

[30] Further information can be found at http://www.boem.gov/Environmental-Stewardship/Archaeology/Shipwrecks.aspx.

that they authorize, fund, or carry out do not degrade the condition of that ecosystem. By definition, a U.S. coral reef ecosystem means those species, habitats, and other national resources associated with coral reefs in all maritime areas and zones subject to the jurisdiction or control of the United States (e.g., federal, state, territorial, or commonwealth waters).

Regulations are already in place to limit or reduce habitat impacts within the Flower Garden Banks National Marine Sanctuary. Additionally, NMFS approved and implemented Generic Amendment 3 for Essential Fish Habitat (GMFMC 2005), which established additional habitat areas of particular concern (HAPC) and gear restrictions to protect corals throughout the Gulf. There are no implications to coral reefs by the actions proposed in this amendment.

E.O. 13132: Federalism

The E.O. on Federalism requires agencies in formulating and implementing policies, to be guided by the fundamental Federalism principles. The E.O. serves to guarantee the division of governmental responsibilities between the national government and the states that was intended by the framers of the Constitution. Federalism is rooted in the belief that issues not national in scope or significance are most appropriately addressed by the level of government closest to the people. This E.O. is relevant to FMPs and amendments given the overlapping authorities of NMFS, the states, and local authorities in managing coastal resources, including fisheries, and the need for a clear definition of responsibilities. It is important to recognize those components of the ecosystem over which fishery managers have no direct control and to develop strategies to address them in conjunction with appropriate state, tribes and local entities (international too).

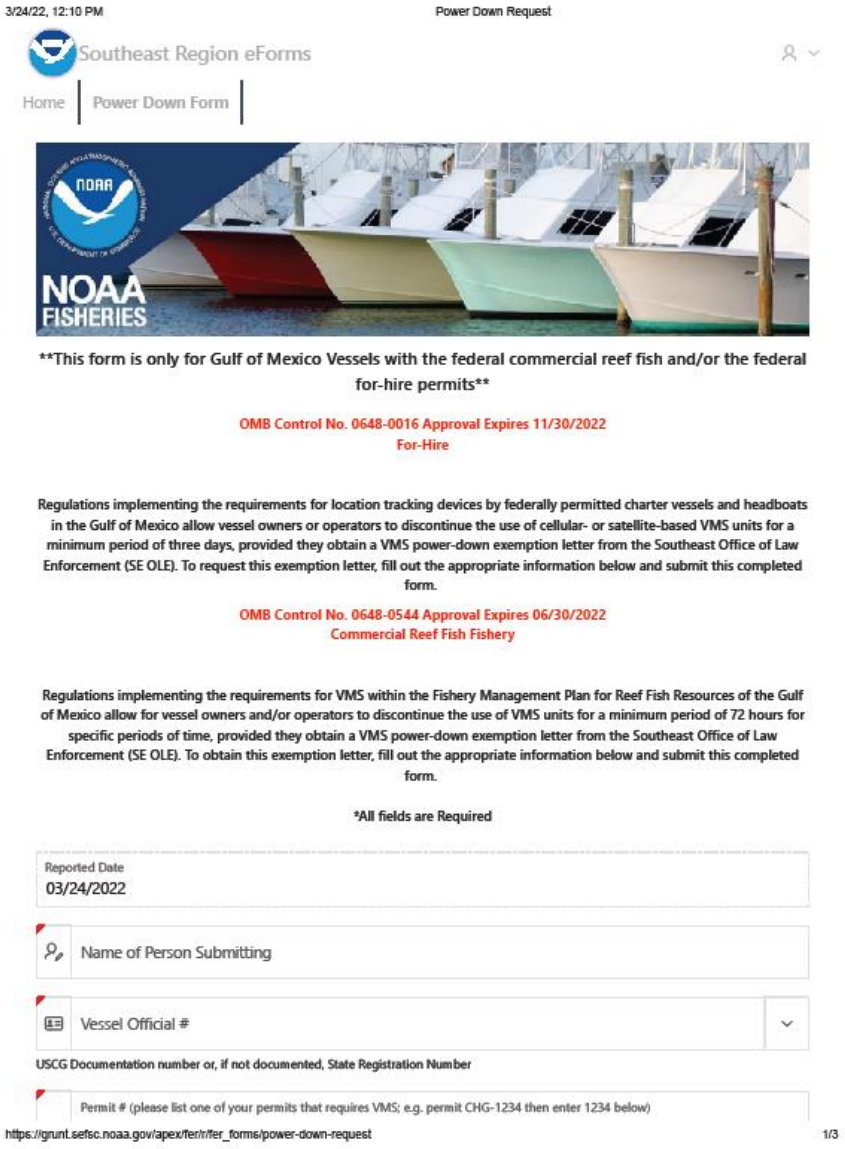
No Federalism issues were identified relative to the action to modify the gray triggerfish catch levels. Therefore, consultation with state officials under Executive Order 12612 was not necessary.

E.O. 13158: Marine Protected Areas

This E.O. requires federal agencies to consider whether their proposed action(s) will affect any area of the marine environment that has been reserved by federal, state, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural or cultural resource within the protected area. There are several marine protected areas, HAPCs, and gear-restricted areas in the eastern and northwestern Gulf. The existing areas are entirely within federal waters of the Gulf. They do not affect any areas reserved by federal, state, territorial, tribal or local jurisdictions.

APPENDIX C. POWER DOWN EXEMPTION REQUEST FORM

Portion of online Power Down Exemption Request form available from NOAA Fisheries. The entire form can be found at: https://grunt.sefsc.noaa.gov/apex/fer/r/fer_forms/power-down-request.



3/24/22, 12:10 PM Power Down Request

Southeast Region eForms

Home | Power Down Form

This form is only for Gulf of Mexico Vessels with the federal commercial reef fish and/or the federal for-hire permits

OMB Control No. 0648-0016 Approval Expires 11/30/2022
For-Hire

Regulations implementing the requirements for location tracking devices by federally permitted charter vessels and headboats in the Gulf of Mexico allow vessel owners or operators to discontinue the use of cellular- or satellite-based VMS units for a minimum period of three days, provided they obtain a VMS power-down exemption letter from the Southeast Office of Law Enforcement (SE OLE). To request this exemption letter, fill out the appropriate information below and submit this completed form.

OMB Control No. 0648-0544 Approval Expires 06/30/2022
Commercial Reef Fish Fishery

Regulations implementing the requirements for VMS within the Fishery Management Plan for Reef Fish Resources of the Gulf of Mexico allow for vessel owners and/or operators to discontinue the use of VMS units for a minimum period of 72 hours for specific periods of time, provided they obtain a VMS power-down exemption letter from the Southeast Office of Law Enforcement (SE OLE). To obtain this exemption letter, fill out the appropriate information below and submit this completed form.

*All fields are Required

Reported Date
03/24/2022

Name of Person Submitting

Vessel Official #

USCG Documentation number or, if not documented, State Registration Number

Permit # (please list one of your permits that requires VMS; e.g. permit CHG-1234 then enter 1234 below)

https://grunt.sefsc.noaa.gov/apex/fer/r/fer_forms/power-down-request 1/3

APPENDIX D. VENDOR RESPONSES TO DURABILITY OF VMS UNITS

Responses to Durability of VMS Units - Type Approved Vendors for the Gulf of Mexico For-Hire Fisheries and/or Commercial Reef Fish Fishery of the Gulf of Mexico

Request sent to all vendors:
We request all VMS vendors currently type approved for the Commercial Reef Fish Fishery of the Gulf of Mexico and the Gulf of Mexico For-Hire Fisheries, in the Southeast Region provide a brief summary and/or statement on the durability of their units. Current fishing amendments are pending related to the For-Hire fleet in the SED. There is a concern from the industry on how often a VMS unit may fail and time to replace a malfunctioning unit which would not allow them to fish, per current regulations. Any information and data that will highlight individual vendor's customer service processes and unit durability will aid in alleviating industry concern about being potentially held at the dock due to equipment replacement time.

Received Responses Faria Beede:
Thank you for your request to clarify system durability on the Faria Beede ETerm-C for the Gulf of Mexico For Hire roll-out currently scheduled for December 2021. Faria Beede understands the concern and appreciates the opportunity to respond. Faria Beede, a World-class type- approved manufacturer, with 20+ years of experience producing telematics systems for domestic and international fisheries has worked with supply partners to provide the very best product that is available in the market. The company has the highest levels of confidence that that product will perform as expected. If, for some reason a system does fail, there is both an internal and external mechanism in place to support the customer and keep them fishing.

We understand that many customers have a perception that a malfunctioning system will keep them from their livelihood – fishing. The fact is, the Faria Beede ETerm-C is a hardened system, running mature software and firmware produced by Faria Beede – a company with significant Worldwide telematics experience. With more than 5,000 VMS systems installed in the World's harshest environments the failure rate on telematics system is extremely low with less than 3-5 failures in any calendar year. Many Faria Beede systems are 7+ years old running 24/7/365, so this durability is truly World-class!

The Faria Beede ETerm-C is designed for harsh marine, military, industrial and VMS applications. The product was quickly type approved by NOAA / VISMA in April of 2021. From the first installs in late 2020 until June 7, 2021, no failures were found with the NOAA test systems nor the NOAA test boats nor the Faria Beede private real-World test vessels. The Android-based IP64-rated (International Protection Code) is a perfect fit for a saltwater environment. Fact is, Android products are mature / durable products; even today's most basic Android-based products rarely fail due to dust, dirt, debris, shock, water intrusion, UV, temperature extremes nor vibration. From a supply chain perspective, Faria Beede has positioned itself well for any potential failures. Not only can replacement systems be shipped

within 24 hours by calling the Faria Beede help line, but stock is located in Florida for same-day delivery should it be required. Just as a boat-owner should be checking their tanks for fuel, their baitwells for bait, and their chartplotters / radar and sonar for proper operation, they too should be checking their VMS systems for proper operation. If the system is NOT operating as planned for some reason, a boat owner simply needs to dial the help line at (800) 473-2742 for assistance with troubleshooting and solving most problems in a matter of minutes. In the unlikely event this troubleshooting defines that the unit has actually failed, a new, easy-to-install (in less than 1- hour) replacement will be ready in 24 hours – much more quickly than any engine, electronics or safety failure.

It is worth noting that Faria Beede and its sister company Riverside MFG., LLC have more than 100 years of combined industrial, military and marine experience producing, testing, procuring and providing instrumentation, telematics systems and other complex electrical systems with very low failure rates. The company's overall return rate is less than 0.5% on all products sold company-wide with VMS telematics solutions always scoring well by internal and external audits. Faria Beede invites you to visit and audit our facilities, work instructions and testing. You will see that the organization is nothing short of World-Class.

If you require additional information, metrics or would like to schedule an on-site audit, please let us know. We look forward to a successful roll-out.

Addvalue:

iFleetONE, a NOAA approved EMTU for VMS, is a maritime satellite communication terminal developed and manufactured by Addvalue to meet all the necessary industrial and regulatory standards. Designed with a reliability metric of Mean Time Between Failures ("MTBF") of at least 3 years, iFleetONE has been well proven to operate in harsh maritime environments seen by small and medium vessels as its overall field return rate is way below 2%.

Addvalue has forged partnerships to support the sale and after-sale activities for iFleetONE-VMS. These partners, counting renowned marine service companies such as Pivotel, Marlink and Mackay, are trained to provide iFleetONE-VMS installation and maintenance support. There will be sufficient buffer stocks and spare parts in USA to ensure timely repair and replacement to minimize equipment down time.

Kalaivanan K

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Skymate:

SkyMate has been a Type-Approved supplier of VMS Systems to the NMFS VMS program for

almost 20 years. Our current VMS System (SkyMate m1600VMS) has been approved in all NMFS regions including the Gulf of Mexico For-Hire Fisheries as well as multiple international VMS Type-Approvals. Since 2015 SkyMate has deployed over 1,300 VMS systems, of these over 95% are still functional.

All SkyMate VMS systems are designed/built for marine environments and thoroughly tested in house. SkyMate VMS systems have a CE Mark, IEC 60945, EN 60529, IP67, and have a history of reliability.

With a network of over 100 dealers across the USA (more than 25 dealers in the Gulf of Mexico) backed by sales reps in the field, 24/7 technical support (703-961-5800, X500) and next day shipping; SkyMate has the team to support our customers quickly and effectively. SkyMate VMS customers can focus on fishing.

Craig Myers Product Manager 703-961-5815

Orolia OmniCom

The Orolia OmniCom unit meets and exceed all needed environmental regulations and tests including but not limited to IEC 60945, IEC60529, and IEC60950.

To date we have more than 10000 hours of deployment with less than 3 failures! Our system uptime is measured at 99.99%. Orolia provides 24-hour support via a toll-free number and we have trained agents throughout the USA. Should a replacement unit be needed we can have it anywhere within 24 hours and usually within 12 hours!

Best regards Henry Nel

Product Line Director - Fleet

Woods Hole Group:

We expect a Triton Advanced EMTU to provide a useful life of a minimum of 5 years once deployed into a marine environment. In the event that a unit may be damaged, or should there be a rare technical failure, we typically keep a stock of 100 units minimum in our Maryland logistics center, where we can overnight spares and/or replacements to the F/V.

Regards, Nick