

**DRAFT**

**Regulatory Framework Action to the Fishery Management Plan  
for Reef Fish Resources of the Gulf of Mexico  
Greater Amberjack – Recreational Fishing Season Closure  
April 2010**



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## ABBREVIATIONS USED IN THIS DOCUMENT

ABC	Acceptable Biological Catch
ACL	Annual Catch Limits
ACT	Annual Catch Targets
AM	Accountability Measures
APA	Administrative Procedures Act
ASPIC	A Stock-Production Model Incorporating Covariates
B	Biomass
B <sub>MSY</sub>	Stock biomass level capable of producing an equilibrium yield of MSY
CE	Categorical Exclusion
CEA	Cumulative Effects Analysis
CI	Confidence Interval
CMP	Coastal Migratory Pelagics
Council	Gulf of Mexico Fishery Management Council
CPUE	Catch per unit effort
CZMA	Coastal Zone Management Act
DEIS	Draft Environmental Impact Statement
DQA	Data Quality Act
DWG	Deepwater Grouper
EA	Environmental Assessment
EEZ	Exclusive Economic Zone
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EJ	Environmental Justice
ELMR	Estuarine Living Marine Resources
EM	Electronic Monitoring
EPA	Environmental Protection Agency
ESA	Endangered Species Act
F	Instantaneous rate of fishing mortality
FL	fork length
F <sub>MSY</sub>	Fishing mortality rate corresponding to an equilibrium yield of MSY
F <sub>OY</sub>	Fishing mortality rate corresponding to an equilibrium yield of OY
F <sub>30% SPR</sub>	Fishing mortality corresponding to 30% spawning potential ratio
FMP	Fishery Management Plan
GMFMC	Gulf of Mexico Fishery Management Council
GW	Gutted Weight
HAPC	Habitat Area of Particular Concern
IFQ	Individual Fishing Quota
IRFA	Initial Regulatory Flexibility Analysis
LOF	List of Fisheries
M	Mortality
MFMT	Maximum Fishing Mortality Threshold
MMPA	Marine Mammal Protection Act
mp	Million Pounds
MRFSS	Marine Recreational Fisheries Survey and Statistics

Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act
MSST	Minimum Stock Size Threshold
MSY	Maximum Sustainable Yield
NMFS	NOAA's National Marine Fisheries Service
nm	nautical mile
OFL	Overfishing Limit
OMB	Office of Management and Budget
OY	Optimum Yield
RA	Regional Administrator
RFA	Regulatory Flexibility Act of 1980
RFFA	reasonably foreseeable future actions
RFFMP	Reef Fish Fishery Management Plan
RIR	Regulatory Impact Review
Secretary	Secretary of Commerce
SEDAR	Southeast Data, Assessment and Review
SEFSC	Southeast Fisheries Science Center
SEIS	Supplemental Environmental Impact Statement
SEP	Socioeconomic Panel
SERO	Southeast Regional Office
SFA	Sustainable Fisheries Act
SMZ	Special Management Zone
SSBR	Spawning Stock Biomass Per Recruit
SSC	Scientific and Statistical Committee
SPR	Spawning Potential Ratio
TAC	Total Allowable Catch
TL	Total Length
USCG	United States Coast Guard
VPA	Virtual Population Analysis
WW	whole weight

## EXECUTIVE SUMMARY

Greater amberjack are currently overfished and undergoing overfishing and have been under a rebuilding plan since 2003. In 2006, a new stock assessment was completed and determined the stock was not recovering at the rate previously projected. A stock assessment update is scheduled to occur during 2010 with the Scientific and Statistical Committee review scheduled November-December 2010.

During the February 2010 Gulf of Mexico Fishery Management Council (Council) meeting, the Council requested that the recreational fishing season be reviewed and analyzed to potentially establish a recreational season closure for greater amberjack (*Seriola dumerili*). Currently, the recreational sector is open to harvest all year while the commercial sector has a seasonal closure of March through May each year.

The intent of this regulatory framework action is to avoid in-season quota closures during peak economic fishing months, maximize social and economic benefits, and potentially provide biological benefits by protecting the stock during the peak spawning. This regulatory framework action proposes one action consisting of three alternatives to modify the existing greater amberjack recreational fishing season.

In 2008, Reef Fish Amendment 30A was approved for the greater amberjack stock establishing recreational and commercial quotas of 1,368,000 pounds whole weight and 503,000 pounds whole weight, respectively. In 2008, the recreational sector remained open throughout the year with an estimated harvest of 88,731 pounds under the quota. The commercial sector harvested an estimated 412,516 pounds whole weight, 82% of the available commercial quota. In 2009, the greater amberjack recreational sector was projected to reach its quota and closed on October 24 with an estimated harvest overage of 192,229 pounds whole weight. The 14% overage in 2009 by the recreational sector resulted in 69 fewer fishing days than in 2008. Accountability measures established in Reef Fish Amendment 30A reduced the 2010 quota to 1,175,771 pounds whole weight, which is estimated to be filled by July 2010. The commercial sector was closed on November 7 and harvested an estimated 567,020 pounds or 12.7% over the commercial quota.

The greater amberjack rebuilding plan is scheduled to increase the total allowable catch or annual catch limit to 2,547,000 pounds whole weight for the recreational sector and 938,000 pounds whole weight for the commercial sector in the years 2011-2013. These increases would only take place if the 2010 stock assessment reveals the greater amberjack stock is on schedule to be rebuilt to  $B_{msy}$  in 2012. Should the 2010 stock assessment reveal that greater amberjack is not rebuilding on target, the quotas would remain at the current levels of 1,368,000 pounds whole weight for the recreational sector and 503,000 pounds whole weight for the commercial sector.

### Management Alternatives

Under **Alternative 1, no action**, the season would remain the same and the in-season accountability measure would close the recreational sector when the quota is reached. Additionally, any overage in harvest would be subtracted from the next year's quota. If the quota remains at 1,368,000 pounds for 2011 and no overage needs to be repaid from the previous

year, landings are estimated to reach the quota by August 26, 2011. In this case, the recreational sector would be closed for the last four months of the year.

**Alternative 2** would close the recreational fishing season from March 1 to April 30. The 61 day closure would provide the anglers an estimated 304 total fishing days with an estimated lower catch limit harvest of 1,028,909 pounds whole weight and an upper catch limit harvest of 1,647,757 pounds whole weight with a mean of 1,338,333 pounds whole weight.

**Alternative 3** is to close the recreational fishing season June 1 to July 31. The 61 day closure would provide the anglers an estimated 304 total fishing days with an estimated lower catch limit harvest of 915,353 pounds whole weight and an upper catch limit harvest of 1,465,901 pounds whole weight with a mean harvest of 1,190,627 pounds.

## 1.0 INTRODUCTION

### 1.1. Background

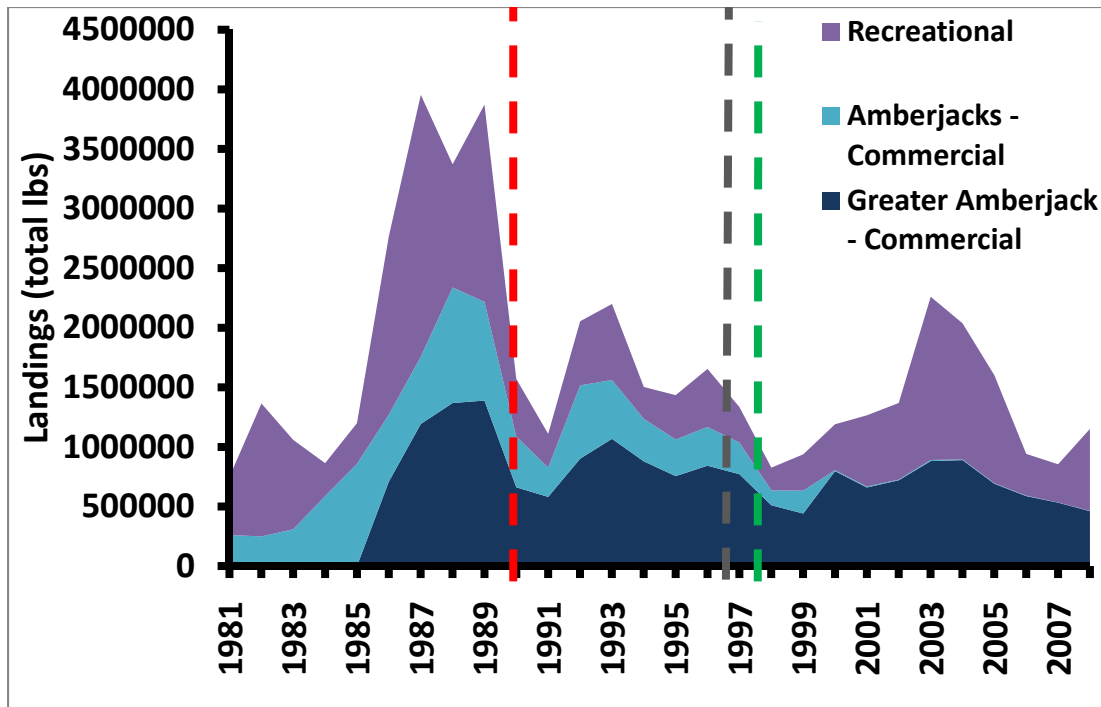
There are 42 species of reef fish in the management unit for the Fishery Management Plan for Reef Fish Resources of the Gulf of Mexico (Reef Fish FMP) implemented in 1984, of which greater amberjack is one of four jack species. Two serranids are not managed, leaving 15 groupers, 14 snappers, five tilefishes, four jacks, one triggerfish and one wrasse. The jurisdiction of the Reef Fish FMP includes all waters of the Gulf of Mexico bounded outside by 200 nautical miles (nm) and inside by the state's territorial waters which are 3 nm in Alabama, Mississippi and Louisiana, and about 9 nm in Florida and Texas.

#### Greater amberjack landings history and relationship to previous amendments

Landings from the commercial sector for greater amberjack are available from the Accumulated Landings System since 1962, and the most recent stock assessment used data from 1963 through 2004. Recreational landings have been collected since 1979 through the Marine Recreational Fishing Statistical Survey (MRFSS). During this time period 2002-2008, the recreational sector took about 72% of the harvest while the commercial sector took the remaining 28% (Table 1.1.1). Landings appear to have been affected by regulations in 1990 through Amendment 1 that set minimum size limits to 28 inches fork length (FL) for the recreational and 36 inches FL for the commercial fisheries and established a bag limit of three fish for the recreational sector (Figure 1.1.1). A recreational bag limit reduction to one fish in 1997 and a commercial closed season in 1998 may also have caused reductions in landings, although it is less clear compared to size limit changes in 1990.

**Table 1.1.1 Recreational and commercial landings of greater amberjack in whole weight (pounds) from 2002-2008.**

YEAR	For Hire	Recreational	Recreational Total	Commercial	Grand Total	Total Allowable Catch
2002	1,406,264	645,968	2,052,232	721,102	2,773,334	
2003	1,292,766	1,373,780	2,666,546	881,610	3,548,156	2,900,000
2004	1,233,689	1,141,145	2,374,834	890,350	3,265,184	2,900,000
2005	532,513	901,192	1,433,705	690,888	2,124,593	2,900,000
2006	1,022,412	351,577	1,373,989	588,303	1,962,292	5,200,000
2007	755,060	323,007	1,078,067	532,267	1,610,334	5,200,000
2008	592,111	687,158	1,279,269	462,026	1,741,295	1,871,000



**Figure 1.1.1 Recreational and commercial landings of greater amberjack from 1981 through 2008 with the implementation date for management regulations noted. Amendment 1 (---) implemented a recreational three-fish bag limit, 28-inch fork length (FL) size limit, and a commercial 36-inch FL size limit. Amendment 12 (---) reduced the bag limit to one fish. Amendment 15 (---) set a commercial closed season from March through May. Recreational include all jack species, Amberjacks-Commercial include all jack species. Source: SEDAR 9 2006.**

## 1.2 Status of the Greater Amberjack Stock in the Gulf of Mexico

Secretarial Amendment 2 to the Reef Fish FMP established a rebuilding plan for greater amberjack based on a stock assessment conducted in 2000. That assessment determined that the greater amberjack stock was overfished and undergoing overfishing as of 1998 (Turner et al 2000). The effects of management measures to reduce the recreational bag limit from three to one fish was implemented January 1997 and the commercial seasonal closure from March through May was implemented January 1998 but, were not incorporated into the assessment. However, the projected effects of these management measures were expected to eliminate overfishing therefore, no new management measures were implemented.

Based on the parameter estimates for 2004, the stock was overfished ( $B_{2004} / B_{MSY} < 1.0$ ) and undergoing overfishing ( $F_{2004}/F_{MSY} > 1.0$ ). Biomass was less than half of  $B_{MSY}$  and fishing mortality was 52% too high in 2004. Stock biomass declined from at least 1986 through 1998 and then increased through 2003. However, these results were very dependent upon the weighting applied to the catch rate indices by fishing sector. The base-case model weighted the indices by the proportion of total catch for each sector over the last eight years. When each catch rate is weighted equally, the stock remains overfished but less so than the base case (SEDAR 9 2006).

The Sustainable Fisheries Act compliant thresholds and targets were defined in Secretarial Amendment 2. The maximum fishing mortality threshold (MFMT) is defined as the fishing mortality rate at maximum sustainable yield (MSY). Minimum stock size threshold (MSST) is defined as  $(1-M) \cdot B_{MSY}$  with natural mortality (M) equal to 0.25. Maximum sustainable yield is the yield associated with  $F_{MSY}$  (proxy =  $F_{30\%SPR}$ ) when the stock is at equilibrium and optimum yield (OY) is the yield associated with  $F_{40\% SPR}$  when the stock is at equilibrium. The fishing mortality (F) and 30% spawning potential ratio ( $F_{30\%SPR}$ ) was defined as the proxy for  $F_{MSY}$  for greater amberjack because biomass-based estimates were considered less accurate than SPR-based estimates in the 2000 assessment. However, the more recent SEDAR 9 assessment accepted the biomass-based estimates for these parameters.

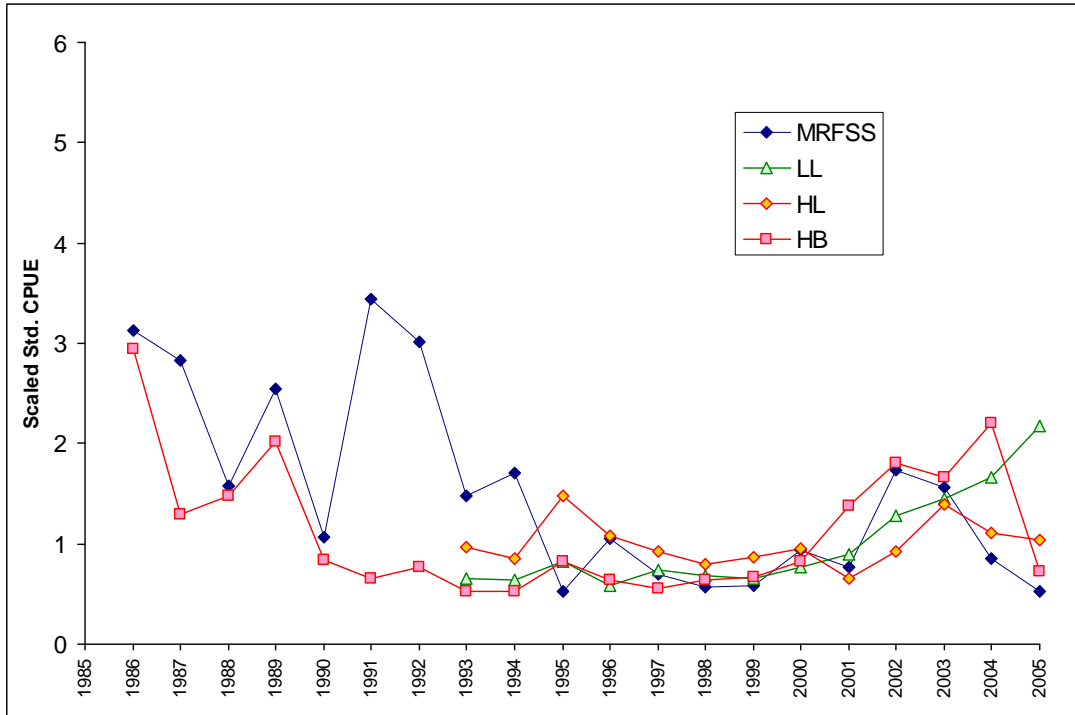
A new assessment was conducted in 2006 using a simple surplus production model called A Stock-Production Model Incorporating Covariates (ASPIC; Prager 2004). Other models, such as the calibrated Virtual Population Analysis (VPA) used in the 2000 assessment and an age-structured surplus production model were applied to the stock, but a lack of good-quality ageing data added an unknown amount of uncertainty to these methods and they were not considered adequate (SEDAR 9 2006).

Results from the ASPIC base model are:

<i>Parameter</i>	<i>Value</i>
<b>Population parameters and management benchmarks</b>	
MSY (million pounds)	5.039
$B_{MSY}$	8.873
$F_{MSY}$	0.568
<b>Stocks parameters in 2004</b>	
$F_{2004}$	0.863
$F_{2004} / F_{MSY}$	1.520
$B_{2004}$	4.250
$B_{2004} / B_{MSY}$	0.479

Some of the uncertainty in the stock status is derived from the indices of relative abundance being inconsistent between sectors in 2004 (Figure 1.2.1). The SEDAR 9 Review Panel stated an explanation of this might be due to different selectivity's between sectors and different fishing locations. There also could be the possibility of strong recruitment into the fishery combined with the selectivity by the charter boats for smaller fish. This makes the projections both uncertain and uninformative, so the SEDAR 9 Review Panel recommended that an update assessment be conducted in the next few years to determine the stock trajectory with more precision.

Subsequent to the SEDAR 9 report, the indices were updated to include the values for 2005 (Figure 1.2.1). The MRFSS and handline indices, representing 92% of the total catch, continued to decline in 2005 and the head boat index declined significantly in 2005 to near historic lows. Collectively these three sectors represent over 97% of the total harvest. Only the commercial longline index representing 2.5% of the total harvest continued to increase. Therefore, the SEDAR 9 assessment including weighted indices by the proportion of catch by sector appears to be valid; the stock is continuing to undergo overfishing and remains overfished.



**Figure 1.2.1 Greater amberjack catch per unit effort trends from recreational (MRFSS and Head boat, HB) and commercial (Longline, LL and Handline, HL) sectors from 1985 through 2005. Source: PowerPoint presentation given to the SSC and Reef Fish Advisory Panel on August 8, 2006 by Guillermo Diaz, SEFSC.**

### 1.3 Purpose and Need

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) requires NOAA Fisheries Service and regional Fishery Management Councils to prevent overfishing, and achieve, on a continuing basis, the optimum yield from federally managed fish stocks. These mandates are intended to ensure fishery resources are managed for the greatest overall benefit to the nation, particularly with respect to providing food production and recreational opportunities, and protecting marine ecosystems. To further this goal, the Magnuson-Stevens Act requires fishery managers to specify through rebuilding plans their strategy for rebuilding overfished stocks to a sustainable level within a certain time frame, provide accountability measures to minimize the risk of overharvest, minimize bycatch and bycatch mortality to the extent practicable, and ensure that management decisions are based on the best available scientific information.

Greater amberjack have been under a rebuilding plan since 2003 with implementation of Secretarial Amendment 2. In 2006, a stock assessment was completed and determined the greater amberjack stock was not recovering at the rate previously projected. The stock continues to be overfished and is undergoing overfishing (SEDAR 9 2006). The Council and NOAA Fisheries Service developed and implemented Amendment 30A to the Reef Fish FMP in response to the stock assessment results in order to end overfishing and rebuild the stock (GMFMC 2008). The minimum reduction required to rebuild the stock by 2012 was 40% of current fish mortality. The total allowable catch (TAC) implemented in Amendment 30A was 1,871,000 pounds whole weight for 2008 through 2010 (GMFMC 2008). Amendment 30A also

established quotas for the recreational and commercial sector at 1,368,000 and 503,000 pound whole weight, respectively. In addition to establishing quotas, Amendment 30A also implemented sector accountability measures. If the either sector exceeds their sector allocation of total allowable catch, the Regional Administrator can close that sector for the remainder of the year. Additionally, if the sector's landings exceed their share of TAC, the Regional Administrator can reduce the fishing season for the time necessary to recover the overage in the following fishing year.

In 2009, the recreational sector was projected to reach the greater amberjack quota and closed October 24, 2009. The recreational sector is currently projected to have exceeded their quota by 14% resulting in accountability measures reducing the 2010 quota to 1,175,771 pounds whole weight, estimated to be filled by July 2010. If the recreational sector does not exceed the 2010 quota, the 2011 quota would be 1,368,000 pounds whole weight. The Council and stakeholders have requested an analysis of various scenarios to modify the recreational greater amberjack season. The purpose of this framework action is to consider a range of alternatives, with various seasonal closures for the greater amberjack recreational fishing season. The main objective is to maximize the number of fishing days available for the recreational sector in the Gulf of Mexico and reduce the probability of exceeding the quota, triggering accountability measures. This objective would be accomplished by analyzing historical landings data to determine when a seasonal closure is needed to provide the recreational sector with maximum number of fishing days possible. The need is to address social and economic impacts of keeping greater amberjack open while other highly targeted and prized reef fish species, such as red snapper, are closed.

#### **1.4 History of Management**

The Reef Fish FMP [with its associated environmental impact statement (EIS)] was implemented in November 1984. The original list of species included in the management unit consisted of snappers, groupers, and sea basses. Gray triggerfish and *Seriola* species, including greater amberjack, were in a second list of species included in the fishery, but not in the management unit. The species in this list were not considered to be target species because they were generally taken incidentally to the directed fishery for species in the management unit. Their inclusion in the FMP was for purposes of data collection, and their take was not regulated.

**Amendment 1** [with its associated environmental assessment (EA), regulatory impact review (RIR), and initial regulatory flexibility analysis (IRFA)] to the Reef Fish FMP, implemented in 1990, added greater amberjack and lesser amberjack to the list of species in the management unit. It set a greater amberjack recreational minimum size limit of 28 inches fork length (FL) and a three-fish recreational bag limit, and a commercial minimum size limit of 36 inches FL. This amendment set as a primary objective of the FMP the stabilization of long-term population levels of all reef fish species by establishing a survival rate of biomass into the stock of spawning age to achieve at least 20% spawning stock biomass per recruit (SSBR), relative to the SSBR that would occur with no fishing. A framework procedure for specification of TAC was created to allow for annual management changes. This amendment also established a commercial vessel reef fish permit as a requirement for harvest in excess of the bag limit and for the sale of reef fish.

**Amendment 4** (with its associated EA and RIR), implemented in May 1992, added the remaining *Seriola* species (banded rudderfish and Almaco jack) to the management unit, and

established a moratorium on the issuance of new commercial reef fish vessel permits for a maximum period of three years.

**Amendment 5** (with its associated supplemental EIS, RIR, and IRFA), implemented in February 1994, required that all finfish except for oceanic migratory species be landed with head and fins attached, and closed the region of Riley's Hump (near Dry Tortugas, Florida) to all fishing during May and June to protect mutton snapper spawning aggregations.

**Amendment 12** (with its associated EA and RIR), submitted in December 1995 and implemented in January 1997, reduced the greater amberjack bag limit from three fish to one fish per person, and created an aggregate bag limit of 20 reef fish for all reef fish species not having a bag limit (including lesser amberjack, banded rudderfish, Almaco jack and gray triggerfish). NMFS disapproved proposed provisions to include lesser amberjack and banded rudderfish along with greater amberjack in an aggregate one-fish bag limit and to establish a 28-inch FL minimum size limit for those species.

**Amendment 15** (with its associated EA, RIR, and IRFA), implemented in January 1998, closed the commercial sector for greater amberjack Gulf-wide during the months of March, April, and May. A regulatory amendment in August 1999 (with its associated EA, RIR, and IRFA) closed two areas (i.e., create two marine reserves), 115 and 104 square nautical miles respectively, year-round to all fishing under the jurisdiction of the Gulf Council with a four-year sunset closure.

**Generic Sustainable Fisheries Act Amendment** (with its associated EA, RIR, and IRFA), partially approved and implemented in November 1999, set the MFMT for greater amberjack at  $F_{30\% SPR}$ . Estimates of MSY, MSST, and OY were disapproved because they were based on SPR proxies rather than biomass-based estimates.

**Amendment 16B** (with its associated EA, RIR, and IRFA), implemented in November 1999, set a slot limit of 14 to 22 inches FL for banded rudderfish and lesser amberjack for both the commercial and recreational fisheries, and an aggregate recreational bag limit of five fish for banded rudderfish and lesser amberjack.

**Secretarial Amendment 2**, implemented in July, 2003 for greater amberjack, specified MSY as the yield associated with  $F_{30\% SPR}$  (proxy for  $F_{MSY}$ ) when the stock is at equilibrium, OY as the yield associated with an  $F_{40\% SPR}$  when the stock is at equilibrium, MFMT equal to  $F_{30\% SPR}$ , and MSST equal to  $(1-M)*B_{MSY}$  or 75% of  $B_{MSY}$ . It also set a rebuilding plan limiting the harvest to 2.9 mp for 2003-2005, 5.2 mp for 2006-2008, 7.0 mp for 2009-2011, and for 7.9 mp for 2012. This was expected to rebuild the stock in seven years. Regulations implemented in 1997 and 1998 (Amendments 12 and 15) were deemed sufficient to comply with the rebuilding plan so no new regulations were implemented.

**Amendment 30A** implemented August 2008, was developed to stop overfishing of gray triggerfish and greater amberjack. The amendment established annual catch limits and accountability measures for greater amberjack and gray triggerfish. For greater amberjack, it modified the rebuilding plan, increased the recreational minimum size limit to 30 inches FL, set a zero bag limit for captain and crew of for-hire vessels, and set commercial and recreational quotas.

## 2.0 MANAGEMENT ALTERNATIVES

### Action 1. Establishment of a Seasonal Closure for Greater Amberjack in the Recreational Fishing Sector

**Alternative 1.** No Action – do not establish a recreational seasonal closure. The recreational fishing season would begin January 1 and end December 31, or whenever the recreational quota is projected to be reached.

**Alternative 2.** Establish a recreational seasonal closure March 1 through April 30.

**Alternative 3.** Establish recreational a seasonal closure June 1 through July 31.

**Discussion and Rationale:** Amendment 30A to the Fishery Management Plan for Reef Fish Resources of the Gulf of Mexico established annual catch limits and accountability measures for greater amberjack in the Gulf of Mexico. The overall total allowable catch was set at 1.871 million pounds (mp) and the recreational quota (73%) was set at 1.368 mp. Accountability measures were established that close the commercial or recreational sector when landings reach or are projected to reach the applicable quota, and adjust the next year's quota to account for any overage that occurred. Currently, the fishing season begins January 1 each year and ends December 31, or when a quota closure is necessary.

In 2009, the recreational quota was projected to be met and the recreational sector closed on October 24, 2009. Projections were based on Marine Recreational Fishing Statistical Survey (MRFSS) data through August 2009, and did not include Monroe County (note: complete 2009 MRFSS data will be available in mid-April). Landings data is also available from the head boat surveys and Texas Parks and Wildlife Department surveys; however, MRFSS data counts for 92% of recreational landings.

The projected overage for 2009 is 192,229 pounds whole weight. After adjusting the 2010 recreational quota to account for this overage, that quota is expected to be met by July 25, 2010. Fisherman requested the Gulf of Mexico Fishery Management Council and NOAA Fisheries Service consider establishing a recreational seasonal closure so fishing can continue during fall when several large fishing tournaments, including the Destin Fishing Rodeo, take place.

If the quota does not change for 2011, landings are projected to reach the quota by August 26, 2011. Each of the alternatives for a seasonal recreational closure is predicted to increase the number of fishing days while constraining landings below the quota until the end of the year (Table 2.0.1). However, natural variation in recruitment and regional availability could change the catchability of the stock. For example, if a large year-class enters the fishery, landings may exceed projections and a quota closure may still be required. In fact, as the stock rebuilds, catch rates would be expected to increase leading to the quota filling more quickly over time.

**Table 2.0.1. Estimated landings and open fishing days for greater amberjack for 2011 based on a quota of 1.368 mp under each alternative. Landings were calculated using MRFSS, Headboat Survey, and Texas Parks and Wildlife Department data for 2000-2008, and MRFSS projected landings for 2009. Open days would be reduced if the quota is projected to be met and the recreational sector is closed early.**

Alternative	Closed season	Mean landings (pounds)	Days Open	Mean estimated pounds under the quota
1	Aug 27-Dec 31	1,366,605± 315,960	238	1,395
2	Mar 1-Apr 30	1,338,333± 309,424	304	29,667
3	Jun 1-Jul 31	1,190,627± 275,274	304	177,373

Source: NOAA Fisheries Service, Southeast Regional Office.

**Alternative 1**, no action, would maintain the current fishing season of January 1 – December 31 with no seasonal recreational closure. However, if the quota was projected to be reached before December 31, NOAA Fisheries Service would close the recreational sector early. If the quota remains at 1.368 mp for 2011 and no overage needs to be repaid from the previous year, landings are estimated to reach the quota by August 26, 2011. In this case, the recreational sector would be closed for the last four months of the year. Any overage from 2010 would require payback in 2011 and would result in an even earlier closure. In 2009, the projected overage was 192,229 pounds, resulting in a decrease of the 2010 quota by more than 10%. If a similar reduction was necessary in 2011, the estimated closure date would be a month earlier, in July.

The biological impacts of **Alternative 1** would be the same as are currently felt from this component of the fishery. Landings would be expected to reach and possibly exceed the quota, potentially jeopardizing the rebuilding plan. The social impacts would stem from the early closure as fishermen would be forced to switch to other species. The overall impacts from no action could be considered as having an adverse impact in comparison to other alternatives because the number of species allowed for harvest would be fewer for the remainder of the year at a time when recreational fishers are facing other closures. **Alternative 1** might affect the administrative environment the most in that quota closures would probably be necessary each year.

Management measures in **Alternatives 2 and 3**, which would revise the greater amberjack fishing season, are expected to have short-term beneficial impacts for the recreational fisheries, primarily the charter sector. The intended regulatory measures would increase the length of the greater amberjack season as reduced fishing pressure during the closure would allow quota to be fished later in the year. While there are no landings data at the community level for the recreational sector, Table 2.0.2 provides a ranking of communities based upon commercial amberjack landings, the number of charter permits divided by population, and recreational infrastructure rank as enumerated from the MRFSS site registry. The charter permit count includes both reef fish and coastal pelagic charter permits and the rank is among all communities with charter permits. This is a crude measure of the reliance upon recreational fishing and is general in nature and not specific to greater amberjack. At this time it is impossible to examine the intensity of recreational fishing activity at the community level for a specific species. However, it is likely that those communities that have a higher rank in terms of charter activity along with recreational fishing infrastructure and have a dynamic commercial fishery for greater amberjack will also have a dynamic recreational greater amberjack fishery. Visits to charter

services websites in these communities suggests that greater amberjack is a key target species, although not as prized as other reef fish or coastal and highly migratory species. However, greater amberjack is fished year round and it is targeted and prized for its fighting ability.

**Table 2.0.2. Average rank for communities with commercial greater amberjack landings, charter permits/population, and recreational fishing infrastructure.**

Community	State	Average rank commercial landings	Average rank charter permits/pop	Infrastructure rank	Average rank
Destin*	FL	5	9	5	6
Islamorada*	FL	2	10	10	7
Key West*	FL	9	12	3	8
Panama City*	FL	6	33	9	16
Grand Isle#	LA	11	33	8	17
Key Largo*	FL	1	51	2	18
Venice*	LA	12	31	18	20
Tavernier#	FL	12	28	22	21
Freeport*	TX	24	28	10	21
Madeira Beach*	FL	4	50	18	24
Pensacola*	FL	16	57	1	25
Fort Myers Beach*	FL	19	65	6	30
Galveston@	TX	15	73	10	33
Saint Petersburg#	FL	8	87	3	33
Clearwater#	FL	13	70	18	34
Tarpon Springs*	FL	24	67	16	36
Houston@	TX	4	117	10	44
Port Isabel*	TX	24	125	10	53
Tampa#	FL	15	148	6	56
Hudson*	FL	19	128	22	56
Ruskin#	FL	22	159	17	66
Golden Meadow*	LA	7	203	21	77
Port Bolivar*	TX	20	203	10	78
Bayou La Batre*	AL	19	202	22	81
Grand Bay*	AL	20	202	25	82

\* Primarily Involved; #Secondarily Involved; @Tangentially Involved in fishing (Impact Assessment, Inc 2005)

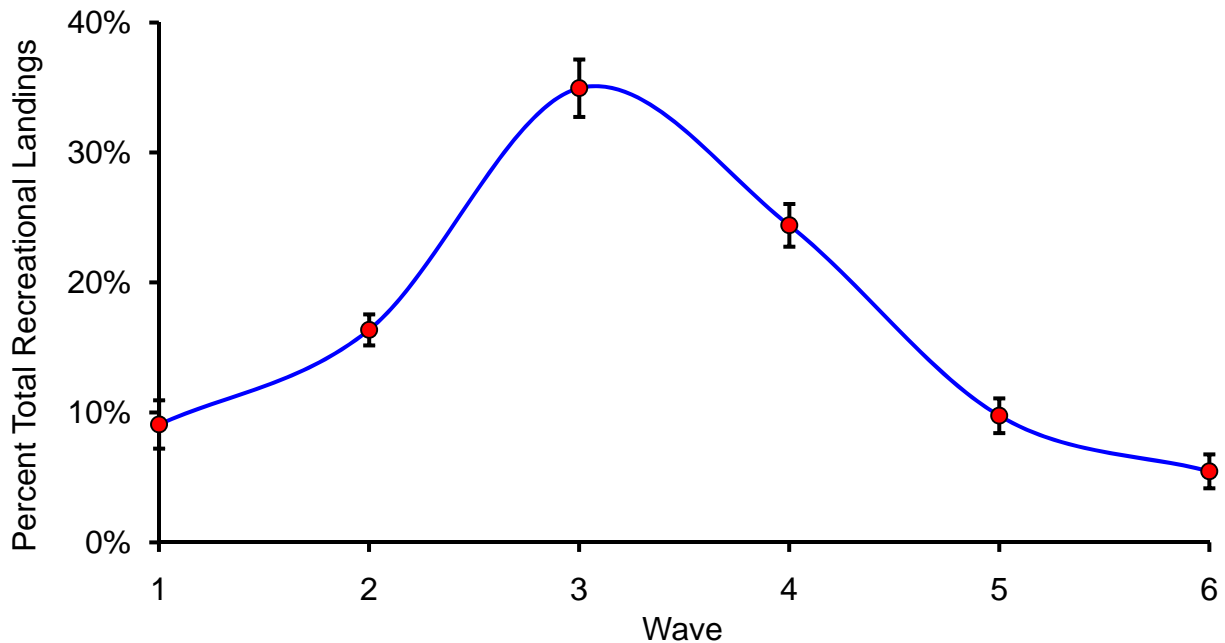
While it is difficult to assess how the communities in Table 2.0.2 would benefit or be adversely affected from actions contained within this amendment, with additional revenues that might accrue to the charter sector as the result of an extended season that may occur with **Alternatives 2 or 3**, overall impacts to these communities should be beneficial. However, this would depend upon changes in fishing behavior which are not easily predicted. While any seasonal closure would often stimulate increased fishing pressure on either side of the closure, how much fishing pressure may be placed upon a species in question is always unknown. If during the closure,

substitute species are readily available, fishing pressure either prior to or after the closure may not increase substantially. If substitute species are not readily available, increased fishing pressure might occur on one or both sides of the closure which could force an earlier than anticipated closure. Since there is some support from the recreational sector for extending the season with a closure, there may be substitute species available and the overall impact may be beneficial if either **Alternative 2 or 3** are chosen.

With an extended fishing year through a seasonal closure in either **Alternative 2 or 3**, those communities listed in Table 2.0.2 should see favorable impacts as all but two communities are listed as either primarily involved or secondarily involved in fishing. The impacts would also depend upon the timing and length of the closure and the anticipated savings in terms of greater amberjack that remain to be fished after the closure. The projected number of fishing days is approximately the same with **Alternative 2 and 3**, which should have beneficial impacts for both the private and for-hire sectors.

In **Alternative 2** the closure would coincide with the peak spawning time for greater amberjack. Greater amberjack have been documented to spawn in the Gulf of Mexico as early as January, but peak during the spring months. Studies in the northern Gulf of Mexico (Murie and Parkyn 2008) and the Keys (Harris et al. 2004) found highest levels of spawning females in March-April; therefore, a March 1-April 30 closure would provide protection for reproductive individuals. The added protection during spawning may have long term benefits if the greater amberjack stock recovers more quickly. Further, a seasonal closure during these months is estimated to allow the recreational sector to remain open for the rest of the year and increase the total number of open days versus **Alternative 1** (Table 2.0.1). In addition, the commercial sector has a seasonal closure each year March 1 – May 31. **Alternative 2** would establish a seasonal closure for the recreational sector during part of this time. A closure of both sectors at the same time would ease the burden on law enforcement.

Sixteen percent of recreational greater amberjack landings occurred during March and April in 2000-2008 (Figure 2.0.1). A shorter spring closure might still constrain landings within the quota, but effort could easily shift to before or after the closed period. If such an effort shift occurs, the quota would be more likely to be met before the end of the year. A quota closure before the end of the year would reduce the number of open days, thereby negating the benefit of the seasonal closure. In addition, any overage would be deducted from the next year's quota, increasing the chance of the recreational sector closing early the following year.



**Figure 2.0.1. MRFSS, Headboat Survey, and Texas Parks and Wildlife Department data for 2000-2008 by wave. Each wave represents two months (e.g., wave 1 = January-February). Bars represent standard error.**

Private anglers and for-hire vessel owners have indicated to the Council they would prefer not to have recreational closures for many reef fish species at the same time. Currently, the shallow-water grouper component of the fishery is closed February 1 – March 31. The red snapper season begins June 1 and closes September 30, or whenever the quota is projected to be reached. Therefore, a seasonal recreational closure of greater amberjack June 1 – July 31 (**Alternative 3**) would coincide with the open recreational seasons for other managed reef fish. This alternative is estimated to increase the number of open days versus **Alternative 1** while still constraining landings within the quota (Table 2.0.1).

Some members of the fishing community would like a seasonal closures during the winter, when recreational fishermen would be least affected. However, these months have the lowest landings (Figure 2.0.1). Even a four month closure, November - February, would not reduce catch enough to constrain harvest within in the quota and prevent a quota closure. In addition, this would result in fewer open days than **Alternative 1**.

### **3.0 REGULATORY IMPACT REVIEW**

### **4.0 REGULATORY FLEXIBILITY ACT ANALYSIS**

### **5.0 FISHERY IMPACT STATEMENT – SOCIAL IMPACT ANALYSIS**

### **6.0 OTHER APPLICABLE LAWS**

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 (EEZ). 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 (APA)**

All federal rulemaking is governed under the provisions of the 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, NMFS is required to publish notification of proposed rules in the Federal Register and to solicit, consider, and respond to public comment on those rules before they are finalized. The APA also establishes a 30-day waiting period from the time a final rule is published until it takes effect.

### **Coastal Zone Management Act (CZMA)**

Section 307(c)(1) of the federal CZMA of 1972, 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 CFR part 930, subpart C. According to these regulations and CZMA Section 307(c)(1), when taking an action that affects any land or water use or natural resource of a state’s coastal zone, NMFS is required to provide a consistency determination to the relevant state agency at least 90 days before taking final action.

Upon submission to the Secretary of Commerce, NMFS would 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 would 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 (DQA)**

The 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 (OMB) 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 OMB on the number and nature of complaints received.

Scientific information and data are key components of FMPs and amendments and the use of best available information is the second national standard under the Magnuson-Stevens Act. To be consistent with the DQA, 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 would also undergo quality control prior to being used by the agency and a pre-dissemination review.

### **Endangered Species Act (ESA)**

The 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 NMFS, 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. NOAA Fisheries Service, as part of the Secretarial review process, would make a determination regarding the potential impacts of the proposed actions.

### **Essential Fish Habitat (EFH)**

The amended Magnuson-Stevens Act includes a new habitat conservation provision known as 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 EIS (GMFMC 2004a) 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.

### **Marine Mammal Protection Act (MMPA)**

The 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 NMFS) 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 NMFS 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, NMFS 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.

### **Paperwork Reduction Act (PRA)**

The PRA of 1995 (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 NMFS to obtain approval from the OMB before requesting most types of fishery information from the public.

### **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, NMFS prepares a RIR for all fishery regulatory actions that either implement a new fishery management plan or significantly amend an existing plan. 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 would have a significant economic impact on a substantial number of small entities in compliance with the RFA. 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. NMFS has preliminarily determined that this action would not meet the economic significance threshold of any criteria.

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

This Executive Order 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. Impacts of commercial and recreational fishing on subsistence fishing are a concern in fisheries management; however, there are no such implications from the action proposed in this amendment.

Although it is anticipated that the impacts of this amendment may affect communities with environmental justice concerns, because the impacts should be beneficial and the regulatory impacts should not discriminate against any group, this action should not trigger any environmental justice concerns. In reviewing the thresholds for both poverty and minorities among all coastal counties involved, Escambia County in Florida is the only location with fishing communities affected by this action where thresholds are exceeded (Poverty threshold exceeded by .08%). Furthermore, with a longer fishing season, the impacts to subsistence fishermen would likely be beneficial. Because recreational amberjack fishing is prosecuted mainly offshore, most subsistence fishing would take place on board private, charter or headboat vessels. Overall impacts should be beneficial if the season is extended.

### **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 NMFS and the U.S. Fish and Wildlife Service to develop a joint agency policy for administering the ESA.

#### **E.O. 13089: Coral Reef Protection**

The Executive Order on Coral Reef Protection requires federal agencies whose actions may affect U.S. coral reef ecosystems to identify those actions, utilize their programs and authorities to protect and enhance the conditions of such ecosystems, and, to the extent permitted by law, ensure actions that they authorize, fund, or carry out do not degrade the condition of that ecosystem. By definition, a U.S. coral reef ecosystem means those species, habitats, and other national resources associated with coral reefs in all maritime areas and zones subject to the jurisdiction or control of the United States (e.g., federal, state, territorial, or commonwealth waters).

Regulations are already in place to limit or reduce habitat impacts within the Flower Garden Banks National Marine Sanctuary. Additionally, NMFS approved and implemented Generic Amendment 3 for EFH, which established additional HAPCs and gear restrictions to protect corals throughout the Gulf of Mexico. There are no implications to coral reefs by the actions proposed in this amendment.

#### **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 NMFS, the states, and local authorities in managing coastal resources, including fisheries, and the need for a clear definition of responsibilities. It is important to recognize those components of the ecosystem over which fishery managers have no direct control and to develop strategies to address them in conjunction with appropriate state, tribes and local entities (international too).

No Federalism issues 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) would 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 MPAs, HAPCs, and gear-restricted areas in the eastern and northwestern Gulf. The existing and proposed areas in these actions are entirely within federal waters of the Gulf of Mexico. They do not affect any areas reserved by federal, state, territorial, tribal or local jurisdictions.

## 7.0 REFERENCES

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