

Modifications to the Shallow-Water Grouper Accountability Measures



Final Amendment 38 to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico

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

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Name of Action

Final Amendment 38 to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico, including Environmental Assessment, Fishery Impact Statement, Regulatory Impact Review, and Regulatory Flexibility Act Analysis - Modifications to the Shallow-Water Grouper Accountability Measures.

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ABBREVIATIONS USED IN THIS DOCUMENT

AA	Assistant Administrator for fisheries
ABC	Acceptable biological catch
ACL	Annual catch limit
ACT	Annual catch target
AMs	Accountability measures
APA	Administrative Procedures Act
B	Stock biomass level
B _{MAX}	Stock biomass level corresponding to maximum yield per recruit
CFR	Code of Federal Regulations
Council	Gulf of Mexico Fishery Management Council
CZMA	Coastal Zone Management Act
DQA	Data Quality Act
EA	Environmental Assessment
EEZ	Exclusive Economic Zone
EFH	Essential fish habitat
EIS	Environmental impact statement
EJ	Environmental justice
ESA	Endangered Species Act
F	Instantaneous rate of fishing mortality
F _{MAX}	Fishing mortality rate corresponding to maximum yield per recruit
F _{MSY}	Fishing mortality rate corresponding to an equilibrium yield of MSY
F _{30% SPR}	Fishing mortality corresponding to 30% spawning potential ratio
FIS	Fishery Impact Statement
FMP	Fishery Management Plan
FR	Federal Register
GMFMC	Gulf of Mexico Fishery Management Council
Gulf	Gulf of Mexico
HAPC	Habitat area of particular concern
HC	Habitat conservation
IFQ	Individual fishing quota
IPCC	Intergovernmental Panel on Climate Change
kg	kilograms
LAPP	Limited access privilege program
LOF	List of fisheries
M	Natural mortality
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act
MFMT	Maximum fishing mortality threshold
MMPA	Marine Mammal Protection Act
lbs	pounds
MRFSS	Marine Recreational Fisheries Survey and Statistics
MSST	Minimum stock size threshold
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MSY	Maximum sustainable yield
NEPA	National Environmental Policy Act

NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOAA Fisheries	Same as NMFS
OFL	Overfishing limit
OY	Optimum yield
PAH	Polyaromatic hydrocarbon
PR	Protected resources
PRA	Paperwork Reduction Act
Reef Fish FMP	Fishery Management Plan for the Reef Fish Resources in the Gulf of Mexico
RFA	Regulatory Flexibility Act of 1980
RFAA	Regulatory Flexibility Act Analysis
RIR	Regulatory impact review
Secretary	Secretary of Commerce
SEDAR	Southeast Data, Assessment and Review
SEFSC	Southeast Fisheries Science Center
SEP	Socioeconomic Panel
SERO	Southeast Regional Office
SSBR	Spawning stock biomass per recruit
SSC	Scientific and Statistical Committee
SPR	Spawning potential ratio
SWG	shallow-water grouper
TAC	Total allowable catch
VOC	Volatile organic compound

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FISHERY IMPACT STATEMENT (FIS)¹

The Magnuson-Stevens Fishery Conservation and Management Act requires that a FIS be prepared for all amendments to fishery management plans. The FIS contains an assessment of the likely biological and socioeconomic effects of the conservation and management measures on fishery participants and their communities, participants in the fisheries conducted in adjacent areas under the authority of another Fishery Management Council, and the safety of human life at sea.

Amendment 38 to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico consists of two management actions. The first action would revise post-season recreational accountability measures for shallow-water grouper species. Currently, the accountability measures include in-season closures, post-season adjustments to the length of the recreational fishing season, and overage adjustments for overfished grouper stocks. This action modifies the specific post-season accountability measure that reduces the length of the recreational season for all shallow-water grouper in the year following a year in which the annual catch limit (ACL) for gag or red grouper is exceeded. The modified accountability measure would reduce the recreational season only for the species whose ACL was exceeded.

The second action would modify the reef fish framework procedure. The addition of accountability measures to the list of items that can be changed through the standard framework procedure would allow for faster implementation of measures designed to maintain harvest at or below the ACL. Additionally, more general language would be added to the framework to accommodate future changes in naming of the Council's advisory committees and panels.

Biological Effects

Currently, recreational harvest of gag is prohibited January 1 – June 30 and November 1 – December 31. During this time, harvest of other shallow-water grouper is allowed, except during the fixed shallow-water grouper closed season (February 1 – March 31). If recreational gag landings exceed the ACL in a year, the recreational closed season for gag will increase by some number of days. In **Action 1, Preferred Alternative 3** would allow continued fishing for other shallow-water grouper during the gag closed season. The effects of an action on the physical and biological/ecological environments are generally tied to how the action affects fishing effort. The proposed change to the accountability measures may allow slightly more effort relative to the current accountability measures, but only if the gag or red grouper recreational ACL is exceeded. **Preferred Alternative 4** would have no change in effects on the biological/ecological environment, except to potentially allow for a quicker response if an ACL is exceeded.

Updating the framework procedures, which outlines the actions that can be implemented through framework actions, would enable harvest modifications to be expedited when they are most needed. **Preferred Alternative 2 in Action 2** increases the number of actions that could be implemented quickly through the framework procedure, and therefore, would benefit the

¹This FIS is based on the current preferred alternatives selected by the Gulf of Mexico Fishery Management Council (Council). Should the Council select other alternatives as preferred, this FIS would need to be modified.

physical and biological/ecological environments. **Preferred Alternative 4** would have no impact on the physical or biological/ecological environments.

Economic Effects

In **Action 1, Preferred Alternative 3** is expected to result in economic benefits stemming from the elimination of the requirement to reduce the season for all shallow-water grouper recreational fishing by allowing potentially more fishing for shallow-water grouper species. **Preferred Alternative 4** is expected to result in economic benefits by avoiding adverse effects that would be associated with potential delays in the implementation of accountability measures.

In **Action 2**, changes to the framework procedure proposed in **Preferred Alternative 2** are expected to result in a speedier implementation of management measures beneficial to the stocks and/or to fishery participants, thereby yielding positive economic effects. **Preferred Alternative 4** would eliminate specific identification of potential advisory groups, e.g., delete references to the Socioeconomic Panel, and allow for access to a broader range of advisory groups, potentially resulting in improved management decisions, and economic benefits.

Social Effects

Social impacts from this amendment are expected to be positive by reducing and removing regulatory obstructions to achieving optimum yield. **Action 1** would enable the recreational harvest of shallow-water grouper species whose quota has not been met to remain open. **Action 2** would increase regulatory flexibility for modifying accountability measures as needed for improved management.

No vessel would be forced to participate in the reef fish fishery under adverse weather or ocean conditions as a result of the imposition of management regulations proposed in this amendment. Therefore, no safety-at-sea issues would be created.

CHAPTER 1. INTRODUCTION

1.1 Background

The 2007 reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) required that most stocks in fishery management plans have annual catch limits (ACLs) and accountability measures for adherence to the ACLs. These measures were to be in effect in 2010 for fisheries determined to be subject to overfishing, and in 2011 for all other fisheries subject to the ACL requirements.

At the time that the requirements were established, four stocks in the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico (Reef Fish FMP) were declared to be undergoing overfishing (red snapper, gag, greater amberjack, and gray triggerfish). Annual catch limits and accountability measures were established on a case by case basis by 2010 for these four stocks, while the remaining stocks had ACLs and accountability measures established in 2011 in the Generic Annual Catch Limits/Accountability Measures Amendment (Generic ACL/AM Amendment) (GMFMC 2011a).

Accountability measures were established for gag in 2009 with the implementation of Amendment 30B to the Reef Fish FMP (GMFMC 2008a). The accountability measures included a provision that, if the recreational sector ACL was exceeded in the current year, the recreational catch levels would be maintained at the current levels and the recreational season for all shallow-water groupers would be shortened the following year to ensure that the gag recreational ACL would not be exceeded. One reason for including all shallow-water grouper in the season adjustment was concern that bycatch and bycatch mortality of gag could increase if recreational fishermen continue to fish for the grouper stocks that remain open. A similar provision was included if the recreational red grouper ACL was exceeded. Additional accountability measures established in 2012 through Amendment 32 to the Reef Fish FMP (GMFMC 2011b) added authorization for the Assistant Administrator of NOAA Fisheries to close the recreational gag or red grouper fishing season when the respective recreational sector ACL is reached or projected to be reached, and an overage adjustment for red grouper or gag if the recreational sector ACL is exceeded and the stock is in a rebuilding plan.

Annual Catch Limit

The amount of fish that can be harvested from the stock each year.

Annual Catch Target

A harvest level set lower than the annual catch limit to create a buffer so that overharvest does not occur.

Accountability Measures

Measures taken to prevent harvest from exceeding the annual catch limit and if exceeded can mitigate

Gulf of Mexico Fishery Management Council

- Responsible for conservation and management of fish stocks
- Consists of 11 voting members who are appointed by the Secretary of Commerce, 1 voting member representing each of the five Gulf states, and the Regional Administrator for NOAA Fisheries Service Southeast Region
- Responsible for developing fishery management plans and recommending regulations to NOAA Fisheries Service for implementation

NOAA Fisheries Service

- Responsible for preventing overfishing while achieving optimum yield
- Approves, disapproves, or partially approves Council recommendations
- Implements regulations

The accountability measure to shorten the recreational shallow-water grouper fishing season if the gag or red grouper ACL is exceeded would affect fishing for six species of grouper (gag, red grouper, black grouper, scamp, yellowfin grouper, and yellowmouth grouper), however, gag and red grouper represent 95% of the recreational shallow-water grouper harvest by number (Amendment 30B, GMFMC 2008a). The gag stock is classified as overfished and undergoing overfishing. Red grouper and black grouper stocks are neither overfished nor undergoing overfishing. The statuses of scamp, yellowfin grouper, and yellowmouth grouper are undetermined (the scamp stock is scheduled to be assessed in 2014, but no assessments are scheduled for yellowfin or yellowmouth grouper). The recreational allocation for red grouper has not been met in recent years, and, therefore, optimum yield has not been achieved. Furthermore, the recreational season for other shallow-water grouper is currently open year-round except for the February-March shallow-water grouper season closure. If the accountability measure to shorten the entire shallow-water grouper season takes effect, then the recreational fishing season for all shallow-water grouper would be shortened.

Removing the accountability measure to shorten the entire shallow-water grouper recreational season, or modifying the measure to shorten the season only for the stock for which the ACL was exceeded, would improve the likelihood of achieving optimum yield for red grouper and avoid unnecessary closures of other shallow-water grouper. Although there is concern that this could increase bycatch and bycatch mortality of gag if the gag recreational ACL is exceeded, there is already a substantial period when recreational gag fishing is closed while fishing for other shallow-water grouper remains open (8 months in 2011, 6 months in 2012). Even if the closed season applies to all shallow-water grouper, fishermen may shift their effort to other species found in areas where gag occur, such as mangrove snapper, greater amberjack, or cobia. Any extension of the gag-only closed season would therefore have only a relatively small change in bycatch from the status quo.

1.2 Purpose and Need

Purpose for Action

The purpose of this amendment is to modify post-season recreational accountability measures for shallow-water grouper species and allow modifications to accountability measures for reef fish species in the future under the framework procedure.

Need for Action

The need for the proposed actions is to achieve optimum yield while ensuring the fishery resources are utilized efficiently.

1.3 History of Management Relative to Accountability Measures

The following summary describes management actions that affect the reef fish fishery in the Gulf of Mexico. The summary focuses on the management of grouper stocks in general, and in particular, the recreational management of grouper species in the Reef Fish FMP. More information on the Reef Fish FMP can be obtained from the Gulf of Mexico Fishery Management Council (Council) at http://www.gulfcouncil.org/fishery_management_plans/index.php.

Grouper in the fishery management unit:

Management measures from the Reef Fish FMP [with its associated environmental impact statement (EIS)] were implemented in November 1984. The original list of species included in the management unit consisted of snappers, groupers, and sea basses. A secondary list of species that did not include any grouper species was designated for purposes of data collection, but their take was not regulated. Species have been added and removed through **Amendments 1 and 15** [with their associated environmental assessment (EA), regulatory impact review (RIR), and regulatory flexibility analysis (RFA)], but these changes did not affect the grouper species. The secondary list of species identified in the original Reef Fish FMP was merged into the management unit through **Amendment 16B** (with its associated EA, RIR, and RFA) and became effective in November 1999. The **Generic ACL/AM Amendment** (with its associated EIS, RIR, and RFA) (GMFMC 2011a) gave jurisdiction to managing Nassau grouper to the South Atlantic Fishery Management Council and removed red hind, rock hind, and misty grouper from the management unit due to low landings. Measures from this amendment were implemented in January 2012. Currently, 11 grouper stocks are in the management unit. For purposes of recreational management, shallow-water grouper consist of gag, red grouper, black grouper, scamp, yellowfin grouper, and yellowmouth grouper (the latter four are collectively referred to as other shallow-water grouper). Deep-water grouper consist of Warsaw grouper, snowy

grouper, speckled hind, and yellowedge grouper. One grouper, goliath grouper, is a protected species.

Stock status and management thresholds, limits, and targets:

The primary objective of **Amendment 1** (with its associated EA, RIR, and RFA) was the stabilization of long-term population levels of all reef fish species by establishing a spawning age survival rate to achieve at least 20% spawning stock biomass per recruit (SSBR), relative to the SSBR that would occur with no fishing. These measures were implemented in 1990. The objective of managing for 20% SSBR was revised to a 20% spawning potential ratio (SPR) in **Amendment 3** (with its associated EA, RIR, and RFA), implemented in July 1991. Measures in the **Generic Sustainable Fisheries Act Amendment** (with its associated EA, RIR, and RFA), were partially approved and implemented in November 1999. This amendment set the maximum fishing mortality threshold (MFMT) for most grouper species at $F_{30\% \text{ SPR}}$. The exceptions were goliath grouper and Nassau grouper for which the MFMT was set at $F_{50\% \text{ SPR}}$. Measures for the maximum sustainable yield (MSY), minimum stock size threshold (MSST), and optimum yield (OY) were disapproved because they were based on spawning potential ratio proxies rather than biomass based estimates.

Red grouper were declared overfished and undergoing overfishing in October 2000. Measures from **Secretarial Amendment 1** (with its associated EA, RIR, and RFA) implemented a red grouper rebuilding plan in July 2004 and set red grouper status determination criteria. The amendment revised the MFMT value from $F_{30\% \text{ SPR}}$ to F_{MSY} and set the values for MSY, OY and MSST at the following levels: the yield at F_{MSY} , the yield at $75\% * F_{\text{MSY}}$, and 80% of the stock biomass (B) capable of producing MSY. In 2007, the stock was determined to be recovered. Annual catch limits and annual catch targets (ACTs) were implemented for red grouper in **Amendment 30B** (with its associated EIS, RIR, and RFA) in May 2009. The red grouper overfishing limit (OFL) was defined in **Amendment 32** (with its associated EIS, RIR, and RFA) with management measures being implemented in March 2012.

The gag stock was determined to be undergoing overfishing in October 2006. Management measures from **Amendment 30B**, implemented May 2009, were developed to end overfishing. This amendment also established a gag MSY proxy, OY proxy, and MSST at the following levels: the yield at F_{MAX} , the yield at $75\% * F_{\text{MAX}}$, and $(1 - M) * B_{\text{MAX}}$ where M is the natural mortality rate and MAX refers to the maximum yield per recruit. **Amendment 30B** implemented sector specific ACLs and ACTs for gag. As a result of an update assessment of gag in 2009, the Council was notified that overfishing was still occurring and that the gag stock was overfished. In response, the Council developed a rebuilding plan in **Amendment 32**, which also defined the gag OFL.

Accountability measures:

The 2007 reauthorization of the Magnuson-Stevens Act required the Council and NOAA Fisheries Service develop accountability measures to prevent ACLs from being exceeded, and if exceeded, correct or mitigate any overages. **Amendment 30B** established accountability measures for red grouper and gag. These accountability measures would limit future increases in

ACTs and reduce the length of the shallow-water grouper fishing season in the following year if the recreational ACLs were exceeded. In addition, the commercial sector would be closed to shallow-water grouper fishing if the gag, red grouper, or shallow-water grouper quotas are reached within the fishing year. Actions from **Amendment 32** (with its associated EIS, RIR, and RFA), implemented on March 12, 2012, revised the gag and red grouper accountability measures. For the commercial sector, the accountability measures became the individual fishing quota program put in place through **Amendment 29** (with its associated EIS, RIR, and RFA) in January 2010. For the recreational sector, gag and red grouper accountability measures, **Amendment 32** added an overage adjustment if the stock is under a rebuilding plan and an in-season closure authority if gag or red grouper recreational landings are projected to exceed the recreational ACL within the fishing year.

The **Generic ACL/AM Amendment** (GMFMC 2011a) established in-season and post-season accountability measures for all stocks that did not already have such measures defined. This includes the “other shallow-water grouper species” complex. The accountability measure states that if an ACL is exceeded, in subsequent years an in-season accountability measure will be implemented that would close shallow-water grouper fishing (for all shallow-water grouper species combined) when the ACL is reached or projected to be reached.

Framework:

The Council created a framework procedure for the specification of the total allowable catch in **Amendment 1**. **Amendment 3** (with its EA, RIR, and RFA), implemented in July 1991, provided additional flexibility to the annual framework procedure allowing the target date for rebuilding an overfished stock to be changed. Implemented in 2006, **Amendment 18A** (with its EA, RIR, and RFA) modified the framework to conform with changes in how stock assessments were conducted. A more open framework was developed to standardized framework procedures for implementing management changes in the **Generic ACL/AM Amendment**.

CHAPTER 2. MANAGEMENT ALTERNATIVES

2.1 Action 1 - Revise Post-season Accountability Measures for Shallow-water Grouper Species

Alternative 1: No Action - Retain the accountability measures for gag and red grouper as written in section 622.49 of the regulations (see current regulatory text below).

Alternative 2: Remove the portions of the accountability measures for gag and red grouper which state that the notification filed by the Assistant Administrator will reduce the length of the recreational shallow-water grouper fishing season the fishing year following an overage of the annual catch limit (ACL) by the amount necessary to ensure gag (or red grouper) recreational landings do not exceed the recreational annual catch target (ACT) in the following fishing year (highlighted in bold in the regulatory text below).

Preferred Alternative 3: Modify the portions of the accountability measures for gag and red grouper which state that the notification filed by the Assistant Administrator will reduce the length of the recreational shallow-water grouper (SWG) fishing season the following fishing year by replacing “SWG” with “gag” (or “red grouper”). Thus, the shortened season would only apply to the species with an ACL overage.

Preferred Alternative 4: Modify the trigger mechanism for recreational accountability measures for gag and red grouper to eliminate the use of moving averages, so that the accountability measures are triggered if the recreational landings for gag or red grouper in the current year exceed the respective ACL for the current year (highlighted in bold in the regulatory text below).

Note: Alternative 4 can be chosen in addition to any of the other alternatives.

Discussion:

The current system of in-season closures, post-season adjustments to the length of the recreational fishing season, and overage adjustments for overfished grouper stocks was established in Amendment 32 to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico (Reef Fish FMP). A detailed explanation of how this system works is provided in that amendment. This discussion will focus on the specific post-season accountability measure that this action proposes to modify, i.e., reducing the length of the recreational season in the following year if the ACL is exceeded in the current year.

Alternative 1, Alternative 2, and Preferred Alternative 3 differ in how the post-season accountability measure is modified and how they affect the recreational grouper fishing season in the following year if the ACL for gag or red grouper is exceeded. These differences are summarized in Figure 2.1. **Preferred Alternative 4** modifies the trigger for determining if the ACL has been exceeded by replacing a moving average system with a simpler single-year method.

Action 1 – Revise Post-season accountability measures for shallow-water grouper species

Under post-season AMs, exceeding the ACL triggers the AM, but the next year's season is shortened to correspond with the ACT.

The ACT is itself an AM, providing a buffer to prevent the ACL from being exceeded.

	In-season AM	Post-season AM
Alt 1	Close season for the species when the species ACL is reached	Shorten next year's season for all SWG to ensure that the species ACT is not exceeded.
Alt 2	Close season for the species when species ACL is reached	None
Alt 3	Close season for the species when the species ACL is reached	Shorten next year's season for species that exceed ACL by closing when the ACT is projected to be reached.

Figure 2.1. A comparison of the effects of Alternatives 1, 2 and 3 on recreational grouper accountability measures (AMs).

Alternative 1 retains the current post-season accountability measure. This would result in a reduction in the fishing season for all shallow-water grouper if the gag or red grouper ACL is exceeded. Because shallow-water groupers other than gag are not overfished, this could prevent harvest of other shallow-water groupers from achieving optimum yield. Currently, recreational fishing for shallow-water grouper other than gag and red grouper is open year-round, except for the February – March shallow-water grouper season closure. Red grouper is subject to an in-season closure, but the recreational sector has not met its allocation in recent years. If the current accountability measure is triggered by the gag ACL being exceeded, the season for all shallow-water grouper would be shortened in the subsequent year, and the recreational sector would be unlikely to harvest its allocation of red grouper, even with the increased bag limit established in Amendment 32.

One reason for including all shallow-water grouper in a season adjustment is concern that bycatch and bycatch mortality of gag or red grouper could increase if recreational fishermen continue to fish for the grouper stocks that remain open. This alternative would reduce the likelihood of bycatch mortality of gag or red grouper from recreational fishermen targeting other species of grouper. During 2004-2006, groupers other than gag and red grouper made up just 5%

of the recreational shallow-water grouper harvest (Amendment 30B, GMFMC 2008a). Thus, it is likely that fishermen targeting other shallow-water grouper would have a bycatch of gag and red grouper. However, if fisherman can target which grouper species they catch, then the likelihood of catching the species with an ACL overage, while not eliminated, is reduced. Anecdotal information suggests that when all shallow-water grouper are closed to harvest, fishermen target other species including mangrove snapper, greater amberjack, and cobia. These species are often caught by recreational fishermen in areas of high gag abundance². In addition, hierarchical cluster analysis of commercial landings have been shown that gag co-occur with vermilion snapper, gray triggerfish, gray (mangrove) snapper, mutton snapper and greater amberjack in addition to other shallow-water grouper (NMFS 2010a). Thus, a closure for all shallow-water grouper may not be effective in reducing bycatch of gag because fishing would likely continue in areas where bycatch of gag may occur.

Alternative 2 removes the post-season accountability measure that calls for the recreational season to be shortened in the subsequent year if the gag (or red grouper) ACL is exceeded in the current year. Under this alternative, there is no pre-set ACT closing date, but in-season accountability measures allow the Regional Administrator to close the season for gag (or red grouper) when the ACL for gag (or red grouper) is projected to be reached. This closure applies only to the single species, not the entire shallow-water grouper aggregate. The ACL is a larger catch level than the ACT, so this alternative may allow a slightly longer season than either **Alternative 1** or **Preferred Alternative 3**. However, because the closing date is based on in-season monitoring rather than being fixed in advance, there would be less advance notice of the closing date. The concerns about bycatch of gag during a gag-only closed season apply to this alternative. Fishermen targeting other grouper or other species that occupy the same habitat as gag during a gag closed season could result in increased removals of gag due to bycatch mortality relative to **Alternative 1** if the recreational gag ACL is exceeded.

Preferred Alternative 3 retains but modifies the current post-season accountability measure. If post-season accountability measures are triggered (i.e., the ACL is exceeded for gag or red grouper), the recreational season is shortened in the subsequent year only for the species whose ACL was exceeded. The fishing season for the remaining shallow-water grouper would remain open unless the species complex ACL is reached. The reduced season for the species whose ACL was exceeded would be based on the date when the ACT is projected to be reached in the following year, which could be slightly shorter than the season under **Alternative 2**, which is based on the ACL closing date. However, the closing date would be set in advance, which may allow businesses dependent upon the fishing season greater stability. It should be noted that an in-season closure could also occur with **Preferred Alternative 3** if the ACL is reached before the adjusted closing date, but the adjusted closing date would be based on the ACT, making that situation unlikely. Also, given the current gag and red grouper in-season accountability measures that would close fishing for these species if the respective ACLs were projected to be met, the likelihood of the ACL being exceeded and triggering the post-season accountability measure is minimal.

The concerns about bycatch of gag during a gag-only closed season also apply to **Preferred Alternative 3**. Fishermen targeting other grouper or other species that occupy the same habitat

² T. Marvel, Recreational Charter Captain, pers. comm., May 23, 2012

as gag during a gag closed season could result in increased removals of gag due to bycatch mortality relative to **Alternative 1**, and slightly increased removals relative to **Alternative 2**, if the recreational gag ACL is exceeded.

Preferred Alternative 4 can be selected in combination with any of the above alternatives. The current method for determining if post-season accountability measures have been triggered for red grouper or gag is to compute a one to three-year moving average of recreational catches, and to compare that moving average of catches to the ACL. This alternative would replace a moving average system for determining if accountability measures are triggered with a simple comparison of current year catches to current year ACL. A moving average is not used for other shallow-water grouper landings, so changing gag and red grouper would promote consistency.

The moving average method was intended to prevent accountability measures from being triggered unnecessarily by comparing the average catch over the last three years to the current ACL. However, the reason for using this method is not easily understood. The use of three-year moving averages instead of single-year landings may have the potential to smooth out harvest fluctuations and reduce the likelihood of triggering accountability measures. Conversely, the use of moving averages could potentially delay the implementation of accountability measures by unduly masking sizeable harvest overages and potentially slowing down the recovery of stocks under rebuilding. In addition, a single large overage could continue to affect the triggering of accountability measures for up to three years. Furthermore, the sequence of moving from one-year to three-year average catches restarts each time the ACL changes. For gag, which is in a rebuilding plan, the ACL changes every year and the three-year moving average is never attained. For red grouper, which has a constant ACL, recreational catches have not come close to exceeding the ACL in recent years.

Current Regulatory Text

The current accountability measures for gag and red grouper are being revised in a supplemental rule to Amendment 32. The final rule for this supplement published on July 31, 2012 and is effective August 30, 2012. The portions where changes are proposed through Amendment 38 are in bold.

§ 622.49 Annual catch limits (ACLs) and accountability measures (AMs).

(a) Gulf reef fish.

(4) Gag.

(ii) Recreational sector.

(A) Without regard to overfished status, if gag recreational landings, as estimated by the SRD, reach or are projected to reach the applicable ACLs specified in paragraph (a)(4)(ii)(D) of this section, the AA will file a notification with the Office of the Federal Register, to close the recreational sector for the remainder of the fishing year. On and after the effective date of such a notification, the bag and possession limit of gag in or from the Gulf EEZ is zero. This bag and possession limit applies in the Gulf on board a vessel for which a valid Federal charter vessel/headboat permit for Gulf reef fish has been issued, without regard to where such species were harvested, i.e. in state or Federal waters. **In addition, the notification will reduce the length of the recreational SWG fishing season the following fishing year by the amount**

necessary to ensure gag recreational landings do not exceed the recreational ACT in the following fishing year.

(B) If gag are not overfished, and in addition to the measures specified in paragraph (a)(4)(ii)(A) of this section, if gag recreational landings, as estimated by the SRD, exceed the applicable ACLs specified in paragraph (a)(4)(ii)(D) of this section, the AA will file a notification with the Office of the Federal Register to maintain the gag ACT, specified in paragraph (a)(4)(ii)(D) of this section, for that following fishing year at the level of the prior year's ACT, unless the best scientific information available determines that maintaining the prior year's ACT is unnecessary.

(C) In addition to the measures specified in paragraphs (a)(4)(ii)(A) and (B) of this section, if gag recreational landings, as estimated by the SRD, exceed the applicable ACL specified in paragraph (a)(4)(ii)(D) of this section, and gag are overfished, based on the most recent status of U.S. Fisheries Report to Congress, the AA will file a notification with the Office of the Federal Register, at or near the beginning of the following fishing year to reduce the ACL and the ACT for that following year by the amount of the ACL overage in the prior fishing year, unless the best scientific information available determines that a greater, lesser, or no overage adjustment is necessary.

(D) The applicable recreational ACLs for gag, in gutted weight, are 1.232 million lb (0.559 million kg) for 2012, 1.495 million lb (0.678 million kg) for 2013, 1.720 million lb (0.780 million kg) for 2014, and 1.903 million lb (0.863 million kg) for 2015 and subsequent fishing years. The recreational ACTs for gag, in gutted weight, are 1.031 million lb (0.468 million kg) for 2012, 1.287 million lb (0.584 million kg) for 2013, 1.519 million lb (0.689 million kg) for 2014, and 1.708 million lb (0.775 million kg) for 2015 and subsequent fishing years.

Recreational landings will be evaluated relative to the ACL based on a moving multi-year average of landings, as described in the FMP.

(5) Red grouper.

(ii) Recreational sector.

(A) Without regard to overfished status, if red grouper recreational landings, as estimated by the SRD, reach or are projected to reach the applicable ACL specified in paragraph (a)(5)(ii)(D) of this section, the AA will file a notification with the Office of the Federal Register, to close the recreational sector for the remainder of the fishing year. On and after the effective date of such a notification, the bag and possession limit of red grouper in or from the Gulf EEZ is zero. This bag and possession limit applies in the Gulf on board a vessel for which a valid Federal charter vessel/headboat permit for Gulf reef fish has been issued, without regard to where such species were harvested, *i.e.* in state or Federal waters.

(B) If red grouper are not overfished, and in addition to the measures specified in paragraph (a)(5)(ii)(A) of this section, if red grouper recreational landings, as estimated by the SRD, exceed the applicable ACL specified in paragraph (a)(5)(ii)(D) of this section, the AA will file a notification with the Office of the Federal Register to maintain the red grouper ACT, specified in paragraph (a)(5)(ii)(D) of this section, for that following fishing year at the level of the prior year's ACT, unless the best scientific information available determines that maintaining the prior year's ACT is unnecessary. **In addition, the notification will reduce the bag limit by one fish and reduce the length of the recreational SWG fishing season the following fishing year by the amount necessary to ensure red grouper recreational landings do not exceed**

the recreational ACT in the following fishing year. The minimum red grouper bag limit for 2014 and subsequent fishing years is two fish.

(C) In addition to the measures specified in paragraphs (a)(5)(ii)(A) and (B) of this section, if red grouper recreational landings, as estimated by the SRD, exceed the applicable ACL specified in paragraph (a)(5)(ii)(D) of this section, and red grouper are overfished, based on the most recent Status of U.S. Fisheries Report to Congress, the AA will file a notification with the Office of the Federal Register, at or near the beginning of the following fishing year to reduce the ACL and the ACT for that following year by the amount of the ACL overage in the prior fishing year, unless the best scientific information available determines that a greater, lesser, or no overage adjustment is necessary.

(D) The recreational ACL for red grouper, in gutted weight, is 1.90 million lb (0.862 million kg) for 2012 and subsequent fishing years. The recreational ACT for red grouper, in gutted weight, is 1.730 million lb (0.785 million kg) for 2012 and subsequent fishing years.

Recreational landings will be evaluated relative to the ACL based on a moving multi-year average of landings, as described in the FMP.

Council Conclusions – Action 1

Under **Alternative 1**, the recreational season would be shortened for all shallow-water grouper if either gag or red grouper recreational harvest exceeds its ACL. The Council felt that this was an overreaction that prevented access to the part of the grouper resource that was being harvested at appropriate levels. The rationale for such an action would be to reduce incidental catch of the species that exceeded its ACL while fishermen target other grouper. However, if fisherman can target which grouper species they catch, then the likelihood of catching the species that exceeded its ACL, while not eliminated, is reduced. Provided that overfishing does not result, the benefits of allowing access to the remaining grouper resources outweighs the potential for incidental harvest. Under **Alternative 2**, any closure would be based on the in-season accountability measure and would apply only to the species that exceeded its allocation. Relying entirely in the in-season accountability measure means that the closing date to the recreational season for the impacted species is not set in advance, resulting in greater uncertainty as to how long the season will remain open. The Council selected **Preferred Alternative 3** because it leaves the post-season accountability measure in place, but applies it only to the species that exceeded its ACL. This provides recreational access to the remaining shallow-water grouper, while providing for the closing date of the shortened season for the impacted species to be announced in advance. There is still a possibility that the season could be closed early if in-season monitoring indicates that the ACL will be harvested faster than projected, but the uncertainty as to the closing date is reduced relative to **Alternative 2**, allowing recreational fishermen and charterboat operators to better plan their fishing seasons.

Preferred Alternative 4 removes a system of using moving averages of recreational harvest to determine if post-season accountability measures have been triggered, and replaces it with a simple system that compares the current year's harvest to the current year's ACL. The Council selected this alternative, in combination with **Preferred Alternative 3**, because it provides a simpler, easier to understand, and more transparent method for evaluating annual recreational grouper harvest levels to determine if the ACL has been exceeded and post-season accountability measures triggered.

2.2 Action 2 – Modify the Reef Fish Framework Procedure

Alternative 1. No Action – Do not modify the reef fish framework procedure adopted through the Generic ACL/AM Amendment.

Preferred Alternative 2. Modify the reef fish framework procedure to include changes to accountability measures through the standard documentation process for open framework actions. Accountability measures that could be implemented or changed would include:

In-season accountability measures

- Closure and closure procedures
- Trip limit implementation or change
- Designation of an existing limited access privilege program as the accountability measure for species in the IFQ program
- Implementation of gear restrictions

Post-season accountability measures

- Adjustment of season length
- Implementation of closed seasons/time periods
- Adjustment or implementation of bag, trip, or possession limit
- Reduction of the ACL/ACT to account for the previous year overage
- Revoking a scheduled increase in the ACL/ACT if the ACL was exceeded in the previous year
- Implementation of gear restrictions
- Reporting and monitoring requirements

Alternative 3. Modify the reef fish framework procedure to include changes to accountability measures through the standard documentation process for open framework actions.

Accountability measures that could be changed would include:

In-season accountability measures

- Closure procedures
- Trip limit reductions or increases

Post-season accountability measures

- Adjustment of season length
- Adjustment of bag, trip, or possession limit

Preferred Alternative 4. Make editorial changes to the framework procedure to reflect changes to the Council advisory committees and panels.

Note: Alternative 4 can be chosen in addition to either Alternative 2 or Alternative 3.

Discussion:

The Council currently has three different regulatory vehicles for addressing fishery management issues. First, they may develop a fishery management plan or plan amendment to establish management measures. The amendment process can take one to three years depending on the analysis needed to support the amendment actions. Second, the Council may vote to request an

interim or emergency rule that could remain effective for 180 days with the option to extend it for an additional 186 days. Interim and emergency rules are only meant as short-term management tools while permanent regulations are developed through an amendment. Third, the Council may prepare a framework action based on a predetermined procedure that allows changes to specific management measures and parameters. Typically, framework actions take less than a year to implement, and, like plan amendments, are effective until amended. The current framework is included below, and proposed changes are highlighted.

Proposed Language for Updated Framework Procedure

This framework procedure provides standardized procedures for implementing management changes pursuant to the provisions of the fishery management plan (FMP). There are two basic processes, the open framework process and the closed framework process. Open frameworks address issues where there is more policy discretion in selecting among various management options developed to address an identified management issue, such as changing a size limit to reduce harvest. Closed frameworks address much more specific factual circumstances, where the FMP and implementing regulations identify specific action to be taken in the event of specific facts occurring, such as closing a sector of a fishery after their quota has been harvested.

Open Framework:

1. Situations under which this framework procedure may be used to implement management changes include the following:
 - a. A new stock assessment resulting in changes to the overfishing limit, acceptable biological catch, or other associated management parameters.
In such instances the Council may, as part of a proposed framework action, propose an annual catch limit (ACL) or series of ACLs and optionally an annual catch target (ACT) or series of ACTs, as well as any corresponding adjustments to maximum sustainable yield (MSY), optimum yield (OY), and related management parameters.
 - b. New information or circumstances.
The Council will, as part of a proposed framework action, identify the new information and provide rationale as to why this new information indicates that management measures should be changed.
 - c. Changes are required to comply with applicable law such as Magnuson-Stevens Act (MSA), Endangered Species Act (ESA), Marine Mammal Protection Act (MMPA), or are required as a result of a court order.
In such instances the Regional Administrator will notify the Council in writing of the issue and that action is required. If there is a legal deadline for taking action, the deadline will be included in the notification.
2. Open framework actions may be implemented in either of two ways, abbreviated documentation, or standard documentation process.
 - a. Abbreviated documentation process. Regulatory changes that may be categorized as a routine or insignificant may be proposed in the form of a letter or memo from the

Council to the Regional Administrator containing the proposed action, and the relevant biological, social and economic information to support the action. If multiple actions are proposed, a finding that the actions are also routine or insignificant must also be included. If the Regional Administrator concurs with the determination and approves the proposed action, the action will be implemented through publication of appropriate notification in the Federal Register. Actions that may be viewed as routine or insignificant include, among others:

- i. Reporting and monitoring requirements,
 - ii. Permitting requirements,
 - iii. Gear marking requirements,
 - iv. Vessel marking requirements,
 - v. Restrictions relating to maintaining fish in a specific condition (whole condition, filleting, use as bait, etc.),
 - vi. Bag and possession limit changes of not more than 1 fish,
 - vii. Size limit changes of not more than 10% of the prior size limit,
 - viii. Vessel trip limit changes of not more than 10% of the prior trip limit,
 - ix. Closed seasons of not more than 10% of the overall open fishing season,
 - x. Species complex composition, including species subject to limited access privilege program (LAPP) management, requiring new share specification,
 - xi. Restricted areas (seasonal or year-round) affecting no more than a total of 100 square nautical miles,
 - xii. Respecification of ACL, ACT or quotas that had been previously approved as part of a series of ACLs, ACTs or quotas,
 - xiii. Specification of MSY, OY, and associated management parameters (such as overfished and overfishing definitions) where new values are calculated based on previously approved specifications,
 - xiv. Gear restrictions, except those that result significant changes in the fishery, such as complete prohibitions on gear types,
 - xv. Quota changes of not more than 10%, or retention of portion of an annual quota in anticipation of future regulatory changes during the same fishing year,
- b. Standard documentation process. Regulatory changes that do not qualify as a routine or insignificant may be proposed in the form of a framework document with supporting analyses. Non routine or significant actions that may be implemented under a framework action include:
- i. Specification of ACTs or sector ACTs, and modifications to ACL/ACT control rule,
 - ii. Specification of ABC and ABC control rules,
 - iii. Rebuilding plans and revisions to approved rebuilding plans,
 - iv. The addition of new species to existing limited access privilege programs (LAPP),
 - v. Changes specified in section 4(a) that exceed the established thresholds.
 - vi. Changes to accountability measures including:
 1. Closures and closure procedures
 2. Trip limit changes

3. Designation of an existing limited access privilege program as the accountability measure for species in the program
4. Implementation of gear restrictions
- Post-season accountability measures
5. Adjustment of season length
6. Implementation of closed seasons/time periods
7. Adjustment or implementation of bag, trip, or possession limit
8. Reduction of the ACL/ACT to account for the previous year overage
9. Revoking a scheduled increase in the ACL/ACT if the ACL was exceeded in the previous year
10. Implementation of gear restrictions
11. Reporting and monitoring requirements

3. The Council will initiate the open framework process to inform the public of the issues and develop potential alternatives to address the issues. The framework process will include the development of documentation and public discussion during at least one Council meeting.
4. Prior to taking final action on the proposed framework action, the Council may convene its ~~SSC, SEP, or AP~~ advisory committees and panels, as appropriate, to provide recommendations on the proposed actions.
5. For all framework actions, the Council will provide the letter, memo, or the completed framework document along with proposed regulations to the Regional Administrator in a timely manner following final action by the Council.
6. For all framework action requests, the Regional Administrator will review the Council's recommendations and supporting information and notify the Council of the determinations, in accordance with the MSA and other applicable law.

Closed Framework:

1. Consistent with existing requirements in the FMP and implementing regulations, the Regional Administrator is authorized to conduct the following framework actions through appropriate notification in the Federal Register:
 - a. Close or adjust harvest any sector of the fishery for a species, sub-species, or species group that has a quota or sub-quota at such time as projected to be necessary to prevent the sector from exceeding its sector-quota for the remainder of the fishing year or sub-quota season,
 - b. Reopen any sector of the fishery that had been prematurely closed,
 - c. Implement accountability measures, either in-season or post-season.

Alternative 1 would retain the current reef fish framework procedure without any changes. This framework procedure was established in the Generic ACL/AM Amendment (GMFMC 2011a)

and provides the Council and NOAA Fisheries Service the flexibility to respond quickly to changes in the reef fish fishery. The framework has both open and closed components. The open components provide more policy discretion, whereas the closed components address more specific, well-defined circumstances. Measures that can be changed under the procedure are identified, as well as the appropriate process needed for each type of change.

Preferred Alternative 2 and **Alternative 3** would allow changes to accountability measures under the standard documentation process of the open framework procedure (see highlighted portion of Section 2b of the Framework Procedure). Each alternative contains a list of the specific accountability measures that could be changed through the process. **Preferred Alternative 2** is a more comprehensive list that includes all accountability measures currently in place. **Alternative 3** would limit the types of accountability measures that could be changed through a framework action. Table 2.2.1 lists the types of accountability measures that would be included under these alternatives, and an example of a change to an accountability measures that would be possible through the framework.

It is important to note that some items included in **Preferred Alternative 2** and **Alternative 3** are currently listed in the abbreviated process section of the open framework procedure as management measures. Although similar, accountability measures differ from management measures because they are tied in some way to the ACL. For example, through the abbreviated process, the Council and NOAA Fisheries Service may implement closed seasons of not more than 10% of the overall open fishing season. The reason for the closed season may be to protect spawning populations or to extend a fishing season later into the year. This is a management measure and would remain in effect until changed through another framework action. On the other hand, **Preferred Alternative 2** would allow the Council and NOAA Fisheries Service to implement a measure through the standard process whereby the Regional Administrator has the authority to set a closed season in the year following a year in which the ACL is exceeded. In this case, the reason for the closed season is to prevent another overage of the ACL. This is an accountability measure and the closed season would only be in effect temporarily. Therefore, the current framework allows changes to management measures, but the proposed alternatives would allow changes to accountability measures, including adding new accountability measures to the existing suite.

Table 2.2.1 Examples of proposed accountability measures (AMs) that could be changed through a framework action, rather than a plan amendment.

AM Type	Example
In-season AMs	
Closure	Create an inseason closure when the ACL/ACT is reached or projected to be reached
Trip limit change	Implement or reduce a trip limit when landings reach 75% of the quota
LAPP	Allow an IFQ program to act as the commercial AM, and remove other AMs (as was done for grouper and tilefish)
Gear restrictions	Prohibit longlines when landings reach 75% of the quota
Post-season AMs	In a year following a year with an overage of the ACL/ACT:
Season length	Reduce the length of the season by the amount needed to prevent another overage
Closed season/time period	Prohibit fishing during a two-month closed season (as was done for greater amberjack) Prohibit fishing on weekends
Bag/trip/possession limit	Reduce the bag limit by the amount needed to prevent another overage
Reduction of ACL/ACT	Subtract the amount of the overage from the next year's ACL and ACT
Revoke an ACL/ACT increase	Freeze the ACL/ACT at the current level until overages cease
Gear restrictions	Prohibit use of longline gear shoreward of the 20 fathom contour
Reporting and monitoring	Require daily instead of weekly reporting to better track the ACL/ACT

Preferred Alternative 4 would fix language in the framework that refers to the Socioeconomic Panel (SEP), which no longer exists under that name due to reorganization of the SSC. The more general proposed language would accommodate future changes to Council advisory committees and panels (see highlighted portion of Section 4 of the Framework Procedure). The Council could choose this alternative in addition to either **Alternative 1**, **Preferred Alternative 2**, or **Alternative 3**.

Council Conclusions – Action 2

Under **Alternative 1**, changes to accountability measures would continue to require full plan amendments, limiting the Council's ability to implement regulatory changes in a timely manner. Many of the actions used in accountability measures such as changes to bag limits or closed seasons can already be modified as standalone actions under the framework procedure. Allowing such changes by a framework procedure in some circumstances but not in others is inconsistent. **Preferred Alternative 2** provides that such changes in accountability measures can be made under the framework procedure, and is consistent with the existing protocol that allows changes to be made under the framework procedure when they are standalone.

Alternative 3 also allows changes to accountability measures to be made under the framework procedure, but is more restrictive in the types of actions that can be modified. The Council felt that, for maximum flexibility and consistency with current actions allowed under the framework, the accountability measure actions that can be changed should be as broad as possible. The framework procedure, while allowing for a faster development of management measures, requires public input and the same analysis of the environmental effects, regulatory impact review, Regulatory Flexibility Act analysis, and other requirements as a full plan amendment.

Preferred Alternative 4 makes minor editorial changes in the text of the framework procedure to replace outdated terminology in the names of advisory committees. It makes no functional change to the framework procedure, but eliminates any possible confusion from the use of terminology that is no longer effective.

CHAPTER 3. AFFECTED ENVIRONMENT

The actions considered in this amendment and associated environmental assessment (EA) would affect fishing in the Gulf of Mexico region, both in state and federal waters (Figure 3.1).

Descriptions of the physical, biological, economic, social, and administrative environments are available in Amendment 32 (GMFMC 2011b) to the Fisheries Management Plan for the Reef Fish Resources of the Gulf of Mexico (Reef Fish FMP) and associated environmental impact statement (EIS). Information from this EIS is incorporated by reference and the reader is directed to the document located at

http://www.gulfcouncil.org/fishery_management_plans/index.php to obtain further information.

Additional impacts to the affected environment from the Deepwater Horizon MC252 oil spill were described in the September 2010 (NMFS 2010b) EA and the January 2011 Regulatory Amendment (GMFMC 2011c), and are incorporated by reference. Summaries of these impacts and the affected environments can be found in Sections 3.1-3.5.

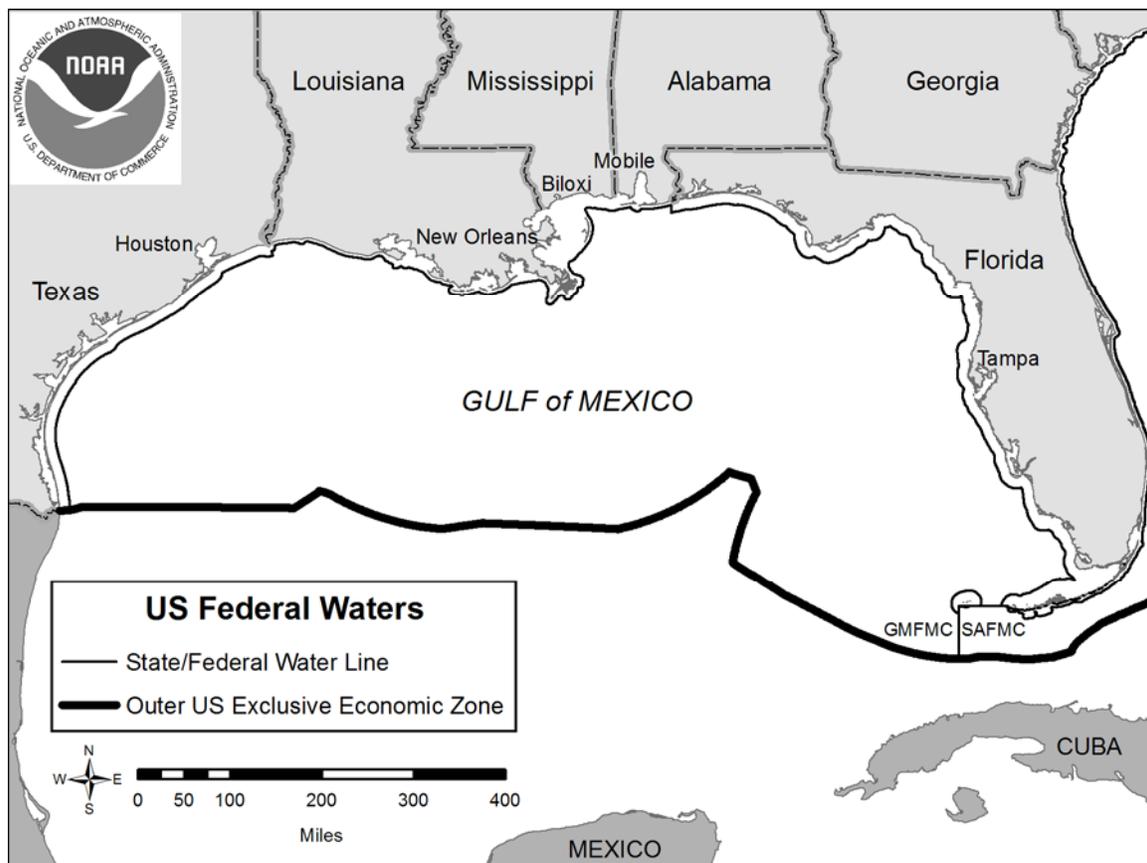


Figure 3.1. Gulf of Mexico federal and state waters.

3.1 Description of the Fishery

The reef fish fishery of the Gulf of Mexico is divided into two broad categories, recreational fishing and commercial fishing. Recreational fishing includes fishing from charter boats and

headboats (collectively referred to as for-hire vessels) as well as from private vessels and from shore. No federal permit is needed for private vessels to fish for reef fish in the exclusive economic zone (EEZ), but persons fishing onboard private vessels do need either a state recreational saltwater fishing permit or be registered in the federal National Saltwater Angler Registry system. For-hire vessels are required to have a federal reef fish charter/headboat permit, and as a condition of the permit, must agree to abide by federal fishing regulations whether in federal or state waters. Reef fish caught under recreational bag limits are not allowed to be sold. Commercial fishing requires a commercial reef fish vessel permit to exceed the bag limit and sell reef fish. In addition, commercial harvest of red snapper, shallow-water grouper, deep-water grouper, and tilefish is managed under an individual fishing quota (IFQ) system, which requires that vessels have individual allocations of the quotas for those stocks to harvest and sell the catch. Both charter/headboat and commercial reef fish permits are under a moratorium, but the permits are transferable. IFQ shares and allocations are also transferable.

A detailed description of the fishing gears and methods used in the reef fish fishery is provided in Amendment 1 to the Reef Fish FMP (GMFMC 1989) (<http://www.gulfcouncil.org/Beta/GMFMCWeb/downloads/RF%20Amend-01%20Final%201989-08-rescan.pdf>). In 1999, NOAA Fisheries Service published a list of authorized fisheries and fishing gear used in those fisheries (FR 64 67511). For the Gulf of Mexico reef fish fishery, the following gears were listed as authorized:

Commercial: Longline, handline, bandit gear, rod and reel, buoy gear, pot, trap, spear, powerhead, cast net, trawl (reef fish caught in a trawl are limited to recreational bag limits and cannot be sold)³.

Recreational: Spear, powerhead, bandit gear, handline, rod and reel, cast net.

The gag stock in the Gulf of Mexico was declared to be overfished and undergoing overfishing in August 2009. A rebuilding plan was implemented, initially through interim rules to limit commercial IFQ shares and the recreational season in 2011, followed by Amendment 32 (GMFMC 2011b), effective March 2012.

The list of species in the management unit was established with the original Reef Fish FMP (GMFMC 1981) and has been modified on several occasions, most recently in the Generic ACL/AM Amendment (GMFMC 2011a). The current list consists of 31 species, as follows.

Common and scientific names of finfishes are from the most recent list of names of fishes published by the American Fisheries Society (Nelson et al. 2004).

Species in the Management Unit

Snappers - Lutjanidae Family

queen snapper	<i>Etelis oculatus</i>
mutton snapper	<i>Lutjanus analis</i>
blackfin snapper	<i>Lutjanus buccanella</i>
red snapper	<i>Lutjanus campechanus</i>
cubera snapper	<i>Lutjanus cyanopterus</i>
gray (mangrove) snapper	<i>Lutjanus griseus</i>

³ In February 2007 the use of fish traps (including pots) was phased out in the Gulf of Mexico EEZ.

lane snapper	<i>Lutjanus synagris</i>
silk snapper	<i>Lutjanus vivanus</i>
yellowtail snapper	<i>Ocyurus chrysurus</i>
wenchman	<i>Pristipomoides aquilonaris</i>
vermilion snapper	<i>Rhomboplites aurorubens</i>

Groupers - Serranidae Family

speckled hind	<i>Epinephelus drummondhayi</i>
yellowedge grouper	<i>Epinephelus flavolimbatus*</i>
goliath grouper	<i>Epinephelus itajara</i>
red grouper	<i>Epinephelus morio</i>
warsaw grouper	<i>Epinephelus nigritus*</i>
snowy grouper	<i>Epinephelus niveatus*</i>
black grouper	<i>Mycteroperca bonaci</i>
yellowmouth grouper	<i>Mycteroperca interstitialis</i>
gag	<i>Mycteroperca microlepis</i>
scamp	<i>Mycteroperca phenax</i>
yellowfin grouper	<i>Mycteroperca venenosa</i>

* Some recent publications use the genus name *Hyporthodus* rather than *Epinephelus* for yellowedge, warsaw and snowy grouper based on a revision recommended by Craig and Hastings (2007). However, it is the Council's policy to use the names listed by the American Fisheries Society in the reference above.

Tilefishes - Malacanthidae (Branchiostegidae) Family

goldface tilefish	<i>Caulolatilus chrysops</i>
blueline tilefish	<i>Caulolatilus microps</i>
tilefish	<i>Lopholatilus chamaeleonticeps</i>

Jacks - Carangidae Family

greater amberjack	<i>Seriola dumerili</i>
lesser amberjack	<i>Seriola fasciata</i>
almaco jack	<i>Seriola rivoliana</i>
banded rudderfish	<i>Seriola zonata</i>

Triggerfishes - Balistidae Family

gray triggerfish	<i>Balistes capriscus</i>
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Wrasses - Labridae Family

hogfish	<i>Lachnolaimus maximus</i>
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3.2 Description of the Physical Environment

The physical environment for reef fish, including red grouper and gag, has been described in detail in the 2004 EIS for the Generic Essential Fish Habitat (EFH) Amendment (GMFMC 2004). The ecologically critical areas in the Gulf of Mexico, such as the Flower Gardens and the Tortugas Marine Sanctuaries are described in detail in Generic EFH Amendment Number 3 (GMFMC 2005a) and are incorporated by reference. The primary habitat for gag and red grouper is located in the eastern Gulf of Mexico as described in Amendment 32 (GMFMC 2011b). In summary, both gag and red grouper are associated with hard bottom areas primarily on the eastern Gulf of Mexico shelf, although juvenile gag are associated with seagrass beds.

Amendment 32 (GMFMC 2011b) also describes environmental sites of special interest relevant to the reef fish fishery including gear restricted areas, area closures, and habitat areas of particular concern (HAPCs). Gear restricted areas include the Longline/Buoy Gear Area Closure and Stressed Areas for Reef Fish; closed areas such as Madison/Swanson and Steamboat Lumps Marine Reserves, The Edges seasonal area closure, and the Tortugas North and South Marine Reserves; and HAPCs such as the individual reef areas and bank HAPCs of the northwestern Gulf of Mexico, the Middle Grounds HAPC, and the Pulley Ridge HAPC. There is one site listed in the National Register of Historic Places in the Gulf of Mexico. This is the wreck of the *U.S.S. Hatteras*, located in federal waters off Texas.

The Deepwater Horizon MC252 oil spill in 2010 affected at least one-third of the Gulf of Mexico area from western Louisiana east to the panhandle of Florida and south to the Campeche Bank in Mexico. The impacts of the Deepwater Horizon MC252 oil spill on the physical environment are expected to be significant and may be long-term. However, the oil remained outside most of the west Florida Shelf where red grouper and gag are particularly abundant (GMFMC 2004). Oil was dispersed on the surface, and because of the heavy use of dispersants (both at the surface and at the wellhead), oil was also documented as being suspended within the water column, some even deeper than the location of the broken well head. Floating and suspended oil washed onto shore in several areas of the Gulf of Mexico as did non-floating tar balls. Whereas suspended and floating oil degrades over time, tar balls are persistent in the environment and can be transported hundreds of miles. For more information on physical impacts of the Deepwater Horizon MC252 oil spill, see http://sero.nmfs.noaa.gov/deepwater_horizon_oil_spill.htm.

3.3 Description of the Biological/Ecological Environment

The biological environment of the Gulf of Mexico, including the species addressed in this amendment, is described in detail in the final EIS for the Generic EFH Amendment (GMFMC 2004). This includes summaries of their life histories.

A description of red grouper and gag life history, biology, and stock status is summarized and incorporated by reference from Amendment 32 (GMFMC 2011b). In summary, both red grouper and gag have typical reef fish life histories where eggs and larvae are pelagic. Larvae then settle to the bottom. Juvenile red grouper can be found on nearshore reefs while gag settle

in sea grass beds. As these species mature, they move out into deeper waters of the Gulf of Mexico. Both species are protogynous hermaphrodite, meaning juveniles first develop female reproductive organs that may possibly change into male reproductive organs in select circumstances.

Status of Reef Fish Stocks

The Reef Fish FMP currently encompasses 31 species. Eleven other species were removed from the FMP in 2012 by the Council in the Generic ACL/AM Amendment (GMFMC 2011a). Stock assessments and stock assessment reviews have been conducted for 13 species and can be found on the Council (www.gulfcouncil.org) and Southeast Data Assessment and Review (SEDAR) (www.sefsc.noaa.gov/sedar) websites. The assessed species are:

- red snapper (SEDAR 7 2005; SEDAR 7 Update 2009)
- vermilion snapper (Porch and Cass-Calay 2001; SEDAR 9 2006a; SEDAR 9 Update 2011b)
- yellowtail snapper (Muller et al. 2003; SEDAR 3 2003)
- mutton snapper (SEDAR 15A 2008)
- gray triggerfish (Valle et al. 2001; SEDAR 9 2006b; SEDAR 9 Update 2011c)
- greater amberjack (Turner et al. 2000; SEDAR 9 2006c; SEDAR 9 Update 2010)
- hogfish (Ault et al. 2003; SEDAR 6 2004a)
- red grouper (NMFS 2002; SEDAR 12 2007; SEDAR 12 Update 2009)
- gag (Turner et al. 2001; SEDAR 10 2006; SEDAR 10 Update 2009)
- black grouper (SEDAR 19 2010)
- yellowedge grouper (Cass-Calay and Bahnick 2002; SEDAR 22 2011a)
- tilefish (golden) (SEDAR 22 2011b)
- goliath grouper (Porch et al. 2003; SEDAR 6 2004b; SEDAR 23 2011)

The NOAA Fisheries Service Office of Sustainable Fisheries updates its Status of U.S. Fisheries Report to Congress on a quarterly basis utilizing the most current stock assessment information. The most recent update can be found at:

(<http://www.nmfs.noaa.gov/sfa/statusoffisheries/SOSmain.htm>). The most recent update at the time of this writing, the second quarter report of the 2012 Status of U.S. Fisheries, classifies gag, red grouper, and the other 11 reef fish species as follows:

Overfished and Experiencing Overfishing:

- gag
- greater amberjack
- gray triggerfish

Overfished but not Experiencing Overfishing:

- red snapper

Not Overfished or Experiencing Overfishing:

- yellowtail snapper
- yellowedge grouper

- vermilion snapper
- black grouper
- red grouper
- mutton snapper
- tilefish (golden)

Unknown:

- hogfish – may be experiencing growth overfishing
- goliath grouper – not experiencing overfishing, but benchmarks do not reflect appropriate stock dynamics to determine overfished status
- Stock assessments have not been conducted for the other species so their classification is unknown

Protected Species

There are 28 different species of marine mammals that may occur in the Gulf of Mexico. All 28 species are protected under the Marine Mammal Protection Act (MMPA) and six are also listed as endangered under the Endangered Species Act (ESA) (i.e., sperm, sei, fin, blue, humpback and North Atlantic right whales). Other species protected under the ESA occurring in the Gulf of Mexico include five sea turtle species (Kemp’s Ridley, loggerhead, green, leatherback, and hawksbill); two fish species (Gulf sturgeon and smalltooth sawfish), and two coral species (elkhorn coral and staghorn coral). Information on the distribution, biology, and abundance of these protected species in the Gulf of Mexico is included in final EIS to the Council’s Generic EFH Amendment (GMFMC, 2004) and the February 2005, October 2009, and September 2011 ESA biological opinions on the reef fish fishery (NMFS 2005; NMFS 2009; NMFS 2011a). Marine Mammal Stock Assessment Reports and additional information are also available on the NOAA Fisheries Service Office of Protected Species website: <http://www.nmfs.noaa.gov/pr/species/>.

The Gulf of Mexico reef fish fishery is classified in the MMPA 2012 List of Fisheries as a Category III fishery (76 FR 73912). 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 these fisheries. Bottlenose dolphins prey upon on the 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.

All five species of sea turtles are adversely affected by the Gulf of Mexico reef fish fishery. Incidental captures are relatively infrequent, but occur in all commercial and recreational hook-and-line and longline components of the reef fish fishery. Captured sea turtles can be released alive or can be found dead upon retrieval of the gear as a result of forced submergence. Sea turtles released alive may later succumb to injuries sustained at the time of capture or from exacerbated trauma from fishing hooks or lines that were ingested, entangling, or otherwise still attached when they were released. Sea turtle release gear and handling protocols are required in the commercial and for-hire reef fish fisheries to minimize post-release mortality.

Smalltooth sawfish are also affected by the Gulf of Mexico reef fish fishery, but to a much lesser extent. Smalltooth sawfish primarily occur in the Gulf of Mexico off peninsular Florida. Incidental captures in the commercial and recreational hook-and-line components of the reef fish fishery are rare events, with only eight smalltooth sawfish estimated to be incidentally caught annually, and none are expected to result in mortality (NMFS 2005). Fishermen in this fishery are required to follow smalltooth sawfish safe handling guidelines. The long, toothed rostrum of the smalltooth sawfish causes this species to be particularly vulnerable to entanglement in fishing gear.

Deepwater Horizon MC252 Oil Spill

The Deepwater Horizon MC252 oil spill affected at least one-third of the Gulf area from western Louisiana east to the panhandle of Florida and south to the Campeche Bank in Mexico. Crude oil is a complex mixture of thousands of chemical compounds. The oil from the Deepwater Horizon MC252 spill is relatively high in alkanes, which can readily be used by microorganisms as a food source. As a result, the oil from this spill is likely to biodegrade more readily than crude oil in general. The Deepwater Horizon MC252 oil is also relatively much lower in polyaromatic hydrocarbons (PAHs). PAHs are highly toxic chemicals that tend to persist in the environment for long periods of time, especially if the spilled oil penetrates into the substrate on beaches or shorelines. Like all crude oils, MS252 oil contains volatile organic compounds (VOCs) such as benzene, toluene, and xylene. Some VOCs are acutely toxic but because they evaporate readily, they are generally a concern only when oil is fresh (NOAA 2012).

In addition to the crude oil, a total of 1.84 million gallons of dispersants were applied both at the surface (1.06 million gallons, primarily COREXIT 9500A and some 9527) and directly at the wellhead on the seafloor (0.78 million gallons COREXIT 9500A) (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 exists on the environmental fate of dispersants in deep water. The affected areas are outside west Florida shelf where shallow-water grouper are primarily found. Therefore the effects of the oil spill on gag, red grouper and other shallow-water grouper populations and their essential fish habitat will likely be minimal.

For protected species, a consultation pursuant to Endangered Species Act Section 7(a)(2) was reinitiated as a result of this spill. On September 30, 2011, the Protected Resources Division released a biological opinion, which after analyzing best available data, the current status of the species, environmental baseline (including the impacts of the recent Deepwater Horizon MC252 oil release event in the northern Gulf of Mexico), effects of the proposed action, and cumulative effects, concluded that the continued operation of the Gulf of Mexico reef fish fishery is not likely to jeopardize the continued existence of green, hawksbill, Kemp's ridley, leatherback, or loggerhead sea turtles, nor the continued existence of smalltooth sawfish (NMFS 2011a).

3.4 Description of the Economic Environment

3.4.1 Commercial Sector

A description of the economic environment for the commercial sector of the grouper component of the reef fish fishery is contained in the 2010 Red Grouper Regulatory Amendment (GMFMC 2010) and the environmental assessment for the 2011 Gag interim rule (NMFS 2010b). The proposed actions in this amendment would only be expected to directly affect the recreational sector. However, these actions would also be expected to have indirect effects on the commercial sector because better monitoring of the recreational annual catch limits (ACLs) and successful limitation of harvest to allowable levels would be expected to result in better management of the total resource, support stock maintenance or recovery, and quota increases to both sectors. Nevertheless, because these proposed actions would only apply to the recreational sector, no updates to the descriptions of the commercial sector are provided in this document.

3.4.2 Recreational Sector

A description of the economic environment for the recreational sector of the grouper component of the reef fish fishery is contained in the 2010 Red Grouper Regulatory Amendment (GMFMC 2010) and the environmental assessment for the 2011 gag interim rule (NMFS 2010b). These descriptions are incorporated by reference and summarized below. Select updated statistics are also provided in the following sections.

3.4.2.1 Angler Effort

Recreational effort derived from the Marine Recreational Fisheries Statistics Survey (MRFSS) database can be characterized in terms of the number of trips as follows:

1. Target effort - The estimated 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 second primary target for the trip. The species did not have to be caught.
2. Catch effort - The estimated number of individual angler trips, regardless of duration and target intent, on which the individual species or a species in the species group was caught. The fish did not have to be kept.
3. Total recreational effort - The estimated total number of individual angler trips taken, regardless of target intent or catch success for any species or species group.

Other measures of effort are possible, such as the number of harvest trips (the number of individual angler trips that harvest a particular species regardless of target intent), and directed trips (the number of individual angler trips that either targeted or caught a particular species), among other measures. Estimates of target effort for shallow-water grouper species in the Gulf of Mexico for the period 2005-2009 are provided in Table 3.4.2.1.1. Although available, data for 2010 were not included in this assessment because 2010 was not a typical year for recreational fishing due to the extensive closures and general decline in fishing that occurred as a result of the Deepwater Horizon MC252 oil spill. For information on the Deepwater Horizon MC252 oil spill

and associated closures, see: http://sero.nmfs.noaa.gov/deepwater_horizon_oil_spill.htm. Final data for 2011 were not available at the time of this assessment.

Table 3.4.2.1.1. Recreational target effort (individual angler trips), 2005-2009, by species or species group.¹

Target Species	2005	2006	2007	2008	2009	Average
Gag	545,491	458,814	552,812	641,576	483,867	534,267
Red Grouper	184,311	115,268	155,315	197,460	163,836	157,970
SWG²	612,149	478,165	575,430	668,465	536,423	564,621
SWG² w/o Gag	203,116	118,182	161,084	199,612	163,962	160,710
SWG² w/o Red Grouper	562,498	461,332	558,581	643,728	483,867	536,877
Total Trips, All Species	21,906,426	23,862,890	24,267,431	24,108,842	22,296,834	23,633,999

¹Totals are not additive because an individual trip may target multiple species. These results do not include Texas or headboat effort.

²SWG = All shallow water grouper including gag and red grouper.

Source: NOAA Fisheries Service Southeast Regional Office using MRFSS data.

Target intent is not collected in the NOAA Fisheries Service Headboat Survey, so estimation of target effort in the headboat sector is not possible with available data. Table 3.4.2.1.2 contains estimates of the number of headboat angler days (normalized 12-hour days) for all Gulf of Mexico states for 2005-2009.

Table 3.4.2.1.2. Headboat angler days.

Year	Florida/Alabama	Louisiana	Texas	Total
2005	130,233	*	59,857	190,090
2006	124,049	5,005	70,789	199,843
2007	136,880	2,522	63,764	203,166
2008	130,176	2,945	41,188	174,309
2009	142,438	3,268	50,737	196,443
Average	132,755	3,435	57,267	192,770

*Unavailable. Headboat data not collected in Louisiana in 2005.

Source: NOAA Fisheries Service Headboat Survey.

3.4.2.2 Permits

The for-hire sector is comprised of charter vessels and headboats (party boats). Although charter vessels tend to be smaller, on average, than headboats, the key distinction between the two types of operations is how the fee is determined. On a charterboat trip, the fee charged is for the entire vessel, regardless of how many passengers are carried, whereas the fee charged for a headboat trip is paid per individual angler.

A federal charter/headboat vessel permit has been required for reef fish since 1996 and the sector currently operates under a limited access system. As of July 12, 2012, there were 1,363 valid (non-expired) or renewable Gulf reef fish for-hire permits. A renewable permit is an expired permit that may not be actively fished, but is renewable for up to one year after expiration. Although the permit does not distinguish between headboats and charterboats, based on the number of vessels on the NOAA Fisheries Service Headboat Survey active survey list on January 24, 2012, an estimated 69 headboats participate in the Southeast Headboat Survey in the Gulf of Mexico.

Information on Gulf of Mexico headboat and charterboat operating characteristics, including average fees and net operating revenues, are included in Savolainen et al. (2012) (<http://www.laseagrant.org/pdfs/Gulf-RFH-Survey-Final-Report-2012.pdf>). More recent information is not available.

There are no specific permitting requirements for recreational anglers to fish for or harvest the species covered by this amendment. 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 with available data to identify how many individual anglers would be expected to be affected by this amendment.

3.4.2.3 Business Activity

Estimates of the business activity (economic impacts) associated with recreational angling for species in the shallow-water grouper complex were derived using average impact coefficients for recreational angling for all species, as derived from an add-on survey to the MRFSS to collect economic expenditure information, and described and utilized in NMFS (2011b). Estimates of these coefficients for target or catch behavior for individual species are not available. Estimates of the average expenditures by recreational anglers are also provided in NMFS (2011b) and are incorporated by reference (http://www.st.nmfs.noaa.gov/st5/publication/fisheries_economics_2009.html).

Business activity for the recreational sector is characterized in the form of full-time equivalent jobs, output (sales) impacts (gross business sales), and value-added impacts (difference between the value of goods and the cost of materials or supplies). Job and output (sales) impacts are equivalent metrics across both the commercial and recreational sectors. Income impacts (commercial sector) and value-added impacts (recreational sector) are not equivalent, though similarity in the magnitude of multipliers generated and used for the two metrics may result in roughly equivalent values. Similar to income impacts, value-added impacts should not be added to output (sales) impacts because this would result in double counting.

Estimates of the average target effort (2005-2009) and associated business activity (2010 dollars) are provided in Tables 3.4.2.3.1 - 3.4.2.3.3. The estimates of the business activity provided in these tables only apply at the state level. National-level estimates are not available. Addition of

the state-level estimates to produce either a regional or national total will underestimate the actual total amount of business activity because summing the state estimates will not capture business activity that leaks outside the individual states. A state estimate only reflects activities that occur within that state and not related activity that occurs in another state. For example, if a good is produced in Alabama but sold in Florida, the measure of business activity in Florida associated with the sale of the product in Florida does not include the production process that occurred in Alabama. Assessment of business activity at the national (or regional) level would capture activity in both states and include all activity except that which leaks into other nations (or regions).

Table 3.4.2.3.1. Summary of shallow-water grouper target trips (2005-2009 average) and associated business activity (2010 dollars). Output and value added impacts are not additive.

	Alabama	Florida	Louisiana	Mississippi	Texas
Shore Mode					
Target Trips	0	49,740	0	0	*
Output Impact	\$0	\$3,413,935	\$0	\$0	*
Value Added Impact	\$0	\$1,983,384	\$0	\$0	*
Jobs	0	36	0	0	*
Private/Rental Mode					
Target Trips	6,398	492,260	359	369	*
Output Impact	\$377,004	\$22,635,046	\$29,650	\$10,658	*
Value Added Impact	\$206,401	\$13,459,647	\$14,583	\$5,108	*
Jobs	4	223	0	0	*
Charter Mode					
Target Trips	700	24,299	0	0	*
Output Impact	\$369,116	\$7,727,610	\$0	\$0	*
Value Added Impact	\$203,186	\$4,581,677	\$0	\$0	*
Jobs	5	78	0	0	*
All Modes					
Target Trips	7,098	566,299	359	369	*
Output Impact	\$746,120	\$33,776,590	\$29,650	\$10,658	*
Value Added Impact	\$409,587	\$20,024,709	\$14,583	\$5,108	*
Jobs	9	337	0	0	*

All shallow-water grouper species are included.

* Because target information for Texas is unavailable, associated business activity cannot be calculated.

Source: effort data from the MRFSS, economic impact results calculated by the NOAA Fisheries Service Southeast Regional Office using the model developed for NMFS (2011b).

Table 3.4.2.3.2. Summary of gag target trips (2005-2009 average) and associated business activity (2010 dollars). Output and value added impacts are not additive.

	Alabama	Florida	Louisiana	Mississippi	Texas
Shore Mode					
Target Trips	0	49,740	0	0	*
Output Impact	\$0	\$3,413,935	\$0	\$0	*
Value Added Impact	\$0	\$1,983,384	\$0	\$0	*
Jobs	0	36	0	0	*
Private/Rental Mode					
Target Trips	6,272	459,671	359	369	*
Output Impact	\$369,580	\$21,136,542	\$29,650	\$10,658	*
Value Added Impact	\$202,337	\$12,568,581	\$14,583	\$5,108	*
Jobs	4	208	0	0	*
Charter Mode					
Target Trips	597	19,503	0	0	*
Output Impact	\$314,803	\$6,202,378	\$0	\$0	*
Value Added Impact	\$173,289	\$3,677,372	\$0	\$0	*
Jobs	4	63	0	0	*
All Modes					
Target Trips	6,869	528,914	359	369	*
Output Impact	\$684,383	\$30,752,854	\$29,650	\$10,658	*
Value Added Impact	\$375,625	\$18,229,336	\$14,583	\$5,108	*
Jobs	8	307	0	0	*

*Because target information for Texas is unavailable, associated business activity cannot be calculated.

Source: effort data from the MRFSS, economic impact results calculated by the NOAA Fisheries Service Southeast Regional Office using the model developed for NMFS (2011b).

Table 3.4.2.3.3. Summary of red grouper target trips (2005-2009 average) and associated business activity (2010 dollars). Output and value added impacts are not additive.

	Alabama	Florida	Louisiana	Mississippi	Texas
Shore Mode					
Target Trips	0	1,339	0	0	*
Output Impact	\$0	\$91,903	\$0	\$0	*
Value Added Impact	\$0	\$53,393	\$0	\$0	*
Jobs	0	1	0	0	*
Private/Rental Mode					
Target Trips	462	150,878	0	0	*
Output Impact	\$27,224	\$6,937,656	\$0	\$0	*
Value Added Impact	\$14,904	\$4,125,390	\$0	\$0	*
Jobs	0	68	0	0	*
Charter Mode					
Target Trips	0	10,559	0	0	*
Output Impact	\$0	\$3,357,992	\$0	\$0	*
Value Added Impact	\$0	\$1,990,943	\$0	\$0	*
Jobs	0	34	0	0	*
All Modes					
Target Trips	462	162,776	0	0	*
Output Impact	\$27,224	\$10,387,550	\$0	\$0	*
Value Added Impact	\$14,904	\$6,169,726	\$0	\$0	*
Jobs	0	103	0	0	*

*Because target information for Texas is unavailable, associated business activity cannot be calculated.

Source: effort data from the MRFSS, economic impact results calculated by NOAA Fisheries Service Southeast Regional Office using the model developed for NMFS (2011b).

Estimates of the economic activity (impacts) associated with headboat effort are not available. The headboat sector in the southeast is not covered by the MRFSS, so estimation of the appropriate business activity coefficients for the headboat sector was not conducted in the development of NMFS (2011b). While appropriate business activity coefficients are available for the charterboat sector, potential differences in certain factors in the two sectors, such as the for-hire fee, rate of tourist versus local participation rates, and expenditure patterns, may result in significant differences in the business activity associated with the headboat sector relative to the charterboat sector.

3.5 Description of the Social Environment

This amendment affects recreational management of the six shallow-water grouper species. This group consists of gag, red grouper, and the four grouper species that make up the other shallow-water grouper complex (scamp, black, yellowfin, and yellowmouth grouper). From a socio-cultural perspective, gag is the most important of the six species, being the declared target

species for the most recreational bottom-fishing trips (Table 3.4.2.1.1). The combined recreational landings of the four other shallow-water grouper species account for a small percentage (1-5%) of the combined recreational landings for the six species of shallow-water grouper (Table 3.5.1 and Figure 3.5.1).

Table 3.5.1. Proportion of gag, red grouper, and the other shallow-water grouper (Other SWG) species (four species) out of the total recreational landings (weight) for the six shallow-water grouper species.

Year	Gag	Red Grouper	Other SWG
1990	52%	43%	4%
1991	53%	45%	1%
1992	35%	63%	2%
1993	50%	48%	2%
1994	47%	50%	3%
1995	59%	40%	1%
1996	70%	29%	1%
1997	78%	18%	3%
1998	79%	17%	4%
1999	72%	26%	2%
2000	68%	31%	1%
2001	72%	26%	2%
2002	68%	31%	1%
2003	69%	29%	2%
2004	59%	40%	1%
2005	69%	29%	3%
2006	64%	32%	4%
2007	69%	28%	3%
2008	74%	22%	4%
2009	61%	35%	4%
2010	70%	28%	2%
2011	48%	47%	5%

Source: SEFSC ACL Recreational dataset (April 30, 2012). Note: 53% of the black grouper combined landings (Gulf of Mexico and South Atlantic) have been allocated to the Gulf of Mexico using the jurisdictional allocation established through the Generic ACL/AM Amendment (GMFMC 2011a)

(http://www.gulfcouncil.org/docs/amendments/Final%20Generic%20ACL_AM_Amendment-September%209%202011%20v.pdf)

Black grouper landings were derived via MRFSS post-stratification; Monroe County landings were removed.

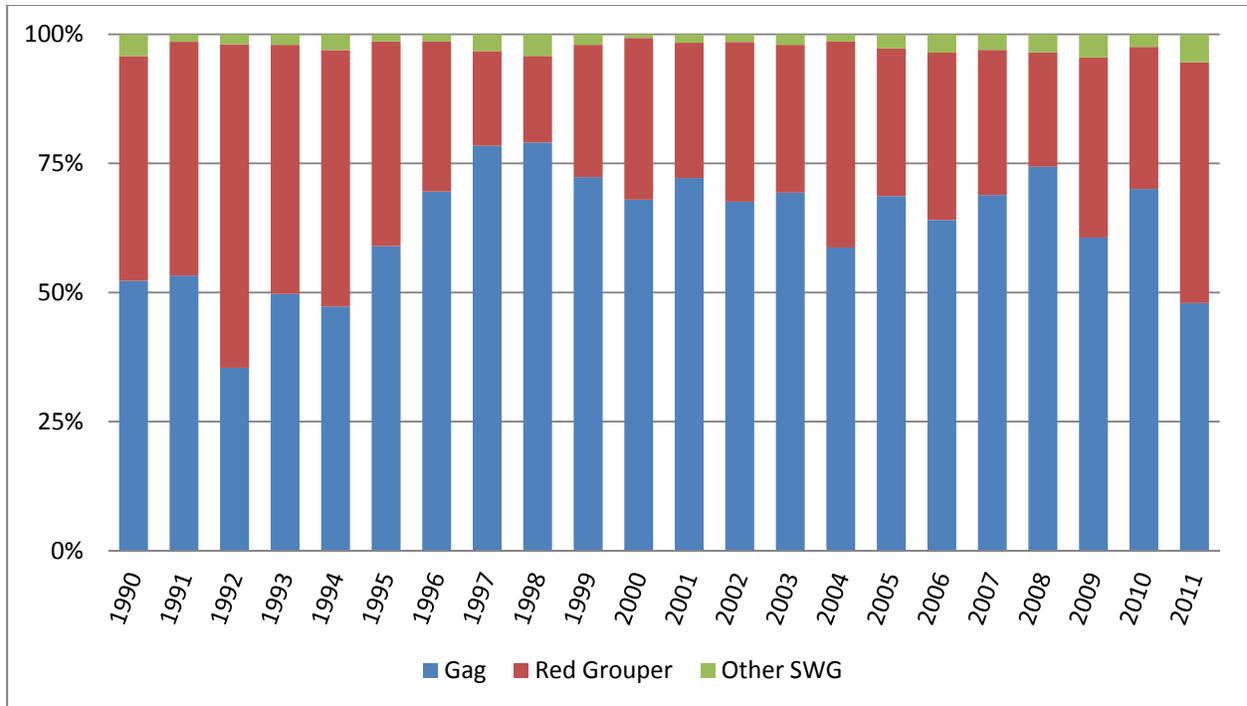


Figure 3.5.1. Proportion of gag, red grouper, and the other shallow-water grouper (Other SWG) species out of the total recreational landings (weight) for the six shallow-water grouper species. Source: SEFSC ACL Recreational dataset (April 30, 2012).

The actions of this amendment are expected to affect the recreational sector only. For the commercial sector, the six grouper species addressed by this amendment are managed under an individual fishing quota (IFQ) program. The IFQ program acts as the commercial accountability measure. Three of these six species have sector allocations (Table 3.5.2).

Table 3.5.2. Breakdown of current sector allocations for three grouper species.

	Gag	Red Grouper	Black Grouper
Commercial	39%	76%	73%
Recreational	61%	24%	27%

Fishing Communities

Recently implemented regulatory actions include a description of the communities identified as being strongly associated with gag and red grouper fishing and are included by reference. This information is summarized below.

Gag: Temporary Rule, November 2010 (NMFS 2010b). Section 2.4 can be found at: http://sero.nmfs.noaa.gov/sf/pdfs/Gag_EA_111510.pdf

Red grouper: 2010 Red Grouper Regulatory Amendment (GMFMC 2010). Section 2.4 can be found at:

<http://www.gulfcouncil.org/docs/amendments/2010%20Red%20Grouper%20Regulatory%20Amendment%209-17-10%20final%20with%20signed%20FONSI.pdf>

The referenced descriptions focus on available geographic and demographic data to identify communities having a strong relationship with grouper fishing. A strong relationship is defined as having significant landings and revenue for gag and red grouper. Thus, impacts from regulatory change are expected to occur in places with greater grouper landings. These communities are located primarily in Florida.

Because recreational landings data are not available at the community level, commercial landings data were used as a proxy to identify communities of specific importance to grouper fishing. The analysis for recreational communities addressed fishing importance more broadly, for groupers, other reef fish, and species managed under other fishery management plans. Although these analyses were conducted in 2010, it is not likely that there have been substantial changes to communities in terms of fishing importance since that time.

Table 3.5.3 summarizes the analysis from the referenced documents, outlining those communities identified as having the strongest, strong, or somewhat strong relationship to grouper fishing. For both species, Pinellas County (Clearwater, Madeira Beach, Redington Shores, St. Petersburg, and Tarpon Springs) clearly has the strongest relationship with grouper fishing of any county in the Gulf of Mexico region. It is highly likely that, other factors being equal, these communities would be the most affected, in absolute terms, by management actions.

Table 3.5.3. Communities most likely to be affected by changes to grouper management.

	Gag	Red Grouper
Strongest	Apalachicola	Panama City, Madeira Beach, and Apalachicola
Strong	Steinhatchee, Panacea, Panama City, Clearwater, and Saint Petersburg	Saint Petersburg, Clearwater, Tarpon Springs, and Redington Shores
Somewhat Strong	Destin, Ft. Myers Beach, Tarpon Springs, and Madeira Beach	Steinhatchee, Crystal River, Tampa, and Panacea

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).

The actions in this amendment are expected to allow more of the shallow-water grouper quota to be caught and to adjust the regulatory procedure for modifying the accountability measures thereby adding more flexibility to the needs of management. Thus, both actions are expected to result in positive impacts to the social environment and not result in impacts to any EJ population. Although no EJ issues have been identified or are expected to arise, the absence of potential EJ concerns cannot be assumed. Information on the race and income status for groups at the different participation levels (charter crew and employees of associated support industries, etc.) is not available.

Amendment 35 to the Reef Fish FMP includes an EJ analysis of Gulf of Mexico coastal counties and is incorporated here by reference (GMFMC 2012). The analysis used 2010 Census Bureau data to identify coastal counties in which populations of EJ concern may reside (minorities or those in poverty). As described in the previous section, communities with the strongest relationship to grouper fishing are located in Florida. No west Florida coastal counties exceed the EJ threshold with regard to minorities; however Dixie (3.8%), Franklin (8%), Gulf (1.7%), Jefferson (4.6%), Levy (3.3%), and Taylor (7.1%) exceed the EJ threshold for poverty by the percentage noted.

Among the communities identified in Table 3.5.3, Apalachicola and Steinhatchee are located within counties identified for potential EJ concerns (Franklin and Taylor counties, respectively). However, as stated, persons employed in the recreational fishing of grouper and associated businesses and communities along the Gulf of Mexico coast of Florida are expected to benefit from this proposed action.

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 Fishery Conservation and Management Act (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, an area extending 200 nautical miles from the seaward boundary of each of the coastal states, and 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 B. In most cases, the Secretary has delegated this authority to NOAA Fisheries Service.

The Gulf of Mexico Fishery Management Council (Council) is responsible for fishery resources in federal waters of the Gulf of Mexico. These waters extend to 200 nautical miles offshore from the nine-mile seaward boundary of Florida and Texas, and the three-mile seaward boundary of Alabama, Mississippi, and Louisiana. The length of the Gulf of Mexico coastline is approximately 1,631 miles.

The 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 the Regional Administrator of the NOAA Fisheries Service Southeast Region. The public is also involved in the fishery management process through participation on advisory panels and through Council meetings that, with few exceptions for discussing personnel and legal matters, are open to the public. The regulatory process is also in accordance with the Administrative Procedures Act, in the form of “notice and comment” rulemaking, which provides extensive opportunity for public scrutiny and comment, and requires consideration of and response to those comments.

Regulations contained within fishery management plans are enforced through actions of the NOAA’s Office for Law Enforcement, the United States Coast Guard, and various state authorities. To better coordinate enforcement activities, federal and state enforcement agencies have developed cooperative agreements to enforce the Magnuson-Stevens Act. The Council’s Law Enforcement Advisory Panel and the Gulf States Marine Fisheries Commission’s Law Enforcement Committee have developed a five-year “GOM Cooperative Law Enforcement Strategic Plan - 2006-2011.”

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 state’s natural resources, all states cooperate with numerous state and federal regulatory agencies when managing marine resources. A more detailed description of each state’s primary regulatory agency for marine resources is provided in Amendment 22 to the Reef Fish FMP (GMFMC 2004a).

CHAPTER 4. ENVIRONMENTAL CONSEQUENCES

4.1 Action 1: Revise Post-season Accountability Measures for Shallow-water Grouper Species

4.1.1 Direct and Indirect Effects on the Physical Environment

This action revises the recreational shallow-water grouper accountability measures. The primary effects of recreational grouper fishing on the physical environment generally result from fishing gear interactions with the sea floor. Most grouper are caught with hook-and-line fishing gear, although some spearfishing does occur. Fishing gear can damage or disturb bottom structures and occasionally incidentally harvest such habitat.

The degree to which a habitat is affected by fishing gear depends largely on the vulnerability of the affected habitat to disturbance, and on the rate that the habitat can recover from disturbance (Barnette 2001). For example, the complex structure and vertical growth pattern of coral reef species makes reef habitat more vulnerable to adverse impacts from fishing gear and slower to recover from such impacts than is sand and mud bottom habitat (Barnette 2001). Juvenile gag are found in seagrass beds and oyster shell reefs whereas adult gag primarily occur over mid-to-high relief natural reef habitat. Red grouper are also associated with hard bottom habitat, but tend to prefer lower relief habitat than gag.

The alternatives in this section affect the amount of time that recreational fishermen can fish for other shallow-water grouper species when gag, or red grouper, is closed to harvest.

Alternative 1 would likely have the greatest benefit to the physical environment because, if accountability measures are triggered, the season would be reduced for all shallow-water grouper species. This is likely to reduce overall fishing effort and potential for interactions with the bottom habitat as discussed above.

Alternative 2 would remove the accountability measures that result in a shorter recreational season in the subsequent year if the annual catch limit (ACL) is exceeded in the current year. Without any reduction in season length, this results in the least benefit to the physical environment because it would allow the greatest level of fishing effort in the subsequent year. This would be mitigated to some extent by the in-season accountability measure that allows the Assistant Administrator to close the season for a specific species when its ACL is projected to be reached, but fishing for the remaining shallow-water grouper species would remain open.

Preferred Alternative 3 would modify the accountability measures that result in a shorter recreational season in the subsequent year if the ACL is exceeded in the current year by applying the shorter season only to the species with an ACL overage. The benefits from this alternative would be slightly greater than **Alternative 2** but less than **Alternative 1**. Both **Alternative 2** and **Preferred Alternative 3** would shorten the season for a specific species. **Alternative 2** would accomplish this through an in-season monitoring of the recreational catch and a closure when the ACL is projected to be reached. **Preferred Alternative 3** would shorten the season

prior to its start based on catch patterns from previous years, but would attempt to keep the catch within the more conservative annual catch target (ACT). Thus, **Preferred Alternative 3** would likely result in a shorter season than **Alternative 2**, which could reduce impacts on the physical environment. **Preferred Alternative 3** would result in the same season length as **Alternative 1**, but would apply the shorter season only to the single species with an ACL coverage. Thus, **Preferred Alternative 3** may not reduce impacts to the physical environment to the same extent as **Alternative 1**.

Preferred Alternative 4 would modify the mechanism for comparing recreational catches to the recreational ACL to determine if accountability measures have been triggered. However, the sequence of moving from one-year to three-year average catches restarts each time the ACL changes. For gag, which is in a rebuilding plan, the ACL changes every year and the three-year moving average is never attained. For red grouper, which has a constant ACL, recreational catches have not come close to exceeding the ACL in recent years. Therefore, the actual result would be no effect on the physical environment.

4.1.2 Direct and Indirect Effects on the Biological/Ecological Environment

Direct beneficial biological effects would occur to stocks where the recreational fishing season is shortened by reducing fishing mortality on the affected stock, although some bycatch mortality may occur on the closed stock from fishermen targeting other species. To the extent that fishermen fish for other species, indirect adverse effects would occur on those other species by increasing their fishing mortality. In the case of overfished stocks, this could reduce the effectiveness of the rebuilding plan. Fishermen have suggested possible alternative species that could be targeted when a grouper stock is closed, including other grouper species, mangrove snapper, cobia, and greater amberjack. Hierarchical cluster analysis of commercial landings have been shown that gag co-occur with vermilion snapper, gray triggerfish, gray (mangrove) snapper, mutton snapper and greater amberjack in addition to other shallow-water grouper (NMFS 2010a). Of these, gag and greater amberjack are overfished and in a rebuilding plan.

Alternative 1 results in the greatest biological benefit because it leaves in place the post-season accountability measure that shortens the season in the subsequent year for all shallow-water grouper species if there is an overage of either the gag or red grouper ACL. The shortened season would be based on the time that is projected to take for the species that exceeded its ACL (gag or red grouper) to reach its ACT in the subsequent year, but it would reduce harvest on all shallow-water groupers. **Alternative 2** removes the post-season accountability measure. As a result, season closures would be based on the date that a species is projected to reach its ACL rather than its ACT, allowing a slightly longer season than if the closure were based on reaching the ACT. The season closure would only apply to the species (gag or red grouper) that is projected to reach its ACL. This provides the least biological benefit because an inaccurate projection could result in the species ACL being exceeded. In addition, recreational fishing effort would still occur on the remaining shallow-water grouper, and some bycatch and bycatch mortality would occur on the species that is closed. **Preferred Alternative 3** leaves the post-season accountability measure in place, but modifies it to apply only to the species (gag or red grouper) that exceeded its ACL. It has a similar effect to **Alternative 2** in that it applies the

season closure only to a single species (gag or red grouper) but the season closure under **Preferred Alternative 3** occurs when the ACT (which is part of the post-season accountability measure) is projected to be reached rather than the ACL, resulting in a slightly shorter season than if the closure were based on reaching the ACL. Although **Preferred Alternative 3** results in a shorter season than **Alternative 2**, it also results in a lower likelihood that the ACL will be exceeded. This would benefit the species that had an overage, although there might be slightly more bycatch and bycatch mortality from fishermen targeting other groupers during the slightly longer closed season.

Alternatives 1 and 2 and Preferred Alternative 3 would all result in the recreational gag (or red grouper) fishing season being closed during part of the year, if accountability measures are triggered. **Alternative 2 and Preferred Alternative 3** would allow harvest of other shallow-water grouper to occur while gag (or red grouper) is closed, which would likely result in bycatch of gag (or red grouper). **Alternative 1** would reduce the season for all shallow-water grouper if the accountability measure is triggered. **Alternative 1**, by shortening the season for all shallow-water grouper when the gag (or red grouper) season is shortened, would reduce bycatch of gag (or red grouper) that may occur from fishermen targeting other grouper. However, fishermen may have a bycatch of gag while targeting other species that occur in the same habitat. Hierarchical cluster analysis of commercial landings have been shown that gag co-occur with vermilion snapper, gray triggerfish, gray (mangrove) snapper, mutton snapper and greater amberjack in addition to other shallow-water grouper (NMFS 2010a). Recreational fishermen have also reported catching species such as cobia, mangrove snapper and greater amberjack in areas where gag occur⁴. Thus, there may be little or no actual impact on reducing overall gag bycatch.

Preferred Alternative 4 would remove a provision that uses moving averages of recent years' recreational catches to determine if the ACL has been exceeded. This provision was intended to reduce spurious triggering of accountability measures by smoothing out variations in year to year catches. However, the use of moving averages could potentially delay the implementation of accountability measures by unduly masking sizeable harvest overages and potentially slowing down the recovery of stocks under rebuilding. The sequence of moving from one-year to three-year average catches restarts each time the ACL changes. For gag, which is in a rebuilding plan, the ACL changes every year and the three-year moving average is never attained. For red grouper, which has a constant ACL, recreational catches have not come close to exceeding the ACL in recent years. Therefore, **Preferred Alternative 4** would result in no effective change in triggering accountability measures for either gag or red grouper, and therefore would have no change in effects on the biological/ecological environment.

4.1.3 Direct and Indirect Effects on the Economic Environment

Alternative 1 would maintain current accountability measures for gag and red grouper. Under current accountability measures, if the gag or red grouper ACL is exceeded or is expected to have been exceeded, **Alternative 1** would continue to require adjustments to the fishing season

⁴ T. Marvel, Recreational Charter Captain, pers. comm., May 23, 2012

for all shallow-water grouper recreational fishing the following year. Because this constitutes the status quo, direct economic effects would not be expected to result from this no-action alternative. However, restrictions on the fishing opportunities for the other shallow-water grouper species to prevent the gag or red grouper ACL from being exceeded would be expected to result in economic losses to fishermen, and associated businesses, which rely on these other species. Reduction of the shallow-water grouper season in the following fishing year, in the event gag or red grouper harvest exceeds the ACL, may reduce total mortality of gag or red grouper by reducing bycatch of these species. As a result, the trade-off to consider is the economic losses to fishermen and associated businesses that would be prevented from harvesting these other shallow-water grouper compared to the possible economic benefits associated with reduced bycatch mortality of gag or red grouper. This trade-off cannot be quantified with available data. Although the target effort for these species can be estimated, neither the likelihood of a harvest overage nor the duration of subsequent seasonal adjustment can be reasonably forecast. However, because the biological benefits of reducing gag or red grouper bycatch mortality while fishing for other shallow-water grouper species are not expected to be significant, the economic benefits of any enhanced protection are assumed, for the purpose of this analysis, to be less than the costs associated with reduced harvest opportunities for the other shallow-water grouper species.

Alternative 2 would no longer decrease the recreational fishing season for shallow-water grouper during the following year if the gag or red grouper ACL is exceeded. Elimination of this restriction would be expected to result in more flexibility for recreational anglers to continue to fish for desired species and result in an increase in potential economic benefits compared to **Alternative 1**. However, while fishery managers would retain the ability to adjust the length of the current fishing season, **Alternative 2** would also result in the loss of the flexibility to make pre-fishing year adjustments for the season length for the year in response to an overage in the ACL in the current year. While the length of the season may ultimately be unaffected, a loss of the flexibility to specify the season for the next year may affect the timing of when season-length adjustments can be announced, reducing the length of advance notice that fishermen and associated businesses have of the resultant season length. The longer the advanced notice of any change, the greater the flexibility anglers have to manage their fishing decisions and businesses to plan their operations. As a result, any reduction in the length of advance notice would be expected to result in reduced economic benefits.

In addition to these effects, **Alternative 2** would also change the target harvest level that would be used in determining the season length to be the ACL instead of the ACT. Because the ACL is greater than the ACT, determining the season length based on the ACL would be expected to result in a longer season than a season based on the ACT. The longer the season, the more recreational fishing trips can occur and economic benefits received. However, this may only be the case in the short term. Because of the difficulty in monitoring recreational harvest, managing with the ACL as the harvest target increases the likelihood of harvest exceeding the ACL in the absence of a buffer. Exceeding the ACL would trigger post-season accountability measures to minimize adverse stock effects and such corrective action would be expected to result in reduced economic benefits relative avoidance of corrective action. In summary, **Alternative 2** would be expected to result in economic effects from three sources: increased economic benefits associated with allowing trips for other shallow-water grouper to be taken; decreased economic

benefits associated with potential shortened advance notice of the length of the fishing season; and decreased economic benefits associated with an increased likelihood of exceeding the ACL and triggering corrective measures.

Preferred Alternative 3 would eliminate the requirement to reduce the season for all shallow-water grouper recreational fishing, retain the ability to adjust the length of the fishing season for gag or red grouper the next year in the event that the ACL for either species is exceeded, and retain the ACT as the target harvest level for determining season length. Post-season accountability measures would still be required if the ACL is exceeded, but the likelihood of exceeding the ACL would remain lower than if the harvest target were the ACL because of the buffer created by the ACT. As a result, the economic losses associated with restricting fishing for other shallow water grouper species, as would occur under **Alternative 1**, would be avoided. As a result, **Preferred Alternative 3** would be expected to result in greater economic benefits than **Alternative 1**. It should be noted that the flexibility to specify a reduction in the fishing season for the next year would not guarantee that the season remain as specified. The ability to make in-season adjustments would remain in effect. Nevertheless, the opportunity for advance notice would be enhanced under **Preferred Alternative 3** relative to **Alternative 2**.

Compared to **Preferred Alternative 3**, **Alternative 2** is expected to result in economic losses due to reduced advance notice of the season length and the increased likelihood of exceeding the ACL. However, **Alternative 2** is also expected to result in more fishing opportunities for recreational anglers. Therefore, the ranking of economic effects expected to result from **Alternative 2** and **Preferred Alternative 3** would be determined by the relative magnitude of adverse economic effects expected to result from reduced advance notice of the season length and increased likelihood of exceeding the ACL, and of economic benefits expected from greater fishing opportunities.

Preferred Alternative 4 would no longer use three-year moving averages as trigger mechanisms for recreational accountability measures for red grouper and gag that would continue under **Alternative 1**. For these species and species group, recreational accountability measures would be triggered whenever recreational landings exceed the corresponding ACL. The use of three-year moving averages instead of single-year landings may have the potential to smooth out harvest fluctuations and reduce the likelihood of triggering accountability measures and incurring the associated reduction in economic benefits. However, the use of a moving average has not been practicable due to the frequent changes that have occurred in the ACLs; each time an ACL is adjusted, the starting point to compute moving averages has to be reset. In addition, the use of moving averages could potentially delay the implementation of accountability measures by unduly masking sizeable harvest overages and potentially slowing down the recovery of stocks under rebuilding. If this were to occur, recovery would not be expected to occur on schedule, delaying the receipt of associated economic benefits or, if the delay were recognized in advance, more restrictive measures, with associated economic costs, would likely be required to return the stock to its original recovery schedule. Under **Preferred Alternative 4**, these economic costs could be avoided. As a result, **Preferred Alternative 4** would be expected to result in greater economic benefits than **Alternative 1**. However, similar to the discussion of the expected effects of **Alternative 2** and **Preferred Alternative 3**, these economic benefits cannot be quantified with available data.

4.1.4 Direct and Indirect Effects on the Social Environment

Current regulations (**Alternative 1**) pose a potential problem for recreational fishermen: the shortening of a fishing season for grouper species whose recreational ACL has not been met. Generally, effort restrictions result in short-term impacts by restricting fishing activity, but provide long-term benefits by enabling more fish to be caught in the future. Restricting fishing by shortening the open season for species that are not overfished, and for which the ACL has not been met, would result in negative short-term impacts to fishermen, yet not provide positive biological benefits, specific to those species, and corresponding long-term social benefits to fishermen.

The effects of **Alternative 2** and **Preferred Alternative 3** are expected to be positive compared to **Alternative 1** by preventing the shortening of a subsequent fishing season for grouper species for which the ACL has not been met. **Preferred Alternative 3** would shorten a subsequent season for only the grouper species (gag or red grouper) for which the ACL was exceeded. This is expected to provide long-term social benefits by reducing effort on the specific species whose ACL was exceeded, thereby enabling rebuilding of the stock, but allowing fishing behavior to continue for other grouper species. Thus, the short-term impacts of a shorter season for that species would be mitigated by long-term benefits resulting from protection of the stock and resulting in anticipated future increases to the ACL.

Alternative 2 would remove the provision to shorten the subsequent fishing season for shallow-water grouper should the recreational sector exceed its gag or red grouper ACL in a given year. Because the in-season accountability measures would remain in place, **Alternative 2** provides for greater short-term benefits by allowing people to fish during the entire season length, following a season when the ACL is exceeded. It would be incumbent upon NOAA Fisheries Service, then, to file the in-season closure notice in a timely manner, so as to prevent recreational harvests from exceeding its ACL.

The combined landings for the four other shallow-water grouper species are small in comparison with landings of gag and red grouper (Table 3.5.1 and Figure 3.5.1). Thus, the positive impacts from preventing a shorter season for the other shallow-water grouper species at the scale of the entire recreational sector are likely to be small. At the individual scale, however, preventing a shorter fishing season for these species could make a qualitatively improved fishing experience by allowing for the landing of some grouper when gag and/or red grouper may be closed.

A social issue arises from post-season accountability measures where effort is further restricted in subsequent seasons because of an in-season overage. Despite individual fisherman compliance with current effort restrictions, including an in-season closure by NOAA Fisheries Service when the ACL is predicted to be met, fishermen may be penalized collectively through further reductions to fishing effort in subsequent fishing seasons. The ACL may be exceeded because of a lack of timely data reporting, collection, and analysis, which is necessary for fishery managers to close the sector before the point where post-season accountability measures are triggered.

By design, the use of a moving average as a post-season accountability measure trigger should have positive social impacts, because higher landings in a single year would not necessarily trigger the accountability measure if the landings from two other years' remained sufficiently below the quota. Thus, positive impacts would result as the subsequent year's season remains the same. Removing the moving average provision (**Preferred Alternative 4**), then, could result in negative impacts should the accountability measure be triggered as a result of exceeding the ACL in a single year. However, the three-year moving average provision resets each time the ACL is changed, which will occur annually for gag from 2012-2015. Thus, the moving average provision is essentially non-functioning as there are not three consecutive years of seasons with a constant ACL. The ACL will remain the same for red grouper and the other shallow-water grouper complex; however, recreational landings for these stocks remain far enough below the ACL that it is not likely that the ACL will be exceeded. Thus, the benefits of the moving average provision would likely be negligible, provided the harvest of these stocks continues at the same level.

The effects of using the moving average provision could also result in negative impacts to the social environment because it is difficult to explain to fishermen the reason for using that method. Should the accountability measure be triggered because of a moving average, it may not be clear to fishermen why the given season's landings were not used to determine the season length of the following year. Thus, removing the use of moving averages for determining the triggering of post-season accountability measures (**Preferred Alternative 4**) could result in positive impacts by avoiding further problems in communication regarding management. On the other hand, given that it is not likely that the provision would trigger an accountability measure, positive impacts are negligible.

4.1.5 Direct and Indirect Effects on the Administrative Environment

The accountability measures in the current regulations (**Alternative 1**) impose a burden on the administration. If the ACL is exceeded in a year, the next year the season for shallow-water grouper would be shortened by some amount. The number of days would need to be determined after the beginning of the year, once the previous year's landings are finalized. This exercise would need to be conducted after each year with an overage. Further, the length of the season would change each time, creating a burden on enforcement. The enforcement burden would decrease with implementation of **Alternative 2** because the accountability measure to shorten the season would be removed. **Preferred Alternative 3** would impose the same administrative burden as **Alternative 1**; regardless of how many species are prohibited, the same calculation must take place. The enforcement burden could increase because one species may be prohibited while others are allowed. This situation already exists during an extended gag closed season, so any increased enforcement burden would be slight. **Preferred Alternative 4** would reduce the administrative burden by replacing a moving average system for determining if accountability measures have been triggered with a simpler and less time consuming procedure.

4.2 Action 2: Modify Reef Fish Framework Procedure

4.2.1 Direct and Indirect Effects on the Physical Environment

As this is primarily an administrative action, none of the alternatives would directly change any effect on the physical environment from recreational fishing. However, adding the capability to modify accountability measures through a framework action would increase the flexibility of management to adjust these measures to better optimize the use of the resource by implementing a framework action rather than the more lengthy full plan amendment process. Examples might include modifying gear restrictions or closed seasons to reduce gear interactions with the bottom habitat such as fishing line becoming entangled on reef outcroppings or anchors dragging over hard bottom. **Alternative 1** would not modify the framework and therefore would not increase the flexibility. **Preferred Alternative 2** would add the largest number of accountability measures that can be implemented or modified using the framework procedure. It therefore would provide the greatest flexibility to use the framework procedure if necessary to reduce adverse impacts on the physical environment. **Alternative 3** also would add accountability measures to the framework procedure, but limit the number to a subset of those in **Preferred Alternative 2**, concentrating on the most commonly used accountability measures. Consequently, **Preferred Alternative 2** would provide greater flexibility than **Alternative 3** to modify accountability measures and indirectly effect the physical environment. Effects on the physical environment could result in either increased or decreased impacts from recreational fishing since any given change could result in either increased or decreased fishing effort. Because the impacts could go in either direction, overall the indirect effects to the physical environment would be neutral for all alternatives. **Preferred Alternative 4** would simply modify terminology to bring it into compliance with current practices, and would have no effect on the physical environment.

4.2.2 Direct and Indirect Effects on the Biological/Ecological Environment

This action would only have indirect impacts on the biological/ecological environment. With respect to the indirect effects on the biological/ecological environment, **Alternative 1** would provide the least benefits since it would result in no change to the ability of management to implement changes to the accountability measures. **Preferred Alternative 2** would provide the greatest indirect benefits because it would allow the greatest number of accountability measures to be modified, thereby providing the greatest flexibility for management thereby yielding biological benefits in the future. For example, quickly implementing more efficient accountability measures may allow NOAA Fisheries Service to better constrain harvest below the ACL. **Alternative 3** is intermediate between **Alternative 1** and **Preferred Alternative 2**. It would allow some accountability measures to be modified, but not as many as **Preferred Alternative 2**. However, the accountability measures that are included in **Alternative 3** are the most common accountability measures. Therefore, this alternative would provide only a small reduction in flexibility from **Preferred Alternative 2**. **Preferred Alternative 4** would simply

modify terminology to bring it into compliance with current practices, and would have no effect on the biological/ecological environment.

4.2.3 Direct and Indirect Effects on the Economic Environment

Alternative 1 would not modify the framework procedure and is therefore not expected to result in economic effects. Modifications to the framework procedure proposed in **Preferred Alternative 2** and **Alternative 3** are administrative actions. **Preferred Alternative 2** and **Alternative 3** would expand the range of management measures that the Council can implement without a full plan amendment. Specifically, **Preferred Alternative 2** and **Alternative 3** would include changes to accountability measures in the standard documentation process for open framework actions. The list of accountability measures considered in **Alternative 3** is nested in **Preferred Alternative 2**. **Preferred Alternative 2** and **Alternative 3** are not expected to directly affect the harvest and other customary uses of the resource. Therefore, **Preferred Alternative 2** and **Alternative 3** are not expected to result in direct economic effects. However, proposed changes to the framework procedure could result in a speedier implementation of management measures beneficial to the stocks thereby yielding biological benefits in the future. Framework changes may also result in a faster implementation of measures beneficial to fishery participants. Indirect positive economic effects are expected to result from these potential benefits to stocks or to fishery participants. The magnitude of anticipated economic benefits that could result from **Preferred Alternative 2** or **Alternative 3** is not known. A quantitative evaluation of alternatives considered under this action would require additional information on the specific management measures to be implemented, expected changes to stocks and/or participants in the fishery in question, and, anticipated time savings that would result from the use of the framework procedure.

Preferred Alternative 4 would simply allow for editorial changes in how Council advisory committees and panels are referenced in the framework procedure. **Preferred Alternative 4** would eliminate specific identification of potential advisory groups, e.g., delete references to the Socioeconomic Panel (SEP), and allow for access to a broader range of advisory groups, potentially resulting in improved quality of advice, better management decisions, and increased economic benefits compared to **Alternative 1**.

4.2.4 Direct and Indirect Effects on the Social Environment

This action would affect the social environment in terms of the ease in adjusting accountability measures that affect how much people are able to fish, as well as what types of, and how quickly accountability measures can be imposed. **Alternative 1** requires the lengthiest process for making changes to accountability measures. This could result in negative impacts to the social environment by preventing timely action to management needs. On the other hand, a lengthier process could allow more time for public input, although public comment would still be solicited for framework actions and more time could be allowed if needed. Positive impacts are expected from adopting any of the remaining alternatives, by allowing changes to be made through a

speedier regulatory process. Therefore, **Preferred Alternative 2** could result in greater social impacts as more accountability measures are able to be adjusted under a framework action, than **Alternative 3**, which includes a narrower list of accountability measures that could be changed under the framework procedure. The magnitude of benefits would depend on the nature of the regulatory change and the speed by which the framework action is implemented. No social impacts are expected from **Preferred Alternative 4**, which addresses editorial changes, only.

While impacts are expected to be positive from the adoption of **Preferred Alternative 2** or **Alternative 3**, fishermen may not be in favor of granting the Council and Regional Administrator greater authority in implementing some of the accountability measures without additional time provided for public comment. However, any proposed management change under this process must first be identified as appropriate to follow the abbreviated documentation or standard documentation process. Only small changes (e.g., less than a 10% change in minimum size or a change in bag limit of one fish only) are permitted under the abbreviated process. Reductions to effort greater than these would be deemed significant and require a standard documentation process, i.e., a regulatory amendment, with a corresponding analysis of impacts and opportunity for public comment. All of the proposed changes in this action apply to the standard documentation process only.

4.2.5 Direct and Indirect Effects on the Administrative Environment

This action would have direct impacts on the administrative environment. **Alternative 1** would be the most administratively burdensome of the alternatives being considered, because any modifications to accountability measures would need to be implemented through a plan amendment, which is a more laborious and time-consuming process than a framework action. **Preferred Alternative 2** and **Alternative 3** would give NOAA Fisheries Service and the Council flexibility by allowing for an adjustment of accountability measures through a framework action. Framework actions generally require less time and staff effort than plan amendments and would lessen the administrative burden on the agency. **Preferred Alternative 2** would provide the most flexibility, resulting in the least administrative burden on the agency. **Preferred Alternative 4** could be chosen in addition to any of the other alternatives and would reduce the administrative burden because the language is generic enough to incorporate future changes in the name of a committee or panel. Thus, development of a plan amendment and the associated time, cost, and workload would be eliminated.

4.3 Cumulative Effects Analysis

As directed by the National Environmental Policy Act (NEPA), federal agencies are mandated to assess not only the indirect and direct impacts, but also the cumulative impacts of actions. The NEPA defines a cumulative impact as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time” (40 CFR 1508.7). Cumulative effects can either be

additive or synergistic. A synergistic effect occurs when the combined effects are greater than the sum of the individual effects.

Cumulative effects to the reef fish fishery relative to accountability measures have been analyzed in detail in Amendment 30B to the Reef Fish FMP (GMFMC 2008a), the Generic ACL/AM Amendment (GMFMC 2011a), and Amendment 32 to the Reef Fish FMP (GMFMC 2011b), and are incorporated by reference and summarized below. Recent regulatory actions include the establishment of ACLs for black grouper and the other shallow-water grouper complex, a decrease in the gag ACL, the addition of in-season recreational accountability measures for gag and red grouper and an overage adjustment if either species is overfished, the creation of a fixed recreational closed season for gag, an increase in the red grouper bag limit, and the implementation of the Marine Recreational Information Program (MRIP) to modify the catch estimation method for recreational harvest. Reasonably foreseeable future actions include adjustments to the allocation between the commercial and recreational sectors and changes to the recreational gag fishing season.

The analyses found the effects of these actions on the biophysical and socioeconomic environments are positive because they would ultimately restore/maintain the stock at a level that allows the maximum benefits in yield and commercial and recreational fishing opportunities to be achieved. However, short-term negative impacts on the fisheries' socioeconomic environment have occurred and are likely to continue due to the need to limit directed harvest and reduce bycatch mortality. These negative impacts can be minimized by selecting measures that would provide the least disruption to the fishery while maintaining the ACL.

Major stresses to grouper stocks have primarily come from overfishing, which previously occurred for red grouper and is currently occurring for gag. In addition, in 2005, both stocks appeared to have suffered an episodic mortality event which has been speculated to have been caused by red tide. Trends in landings and the status of grouper stocks are based on NOAA Fisheries Service and Southeast Data Assessment and Review (SEDAR) stock assessments (summarized in Amendment 32). In the past, the lack of management of reef fish allowed many stocks to undergo both growth and recruitment overfishing. This has allowed some stocks to decline. Present management measures work to limit the harvest to sustainable levels; however, these measures may redirect fishing effort towards other reef fish species. Reasonably foreseeable future actions are expected to benefit managed species. These measures are intended to prevent overfishing and allow for sustainable fisheries. Non-fishing activities are likely to adversely affect reef fish stocks, including loss of larvae by liquefied natural gas facilities and damage to habitat through the Deepwater Horizon MC252 oil spill. Closed- rather than open-loop systems may mitigate the effects of the liquefied natural gas facilities.

Global climate change can affect marine ecosystems through ocean warming by increased thermal stratification, reduced upwelling, sea level rise, and through increases in wave height and frequency, loss of sea ice, and increased risk of diseases in marine biota. Decreases in surface ocean pH due to absorption of anthropogenic CO₂ emissions may impact a wide range of organisms and ecosystems (IPCC 2007, and references therein). These influences could affect biological factors such as migration, range, larval and juvenile survival, prey availability, and

susceptibility to predators. At this time, the level of impacts cannot be quantified, nor is the time frame known in which these impacts would occur.

Monitoring

The effects of the proposed action are, and will continue to be, monitored through collection of landings data by NOAA Fisheries Service, 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 of Mexico are collected through Marine Recreational Fisheries Statistics Survey (MRFSS), NOAA's Headboat Survey, and the Texas Marine Recreational Fishing Survey. MRFSS has been replaced by Marine Recreational Information Program, a program designed to improve the monitoring of recreational fishing. Commercial data are collected through trip ticket programs, port samplers, and logbook programs. Currently, SEDAR assessments of Gulf of Mexico gag and red grouper are scheduled for 2013. In response to the Deepwater Horizon MC252 incident, increased frequency of surveys of the recreational sector's catch and effort, along with additional fishery independent information regarding the status of the stock, were conducted. This will allow future determinations regarding the impacts of the Deepwater Horizon MC252 incident on various fishery stocks. At this time it is not possible to make such determinations.

CHAPTER 5. REGULATORY IMPACT REVIEW

5.1 Introduction

The NOAA Fisheries Service 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 and provides information that may be used in conducting an analysis of impacts on small business entities pursuant to the Regulatory Flexibility Act. This RIR analyzes the expected effects that this action would be expected to have on the Gulf of Mexico reef fish fishery. Additional details on the expected economic effects of the various alternatives in this action are included in Section 4.

5.2 Problems and Objectives

The purpose and need, issues, problems, and objectives of this amendment are presented in Section 1.2.

5.3 Description of the Fishery

A description of the Gulf of Mexico reef fish fishery, with particular reference to gag and red grouper, is discussed in Section 3.1.

5.4 Effects of Management Measures

5.4.1 Action 1: Revise Post-season Accountability Measures for Shallow-water Grouper Species

A detailed analysis of the expected economic impacts of alternatives considered for this action is contained in Section 4.1.3. **Alternative 1** would continue to require adjustments to the fishing season for all shallow-water grouper recreational fishing the year following an overage of the annual catch limit (ACL). Because this constitutes the status quo, direct economic effects would not be expected to result from this no-action alternative. However, restrictions on the fishing opportunities for the other shallow-water grouper species to prevent the gag or red grouper ACL from being exceeded would be expected to result in economic losses to fishermen and associated businesses who fish for these other species. Reduction of the shallow-water grouper season in the following fishing year, in the event gag or red grouper harvest exceeds the ACL, may reduce total mortality of gag or red grouper by reducing bycatch of these species. As a result, the trade-off to consider is the economic losses to fishermen and associated businesses, which would be

prevented from harvesting these other shallow-water grouper compared to the possible economic benefits associated with reduced bycatch mortality of gag or red grouper.

Alternative 2 would no longer decrease the recreational fishing season for all shallow-water grouper during the following year if the gag or red grouper ACL is exceeded or is expected to have been exceeded in a given year. **Alternative 2** would be expected to result in economic effects from three sources: increased economic benefits associated with allowing trips for other shallow-water grouper to be taken; decreased economic benefits associated with potential shortened advance notice of the length of the fishing season; and decreased economic benefits associated with an increased likelihood of exceeding the ACL and triggering corrective measures. **Preferred Alternative 3** would eliminate the requirement to reduce the season for all shallow-water grouper recreational fishing, retain the ability to adjust the length of the fishing season for gag or red grouper the next year in the event that the ACL for either species is exceeded, and retain the annual catch target (ACT) as the target harvest level for determining season length. **Preferred Alternative 3** would therefore be expected to result in greater economic benefits than **Alternative 1**. It should be noted that the flexibility to specify a reduction in the fishing season for the next year would not guarantee that the season remain as specified. The ability to make in-season adjustments would remain in effect. Nevertheless, the opportunity for advance notice would be enhanced under **Preferred Alternative 3** relative to **Alternative 2**. Compared to **Preferred Alternative 3**, **Alternative 2** is expected to result in economic losses due to reduced advance notice of the season length and the increased likelihood of exceeding the ACL. However, **Alternative 2** is also expected to result in more fishing opportunities for recreational anglers. Therefore, the ranking of economic effects expected to result from **Preferred Alternative 3** and **Alternative 2** would be determined by the relative magnitude of adverse economic effects expected to result from reduced advance notice of the season length and increased likelihood of exceeding the ACL, and of economic benefits expected from greater fishing opportunities.

Preferred Alternative 4 would no longer use three-year moving averages as trigger mechanisms for recreational accountability measures for red grouper, gag, and other shallow-water grouper. Recreational accountability measures would be triggered whenever recreational landings exceed the corresponding ACL. The use of moving averages could potentially delay the implementation of accountability measures by unduly masking sizeable harvest overages and potentially slowing down the recovery of stocks under rebuilding. If this were to occur, recovery would not be expected to occur on schedule, delaying the receipt of associated economic benefits or, if the delay were recognized in advance, more restrictive measures, with associated economic costs, would likely be required to return the stock to its original recovery schedule. Under **Preferred Alternative 4**, these economic costs would be avoided. **Preferred Alternative 4** would therefore be expected to result in greater economic benefits than **Alternative 1**.

5.4.2 Action 2: Modify the Reef Fish Framework Procedure

A detailed analysis of the expected economic impacts of alternatives considered for this action is contained in Section 4.2.3. **Preferred Alternative 2** and **Alternative 3** propose changes to the scope of actions for the reef fish fishery that could be accomplished through framework procedures, whereas **Preferred Alternative 4** is a proposed administrative change to the

language in the framework that identifies advisory groups potentially utilized in the framework process. As a result, **Preferred Alternative 4** is not an alternative to **Preferred Alternative 2** and **Alternative 3**; the expected economic effects of **Preferred Alternative 4** should only be compared with those of **Alternative 1**.

Alternative 1 would not modify the framework procedure and is therefore not expected to result in economic effects. **Preferred Alternative 2** and **Alternative 3** would include changes to accountability measures in the standard documentation process for open framework actions. The list of accountability measures considered in **Alternative 3** is nested in **Preferred Alternative 2**. **Preferred Alternative 2** and **Alternative 3** are not expected to directly affect the harvest and other customary uses of the resource. Therefore, **Preferred Alternative 2** and **Alternative 3** are not expected to result in direct economic effects. However, proposed changes to the framework procedure could result in a speedier implementation of management measures beneficial to the stocks thereby yielding biological benefits in the future. Framework changes may also result in a faster implementation of measures beneficial to fishery participants. Indirect positive economic effects are expected to result from these potential benefits to stocks or to fishery participants.

Preferred Alternative 4 would eliminate specific identification of potential advisory groups, e.g., delete references to the Socioeconomic Panel (SEP), and allow for access to a broader range of advisory groups, potentially resulting in improved quality of advice, better management decisions, and increased economic benefits compared to **Alternative 1**.

5.5 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 which can be expressed as costs associated with the regulations. Costs associated with this amendment include:

Gulf of Mexico Fishery Management Council (Council) costs of document preparation, meetings, public hearings, and information dissemination	\$40,000
NOAA Fisheries administrative costs of document preparation, meetings and review	\$30,000
TOTAL	\$70,000

The Council and federal 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. There are no permit requirements proposed in this regulatory action or anticipated additional enforcement costs involved in monitoring any closures. In addition, under a fixed budget, any additional enforcement activity due to the adoption of this interim rule would likely mean a redirection of resources to enforce the new measures rather than an expenditure of new funds.

5.6 Determination of Significant Regulatory Action

Pursuant to E.O. 12866, a regulation is considered a “significant regulatory action” if it is expected 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 information provided in Section 5.5, this regulatory action would not meet the first criterion. Therefore, this regulatory action is determined to not be economically significant for the purposes of E.O. 12866.

CHAPTER 6. REGULATORY FLEXIBILITY ACT ANALYSIS

6.1 Introduction

The purpose of the Regulatory Flexibility Act (RFA) is to establish a principle of regulatory issuance that agencies shall endeavor, consistent with the objectives of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of businesses, organizations, and governmental jurisdictions subject to regulation. To achieve this principle, agencies are required to solicit and consider flexible regulatory proposals and to explain the rationale for their actions to assure such proposals are given serious consideration. The RFA does not contain any decision criteria; instead the purpose of the RFA is to inform the agency, as well as the public, of the expected economic impacts of various alternatives contained in the fishery management plan (FMP) or amendment (including framework management measures and other regulatory actions) and to ensure the agency considers alternatives that minimize the expected impacts while meeting the goals and objectives of the FMP and applicable statutes.

The RFA requires agencies to conduct a Regulatory Flexibility Act Analysis (RFAA) for each proposed rule. The RFAA is designed to assess the impacts various regulatory alternatives would have on small entities, including small businesses, and to determine ways to minimize those impacts. An RFAA is conducted to primarily determine whether the proposed action would have a “significant economic impact on a substantial number of small entities.” The RFAA provides: 1) A description of the reasons why action by the agency is being considered; 2) a succinct statement of the objectives of, and legal basis for, the proposed rule; 3) a description and, where feasible, an estimate of the number of small entities to which the proposed rule would apply; 4) a description of the projected reporting, record-keeping, and other compliance requirements of the proposed rule, including an estimate of the classes of small entities which would be subject to the requirements of the report or record; 5) an identification, to the extent practicable, of all relevant federal rules, which may duplicate, overlap, or conflict with the proposed rule; 6) a description and estimate of the expected economic impacts on small entities; and 7) an explanation of the criteria used to evaluate whether the rule would impose “significant economic impacts”.

6.2 Statement of the need for, objective of, and legal basis for the rule

The problems and objective of this amendment and its implementing proposed rule are provided in Section 1.2. In summary, the objective of this proposed rule is to modify post-season recreational accountability measures for shallow-water grouper species and allow modifications to accountability measures for reef fish species in the future under the framework procedure to achieve optimum yield while ensuring the fishery resources are utilized efficiently. The Magnuson-Stevens Fishery Conservation and Management Act provides the statutory basis for this proposed rule.

6.3 Description and estimate of the number of small entities to which the proposed action would apply

This rule, if implemented, would be expected to directly affect 1,363 vessels that possess a reef fish for-hire permit. The for-hire fleet is comprised of charterboats, which charge a fee on a vessel basis, and headboats, which charge a fee on an individual angler (head) basis. The average charterboat is estimated to earn approximately \$76,000 (2009 dollars) in annual revenue, while the average headboat is estimated to earn approximately \$230,000 (2009 dollars).

No other small entities that would be expected to be directly affected by this proposed rule have been identified.

The Small Business Administration has established size criteria for all major industry sectors in the U.S. including fish harvesters. A business involved in the for-hire fishing industry is classified as a small business if it is independently owned and operated, is not dominant in its field of operation (including its affiliates), and has combined annual receipts not in excess of \$7.0 million (NAICS code 713990, recreational industries). Based on the average revenue estimates provided above, all for-hire vessels expected to be directly affected by this proposed rule are determined for the purpose of this analysis to be small business entities.

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

This proposed rule would not establish any new reporting, record-keeping, or other compliance requirements.

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

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

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

Substantial number criterion

As previously discussed, this proposed rule, if implemented, would be expected to directly affect all 1,363 vessels that possess a reef fish for-hire permit. Because all vessels in the fishery would be affected, this proposed rule is determined to meet the substantial number criterion.

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?

All small entities expected to be directly affected by the measures in this proposed action are determined for the purpose of this analysis to be small business entities, so the issue of disproportionality does not arise in the present case.

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

A discussion of the expected economic effects of the actions in this proposed rule is provided in Sections 4.1.3 and 4.2.3. Neither action in this proposed rule would be expected to result in any reduction in profit for any small entities. One action in this proposed rule would revise the post-season accountability measures for shallow-water grouper species, while the second action would modify the reef fish framework procedure. The proposed modifications to the framework procedure would expand the range of management actions that could be taken under framework procedures, thereby potentially reducing the time required to implement necessary management change, and improve the opportunity to access quality advice in the management process by expanding the access to advisory committees and panels. As a result, this action would be expected to support better and more timely management decisions and associated increased economic benefits to small entities that harvest reef fish. However, modifying the framework procedure would be an administrative action that would only have indirect effects on small entities; direct effects would only occur in the event that future fishery or resource conditions change, necessitating management action through framework procedures. As a result, because the effects on small entities of implementing this action would be indirect, this component of the proposed rule is outside the scope of the RFA.

Accountability measures specify methods and procedures intended to ensure harvest overages are neither excessive nor persistent. Post-season accountability measures are invoked only in the event a harvest overage occurs. Although implementing accountability measures would be expected to result in direct economic effects on affected small entities, the establishment of accountability measures, or their modification, would be an administrative action that would only be expected to have indirect effects on any small entities. Because the proposed action would only modify the current accountability measures, no direct effects would be expected to accrue to any small entities. As a result, this component of the proposed rule is also outside the scope of the RFA.

However, despite this determination, because implementing post-season accountability measures would be expected to restrict fishing operations and result in direct short-term reductions in revenue and profit, further discussion of the potential significance of these effects is provided. The proposed modification to the accountability measures would be expected to result in less

restrictive measures than the current accountability measures. The action would base evaluation of harvest overage on the annual harvest of the current year rather than use a three-year moving average and limit any necessary corrective harvest restrictions to just gag or red grouper, rather than imposing restrictions on fishing for any species in the shallow-water grouper complex. The change to basing the evaluation on the current year would be expected to result in more timely response to harvest overages, limit resource harm, and reduce the scope of necessary corrective action, thereby reducing the magnitude of any short-term economic effects and better preserve the long-term economic benefits to small entities. Limiting corrective action to gag or red grouper would allow continued fishing for and harvest of other species in the shallow-water grouper complex and continued receipt of the revenue and profit associated with these activities. As a result, the proposed changes to the accountability measures would be expected to increase economic benefits to small entities relative to the status quo.

Although the expected economic effects of the proposed modification to the accountability measures would be an increase in revenue and profit, any change would be expected to occur at the margins of total fishing activity by affected small entities. Based on 2005-2009 recreational data, an average of only approximately 2.5% of charterboat anglers reported targeting any species in the shallow-water grouper complex. Gag and red grouper are the dominant target species, accounting for approximately 2% and 1% of charterboat individual angler trips, respectively (the percentages are not additive because some anglers target multiple shallow-water grouper species). During this period, approximately 1% of charterboat anglers reported targeting shallow-water grouper species other than gag, while approximately 2% reporting targeting shallow-water grouper species other than red grouper. If both gag and red grouper are removed from the list of targeted shallow-water grouper species, less than one tenth of one percent of charterboat anglers reported targeting any of the remaining shallow-water grouper species. Similar data are not available for headboat anglers because target intent is not collected for this sector. However, for the purpose of this analysis, target behavior in the charterboat sector is assumed to be representative of target behavior in the headboat sector. While some individual vessels may be more dependent on the subject species, these results clearly indicate that, for the average small entity that may be affected by this proposed rule, any economic effects, either positive or negative, would be marginal. Additionally, these results represent annual target behavior. Because the implementation of accountability measures would be expected to affect only a portion of the year, the likelihood that any economic effects would be significant is further reduced.

Based on the discussion above, it is determined that, this rule, if implemented, would not be expected to have a significant economic effect on a substantial number of small entities.

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

CHAPTER 7. BYCATCH PRACTICABILITY ANALYSIS

A bycatch practicability analysis for the grouper fishery was conducted in Amendment 32 (GMFMC 2011b) to the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico (Reef Fish FMP), which established the current accountability measures for groupers, and is incorporated herein by reference. Amendment 32 can be found at [http://www.gulfcouncil.org/docs/amendments/Final%20RF32_EIS_October_21_2011\[2\].pdf](http://www.gulfcouncil.org/docs/amendments/Final%20RF32_EIS_October_21_2011[2].pdf). Consequently, the Council is considering in this amendment the practicability of taking additional action to adjust those accountability measures for the recreational sector and to revise the framework procedure to provide more flexibility in making future revisions to accountability measures. The following analysis will focus on bycatch by the recreational sector.

Background/Overview

Bycatch is defined as fish harvested in a fishery, but not sold or retained for personal use. This definition includes both economic and regulatory discards, but excludes fish released alive. Economic discards are generally undesirable from a market perspective because of their species, size, sex, and/or other characteristics. Regulatory discards are fish required by regulation to be discarded, but also include fish that may be retained but not sold.

Guidance provided at 50 CFR 600.350(d)(3) identifies ten factors to consider in determining whether a management measure minimizes bycatch or bycatch mortality to the extent practicable. These are:

1. Population effects for the bycatch species.
2. Ecological effects due to changes in the bycatch of that species (effects on other species in the ecosystem).
3. Changes in the bycatch of other species of fish and the resulting population and ecosystem effects.
4. Effects on marine mammals and birds.
5. Changes in fishing, processing, disposal, and marketing costs.
6. Changes in fishing practices and behavior of fishermen.
7. Changes in research, administration, and enforcement costs and management effectiveness.
8. Changes in the economic, social, or cultural value of fishing activities and non-consumptive uses of fishery resources.
9. Changes in the distribution of benefits and costs.
10. Social effects.

The Councils are encouraged to adhere to the precautionary approach outlined in Article 6.5 of the Food and Agriculture Organization (FAO) of the United Nations Code of Conduct for Responsible Fisheries when uncertain about these factors.

Gag Release Mortality Rates and Bycatch

As described in the bycatch practicability analysis in Amendment 30B to the Reef Fish FMP (GMFMC 2008a), the 2001 Gulf of Mexico gag assessment used discard mortality rates of 20% for the recreational sector and 30% for the commercial sector based on different depths fished. However, these rates were revised based on subsequent work that was incorporated into SEDAR 10 (2006) that showed a positive relationship between release mortality and depth. SEDAR 10 estimated the average release mortality rate for commercially caught gag was 67% and for recreationally caught gag was 20%. Although the release mortality rate was estimated higher in the commercial sector than in the recreational sector, the number of discards is significantly lower in the commercial sector because of lower encounter rates of undersized fish.

As determined by SEDAR 10, recreational discards were attributed primarily to the minimum size limit. During 1990-1999 (20-inch TL minimum size limit), the recreational dead discards were 16% of total recreational removals (GMFMC 2008a). After the increase to a 22-inch TL minimum size limit in 2000, recreational dead discards were estimated at 23% of the total recreational removals by weight. This estimate has been revised to an average of 35% of the total recreational removals by weight for the time period 2006-2009 (Table 7.1). A small number of recreational discards were estimated to occur prior to implementation of federal size limits (1986-1989), accounting for about 3% of total recreational removals (note: an 18-inch TL gag minimum size limit was implemented in Florida state waters beginning in 1985).

Table 7.1. Gag recreational, commercial, and total landings and dead discards by weight, and as a percentage of the total fish killed for discards, in the Gulf of Mexico from 2006-2009 (From NMFS 2011).

Removal type	Year	Recreational (lbs)	Commercial (lbs)	Total (lbs)
Landings	2006	2,286,440	1,369,985	3,656,425
	2007	2,231,762	1,262,181	3,493,943
	2008	2,958,027	1,248,481	4,206,509
	2009	1,613,316	733,292	2,346,608
	Average	2,272,386	1,153,485	3,425,871
Dead discards	2006	904,294	357,397	1,261,691
	2007	1,218,783	371,134	1,589,917
	2008	1,694,804	301,260	1,996,064
	2009	1,003,761	596,291	1,600,052
	Average	1,205,411	406,520	1,611,931
Percent dead discards of total fish killed	2006	28%	21%	26%
	2007	35%	23%	31%
	2008	36%	19%	32%
	2009	38%	45%	41%
	Average	35%	26%	32%

Red Grouper Release Mortality Rates and Bycatch

Red grouper release mortality rates and bycatch are discussed in detail in the bycatch practicability analysis for Amendment 30B (GMFMC 2008a) and Amendment 32 (GMFMC 2011b) and are incorporated by reference here. The estimation of red grouper release mortality rates are described in detail in SEDAR 12 (2007) and the 2009 red grouper assessment update (SEDAR 12 update 2009). In SEDAR 12 (2007), a 10% release mortality rate was estimated for the recreational, commercial handline, and trap sectors and a 45% release mortality rate was estimated for the commercial longline sector.

Observer-based discard information from the headboat sector was applied to both private and charter-vessel landings in the assessment. To estimate the magnitude of discards in the recreational sector, a 10% discard mortality rate was applied to number of red grouper released alive (B2 catch type in the Marine Recreational Information Program) and multiplied by an average weight for released fish⁵. Total estimated recreational dead discards by weight for 2006-2008 (the last three years of the assessment update) are shown Table 7.2. The total estimated weight of discards ranged from 22 to 49% of removals for this sector between 2006 and 2008 and average 35%. However, as illustrated in Table 7.2, the weight of removals (both as landings and through dead discards) is much higher for the commercial than the recreational sector.

Table 7.2. Red grouper recreational, commercial, and total landings and dead discards by weight, and as a percentage of the total fish killed for discards, in the Gulf of Mexico from 2006-2008.

Removal type	Year	Recreational (lbs)	Commercial (lbs)	Total (lbs)
Landings	2006	960,890	5,162,527	6,123,417
	2007	1,016,807	3,708,863	4,725,670
	2008	892,998	4,739,295	5,632,293
	Average	956,898	4,536,895	5,493,793
Dead discards	2006	272,627	1,428,385	1,701,012
	2007	385,147	1,293,782	1,678,929
	2008	875,121	963,679	1,838,800
	Average	510,965	1,228,615	1,739,580
Percent dead discards of total fish killed	2006	22%	22%	22%
	2007	27%	26%	26%
	2008	49%	17%	25%
	Average	35%	21%	24%

⁵Personal communication, John Walter, Southeast Fisheries Science Center, Miami, FL

Other Bycatch

Species incidentally encountered by the directed gag and red grouper fisheries include sea turtles, sea birds, and other reef fishes, such as snappers and groupers. The Gulf of Mexico commercial reef fish fishery is listed as a Category III fishery under the Marine Mammal Protection Act (November 29, 2011; 76 FR 73912). This classification indicates the annual mortality and serious injury of a marine mammal stock resulting from any fishery is very low. The risk of serious injury or mortality to marine mammals resulting from the recreational sector of the reef fish fishery, which uses similar gear (i.e., handlines, rod and reel, spears, etc.), is also expected to be low, although interactions with dolphins and sea turtles are known to occur.

The most recent biological opinion for the Gulf of Mexico reef fish fishery completed on September 29, 2011, concluded this fishery is not likely to jeopardize the continued existence of sea turtles, smalltooth sawfish, other listed species, or their designated critical habitat. The 2011 biological opinion supported the determinations of an earlier 2009 biological opinion (NMFS 2009). Specific actions taken by the Council to reduce the impact of the fishery on listed species include actions taken in Amendment 18A to the Reef Fish FMP (GMFMC 2005b) that established regulations to minimize stress to endangered species incidentally caught in the reef fish fishery, and actions taken in Amendment 31 to the Reef Fish FMP (GMFMC 2009) to reduce interactions between sea turtles and the longline sector of the fishery.

Other species of reef fish are also incidentally caught when targeting gag and red grouper. In the eastern Gulf of Mexico, vermilion snapper, greater amberjack, red snapper, scamp, black grouper, and other shallow-water grouper, are caught as bycatch when targeting grouper. Vermilion snapper are not overfished or undergoing overfishing (SEDAR 9 2006a) and bycatch is not expected to jeopardize the status of this stock. Greater amberjack (SEDAR 9 2006c, SEDAR 9 update 2010) is overfished and undergoing overfishing. Greater amberjack release mortality is estimated to be fairly low, ranging from 10% to 20%. Discards are higher for commercially caught greater amberjack than they are for recreationally caught greater amberjack because of differences in minimum size limits (36 inches FL commercial vs. 30 inches FL recreational). Because greater amberjack are pelagic and grouper are bottom fish, bycatch of greater amberjack is relatively low in the shallow-water grouper fishery and likely not greatly affected by changes in grouper management measures. In contrast, red snapper have been increasing in abundance in the eastern Gulf of Mexico over the past two decades and fishermen have indicated they are discarding more red snapper. Red snapper (SEDAR 7 2005, SEDAR 7 update 2009) is overfished, but overfishing was determined to have ended in 2011. Most commercial grouper fishermen in the eastern Gulf of Mexico were allocated few red snapper individual fishing quota shares, and therefore are unable to retain large quantities of red snapper when fishing for grouper. Bycatch is a significant source of mortality in the red snapper fishery, resulting in the Council approving actions in Joint Reef Fish/Shrimp Amendment 27/14 to reduce directed fishery bycatch. The statuses of other shallow-water grouper species, such as scamp are unknown. Most trips target red, gag, and black grouper, and capture other shallow-water groupers incidentally. Bycatch is not known to be significant for these species, because the remaining shallow-water grouper species (e.g., yellowmouth grouper, yellowfin grouper, and scamp) have no or small minimum size limits (e.g., scamp – 16 inches TL).

Practicability of current management measures in the directed shallow-water grouper fishery relative to their impact on bycatch and bycatch mortality.

Bycatch and bycatch mortality can negatively affect a stock by reducing the number of fish that survive and become susceptible to harvest. Fishery management regulations are intended to constrain effort and control fishing mortality, but in some cases increase bycatch or bycatch mortality. When proposing fishing regulations, managers must balance the competing objectives of maximizing yield, ending overfishing, and reducing bycatch to the extent practicable.

On average, for the last three years of the assessment update, dead discards in weight account for 24% of the total biomass removed from the red grouper stock each year (Table 4.1.2). In the gag stock, dead discards account for an even greater percentage of the total biomass removed (32% for 2006-2009) and the proportion of dead discards to landings has increased greatly in recent years.

The bycatch practicability analysis in Amendment 32 (GMFMC 2011b) describes current management measures and their relative impact on bycatch and bycatch mortality for shallow-water grouper. The commercial harvest of shallow-water grouper has been managed with trip limits, quotas, gear restrictions, minimum size limits, and a one-month closed season (applies to gag, red grouper, and black grouper only); however, with the implementation of the individual fishing quota program, the trip limits and closed season were removed. The recreational harvest of shallow-water grouper has been managed with size limits, bag limits, and a two-month closed season (applies to all shallow-water grouper). There are also several restricted fishing areas intended to protect reef fish, and in particular gag spawning aggregations.

Alternatives being considered to minimize bycatch

Reductions in dead discards can be accomplished either by reducing the number of red grouper, gag, and shallow-water grouper discarded or reducing the release mortality rate of discards. To reduce the number of grouper discards, management measures limit fishing effort, change the selectivity of fishing gears, or change the fishing behavior of fishermen in such a way that reduces the harvest of sublegal and closed season fish. To reduce the discard mortality rate of red grouper, gag, and other shallow-water grouper, sources of release mortality must first be identified (i.e., depth, hooking, surface interval) and management measures be imposed to reduce discard mortality rates.

The post-season accountability measure implemented in Amendment 30B, which shortens the recreational season for all shallow-water grouper if the recreational annual catch limit (ACL) for gag or red grouper is exceeded, is expected to reduce bycatch of gag or red grouper from fishermen targeting other grouper species, but only if the accountability measure is triggered. The status quo if the accountability measure is not triggered is to have a season when recreational gag harvest is closed but other shallow-water grouper is open. Amendment 38 considers adjustments to the post-season accountability measure that would leave the status quo gag-only closed season in place, adjusting only the length of the closed season in the year following an ACL overage. Alternatives that close recreational harvest of one species of grouper while allowing other species to be harvested could result in incidental harvest of the species that

is closed (Action 1). On the other hand, closing all shallow-water grouper species to recreational harvest could result in incidental harvest of shallow-water grouper from fishermen targeting non-grouper species such as cobia, greater amberjack, or mangrove snapper. Actions that modify the framework procedure to allow accountability measures to be implemented or revised through a framework action could provide increased flexibility to implement or adjust accountability measures to reduce bycatch (Action 2).

Practicability Analysis

Criterion 1: Population effects for the bycatch species

As described in Amendment 30B (GMFMC 2008a), for both the red grouper and gag stocks, total dead discards have increased significantly since the implementation of minimum size limits. In addition, gag have been under a rebuilding plan as described in Amendment 32 (GMFMC 2011b). For red grouper, commercial dead discards, on average, have been greater than recreational discards, and for gag, recreational dead discards, on average, have been greater than the commercial discards. The adjustments to post-season accountability measures in Action 1 would apply only to the recreational sector. The individual fishing quota system used for commercial harvest of shallow-water grouper serves as the accountability measure for that sector. Therefore, adjustments to the post-season accountability measures would affect only recreationally caught red grouper and gag.

Currently, the closed season for gag applies to that species only, with other shallow-water grouper remaining open except for the February-March fixed shallow-water grouper closed season. If the post-season accountability measure is not triggered, the gag-only closed season will remain in effect, except that the specific dates of the closed season may change from year to year as the stock rebuilds and allows the gag season to remain open longer. The current post-season accountability measure for recreational gag and red grouper harvest, if triggered, would result in a closed season that applies to all shallow-water grouper, which would likely reduce bycatch of the gag or red grouper. Alternatives to modify the post-season accountability measures would result in the closed season remaining species-specific. Thus, while the alternatives may not reduce bycatch of gag or red grouper during a closed season, they would not worsen any existing bycatch levels. Based on the SEDAR 9 update assessment, red grouper is at or near its optimum yield biomass levels, and the stock is unlikely to be harmed by existing bycatch. Gag is overfished and is under a rebuilding program. Expected bycatch levels of gag have been taken into account in setting the closed season and other management measures to rebuild the stock. As the stock recovers, the length of the closed season should become shorter. Therefore, the gag rebuilding plan is unlikely to be negatively impacted by existing bycatch levels. In the event that it becomes necessary to make future modifications to the accountability measures to address bycatch, the alternatives to modify the framework procedure to allow implementation and modification of accountability measures would increase the flexibility to respond to such needs (Action 2).

For other reef fish species including red grouper, current post-season accountability measures to close all shallow-water grouper if gag or red grouper landings exceed their ACL could lead to increased discards for these species from fishermen targeting other species. The adjustments to

post-season accountability measures being considered in this amendment would reduce the potential for such bycatch.

Criterion 2: Ecological effects due to changes in the bycatch of gag and red grouper (effects on other species in the ecosystem)

The relationships among species in marine ecosystems are complex and poorly understood, making the nature and magnitude of ecological effects difficult to predict with any accuracy. The most recent gag and red grouper stock assessment updates (SEDAR 10 update 2009, SEDAR 12 update 2009) indicated an episodic mortality event in 2005 (possibly due to red tide) reduced both the red grouper and gag stocks. The red grouper stock was not reduced sufficiently to be considered overfished, and is currently at or near its optimum yield biomass level. This allowed the Council to increase the ACL and the red grouper bag limit in Amendment 32 and in a 2011 Red Grouper Regulatory Amendment (GMFMC 201d), which should reduce discards. Gag is overfished, and the rebuilding plan and management measures Amendment 32 are expected to decrease fishing mortality for the gag stock and allow the stock to rebuild until it is capable of supporting fishing at the optimum yield level. Changes in the bycatch of gag, red grouper and other shallow-water grouper are not expected to directly affect other species in the ecosystem. Although birds, dolphins, and other predators may feed on grouper discards, there is no evidence that any of these species rely on grouper discards for food.

Criterion 3: Changes in the bycatch of other species of fish and invertebrates and the resulting population and ecosystem effects

Population and ecosystem effects resulting from changes in the bycatch of other species of fish and invertebrates are difficult to predict. As discussed in Amendment 30B (GMFMC 2008a), snappers, greater amberjack, gray triggerfish and other reef fishes are commonly caught in association with shallow-water grouper. Some of these species are in rebuilding plans (red snapper, gray triggerfish, and greater amberjack) with the stocks improving. Regulatory discards significantly contribute to fishing mortality in all of these reef fish fisheries, except vermilion snapper.

Adjustments to the post-season accountability measures to allow recreational fishing for other shallow-water grouper while gag or red grouper is closed would reduce bycatch of shallow-water grouper by fishermen targeting other species.

Criterion 4: Effects on marine mammals and birds

The effects of current management measures on marine mammals and birds are described above. Actions evaluated in this amendment are not expected to significantly affect marine mammals and birds. There is no information to indicate marine mammals and birds rely on grouper for food, and measures in this amendment are not anticipated to alter the existing prosecution of the fishery, and thus interactions with marine mammals or birds.

Criterion 5: Changes in fishing, processing, disposal, and marketing costs

The current post-season accountability measures to close all recreational shallow-water grouper if the gag or red grouper ACL is exceeded would have negative impacts on charter and headboats, tackle and bait shops, and other commercial activities that support recreational grouper fishing. Modifying the post-season accountability measures to allow continued harvest of other shallow-water grouper when gag or red grouper are closed would provide beneficial impacts to these activities. Because the accountability measures being considered in this amendment only affect the recreational sector, there would be no impact to the commercial sector.

Criterion 6: Changes in fishing practices and behavior of fishermen

Changes to the post-season accountability measures would affect fishing practices and behavior of recreational fishermen. A closure on all shallow-water grouper would cause some fishermen to stop fishing offshore for the duration of the closure, and would cause others to target other species such as greater amberjack or cobia. For example, anglers may also choose to fish closer to shore because of higher fuel prices and a longer gag closed season. A closed season that applies only to a specific species would be expected to change the behavior of fishermen to target only the species that remain open. Their success in targeting other species while avoiding the species for which the season is closed depends on the knowledge and skill of the fishermen or the operator and crew of the charter or headboat on which the fisherman is fishing.

Criterion 7: Changes in research, administration, and enforcement costs and management effectiveness

Proposed management measures are not expected to significantly impact administrative costs. Managers are currently required to monitor recreational gag and red grouper harvests to project when the ACL would be reached. This requirement would continue. Enforcement would continue to be required to enforce recreational grouper closed seasons, with the only change being whether the closed season applies to a single species or to all shallow-water grouper. All of these measures would require additional research to determine the magnitude and extent of impacts to bycatch and bycatch mortality.

Criterion 8: Changes in the economic, social, or cultural value of fishing activities and non-consumptive uses of fishery resources

Recreational closed seasons for gag would remain in place during the rebuilding program, and could be implemented for red grouper if the recreational ACL is reached. Allowing other shallow-water grouper to be harvested if the gag or red grouper closed season is adjusted in the following year would benefit the economic, social and cultural value of the recreational grouper sector by allowing continued year-round harvest to occur (except for the February-March fixed closed season). To the extent that fishermen can avoid catching gag or red grouper while targeting other species, discards of gag or red grouper could be reduced.

Criterion 9: Changes in the distribution of benefits and costs

No changes in gag, red grouper or shallow-water grouper allocation would occur, resulting in no change to the distribution of benefits and costs associated with bycatch.

Criterion 10: Social effects

Bycatch is considered wasteful because it reduces overall yield obtained from the fishery. Measures that reduce bycatch to the extent practicable will increase efficiency, reduce waste, and benefit stock recovery, thereby resulting in net social benefits. However, measures that prohibit access to stocks that are not overfished can result in economic and social disruption, and can prevent or reduce the likelihood of attaining optimum yield. Managers must balance the competing objectives of maximizing yield, ending overfishing, and reducing bycatch to the extent practicable. The status quo in the absence of post-season accountability measures being triggered is to allow harvest of other shallow-water grouper during a gag closed season. Therefore, adjustments to the post-season accountability measures to allow recreational harvest of other shallow-water grouper to continue during a closure of the species with an ACL overage would avoid disruptions to the recreational sector without changing bycatch levels. Because the expected bycatch of gag during the gag closed season has been taken into account, there would be long-term benefits of stock rebuilding while maintaining recreational access to the resource.

CONCLUSIONS

Analysis of the ten bycatch practicability factors indicates there would be no adverse biological impacts associated with modifying the recreational post-season accountability measures for shallow-water grouper. The main benefits are: 1) maintaining the gag rebuilding plan and 2) maintaining recreational access to the shallow-water grouper species that are not overfished.

If subsequent adjustments to the accountability measures become necessary, whether to address bycatch issues or for other reasons, incorporating the implementation or adjustment of accountability measures through the framework procedure would allow a more streamlined and flexible approach to making such changes as compared to the current requirement to go through a full plan amendment process.

When determining reductions associated with various management measures, release mortality was factored into the analyses, to adjust the estimated reductions for losses due to dead discards. The increases in discards associated with each of these management measures varies and is contingent on assumptions about how fishermen's behavior and fishing practices would change. In this action, none of the alternatives would increase bycatch relative to the status quo. However, the current post-season accountability measure may, if triggered, reduce bycatch of gag (or red grouper) by closing all shallow-water grouper when gag (or red grouper) are closed. The remaining alternatives would maintain the current practice of leaving the remaining shallow-water grouper species open to recreational harvest (except for the fixed February-March shallow-water grouper closed season) when recreational harvest of gag is closed. The Council had to weigh the benefits of reducing bycatch with the negative social effects of closing all shallow-water grouper to recreational harvest for an extended time. The Council concluded that, given

that the shallow-water grouper other than gag are not overfished, and that the gag management actions to rebuild the stock have already accounted for dead discards, the benefits of allowing harvest to continue on other shallow-water grouper may outweigh the benefits of further reducing discard mortality.

Consequently, the actions in this amendment, combined with previous actions, are intended to allow the optimum yield to be taken by the recreational sector, while, to the extent practicable, minimizing bycatch and bycatch mortality.

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Susan Gerhart	Fishery biologist	Co-Team Lead – Amendment development, purpose and need, cumulative effects analysis	SERO
Peter Hood	Fishery biologist	Biological analysis	SERO
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Stephen Holiman	Economist	Regulatory Flexibility Act analysis	SERO
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GMFMC = Gulf of Mexico Fishery Management Council, SERO = Southeast Regional Office of NMFS

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GC = General Counsel, SERO = Southeast Regional Office, NEPA = National Environmental Policy Act, HC = Habitat Conservation, SEFSC = Southeast Fisheries Science Center, PR = Protected Resources

CHAPTER 9. LIST OF AGENCIES, ORGANIZATIONS AND PERSONS CONSULTED

National Marine Fisheries Service
- Southeast Fisheries Science Center
- Southeast Regional Office
- Office for Law Enforcement
NOAA General Counsel

Environmental Protection Agency
United States Coast Guard
United States Fish and Wildlife Services
Texas Parks and Wildlife Department
Alabama Department of Conservation and Natural Resources/Marine Resources Division
Louisiana Department of Wildlife and Fisheries
Mississippi Department of Marine Resources
Florida Fish and Wildlife Conservation Commission

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APPENDIX A. ALTERNATIVES CONSIDERED BUT REJECTED

There were no considered but rejected alternatives. All alternatives were considered and are listed and discussed in Section 2.

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 fishery management in federal waters of the exclusive economic zone. However, fishery 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 are summarized below.

Administrative Procedures Act

All federal rulemaking is governed under the provisions of the Administrative Procedure Act (APA) (5 U.S.C. Subchapter II), which establishes a “notice and comment” procedure to enable public participation in the rulemaking process. Under the APA, NOAA Fisheries Service 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 APA also establishes a 30-day waiting period from the time a final rule is published until it takes effect.

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 NOAA regulations at 15 C.F.R. 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, NOAA Fisheries Service 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, NOAA Fisheries Service will determine if this plan amendment is consistent with the Coastal Zone Management programs of the states of Alabama, Florida, Louisiana, Mississippi, and Texas to the maximum extent possible. Their determination will then be submitted to the responsible state agencies under Section 307 of the CZMA administering approved Coastal Zone Management programs for these states.

Data Quality Act

The Data Quality Act (DQA) (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 DQA 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 fishery management plans (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 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.

Endangered Species Act

The Endangered Species Act (ESA) of 1973, as amended, (16 U.S.C. Section 1531 et seq.) requires federal agencies use their authorities to conserve endangered and threatened species. The ESA requires NOAA Fisheries Service, when proposing a fishery action that “may affect” critical habitat or endangered or threatened species, to consult with the appropriate administrative agency (itself for most marine species, the U.S. Fish and Wildlife Service for all remaining species) to determine the potential impacts of the proposed action. Consultations are concluded informally when proposed actions may affect but are “not likely to adversely affect” endangered or threatened species or designated critical habitat. Formal consultations, including a biological opinion, are required when proposed actions may affect and are “likely to adversely affect” endangered or threatened species or adversely modify designated critical habitat. If jeopardy or adverse modification is found, the consulting agency is required to suggest reasonable and prudent alternatives.

On September 30, 2011, NOAA Fisheries Service Southeast Regional Office, Protected Resources Division, released a biological opinion which analyzed best available data, the current status of the species, environmental baseline (including the impacts of the recent Deepwater Horizon MC 252 oil release event in the northern Gulf of Mexico), effects of the proposed action, and cumulative effects. The opinion concluded that the continued operation of the Gulf of Mexico reef fish fishery is not likely to jeopardize the continued existence of green, hawksbill, Kemp’s ridley, leatherback, or loggerhead sea turtles, nor the continued existence of smalltooth sawfish (NMFS 2011a).

Marine Mammal Protection Act

The Marine Mammal Protection Act (MMPA) established a moratorium, with certain exceptions, on the taking of marine mammals in U.S. waters and by U.S. citizens on the high seas, and on the importing of marine mammals and marine mammal products into the United States. Under the

MMPA, the Secretary of Commerce (authority delegated to NOAA Fisheries Service) is responsible for the conservation and management of cetaceans and pinnipeds (other than walrus). The Secretary of the Interior is responsible for walrus, sea and marine otters, polar bears, manatees, and dugongs.

Part of the responsibility that NOAA Fisheries Service has under the MMPA involves monitoring populations of marine mammals to make sure that they stay at optimum levels. If a population falls below its optimum level, it is designated as “depleted,” and a conservation plan is developed to guide research and management actions to restore the population to healthy levels.

In 1994, Congress amended the MMPA, to govern the taking of marine mammals incidental to commercial fishing operations. This amendment required the preparation of stock assessments for all marine mammal stocks in waters under U.S. jurisdiction, development and implementation of take-reduction plans for stocks that may be reduced or are being maintained below their optimum sustainable population levels due to interactions with commercial fisheries, and studies of pinniped-fishery interactions.

Under section 118 of the MMPA, NOAA Fisheries Service must publish, at least annually, a List of Fisheries (LOF) that places all U.S. commercial fisheries into one of three categories based on the level of incidental serious injury and mortality of marine mammals that occurs in each fishery. The categorization of a fishery in the LOF determines whether participants in that fishery may be required to comply with certain provisions of the MMPA, such as registration, observer coverage, and take reduction plan requirements. The conclusions of the most recent List of Fisheries for gear used by the reef fish fishery can be found in Section 3.3.

Paperwork Reduction Act

The Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501 et seq.) regulates the collection of public information by federal agencies to ensure the public is not overburdened with information requests, the federal government’s information collection procedures are efficient, and federal agencies adhere to appropriate rules governing the confidentiality of such information. The PRA requires NOAA Fisheries Service to obtain approval from the Office of Management and Budget before requesting most types of fishery information from the public. Action 2 adds reporting and monitoring requirements to the list of post-season accountability measures that can be implemented or changed under the framework procedure and may have PRA consequences.

Executive Orders

E.O. 12630: Takings

The Executive Order 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. 12866: Regulatory Planning and Review

Executive Order 12866: Regulatory Planning and Review, signed in 1993, requires federal agencies to assess the costs and benefits of their proposed regulations, including distributional impacts, and to select alternatives that maximize net benefits to society. To comply with E.O. 12866, NOAA Fisheries Service prepares a Regulatory Impact Review (RIR) for all fishery regulatory actions that either implement a new fishery management plan or significantly amend an existing plan (See Chapter 5). RIRs provide a comprehensive analysis of the costs and benefits to society of proposed regulatory actions, the problems and policy objectives prompting the regulatory proposals, and the major alternatives that could be used to solve the problems. The reviews also serve as the basis for the agency's determinations as to whether proposed regulations are a "significant regulatory action" under the criteria provided in E.O. 12866 and whether proposed regulations will have a significant economic impact on a substantial number of small entities in compliance with the Regulatory Flexibility Analysis. A regulation is significant if it a) has an annual effect on the economy of \$100 million or more or adversely affects 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 and communities; b) creates a serious inconsistency or otherwise interferes with an action taken or planned by another agency; c) materially alters the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or d) raises novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive Order.

E.O. 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations

This Executive Order mandates that each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, 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 and possessions. The Executive Order is described in more detail relative to fisheries actions and this amendment in Section 3.5.

E.O. 12962: Recreational Fisheries

This Executive Order 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 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 Council 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 Order requires NOAA Fisheries Service and the U.S. Fish and Wildlife Service to develop a joint agency policy for administering the ESA.

E.O. 13132: Federalism

The Executive Order on Federalism requires agencies in formulating and implementing policies, to be guided by the fundamental Federalism principles. The Order 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 Order is relevant to FMPs and amendments given the overlapping authorities of NOAA Fisheries Service, 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 have been identified relative to the action proposed in this amendment. Therefore, consultation with state officials under Executive Order 12612 is not necessary.

E.O. 13158: Marine Protected Areas

This Executive Order 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, habitat areas of particular concern, and gear-restricted areas in the eastern and northwestern Gulf of Mexico. However, actions in this amendment would not substantially change fishing practices, and would still require adherence to protected areas.

Essential Fish Habitat

The amended Magnuson-Stevens Act included a new habitat conservation provision known as essential fish habitat (EFH) that requires each existing and any new FMPs to describe and identify EFH for each federally managed species, minimize to the extent practicable impacts from fishing activities on EFH that are more than minimal and not temporary in nature, and identify other actions to encourage the conservation and enhancement of that EFH. To address these requirements the Council has, under separate action, approved an environmental impact statement (GMFMC 2004) to address the new EFH requirements contained within the

Magnuson-Stevens Act. Section 305(b)(2) requires federal agencies to obtain a consultation for any action that may adversely affect EFH. An EFH consultation will be conducted for this action.

APPENDIX C. SUMMARIES OF PUBLIC COMMENTS RECEIVED

One written comment was received: “Bycatch mortality is a problem, but look at what is happening with the red snapper. People tell me they catch 10 or 20 and cull them to get the big ones due to the small limit. Big mortality let everyone buy tags and increase the enforcement at the bay openings and the docks and boat ramps.”