

Modification of For-hire Multi-day Trip Possession Limits



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

October 2019



This is a publication of the Gulf of Mexico Fishery Management Council Pursuant to National Oceanic and Atmospheric Administration Award No. NA15NMF4410011.

This page intentionally blank

FRAMEWORK ACTION COVER SHEET

Name of Action

Generic Framework Action to the Fishery Management Plans for Reef Fish Resources of the Gulf of Mexico and Coastal Migratory Pelagic Resources in the Gulf of Mexico and South Atlantic Region: Modification of For-Hire Multi-day Trip Possession Limits including Environmental Assessment, Regulatory Impact Review, and Regulatory Flexibility Act Analysis.

Responsible Agencies and Contact Persons

Gulf of Mexico Fishery Management Council (Council) 813-348-1630
4107 W. Spruce Street, Suite 200 813-348-1711 (fax)
Tampa, Florida 33607 gulfcouncil@gulfcouncil.org
Ryan Rindone (ryan.rindone@gulfcouncil.org) <http://www.gulfcouncil.org>
Natasha Mendez-Ferrer (natasha.mendez@gulfcouncil.org)

National Marine Fisheries Service (Lead Agency) 727-824-5305
Southeast Regional Office 727-824-5308 (fax)
263 13th Avenue South <http://sero.nmfs.noaa.gov>
St. Petersburg, Florida 33701
Rich Malinowski (rich.malinowski@noaa.gov)

Type of Action

Administrative
 Draft

Legislative
 Final

ABBREVIATIONS USED IN THIS DOCUMENT

CFR	code of federal regulations
CHTS	Coastal Household Telephone Survey
CMP	coastal migratory pelagic
Council	Gulf of Mexico Fishery Management Council
CS	consumer surplus
EEZ	exclusive economic zone
E.O.	executive order
FES	fishing effort survey
FHS	for-hire survey
FMP	Fishery Management Plan
GDP	gross domestic product
Gulf	Gulf of Mexico
MRIP	Marine Recreational Information Program
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOR	net operating revenue
PS	producer surplus
RIR	regulatory impact review
SEFSC	Southeast Fisheries Science Center
TPWD	Texas Parks and Wildlife Department
USCG	United States Coast Guard

TABLE OF CONTENTS

Framework Action Cover Sheet.....	i
Abbreviations Used in this Document	ii
Table of Contents	iii
List of Tables	iv
Chapter 1. Introduction	1
1.1 Background	1
1.2 Purpose and Need	4
1.3 History of Management.....	5
1.4 Proposed Management Options.....	6
1.4.1 Preferred Option Discussion	7
1.4.2 Council Conclusions:	7
Chapter 2. Regulatory Impact Review.....	9
2.1 Introduction	9
2.2 Problems and Objectives	9
2.3 Description of Fisheries.....	9
2.3.1 Reef Fish	9
2.3.2 Coastal Migratory Pelagic.....	17
2.4 Impacts of Management Action	22
2.5 Public and Private Costs of Regulations	23
2.6 Determination of Significant Regulatory Action	24
Chapter 3. Regulatory Flexibility Analysis	25
3.1 Description of the projected reporting, record-keeping and other compliance requirements of the proposed action, including an estimate of the classes of small entities which will be subject to the requirement and the type of professional skills necessary for the preparation of the report or records	25
3.2 Identification of all relevant federal rules, which may duplicate, overlap or conflict with the proposed action.....	25
3.3 Significance of economic impacts on a substantial number of small entities	25
3.4 Description of the significant alternatives to the proposed action and discussion of how the alternatives attempt to minimize economic impacts on small entities	26
Chapter 4. References	27
Appendix A. Current Regulations on Possession Limits.....	30
Appendix B. Supplemental Analyses	31
Appendix C. Public Comments Received.....	33

LIST OF TABLES

Table 1.1.1. The number of SRHS headboat trips from 2014 through 2018, commensurate with the trip duration options presented in Section 1.4 of this document.....	2
Table 1.1.2. The number and percentage of SRHS headboat trips from 2014 through 2018 from the Gulf that captured a reef fish or coastal migratory pelagic species <24 or ≥24 hours.....	2
Table 1.1.3. The number and percentage of unique SRHS headboat vessels from 2014 through 2018 from the Gulf that captured a reef fish or coastal migratory pelagic species fishing <24 or ≥24 hours.	3
Table 1.1.4. The number of sampled Gulf FHS trips from 2014 through 2018 ≥ 24 hours in duration.	3
Table 1.1.5. The number of unique vessels sampled in the Gulf FHS from 2014 through 2018 by trip duration category.	4
Table 2.3.1.1. Number of Gulf reef fish recreational target trips, by mode and state, 2014-2018.*	12
Table 2.3.1.2. Gulf headboat angler days and percent distribution by state (2014 through 2018).	13
Table 2.3.1.3. Gulf headboat angler days (in thousands) and percent distribution by month (2014 – 2018).	14
Table 2.3.1.4. Estimated annual average economic impacts (2014-2018) from recreational trips that targeted reef fish species in the Gulf, by state and mode, using state-level multipliers.	17
Table 2.3.2.1. Number of Gulf CMP recreational target trips, by mode and state, 2014-2018.*	19
Table 2.3.2.2. Estimated annual average economic impacts (2014-2018) from recreational trips that targeted CMP species in the Gulf, by state and mode, using state-level multipliers.	22
Table B.1. The number of MRIP intercepts from 2014 through 2018 (n=34,164) from the Gulf of Mexico (AL, FL, and MS) that captured a reef fish or CMP species by mode and hours fished.	31
Table B.2. The number of TPWD intercepts from 2014 through 2018 recording a reef fish or CMP species by mode and trip duration.	32

CHAPTER 1. INTRODUCTION

1.1 Background

In federal waters of the Gulf of Mexico (Gulf), persons aboard a vessel with a federal Gulf charter/headboat permit for reef fish or coastal migratory pelagic fish (for-hire permit) that is on a for-hire trip greater than 24 hours in duration are generally allowed to possess two daily bag limits of species managed under the Fishery Management Plan for Reef Fish Resources of the Gulf (Reef Fish FMP) and the FMP for Coastal Migratory Pelagic Resources in the Gulf and South Atlantic Region (CMP FMP) after the first 24 hours has passed. One exception to the two-day bag limit allowance is for the Gulf migratory group of cobia. The possession of Gulf migratory group cobia is two per person per day regardless of the duration of a trip. In addition, speckled hind and Warsaw grouper have daily bag limits of one fish per vessel per day; therefore, the possession limit after 24 hours is two vessel limits, or 2 fish per vessel. For-hire trips greater than 24 hours in duration must have two United States Coast Guard (USCG) licensed captains on board, and every passenger must have a receipt for the fishing trip which verifies the length of the trip (50 C.F.R. § 622.38(c)). The ability for anglers to retain two daily bag limits comes into effect after the trip duration has exceeded 24 hours; meaning, that during the first 24 hours of the trip, each person (or vessel limit in the case of speckled hind and Warsaw grouper) may only possess one daily bag limit (50 C.F.R. § 622.11(a)(1); Appendix A). After 24 hours have passed and up to any trip duration thereafter, no more than two daily bag limits may be possessed per person (or vessel).

The Gulf of Mexico Fishery Management Council (Council) heard testimony at its meeting in June 2019 that some vessel captains may have misinterpreted the regulations as allowing the possession of two daily bag limits at any time during a trip that lasts more than 24 hours. According to testimony, allowing anglers to retain the possession limit at any time during the multi-day trip could increase the efficiency of the trip and reduce regulatory discards. For example, some vessels prefer to target one species at a time in spots in which that species is prolific, fishing until the two-day bag limit (for the planned multi-day trip) has been retained to minimize discard mortality and increase fishing efficiency. After the two-day bag limit has been possessed, the vessel captains actively attempt to avoid that species for the remainder of the multi-day trip. Current regulations prohibit such vessel captains from allowing anglers to possess the second bag limit until 24 hours of the trip have passed, requiring those captains to resume fishing for the target species after the first 24-hour period. If for-hire vessels were allowed to possess the second bag limit within the initial 24 hours of a trip that lasts more than 24 hours, a vessel operator would be able to allow passengers to possess the second bag limit at any time which could increase trip efficiency, potentially reduce discards, and provide for increased flexibility in fishing operations.

Table 1.1.1 shows the number of headboat trips from 2014 – 2018 based on data reported to the Southeast Region Headboat Survey (SRHS), separated by the trip duration options presented in Section 1.4 of this document. Trip duration is defined as the amount of time that elapsed between when the vessel left the dock to when the vessel returned to the dock. The trip duration categories represent headboat vessel trips less than or exceeding 24 hours in duration in the Gulf. It should be noted that the total number of headboat trips in excess of 24 hours in duration taken

between 2014 and 2018 accounts for only ~2.79% of all headboat trips of any duration recorded by the SRHS for the same time period.

Table 1.1.1. The number of SRHS headboat trips from 2014 through 2018, commensurate with the trip duration options presented in Section 1.4 of this document.

Trip Duration	Number of Trips	% of Total Trips
< 24 Hours	44,765	97.2%
24 – 29.9 Hours	262	0.6%
30 – 35.9 Hours	251	0.5%
≥ 36 Hours	777	1.7%

Source: SRHS eLog file [August 30, 2019].

From 2014 through 2018, there were a total of 46,092 SRHS trips that captured a reef fish or coastal migratory pelagic species in the Gulf (Table 1.1.2). Less than 3% of SRHS trips annually were greater than or equal to 24 hours in duration, with the exception of 2018 which was 3.2%. Approximately, 35% of headboat vessels make at least one trip annually that is greater than or equal to 24 hours in duration, and the number of trips of this type made by these vessels increased from 2014 to 2016, and then declined in the two years thereafter (Tables 1.1.2 and 1.1.3).

Table 1.1.2. The number and percentage of SRHS headboat trips from 2014 through 2018 from the Gulf that captured a reef fish or coastal migratory pelagic species <24 or ≥24 hours.

Year	Number of Trips <24 Hours	Number of Trips ≥24 Hours	Percentage of Trips ≥24 Hours
2014	8,557	221	2.5%
2015	8,957	251	2.7%
2016	9,296	246	2.6%
2017	9,073	274	2.9%
2018	8,919	298	3.2%

Source: SRHS CRNF file [August 15, 2019].

Table 1.1.3. The number and percentage of unique SRHS headboat vessels from 2014 through 2018 from the Gulf that captured a reef fish or coastal migratory pelagic species fishing <24 or ≥24 hours.

Year	Total Number of Vessels in SRHS	Number of Vessels Fished ≥24 Hours	Percentage of Vessels Fished ≥24 Hours
2014	68	26	38%
2015	68	23	34%
2016	68	22	32%
2017	71	24	34%
2018	71	27	38%

Source: SRHS CRNF file [August 15, 2019].

In addition to the information collected from headboat vessels through the SRHS, information is collected from charter vessels through the Marine Recreational Information Program (MRIP) For-Hire Survey (FHS). This weekly telephone survey collected information from state and federally permitted charter vessel operators to estimate fishing effort from the charter component of the recreational sector (see Appendix B for supplemental data). Texas and Louisiana did not participate in the FHS. The FHS used a list of state and federally permitted charter vessels to conduct its sampling. The FHS asked vessel operators to report fishing activity during a one-week reference period and to recount details from each trip. In 2018 MRIP completed a transition from the weekly phone survey to a mail survey that included several improvements. The mail survey and research has found that response rates are much higher for mail surveys, and may result in more accurate reports of fishing activity than telephone surveys provided.

From 2014 through 2018, there were 39,520 trips available from 1,928 unique vessels for which a dock to dock duration could be calculated from the data. Only 117 trips (<0.3%) taken by 47 vessels (2.4%) had a dock-to-dock trip duration ≥ 24 hours (Tables 1.1.4 and 1.1.5).

Table 1.1.4. The number of sampled Gulf FHS trips from 2014 through 2018 ≥ 24 hours in duration. Note: Texas and Louisiana were not included in the FHS for these years.

Trip Duration	Number of Trips	% of Total Trips
< 24 Hours	39,403	99.7%
24 – 30 Hours	16	< 0.1%
30.1 – 36 Hours	33	< 0.1%
> 36 Hours	68	0.2%

Source: MRIP FHS files [August 19, 2019].

Table 1.1.5. The number of unique vessels sampled in the Gulf FHS from 2014 through 2018 by trip duration category. The total number of unique vessels sampled is 1,928; however, vessels can make trips in multiple trip duration categories.

Trip Duration	Number of Vessels (n = 1,928)
< 24 Hours	1,924
24 – 30 Hours	14
30.1 – 36 Hours	18
> 36 Hours	28

Source: MRIP FHS files [August 19, 2019].

Additional analyses using the FHS data examined for-hire trips primary and secondary target species, but a high percentage of trips had only “bony fishes” recorded as a target species. The analyses only included trips targeting reef fish or CMP species, and excluded trips targeting the general “bony fishes” category. As such, these analyses may underestimate the number of trips targeting the managed species. From 2014 through 2018, there is information from 13,290 for-hire trips taken by 1,129 unique vessels that targeted either a reef fish or coastal migratory pelagic species. From these trips, only 33 trips (<0.3%) by 22 unique vessels (1.9%) had a dock to dock trip duration \geq 24 hours.

The Texas Parks and Wildlife Division does record trip duration to the nearest half hour (i.e., from dock to dock) through survey intercepts. From 2014 through 2018, there were 3,341 intercepts of trips on which a reef fish or CMP species was caught and provided the trip length. No charter or private angling trips were recorded longer than 12 hours.

In response to the public comment noted above, the Council decided to begin work on this generic framework action to examine options for modifying the requirements for the possession of two daily bag limits on appropriately compliant for-hire vessels (those with two USCG-licensed captains, on trips exceeding a specified duration, and with all anglers in possession of a receipt indicating the trip duration).

1.2 Purpose and Need

The purpose of this action is to modify requirements for the multi-day possession limit for persons aboard federal for-hire vessels.

The need for this action is to promote efficiency in the utilization of the reef fish and CMP resources and a potential decrease in regulatory discards by providing the owners and operators of federally permitted for-hire vessels greater flexibility in determining when to allow passengers to retain the possession limit on multi-day trips.

1.3 History of Management

This history of management focuses on events pertinent to possession limits on federal for-hire vessels. A complete history of management for the Reef Fish FMP and CMP FMP are available on the Council's website at <http://gulfcouncil.org/fishery-management/implemented-plans/reef-fish/>, and <http://gulfcouncil.org/fishery-management/implemented-plans/coastal-migratory-pelagics/>, respectively.

Reef Fish

The final rule for the **Reef Fish FMP** (GMFMC 1981) was effective November 8, 1984, and defined the reef fish fishery management unit. The Reef Fish FMP established an exemption to the minimum size limit to possess five undersized red snapper per person, among other regulatory actions.

Amendment 1 (GMFMC 1989) established the allowance for a 2-day possession limit for for-hire vessels on trips that extend beyond 24 hours, provided the vessel has two licensed operators aboard as required by the USCG and each passenger can provide a receipt to verify the length of the trip. All other fishermen fishing under a bag limit are limited to a single day possession limit. The amendment also established bag limits (e.g., red snapper, aggregate grouper and snapper, and greater amberjack) and minimum size limits for many reef fish species, among other actions.

In 1996, the National Marine Fisheries Service (NMFS) consolidated 11 code of federal regulations (CFR) parts into one new CFR part, including Gulf reef fish regulations and Gulf and South Atlantic CMP regulations (61 FR 47821). The intent of this rule was to make the regulations more concise, better organized, and more uniform among fisheries, making them easier for the public to use. However, some modifications were made that resulted in substantive effects. This rule modified the language of the bag and possession limit regulations, which included adding language that expressly stated that the second bag limit may not be retained until 24 hours had elapsed on a for-hire trip. These changes were not reviewed nor approved by the Council.

Secretarial Amendment 1 (GMFMC 2004) included several actions for the management of red grouper, including the reduction in the bag limit to two red grouper within the five aggregate grouper bag limit per person. The amendment stated that "it is the Council's intent that the double bag limit allowance apply on qualified for-hire vessels that are out over 24 hours" (GMFMC 2004:14).

Bag limit for Captain and Crew of For-hire Vessels

A series of regulatory actions alternately prohibited then allowed the captain and crew on for-hire trips to retain a bag limit of red snapper or other reef fish. A **February 1998 Regulatory Amendment** (GMFMC 1998a) proposed setting a zero bag limit for the captain and crew of for-hire vessels to extend the red snapper season for the recreational sector, but the provision was not implemented. A **December 1998 Regulatory Amendment** (GMFMC 1998b) prohibited the

captain and crew of for-hire vessels from retaining a bag limit of red snapper. A **February 2000 Regulatory Amendment** (GMFMC 2000a) reinstated the allowance for captain and crew of for-hire vessels to retain a red snapper bag limit. **Joint Reef Fish Amendment 27/Shrimp 14** (GMFMC 2007) prohibited retention of a bag limit for red snapper by captain and crew on for-hire vessels.

A **March 2006 Regulatory Amendment** (GMFMC 2006) prohibited the captain and crew of for-hire vessels from retaining a bag limit of grouper when under charter.

Amendment 30A (GMFMC 2008) added greater amberjack to the reef fish species of which captain and crew may not retain a bag limit.

CMP

The final rule for the **CMP FMP** (GMFMC 1983) defined the CMP fishery management unit.

A **May 1986 Regulatory Amendment** (GMFMC 1986) set the king mackerel bag limit at two fish for persons fishing from boats without a captain and crew and three fish for persons fishing from boats with a captain and crew (i.e., for-hire boats), excluding the crew.

Amendment 5 (GMFMC 1990) redefined recreational bag limits from trip limits to daily limits, such that recreational bag limits apply per person per day with a one-day possession limit. The amendment also established a 2-day possession limit for for-hire vessels on multi-day trips provided that two qualified captains are aboard and anglers have been provided with receipts for multi-day trips.

Bag limit for Captain and Crew of For-hire Vessels

A series of regulatory actions alternately prohibited then allowed the captain and crew on for-hire trips to retain a bag limit. A **May 1996 Regulatory Amendment** (GMFMC 1996) prohibited the captain and crew on for-hire vessels from retaining a bag limit of king mackerel. A **May 1997 Regulatory Amendment** (GMFMC 1997) removed the prohibition on a captain and crew on for-hire vessels from retaining a bag limit. A **May 1998 Regulatory Amendment** (GMFMC 1998c) prohibited the captain and crew on for-hire vessels from retaining a bag limit of king mackerel. A **July 1999 Regulatory Amendment** (GMFMC 1999) established a two-fish per person per day bag limit on Gulf group king mackerel for the captain and crew of for-hire vessels; however, the captain and crew bag limit was rejected by NMFS. A **July 2000 Regulatory Amendment** (GMFMC 2000b) removed the prohibition for a two-fish king mackerel bag limit for captain and crew of for-hire vessels.

1.4 Proposed Management Options

Preferred Option: The on-board possession limit for federal for-hire trips in the Gulf exceeding a given trip duration (**Options a – c**) will be two daily bag limits per angler (or per vessel for speckled hind and warsaw grouper). The second daily bag limit can be retained anytime during a trip with a minimum trip duration of:

Sub-Option a: Greater than 24 hours.

Preferred Sub-Option b: Greater than 30 hours.

Sub-Option c: Greater than 36 hours.

1.4.1 Preferred Option Discussion

Anglers on trips exceeding 24 hours in duration on Gulf federally permitted for-hire vessels are allowed to possess two daily bag limits (or vessel limits for warsaw grouper and speckled hind) of species managed by the FMPs for Reef Fish and CMP, with the exception of the Gulf migratory group of cobia (see Section 1.1). The possession of Gulf migratory group cobia is two per person per day regardless of the duration of a trip. The bag limit and possession limits for warsaw grouper and speckled hind are vessel limits (one per vessel per day). For the 2-day possession limit to apply, the for-hire vessel must have two USCG licensed captains onboard, and every passenger must be in possession of a receipt verifying trip duration (50 CFR 622.38(c)). Further, the second daily bag limit may only be retained once the trip duration has exceeded 24 hours. This means that during the first 24 hours of the trip, each person (or vessel for warsaw grouper and speckled hind) may only possess one daily bag limit (50 CFR 622.11(a)(1)). According to some public testimony, this scenario results in inefficiencies in for-hire fishing effort by requiring vessels to move off a successful set (when the fish are biting the baits vigorously) which may increase discard mortality.

The **Preferred Sub-Option b** would modify the on-board possession limit for federal for-hire trips in the Gulf. It would increase the required trip duration to greater than 30 hours, but would allow anglers to retain the second daily bag limit at any time after the federal for-hire vessel leaves the dock. All other requirements to retain the possession limit would be unchanged. Although the number of vessels in the SRHS making trips greater than 24 hours in duration has remained relatively static from 2014 – 2018, the number of trips made by these vessels has increased since 2014. It is possible that the number of trips made by these for-hire vessels could change, as could the duration of the trips they make and when the second bag limit may be possessed, if the trip duration requirement for the possession of two daily bag limits increases. For the purpose of daily bag limits, trip duration must coincide with an open fishing season for each species, and any fish retained may only be landed while the fishing season is open for each species. For example: a federal for-hire vessel departs at 7:00 AM on May 31 on a trip with a duration of 36 hours, planning to return to the dock at 7:00 PM on June 1. If this vessel targets red snapper (the federal for-hire season for red snapper opens June 1), the anglers on the vessel may only retain one daily bag limit, since the fishing season for red snapper would have only been open for one of the two calendar days during which the vessel's trip was under way, and the retained red snapper must have been landed on June 1.

1.4.2 Council Conclusions:

The Council considered the purpose of the regulations to be modified, and determined that changing *when* the second daily bag limit may be possessed is unlikely to result in any measurable impacts because the presumption is that the second daily bag limit would be possessed at some point on that trip. The Council also determined that since anglers would be

allowed to possess the second daily bag limit at any time during the trip, the trip duration should clearly exceed 24 hours. Therefore, the Council chose to increase the minimum trip duration to greater than 30 hours (**Preferred Sub-Option b**).

CHAPTER 2. REGULATORY IMPACT REVIEW

2.1 Introduction

The National Marine Fisheries Service (NMFS) requires a Regulatory Impact Review (RIR) for all regulatory actions that are of public interest. The RIR does three things: 1) it provides a comprehensive review of the level and incidence of impacts associated with a proposed or final regulatory action; 2) it provides a review of the problems and policy objectives prompting the regulatory proposals and an evaluation of the major alternatives that could be used to solve the problem; and 3) it ensures that the regulatory agency systematically and comprehensively considers all available alternatives so that the public welfare can be enhanced in the most efficient and cost-effective way. The RIR also serves as the basis for determining whether the proposed regulations are a "significant regulatory action" under the criteria provided in Executive Order (E.O.) 12866. This RIR analyzes the expected economic effects of a proposed framework action to increase the minimum trip duration required to retain the second daily bag limit for federal for-hire trips in the Gulf and to allow the second daily bag limit to be retained anytime during a trip meeting the minimum trip duration.

2.2 Problems and Objectives

The objective of this action is to modify requirements for the multi-day possession limit for persons aboard federal for-hire vessels. Another objective is to promote efficiency in the utilization of the reef fish and CMP resources and a potential decrease in regulatory discards by providing the owners and operators of federally permitted for-hire vessels greater flexibility in determining when to allow passengers to retain the possession limit on multi-day trips.

2.3 Description of Fisheries

A description of the affected components in the Gulf is provided, by fishery, in Sections 2.3.1 (reef fish) and 2.3.2 (CMP). Information contained in the most recent reef fish and CMP FMP amendments, particularly Abbreviated Framework Action to the Fishery Management Plans for the Reef Fish and Coastal Migratory Pelagic Resources of the Gulf of Mexico and South Atlantic with Regulatory Impact Review and Regulatory Flexibility Act Analysis (Replacement of Historical Captain Permits with Standard Federal Charter/Headboat Permits) (GMFMC 2019), are incorporated herein by reference. Chapter 1 also provides some information on the fishing activities of Gulf reef fish and CMP for-hire vessels.

2.3.1 Reef Fish

Permits

For-hire vessels in the Gulf are required to have a limited access Gulf Charter/Headboat for Reef Fish permit to fish for or possess managed reef fish species in or from the Gulf exclusive

economic zone (EEZ). On August 29, 2019, there were 1,274 valid (non-expired) or renewable¹ Gulf reef fish for-hire permits and 33 valid or renewable Gulf reef fish historical captain for-hire permits. Owners of historical captain permits may soon be provided with the opportunity to replace their permits with standard for-hire permits (see Framework Action: Replacement of Historical Permits with Standard Federal Charter/Headboat Permits, GMFMC 2019). 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 NMFS Southeast Region Headboat Survey (SRHS) at this time. Participation in the SRHS is based on determination by the Southeast Fisheries Science Center (SEFSC) that the vessel primarily operates as a headboat. As of August 20, 2019, 68 Gulf headboats were registered in the SRHS (K. Fitzpatrick, NMFS SEFSC, pers. comm.). The majority of these headboats were located in Florida (38), followed by Texas (16), Alabama (9), and Mississippi/Louisiana (5). All vessels with Gulf reef fish for-hire permits that do not participate in the SRHS, if selected by the SEFSC, must maintain fishing records for their trips and submit them to the SEFSC in accordance with federal regulations.

There are no specific federal permitting requirements for recreational anglers to fish for or harvest reef fish. Instead, anglers are required to possess either a state recreational fishing permit that authorizes saltwater fishing in general, or be registered in the federal National Saltwater Angler Registry system, subject to appropriate exemptions. As a result, it is not possible to identify with available data how many individual anglers would be expected to be affected by this proposed amendment.

Angler Effort

Recreational effort derived from the Marine Recreational Information Program (MRIP) database can be characterized in terms of the number of trips as follows:

- Target trips - 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 trips - 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. The following discussion focuses on target trips for reef fish species in the Gulf.

¹ A renewable permit is an expired permit that may not be actively fished, but is renewable for up to one year after expiration.

The majority of estimated target trips for reef fish species in the Gulf, on average (2014 through 2018), were taken in Florida, and the predominant mode of fishing on these trips was the private/rental mode (Table 2.3.1.1). The total number of trips targeting reef fish species in the Gulf fluctuated from 2014 through 2018, and averaged approximately 4 million trips (Table 2.3.1.1). It is important to note that in 2018, MRIP transitioned from the old Coastal Household Telephone Survey (CHTS) to a new mail-based fishing effort survey (FES). The estimates presented in Table 2.3.1.1 have been calibrated to the FES, and may not compare with earlier CHTS-based estimates.

Table 2.3.1.1. Number of Gulf reef fish recreational target trips, by mode and state, 2014-2018.*

	AL	FL	LA**	MS	Total
			Shore Mode		
2014	5,253	714,787	N/A	0	720,040
2015	47,804	473,433	N/A	0	521,237
2016	57,453	970,732	N/A	0	1,028,185
2017	9,623	1,018,872	N/A	0	1,028,495
2018	7,166	947,527	N/A	0	954,693
Average	25,460	825,070	N/A	0	850,530
			Charter Mode		
2014	14,192	104,116	N/A	0	118,308
2015	23,232	142,241	N/A	338	165,811
2016	41,098	160,120	N/A	1,427	202,645
2017	35,011	148,271	N/A	3,025	186,307
2018	33,891	172,933	N/A	326	207,150
Average	29,485	145,536	N/A	1,023	176,044
			Private/Rental Mode		
2014	224,260	2,771,716	N/A	21,102	3,017,078
2015	321,673	2,308,872	N/A	11,436	2,641,981
2016	417,131	2,252,152	N/A	77,062	2,746,345
2017	667,851	2,338,713	N/A	77,092	3,083,656
2018	425,646	2,349,426	N/A	95,688	2,870,760
Average	411,312	2,404,176	N/A	56,476	2,871,964
			All Modes		
2014	243,705	3,590,619	N/A	21,102	3,855,426
2015	392,709	2,924,546	N/A	11,774	3,329,029
2016	515,682	3,383,004	N/A	78,489	3,977,175
2017	712,485	3,505,856	N/A	80,117	4,298,458
2018	466,703	3,469,886	N/A	96,014	4,032,603
Average	466,257	3,374,782	N/A	57,499	3,898,538

Source: MRIP database, SERO, NMFS. Note: Texas and headboat information is unavailable.

* Directed effort estimates are calibrated to the new MRIP mail-based FES, and may not compare with CHTS-based estimates.

** MRIP estimates for Louisiana are not available after 2013. The Louisiana Department of Wildlife and Fisheries did collect target effort data beginning in 2016; however, those data are not currently calibrated with the MRIP data and therefore are not usable for direct comparison.

Similar analysis of recreational effort is not possible for the headboat mode because headboat data are not collected at the angler level. Estimates of effort by the headboat mode are provided in terms of angler days, or the total number of standardized full-day angler trips.² From 2014 through 2018, Alabama and Texas experienced increases of 18% and 2%, respectively, in the number of headboat angler days while Florida and Mississippi/Louisiana, decreases of 1.5% and 1%, respectively (Table 2.3.1.2). On average (2014 through 2018), Florida accounted for the majority of headboat angler days reported, followed by Texas and Alabama, whereas Mississippi/Louisiana accounted for only a small percentage (Table 2.3.1.2).

Table 2.3.1.2. Gulf headboat angler days and percent distribution by state (2014 through 2018).

	Angler Days				Percent Distribution			
	FL	AL	MS-LA**	TX	FL	AL	MS-LA	TX
2014	174,599	16,766	3,257	51,231	71.02%	6.82%	1.32%	20.84%
2015	176,375	18,008	3,587	55,135	69.68%	7.11%	1.42%	21.78%
2016	183,147	16,831	2,955	54,083	71.26%	6.55%	1.15%	21.04%
2017	178,816	17,841	3,189	51,575	71.12%	7.10%	1.27%	20.51%
2018	171,996	19,851	3,235	52,160	69.57%	8.03%	1.31%	21.10%
Average	176,987	17,859	3,245	52,837	70.53%	7.12%	1.29%	21.05%

Source: NMFS SRHS.

**Headboat data from Mississippi and Louisiana are combined for confidentiality purposes.

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 (2014 through 2018) (Table 2.3.1.3). The monthly trend in angler days was mostly similar across years, building gradually from January through May, rising sharply to a peak in June and July, dropping rapidly through September, increasing slightly in October, then tapering through December.

² 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 0.5 angler days, etc. Angler days are not standardized to an hourly measure of effort and actual trip durations may vary within each category.

Table 2.3.1.3. Gulf headboat angler days (in thousands) and percent distribution by month (2014 – 2018).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Headboat Angler Days (in thousands)											
2014	7.1	12.4	18.6	18.7	21.3	44.3	46.2	30.9	12.1	17.4	7.6	9.2
2015	9.4	10.6	22.8	20.7	21.0	44.7	45.2	26.6	15.1	17.2	9.8	9.9
2016	8.0	13.2	21.8	18.7	21.7	50.3	49.9	21.8	13.6	15.8	11.8	10.4
2017	9.0	14.0	21.0	19.4	19.2	47.7	54.0	23.0	10.3	11.1	11.3	11.5
2018	5.5	13.7	20.8	17.6	16.9	54.3	53.3	24.8	13.2	10.6	8.2	8.4
Avg	7.8	12.8	21.0	19.0	20.0	48.3	49.7	25.4	12.9	14.4	9.7	9.9
	Percent Distribution											
2014	2.9%	5.0%	7.6%	7.6%	8.7%	18.0%	18.8%	12.6%	4.9%	7.1%	3.1%	3.7%
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%
Avg	3.1%	5.1%	8.4%	7.6%	8.0%	19.2%	19.8%	10.1%	5.1%	5.8%	3.9%	3.9%

Source: NMFS SRHS.

Economic Value

Participation, effort, and harvest are indicators of the value of saltwater recreational fishing. However, a more specific indicator of value is the satisfaction that anglers experience over and above their costs of fishing. The economic value of this satisfaction is referred to as consumer surplus (CS). The value or benefit derived from the recreational experience is dependent on several quality determinants, which include fish size, catch success rate, and the number of fish kept. These variables help determine the value of a fishing trip and influence total demand for recreational fishing trips. For example, the estimated value of the CS for catching and keeping a second red snapper³ on an angler trip is approximately \$84 (values updated to 2018 dollars), and decreases thereafter (approximately \$56 for a third red snapper, \$41 for a fourth red snapper, and \$33 for a fifth red snapper) (Carter and Liese 2012). In comparison, the estimated value of the CS for catching and keeping a grouper is approximately \$108 for the second fish, \$72 for the third fish, \$53 for the fourth fish, and \$42 for the fifth fish (Carter and Liese 2012).

The foregoing estimates of economic value should not be confused with economic impacts associated with recreational fishing expenditures. Although expenditures for a specific good or service may represent a proxy or lower bound of value (a person would not logically pay more for something than it was worth to them), they do not represent the net value (benefits minus cost), nor the change in value associated with a change in the fishing experience.

³ The study only considered trips with at least one fish caught and kept in its experimental design; thus, an estimated value for the first caught and kept fish is not available.

With regard to for-hire businesses, economic value 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 the PS per for-hire passenger trip are not available. Instead, net operating revenue (NOR), which is the return used to pay all labor wages, returns to capital, and owner profits, and is used as a proxy for PS. The estimated NOR value for an average Gulf charter angler trip is \$162 (2018 dollars⁴) and the estimated NOR value for an average Gulf headboat angler trip is \$53 (C. Liese, NMFS SEFSC, pers. comm.). Estimates of NOR for for-hire trips that target specific species are not available.

The most current estimates of average annual gross revenue per vessel are provided in Savolainen, et al. (2012).⁵ In 2018 dollars, the average annual gross revenue for a Gulf headboat is \$267,067 while the average annual gross revenue for a Gulf charter vessel is \$88,111. 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 annual PS. In general, PS is the amount of money a vessel owner earns in excess of variable (trip) costs. Economic profit is the amount of money a vessel owner earns in excess of variable and fixed costs, inclusive of all implicit costs, such as the value of a vessel owner's time as captain and as entrepreneur, and the cost of using physical capital (i.e., depreciation of the vessel and gear). In 2018 dollars, Savolainen, et al. (2012) estimated the annual producer surplus for Gulf headboats and charter vessels was approximately \$186,860 and \$57,964 respectively. Their best estimates of economic profit were \$77,960 and \$26,053 (2018 dollars), respectively.⁶

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 reef fish species in the Gulf were calculated using average trip-level impact coefficients derived from the 2015 Fisheries Economics of the U.S. report (NMFS 2017) and underlying data provided by the NOAA Office of Science and Technology. Economic impact estimates in 2015 dollars were adjusted to 2018 dollars using the annual, not seasonally adjusted gross domestic product (GDP) implicit price deflator provided by the U.S. Bureau of Economic Analysis.

⁴ Converted to 2018 dollars using the annual, not seasonally adjusted GDP implicit price deflator provided by the U.S. Bureau of Economic Analysis.

⁵ Research by Abbott and Willard (2017) suggest that Savolainen, et al.'s (2012) estimate of average annual gross revenues for headboats may be an underestimate as data in the former suggest that average gross revenue in 2009 (continued) for the vessels in their sample was about \$453,000 (2016 \$). However, Abbott and Willard's (2017) estimates are based on a sample of 17 headboats that chose to participate in the Headboat Collaborative Program in 2014 while Savolainen, et al. (2012) are based on a random sample of 20 headboats.

⁶ Although Savolainen, et al. (2012) account for all explicit variable and fixed costs, they do not account for implicit costs, and thus they over-estimate actual economic profits for these vessels.

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 (2014-2018) resulting from Gulf reef fish target trips are provided in Table 2.3.1.4. The average impact coefficients, or multipliers, used in the model are invariant to the “type” of effort and can therefore be directly used to measure the impact of other effort measures such as reef fish catch trips. To calculate the multipliers from Table 2.3.1.4, 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 2.3.1.4 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 or groups of species. As such, the estimates provided in Table 2.3.1.4 may be considered a lower bound on the economic activity associated with those trips that targeted 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 2.3.1.4. Estimated annual average economic impacts (2014-2018) from recreational trips that targeted reef fish species in the Gulf, by state and mode, using state-level multipliers. All monetary estimates are in 2018 dollars in thousands.*

	FL	AL	MS	LA
Charter Mode				
Target Trips	145,536	29,485	1,023	N/A
Value Added Impacts	\$49,366	\$11,906	\$444	N/A
Sales Impacts	\$82,899	\$21,653	\$839	N/A
Income Impacts	\$28,848	\$6,791	\$256	N/A
Employment (Jobs)	787	243	10	N/A
Private/Rental Mode				
Target Trips	2,404,176	411,312	56,476	N/A
Value Added Impacts	\$84,030	\$18,027	\$1,195	N/A
Sales Impacts	\$130,241	\$27,894	\$1,984	N/A
Income Impacts	\$44,094	\$7,016	\$629	N/A
Employment (Jobs)	1,229	266	21	N/A
Shore				
Target Trips	825,070	25,460	0	N/A
Value Added Impacts	\$29,303	\$1,742	\$0	N/A
Sales Impacts	\$45,794	\$3,000	\$0	N/A
Income Impacts	\$15,436	\$897	\$0	N/A
Employment (Jobs)	433	32	0	N/A
All Modes				
Target Trips	3,374,782	466,257	57,499	N/A
Value Added Impacts	\$162,700	\$31,676	\$1,640	N/A
Sales Impacts	\$258,934	\$52,547	\$2,823	N/A
Income Impacts	\$88,378	\$14,704	\$884	N/A
Employment (Jobs)	2,448	541	31	N/A

Source: Effort data from MRIP; economic impact results calculated by NMFS SERO using NMFS (2017) and underlying data provided by the NOAA Office of Science and Technology.

* Headboat target information is unavailable as are target effort estimates from Texas.

** Louisiana economic impacts cannot be calculated in the absence of MRIP calibrated directed effort estimates for the state.

2.3.2 Coastal Migratory Pelagic

Permits

For-hire vessels in the Gulf are required to have a limited access Gulf Charter/Headboat for Coastal Migratory Pelagics (CMP) federal permit to fish for or possess CMP species in or from the Gulf EEZ. On August 29, 2019, there were 1,284 valid (non-expired) or renewable Gulf

CMP for-hire permits and 33 valid or renewable Gulf CMP historical captain for-hire permits. It is noted that many CMP for-hire permittees also hold reef fish for-hire permits. Owners of historical captain permits may soon be provided with the opportunity to replace their permits with standard for-hire permits (see Framework Action: Replacement of Historical Permits with Standard Federal Charter/Headboat Permits, GMFMC 2019). 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 NMFS SRHS.

Although the CMP for-hire permit is separate from the reef fish for-hire permit, the data collection program does not distinguish between CMP and reef fish headboats. Thus, the same information on headboats, such as the total number and distribution of headboats in the Gulf by state, earlier presented for reef fish also applies to CMP headboats.

There are no specific federal permitting requirements for recreational anglers to fish for or harvest CMP species. Instead, anglers are required to possess either a state recreational fishing permit that authorizes saltwater fishing in general, or be registered in the federal National Saltwater Angler Registry system, subject to appropriate exemptions. As a result, it is not possible to identify with available data how many individual anglers would be expected to be affected by this proposed amendment.

Angler Effort

As previously discussed, recreational effort derived from the MRIP database can be characterized as target trips, catch trips, and total recreational trips (see Section 2.3.1). The following discussion focuses on target trips for CMP species (Spanish mackerel, king mackerel, and cobia) in the Gulf.

The majority of estimated target trips for CMP species in the Gulf, on average (2014 through 2018), were taken in Florida, and the predominant mode of fishing on these trips was the shore mode (Table 2.3.2.1). The total number of trips targeting CMP species in the Gulf fluctuated from 2014 through 2018 and averaged approximately 4.3 million trips (Table 2.3.2.1). It is important to note that in 2018, MRIP transitioned from the CHTS to the FES. Similar to those for reef fish, the estimates presented in Table 2.3.2.1 are calibrated to the FES.

Table 2.3.2.1. Number of Gulf CMP recreational target trips, by mode and state, 2014-2018.*

	AL	FL	LA**	MS	Total
Shore Mode					
2014	645,075	2,481,450	N/A	0	3,126,525
2015	1,057,855	1,950,675	N/A	0	3,008,530
2016	1,136,248	2,288,743	N/A	0	3,424,991
2017	874,667	1,938,578	N/A	0	2,813,245
2018	996,926	2,748,002	N/A	27,377	3,772,305
Average	942,154	2,281,490	N/A	27,377	3,251,021
Charter Mode					
2014	8,535	31,142	N/A	182	39,859
2015	8,497	56,151	N/A	1,709	66,357
2016	7,460	39,952	N/A	483	47,895
2017	6,475	72,937	N/A	304	79,716
2018	3,224	80,460	N/A	895	84,579
Average	6,838	56,128	N/A	715	63,681
Private/Rental Mode					
2014	122,452	924,702	N/A	25,937	1,073,091
2015	123,467	750,602	N/A	95,267	969,336
2016	123,935	942,153	N/A	20,540	1,086,628
2017	123,406	718,066	N/A	41,133	882,605
2018	85,964	674,626	N/A	23,654	784,244
Average	115,845	802,030	N/A	41,306	959,181
All Modes					
2014	776,062	3,437,294	N/A	26,119	4,239,475
2015	1,189,819	2,757,428	N/A	96,976	4,044,223
2016	1,267,643	3,270,848	N/A	21,023	4,559,514
2017	1,004,548	2,729,581	N/A	41,437	3,775,566
2018	1,086,114	3,503,088	N/A	51,926	4,641,128
Average	1,064,837	3,139,648	N/A	69,398	4,273,883

Source: MRIP database, SERO, NMFS. Note: Texas and headboat information is unavailable.

* Directed effort estimates are calibrated to the new MRIP mail-based FES and may not compare with CHTS-based estimates.

** MRIP estimates for Louisiana are not available after 2013. The Louisiana Department of Wildlife and Fisheries did collect target effort data beginning in 2016; however, those data are not currently calibrated with the MRIP data and therefore are not useful for direct comparison.

Similar analysis of recreational effort is not possible for the headboat mode because headboat data are not collected at the angler level. Estimates of effort by the headboat mode, in terms of angler days, are provided in Section 2.3.1.

Economic Value

Economic value received by anglers can be measured in the form of CS per additional fish kept on a trip (the amount of money that an angler would be willing to pay for a fish in excess of the cost to harvest the fish). The estimated values of the CS per fish for a second⁷, third, fourth, and fifth king mackerel kept on a trip are approximately \$103, \$70, \$51, and \$40, respectively (Carter and Liese 2012; values updated to 2018 dollars).⁸ There is no available estimate of CS for cobia, but dolphin or king mackerel CS estimates may be close proxies. For dolphin, the values for the second, third, fourth, and fifth kept fish are approximately \$15, \$10, \$8, and \$6, respectively (Carter and Liese 2012; values updated to 2018 dollars).

Another study estimated the CS for catching and keeping one additional Spanish mackerel in the Southeastern U.S. using four separate econometric modeling techniques (Haab et al. 2012). Of the four models, only the finite mixture model, which takes into account variation in the preferences of anglers, produced a positive value for Spanish mackerel. The CS estimate for Spanish mackerel from the finite mixture model was \$18 (2018 dollars) with a 95% confidence interval of \$6 to \$34. The other logit-based models from the study produced CS estimates that ranged from negative \$14 to negative \$8, a result of anglers avoiding fishing locations where Spanish mackerel are prevalent.

The foregoing estimates of economic value should not be confused with economic impacts associated with recreational fishing expenditures. Although expenditures for a specific good or service may represent a proxy or lower bound of value (a person would not logically pay more for something than it was worth to them), they do not represent the net value (benefits minus cost), nor the change in value associated with a change in the fishing experience. For a discussion of the economic value generated by for-hire businesses, see Section 2.3.1.

Business Impacts

Section 2.3.1 provides some details on the nature of business impacts, data sources, and estimation methods. In essence, 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.

⁷ The study only considered trips with at least one fish caught and kept in its experimental design; thus, an estimated value for the first caught and kept fish is not available.

⁸Converted to 2018 dollars using the annual, not seasonally adjusted GDP implicit price deflator provided by the U.S. Bureau of Economic Analysis.

Estimates of the average annual economic impacts (2014-2018) resulting from Gulf CMP target trips are provided in Table 2.3.2.2. The average impact coefficients, or multipliers, used in the model are invariant to the “type” of effort and can therefore be directly used to measure the impact of other effort measures such as CMP catch trips. To calculate the multipliers from Table 2.3.2.2, 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 2.3.2.2 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 or groups of species. As such, the estimates provided in Table 2.3.2.2 may be considered a lower bound on the economic activity associated with those trips that targeted CMP species.

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 2.3.2.2. Estimated annual average economic impacts (2014-2018) from recreational trips that targeted CMP species in the Gulf, by state and mode, using state-level multipliers. All monetary estimates are in 2018 dollars in thousands.*

	FL	AL	MS	LA**
Charter Mode				
Target Trips	56,128	6,838	715	N/A
Value Added Impacts	\$19,039	\$2,761	\$311	N/A
Sales Impacts	\$31,971	\$5,022	\$587	N/A
Income Impacts	\$11,126	\$1,575	\$179	N/A
Employment (Jobs)	303	56	7	N/A
Private/Rental Mode				
Target Trips	802,030	115,845	41,306	N/A
Value Added Impacts	\$28,032	\$5,077	\$874	N/A
Sales Impacts	\$43,448	\$7,856	\$1,451	N/A
Income Impacts	\$14,710	\$1,976	\$460	N/A
Employment (Jobs)	410	75	15	N/A
Shore				
Target Trips	2,281,490	942,154	27,377	N/A
Value Added Impacts	\$81,030	\$64,470	\$340	N/A
Sales Impacts	\$126,630	\$111,033	\$526	N/A
Income Impacts	\$42,684	\$33,176	\$185	N/A
Employment (Jobs)	1,198	1,168	7	N/A
All Modes				
Target Trips	3,139,648	1,064,837	69,398	N/A
Value Added Impacts	\$128,101	\$72,308	\$1,525	N/A
Sales Impacts	\$202,050	\$123,911	\$2,563	N/A
Income Impacts	\$68,519	\$36,727	\$824	N/A
Employment (Jobs)	1,911	1,300	29	N/A

Source: Effort data from MRIP; economic impact results calculated by NMFS SERO using NMFS (2017) and underlying data provided by the NOAA Office of Science and Technology.

* Headboat target information is unavailable as are target effort estimates from Texas.

** Louisiana economic impacts cannot be calculated in the absence of MRIP calibrated directed effort estimates for the state.

2.4 Impacts of Management Action

The proposed action increases the minimum trip duration required to retain the second daily bag limit for federal for-hire trips in the Gulf and allows the second daily bag limit to be retained anytime during a trip meeting the minimum trip duration. Economic analysis of the net benefits from the proposed action is comprised of both the resulting costs and benefits. The economic

impacts of the proposed action cannot be easily quantified and are therefore described qualitatively and then ranked based on net economic benefits.

Sub-Option a would have the same minimum trip duration requirement for a second daily bag limit as under the status quo, so no economic effects would be expected under the minimum trip duration requirement for **Sub-Option a**. Based on sampled Gulf of Mexico FHS trips from 2014 to 2018, increasing the minimum trip duration required to retain the second daily bag limit would affect <0.1% (or 16 trips per 5 years) and 0.1% (or 33 trips per 5 years) of the total for-hire trips, respectively, under **Preferred Sub-Option b** and **Sub-Option c**. This would also affect 0.7% (or 14 vessels per 5 years) and 1.6% (or 32 vessels per 5 years) of the total for-hire vessels, respectively, under **Preferred Sub-Option b** and **Sub-Option c**. Based on sampled SRHS headboat trips from 2014 to 2018, increasing the minimum trip duration required to retain the second daily bag limit would affect up to 2.8% (or 1,290 trips per 5 years) of the total SRHS headboat trips, which is the number of sampled trips greater than 24 hours in duration. This serves as an upper bound for the number of affected trips, since trips are not recorded in hours comparable to the sub-options under the **Preferred Option**. Potentially, some vessels would offer longer for-hire trips in order to meet the minimum trip duration requirement for a second daily bag limit, and this would serve to reduce any negative impacts of passengers switching to vessels that already offer longer for-hire trips.

Allowing the second daily bag limit to be retained anytime during a trip meeting the minimum trip duration would be expected to result in similar benefits across all of the sub-options under the **Preferred Option**. The positive economic benefits would accrue to vessel operators in the form of reduced costs, as they would be able to allow passengers to possess the second bag limit at the time of chumming or baiting fish at the initial fishing spot, which public testimony indicated could increase trip efficiency and potentially reduce discards. Positive economic benefits may also accrue to passengers if they are able to spend more time fishing and less time in transit from one fishing spot to another, as a result of being able to retain the second daily bag limit anytime during the trip.

Relative ranking of the sub-options under the **Preferred Option** from greatest to least expected positive net economic benefits are as follows: **Sub-Option a**, **Preferred Sub-Option b**, and **Sub-Option c**. **Preferred Sub-Option b** would be expected to have positive net economic benefits in comparison to the status quo.

2.5 Public and Private Costs of Regulations

The preparation, implementation, enforcement, and monitoring of this or any federal action involves the expenditure of public and private resources that can be expressed as costs associated with the regulations. Costs associated with this specific action include:

Gulf of Mexico Fishery Management Council (Council) costs of document preparation, meetings, and information dissemination.....	\$12,000
NMFS administrative costs of document preparation, meetings, and review	\$6,000

TOTAL.....\$18,000

The development of this proposed action has been undertaken by NMFS and the Council. The Council and NMFS’ costs of document preparation are based on staff time, travel, printing, and any other relevant items where funds were expended directly for this specific action. No changes in enforcement costs are anticipated.

2.6 Determination of Significant Regulatory Action

Pursuant to E.O. 12866, a regulation is considered a “significant regulatory action” if it is likely to result in: 1) an annual effect of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; 2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; 3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights or obligations of recipients thereof; or 4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this executive order. Based on the expected positive net benefits due, primarily, to potential reductions in operating costs to a minimal number of vessels and trips in the for-hire component, this proposed action has been determined to not be economically significant for the purposes of E.O. 1286.

CHAPTER 3. REGULATORY FLEXIBILITY ANALYSIS

3.1 Description of the projected reporting, record-keeping and other compliance requirements of the proposed action, including an estimate of the classes of small entities which will be subject to the requirement and the type of professional skills necessary for the preparation of the report or records

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

3.2 Identification of all relevant federal rules, which may duplicate, overlap or conflict with the proposed action

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

3.3 Significance of economic impacts on a substantial number of small entities

Substantial number criterion

As noted above, the proposed action would not affect any small business entities in the Gulf of Mexico (Gulf) reef fish or coastal migratory pelagic (CMP) fishery, thus this criterion is not applicable.

Significant economic impacts

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

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

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

In the absence of any economic impacts on small entities in the Gulf reef fish or CMP fishery, the proposed action would not raise issues related to disproportionality and profitability. It is, therefore, concluded that the proposed action would not result in any significant economic impacts on small business entities.

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

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

CHAPTER 4. REFERENCES

Carter, D. W., and Liese, C. 2012. The economic value of catching and keeping or releasing saltwater sportfish in the Southeast USA. *North American Journal of Fisheries Management* 32(4): 613-625.

<http://dx.doi.org/10.1080/02755947.2012.675943>

GMFMC. 1981. Environmental impact statement and fishery management plan for the reef fish resources of the Gulf of Mexico and environmental impact statement. Gulf of Mexico Fishery Management Council, Tampa, Florida. 328 pp.

<http://archive.gulfcouncil.org/Beta//GMFMCWeb/downloads/RF%20FMP%20and%20EIS%201981-08.pdf>

GMFMC. 1983. Fishery management plan final environmental impact statement regulatory impact review final regulations for the coastal migratory pelagics (mackerels). Gulf of Mexico Fishery Management Council. Tampa, Florida. 340 pp.

<http://gulfcouncil.org/wp-content/uploads/MAC-FMP-Final-EIS-1983-02.pdf>

GMFMC. 1986. Supplemental regulatory impact review of preseason changes in TAC, permits, and bag limits for king mackerel Atlantic migratory group managed under the fishery management plan for the coastal migratory pelagic resources of the Gulf of Mexico and the South Atlantic. 7 pp.

<http://gulfcouncil.org/wp-content/uploads/Mackerel-Regulatory-Amendment-1986-05-1.pdf>

GMFMC. 1989. Amendment 1 to the reef fish fishery management plan with environmental assessment. Gulf of Mexico Fishery Management Council, Tampa, Florida. 356 pp.

<http://archive.gulfcouncil.org/Beta//GMFMCWeb/downloads/RF%20Amend-01%20Final%201989-08-rescan.pdf>

GMFMC. 1990. Amendment 5 to the fishery management plan for coastal migratory pelagic resources (mackerels) including environmental assessment and regulatory impact review. Gulf of Mexico Fishery Management Council, Tampa, Florida. 44 pp.

<http://gulfcouncil.org/wp-content/uploads/MAC-Amend-05-Final-1990-03-2.pdf>

GMFMC. 1996. Framework seasonal adjustment of harvest levels and procedures under the fishery management plan for coastal migratory pelagics (mackerels) in the Gulf of Mexico, including environmental assessment and regulatory impact review and initial regulatory flexibility analysis. 64 pp. Gulf of Mexico Fishery Management Council, Tampa, Florida.

<http://gulfcouncil.org/wp-content/uploads/Mackerel-Regulatory-Amendment-1996-07-1.pdf>

GMFMC. 1997. Framework seasonal adjustment of harvest levels and procedures under the fishery management plan for coastal migratory pelagics (mackerels) in the Gulf of Mexico, including environmental assessment and regulatory impact review and initial regulatory flexibility analysis. 43 pp. Gulf of Mexico Fishery Management Council, Tampa, Florida.

<http://gulfcouncil.org/wp-content/uploads/Mackerel-Regulatory-Amendment-1997-05-1.pdf>

GMFMC. 1998a. Regulatory amendment to the reef fish fishery management plan for the 1998 red snapper total allowable catch and the recreational bag limit. Gulf of Mexico Fishery Management Council, Tampa, Florida. 53 pp.

<http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/RF%20RegAmend%20-%201998-02.pdf>

GMFMC. 1998b. Regulatory amendment to the reef fish fishery management plan for red snapper including total allowable catch, bag limits, minimum size limits, and seasons. Gulf of Mexico Fishery Management Council, Tampa, Florida. 63 pp.

<http://archive.gulfcouncil.org/Beta/GMFMCWeb/downloads/RF%20RegAmend%20-%201998-12.pdf>

GMFMC. 1998c. Framework seasonal adjustment of harvest levels and procedures under the fishery management plan for coastal migratory pelagics (mackerels) in the Gulf of Mexico and South Atlantic region, including environmental assessment and regulatory impact review and initial regulatory flexibility analysis. 49 pp. Gulf of Mexico Fishery Management Council, Tampa, Florida.

<http://gulfcouncil.org/wp-content/uploads/Mackerel-Regulatory-Amendment-1998-05-1.pdf>

GMFMC. 1999. Framework seasonal adjustment of harvest levels and procedures under the fishery management plan for coastal migratory pelagic resources (mackerels) in the Gulf of Mexico and South Atlantic region including environmental assessment, regulatory impact review. Gulf of Mexico Fishery Management Council, Tampa, Florida. 36 pp.

<http://gulfcouncil.org/wp-content/uploads/Mackerel-Regulatory-Amendment-1999-07-1.pdf>

GMFMC. 2000a. Regulatory amendment to the reef fish fishery management plan to set total allowable catch and management measures for red snapper for the 2000 and 2001 seasons. Gulf of Mexico Fishery Management Council, Tampa, Florida. 55 pp.

<http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/RF%20RegAmend%20-%202000-02.pdf>

GMFMC. 2000b. Framework seasonal adjustment of harvest levels and procedures under the fishery management plan for coastal migratory pelagic resources (mackerels) in the Gulf of Mexico and South Atlantic region, including environmental assessment and regulatory impact review. Gulf of Mexico Fishery Management Council, Tampa, Florida. 50 pp.

<http://gulfcouncil.org/wp-content/uploads/Mackerel-Regulatory-Amendment-2000-07-1.pdf>

GMFMC. 2004. Secretarial Amendment 1 to the reef fish management plan to set a 10-year rebuilding plan for red grouper, with associated impacts on gag and other groupers includes environmental assessment, regulatory impact review and final regulatory flexibility analyses. Gulf of Mexico Fishery Management Council. Tampa, Florida. 367 pp.

<http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/Secretarial-Amendment-1-RF.pdf>

GMFMC. 2006. Final regulatory amendment to the reef fish fishery management plan to set recreational management measures for grouper starting in 2006, includes environmental

assessment, regulatory impact review, and regulatory flexibility analysis. Gulf of Mexico Fishery Management Council. Tampa, Florida. 131 pp.

<http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/Final%20Grouper%20Reg%20Amend%2031606.pdf>

GMFMC. 2007. Final Amendment 27 to the reef fish fishery management plan and amendment 14 to the shrimp fishery management plan including supplemental environmental impact statement, regulatory impact review, and regulatory flexibility act analysis. Gulf of Mexico Fishery Management Council. Tampa, Florida. 490 pp with appendices.

<http://archive.gulfcouncil.org/Beta/GMFMCWeb/downloads/Final%20RF%20Amend%2027-%20Shrimp%20Amend%2014.pdf>

GMFMC. 2008. Final reef fish amendment 30A: greater amberjack – revised rebuilding plan, accountability measures; gray triggerfish – establish rebuilding plan, end overfishing, accountability measures, regional management, management thresholds and benchmarks including supplemental environmental impact statement, regulatory impact review, and regulatory flexibility act analysis. Gulf of Mexico Fishery Management Council. Tampa, Florida. 346 pp.

<http://www.gulfcouncil.org/docs/amendments/Amend-30A-Final%202008.pdf>

GMFMC. 2019. Final generic abbreviated framework action to the fishery management plans for reef fish and coastal migratory pelagic resources in the Gulf of Mexico and South Atlantic region: Replacement of historical captain permits with standard federal charter/headboat permits with regulatory impact review and regulatory flexibility act analysis. Gulf of Mexico Fishery Management Council. Tampa, Florida. 39 pp.

http://gulfcouncil.org/wp-content/uploads/Historical-Captain-Permits-Transmit-May-2019_FINAL.pdf

Haab, T., R. Hicks, K. Schnier, and J.C. Whitehead. 2012. Angler heterogeneity and the species-specific demand for recreational fishing. *Marine Resource Economics* 27: 229-251.

<https://www.journals.uchicago.edu/doi/abs/10.5950/0738-1360-27.3.229>

NOAA. 2017. Fisheries economics of the United States, 2015. U.S. Department of Commerce. NOAA Technical Memorandum: NMFS-F/SPO-170. 247 pp.

<https://repository.library.noaa.gov/view/noaa/16121>

Savolainen, M.A., R.H. Caffey, and R.F. Kazmierczak. 2012. Economic and attitudinal perspectives of the recreational for-hire fishing industry in the U.S. Gulf of Mexico. Center for Natural Resource Economics and Policy, Louisiana State University. Final report to National Marine Fisheries Service. 171 pp. www.laseagrant.org/pdfs/Gulf-RFH-Survey-Final-Report-2012.pdf

APPENDIX A. CURRENT REGULATIONS ON POSSESSION LIMITS

§622.11 Bag and possession limits—general applicability.

This section describes the general applicability provisions for bag and possession limits specified in subparts B through V of this part.

(a) Applicability. (1) The bag and possession limits apply for species/species groups in or from the EEZ. Unless specified otherwise, bag limits apply to a person on a daily basis, regardless of the number of trips in a day. Unless specified otherwise, a person is limited to a single bag limit for a trip lasting longer than one calendar day. **Unless specified otherwise, possession limits apply to a person on a trip after the first 24 hours of that trip.** The bag and possession limits apply to a person who fishes in the EEZ in any manner, except a person aboard a vessel in the EEZ that has on board the commercial vessel permit required under this part for the appropriate species/species group. The possession of a commercial vessel permit notwithstanding, the bag and possession limits apply when the vessel is operating as a charter vessel or headboat. A person who fishes in the EEZ may not combine a bag limit specified in subparts B through V of this part with a bag or possession limit applicable to state waters. A species/species group subject to a bag limit specified in subparts B through V of this part taken in the EEZ by a person subject to the bag limits may not be transferred at sea, regardless of where such transfer takes place, and such fish may not be transferred in the EEZ. The operator of a vessel that fishes in the EEZ is responsible for ensuring that the bag and possession limits specified in subparts B through V of this part are not exceeded.

(2) [Reserved]

(b) [Reserved]

APPENDIX B. SUPPLEMENTAL ANALYSES

These analyses are based on data related to the management action proposed in Chapter 1, but were not found to be directly informative to the decision before the Gulf of Mexico Fishery Management Council as posed in the Purpose and Need (Chapter 1, Section 1.2).

Table B.1 describes the number of Marine Recreational Information Program (MRIP) intercepts from 2014 through 2018 from Alabama, Florida, and Mississippi that captured a reef fish or coastal migratory pelagic (CMP) species, broken down by mode and hours fished (i.e., time spent fishing, not time from dock to dock). No charter or private angling trips intercepted at the dock after a trip reported fishing more than 24 hours, and only 12 charter trips reported fishing more than 12 hours.

Table B.1. The number of MRIP intercepts from 2014 through 2018 (n=34,164) from the Gulf of Mexico (AL, FL, and MS) that captured a reef fish or CMP species by mode and hours fished. No charter or private angling trips reported fishing more than 24 hours and only 12 charter trips (<0.1%) reported fishing more than 12 hours.

Mode	Hours Fished	Number of Intercepts	Number of Estimated Trips
Charter	0-6	12,888	3,690,415
Charter	6-12	790	246,936
Charter	12-18	9	1,570
Charter	18-24	3	594
Private	0-6	17,220	34,398,298
Private	6-12	3,212	7,877,992
Private	12-18	31	125,939
Private	18-24	11	19,131

Source: MRIP survey data, available at https://www.st.nmfs.noaa.gov/st1/recreational/MRIP_Survey_Data/. [Accessed July 16, 2019].

Table B.2 describes the number of Texas Parks and Wildlife Department (TPWD) intercepts from 2014 through 2018 recording a reef fish or CMP species by mode and trip duration. No TPWD intercepts recorded a trip duration greater than 12 hours.

Table B.2. The number of TPWD intercepts from 2014 through 2018 recording a reef fish or CMP species by mode and trip duration. No TPWD intercepts recorded a trip duration greater than 12 hours.

Mode	Trip Duration (Hours)	Number of Intercepts
Charter	0-6	209
Charter	6-12	290
Private	0-6	1,179
Private	6-12	1,663

Source: TPWD [July 15, 2019].

APPENDIX C. PUBLIC COMMENTS RECEIVED