

AMENDMENT 4

TO THE

REEF FISH FISHERY MANAGEMENT PLAN

FOR THE REEF FISH RESOURCES OF

THE GULF OF MEXICO

**(Includes Environmental Assessment
and Regulatory Impact Review)**

NOVEMBER 1991

**Gulf of Mexico Fishery Management Council
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1. PUBLIC REVIEW

A total of six public hearings were scheduled to obtain public comments on this plan amendment with one additional hearing held during the Gulf Council meeting on Wednesday, September 18, 1991, in New Orleans, Louisiana. The public comment period for this amendment ended on September 13, 1991.

The public hearings, with the exception of the one conducted during the Council meeting, were held at the following dates and places beginning at 7:00 p.m.

Monday, August 12, 1991

H. L. Stokely Hall
Ft. Brown Memorial Center Complex
600 International Boulevard
Brownsville, Texas

Tuesday, August 13, 1991

Galveston Beachfront Hotel
5914 Seawall Boulevard
Galveston, Texas

Wednesday, August 14, 1991

Gouaux Hall
Corner of Arcadia and Glenwood
Nichols State University
Thibodaux, Louisiana

Thursday, August 15, 1991

Mobile Civic Center
401 Civic Center Drive
Mobile, Alabama

Wednesday, August 21, 1991

City Hall Auditorium
300 Municipal Drive
Madeira Beach, Florida

Thursday, August 22, 1991

The Reach Hotel
1435 Simonton Street
Key West, Florida

LIST OF AGENCIES AND PERSONS CONSULTED

Gulf of Mexico Fishery Management Council: Scientific and Statistical Committee
Reef Fish Advisory Panel
Reef Fish Scientific Assessment Panel

Coastal Zone Management Programs: Louisiana
Mississippi
Alabama
Florida

National Marine Fisheries Service: Southeast Fisheries Center
Southeast Regional Office

2. HISTORY OF MANAGEMENT

The Reef Fish Fishery Management Plan was implemented in November 1984. The implementing regulations, designed to rebuild declining reef fish stocks, included: (1) prohibitions on the use of fish traps, roller trawls, and powerhead-equipped spear guns within an inshore stressed area; (2) a minimum size limit of 13 inches total length for red snapper with the exceptions that for-hire boats were exempted until 1987 and each angler could keep five undersize fish; and, (3) data reporting requirements.

The National Marine Fisheries Service (NMFS) has collected annual commercial landings data since the early 1950s, recreational harvest data since 1979, and in 1984 initiated a dockside interview program to collect more detailed data on commercial harvest. Consequently, just recently has quantitative assessment of the population levels of major reef fish species been possible. The first red snapper assessment in 1988 indicated that red snapper was significantly overfished and that reductions in fishing mortality rates of as much as 60 to 70 percent were necessary to rebuild red snapper to a recommended 20 percent spawning stock potential ratio (SPR). The 1988 assessment also identified shrimp trawl bycatch as a significant source of mortality.

The Council, through Amendment 1 to the Reef Fish Fishery Management Plan, implemented in 1990 a five fish recreational bag limit and a 11.0 million pound commercial quota for groupers that together were to reduce fishing mortality by about 10 percent and begin rebuilding the population. The commercial quota was subdivided into a 9.2 million pound shallow-water quota and a 1.8 million pound deep-water quota. The Council also implemented a framework procedure to allow for annual management changes in the reef fish fishery.

Amendment 2, implemented in 1990, prohibited the harvest of jewfish to provide complete protection for the species in Federal waters because the population abundance throughout its range is greatly depressed. This amendment rule was initially implemented by emergency rule.

Amendment 3, implemented in July 1991 provided additional flexibility in the annual framework procedure by allowing the target date for rebuilding an overfished stock to be changed depending on changes in scientific advice. The amendment also transferred speckled hind from the shallow-water grouper quota category to the deep-water grouper quota category and established a new red snapper target year of 2007 for achieving the 20 percent spawning potential goal established in Amendment 1.

3. PROBLEMS REQUIRING PLAN AMENDMENT

Amendment 1 to the Reef Fish FMP introduced a set of regulatory measures to effectively manage the reef fish fishery. Since its implementation in 1990, several problems and issues have been identified and are addressed in this plan amendment.

- 1) The framework procedure implemented in Amendment 1 specifies that NMFS deliver stock and economic assessments in April of each year. This timing precludes the use of the previous year's fishery dependent data.
- 2) Measures which are proposed by the Council under the current framework procedure can be rejected or held in abeyance by NMFS with no prescribed time for notifying the Council of such action. This can create problems for the Council because of unnecessary delays and a lack of Council understanding of the deficiencies which cause the rejection or delay.
- 3) The public has reported an enforcement and compliance problem for regulations which apply to greater amberjack. The problem is reported to occur because it is difficult to distinguish greater amberjack from lesser amberjack, Almaco jack and banded rudderfish.
- 4) Scamp are classified as shallow-water grouper but are also caught in deep water. After the shallow-water quota is filled, scamp are still caught incidental to deep-water grouper fishing activities and must be discarded even though they are usually dead because of embolism.
- 5) The open access nature of the fishery has resulted in additional fishing effort or changes in the timing of existing effort in response to quotas and in response to actual or anticipated increases in stock levels. The additional effort and the timing of the use of current effort both tend to dissipate the potential net benefits which were originally forecast to result from the earlier management actions.

4. MANAGEMENT OBJECTIVES

The basic management objectives are enumerated in the Reef Fish Fishery Management Plan, as amended, and need no re-statement here except for those that have direct bearing on the presently proposed set of regulations. These objectives are:

- 1) To rebuild the declining reef fish stocks wherever they occur within the fishery.
- 2) To maximize net economic benefits from the reef fish fishery.
- 3) To revise the definitions of the fishery management unit and fishery to reflect the current species composition of the reef fish fishery.

5. MANAGEMENT OPTIONS AND REGULATORY IMPACT REVIEW

The Executive Order 12291 (E.O. 12291) 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 to enhance the public welfare in the most efficient and cost effective way.

The RIR also serves as the basis for determining whether any proposed regulations are major under criteria provided in E.O. 12291 and whether the proposed regulations will have a significant economic impact on a substantial number of small entities in compliance with the Regulatory Flexibility Act of 1980 (RFA).

This RIR analyzes the probable impacts that the proposed alternatives for the Reef Fish Fishery Management Plan and associated amendments would have on the directed commercial and recreational reef fish fishery.

In this document, the "Regulatory Impacts" statements under each of the management options comprise the bulk of the RIR. The "Discussion" sections describe the nature of the various options and Council's rationale for proposing or rejecting an option.

The problems and objectives are described in previous sections of the amendment document as a part of the RIR by reference. In those instances where expanded discussion of the problems and/or objectives is required in the context of the various management measures, the expanded language is included in the appropriate "Regulatory Analysis" section in the balance of the RIR.

To a large degree, the changes which are expected to result from this action are not amenable to quantitative analysis because the management measures do not typically affect the quantity of landings. Instead, most of the measures are directed at improvements in efficiency. For example, as will be seen in the "Regulatory Impacts" sections for the measures to improve the framework procedure, the RIR will forecast benefits from the improved information which should result from certain of the actions, but there are no methods available upon which to translate better information into quantifiable benefits. Similarly, some of the measures designed to halt or slow effort increases during an interim period while the Council is considering an ITQ or other effort-limiting fishery management regime will be forecast to have benefits. However, these benefits will be in the form of slowing the dissipation of rents and other benefits but will not affect the level of total catch which is already controlled via the set of open-access measures described in the "History of Management" section. In this case the gains (benefits) will be in the form of reducing efficiency losses relative to the status quo. Information and data simply do not exist to quantify these benefits which depend heavily on the reaction of the fishermen to the new regulations. For example, such minimum data as the amount of effort and resources currently devoted to these species (with the exception of a count of the presumed maximum number of participants) does not exist.

Because of the nature of the benefits and the lack of data discussed in the preceding paragraph, virtually the entire analysis will be of a qualitative nature.

A. FRAMEWORK PROCEDURE MODIFICATIONS

This amendment addresses several options for changes to the current framework procedure established by Amendment 1. In order to provide a basis for discussion of the changes, the existing framework measure is shown below.

Existing Framework Measure

Optimum Yield (OY) can be achieved with annual total allowable catch (TAC) specifications for each species or species group. The Council has established a framework procedure where, on an annual basis, a scientific working group will establish an ABC range and the Council will set a TAC and prescribe fishing restrictions to attain the management goal of OY for implementation by the Regional Director (RD) of NMFS prior to the beginning of a fishing year.

Procedure for Specification of TAC:

1. Prior to April 1 each year, or such other time as agreed upon by the Council and RD, the Southeast Fisheries Center of NMFS (SEFC) will: a) update or complete biological and economic assessments and analyses of the present and future condition of the stocks for red snapper and other reef fish stock or stock complex; b) assess to the extent possible the current SPR levels for each stock; c) estimate fishing mortality (F) in relation to F(20 percent SPR); d) estimate annual surplus production F(max) or other population parameters deemed appropriate; e) summarize statistics on the fishery for each stock or stock complex; f) specify the geographical variations in stock abundance, mortality, recruitment, and age of entry into the fishery for each stock or stock complex; and g) analyze social and economic impacts of any specification demanding adjustments of allocations, quotas, or bag limits.
2. The Council will convene a Scientific Assessment Panel, appointed by the Council, that will, as a working group, review the SEFC assessment(s), current harvest statistics, economic, social, and other relevant data. It will prepare a written report to the Council specifying a range of ABC for each stock or stock complex which is in need of catch restrictions for attaining or maintaining OY. The ABCs are catch ranges that will be calculated for those species in the management unit that have been identified by the Council, NMFS, or the working panel as in need of catch restrictions for attaining or maintaining OY. The range of ABCs shall be calculated so as to achieve reef fish population levels at or above the 20 percent SPR goal by January 1, 2000, for all reef fish except red snapper which has a January 2007 target date, or by a time period (target date), or set of time periods (target dates) specified by the stock assessment

panel. Any time period specified by the assessment panels for consideration by the Council under this framework procedure cannot exceed a period equal to 1.5 times the potential generation time of the stock. Generation times are to be specified by the stock assessment panel based on the biological characteristics of the individual stocks. For stock or stock complexes where data in the SEFC reports are inadequate to compute an ABC based on the spawning stock biomass per recruit model, the above working group will use other available information as a guide in providing their best estimate of an ABC range that should result in at least a 20 percent SPR level. The ABC ranges will be established to prevent an overfished stock from further decline. To the extent possible, a risk analysis should be conducted indicating the probabilities of attaining or exceeding the stock goal of 20 percent SPR, the annual transitional yields (i.e., catch streams) calculated for each level of fishing mortality within the ABC range, and the economic and social impacts associated with those levels. The working group report will include recommendations on bag limits, size limits, specific gear limits, season closures, and other restrictions required to attain management goals, along with the economic and social impacts of such restrictions, and the research and data collection necessary to improve the assessments. The working group may also recommend additional species for future analyses.

3. The Council will conduct a public hearing on the working group reports at, or prior, to the time it is considered by the Council for action. Other public hearings may be held also. The Council will request review of the reports by its Reef Fish Advisory Panel and Standing Scientific and Statistical Committees and may convene these groups before taking action.
4. The Council in selecting a TAC level and time period (target date), if necessary, for each stock or stock complex for which an ABC range has been identified will, in addition to taking into consideration the recommendations provided for in (1), (2), and (3), utilize the following criteria:
 - a. Set TAC within or below the ABC range or set a series of annual TACs to obtain the ABC level within three years or less.
 - b. Subdivide the TACs into commercial and recreational allocations which maximize the net benefits of the fishery to the nation. The allocations will be based on historical percentages harvested by each user group during the base period of 1979-1987. However, if the harvest in any year exceeds the TAC due to either the recreational or commercial user group exceeding its allocation, subsequent allocations pertaining to the respective user group will be adjusted to assure meeting the specified target date spawning stock biomass per recruit (SPR) goal.
5. The Council will provide its recommendations to the RD for any specifications in TACs and target dates for each stock or stock complex, quotas, bag limits, trip limits, size limits, closed seasons, and gear restrictions necessary to attain the TAC, along with the reports, a regulatory impact review and environmental assessment of impacts, and the

proposed regulations before October 15, or such other time as agreed upon by the Council and RD.

6. Prior to each fishing year, or other such time as agreed upon by the RD and Council, the RD will review the Council's recommendations and supporting information; and, if he concurs that the recommendations are consistent with the objectives of the FMP, the National Standards, and other applicable law, he shall forward for publication notice of proposed TACs and associated harvest restrictions by November 1, or such other time as agreed upon by the Council and RD (providing up to 30 days for additional public comment). The RD will take into consideration all information received and will forward for publication in the Federal Register the notice of final rule by December 1, or such other time as agreed upon by the Council and RD.
7. Appropriate regulatory changes that may be implemented by notice action include:
 - a. The TACs for each stock or stock complex that are designed to achieve a specific level of ABC within the first year, or annual levels of TAC designed to achieve the ABC level within three years.
 - b. Bag limits, size limits, vessel trip limits, closed seasons or areas, gear restrictions, and quotas designed to achieve the TAC level.
 - c. The time period (target date) specified for rebuilding an overfished stock with the restriction that a time period specified under this framework procedure cannot exceed a period equal to 1.5 times the generation time of the stock under consideration.

Proposed Alternatives:

The Council considered the following three options (A1 - A3) to improve the timeliness of data provided in stock assessments and to clarify the role of the Regional Director in providing information to the Council on recommended action taken under the framework procedure. Quota subdivisions were considered, but rejected, for framework action to allow for such changes at the same time the quota levels are considered. These options are discussed relative to the status quo which is not to make the suggested changes to the framework procedure.

Option A1: Specify that the NMFS stock and socioeconomic assessments be provided prior to August rather than the current receipt date of April.

Discussion: The primary benefit of changing the date for receipt of stock assessments from April to August is to allow the assessment to incorporate more timely landings data from the previous year. This change would be an improvement over status quo which results in use of data that is about two years old by the time management measures are implemented. For example, an assessment in April 1992 will include data only through the year 1990, whereas

an assessment in August 1992 can include preliminary 1991 data as well. Therefore, this measure would allow the quota calculations to be based on more recent data than is presently possible. Postponing the assessment until later in the year also continues to provide for timely action by the Council at its September meeting based on the most up-to-date data. In contrast, status quo necessitates updates of the assessment throughout the year as new data become available. This change would put the reef fish framework procedure on a schedule similar to that being followed by the Mackerel FMP. If the Council were to delay action on a quota until the November meeting to accommodate public hearings in addition to the one that is held at the Council meeting, it would delay implementation of quotas and allocations by only two months. As long as the stocks are being restored and TACs are increasing, this potential delay should not be a major concern since current rules remain in place until revised and the new rule would become effective shortly after the beginning of the fishing year. The current fishing year for all reef fish species is January through December. Delaying action until November would occur only under exceptional circumstances and the Council could meet in October rather than November.

The flexibility currently incorporated in the framework procedure that allows the Council and Regional Director to agree on an alternative receipt date will remain. In addition, the annual assessments will only address certain selected species each year. There are too many reef fish species in the fishery for a particular species to be assessed every year. In cases where quotas or other management measures are modified based on information contained in an assessment those measures will remain in effect until revised by the Council due to changes in either the assessment advice or conditions in the fishery. In other words, all quotas and other measures will not necessarily be revised every year, nor must revisions be based solely on assessments, e.g., size limits for instance could be changed based on yield per recruit analysis or release mortality analysis.

Regulatory Impacts: This option allows the incorporation of more recent data into the stock and socioeconomic assessments. Since virtually all available information would be incorporated, Council deliberation and actions on specific management issues would not have to be repeated later in the year due to changes in information. To some extent, this option creates a more stable condition under which the Council makes its decisions on specific management issues for the reef fish fishery. This could, in turn, translate into a more stable environment for business planning by fishing operators and processors, although these plans will still be affected by annual changes in regulations. This option could also reduce management cost by reducing Council and analysts time.

Option A2: Specify that if the NMFS decides not to publish the proposed rule of the recommended management measures, or to otherwise hold the measures in abeyance, then the Regional Director must notify the Council of his intended action within 15 days of receipt of the Council's proposal and the reasons for NMFS concern along with suggested changes to the proposed management measures that would alleviate the concerns. Such notice shall specify: 1) the applicable law with which the amendment is inconsistent, 2) the nature of such inconsistencies, and 3) recommendations concerning the actions that could be taken by the Council to conform the amendment to the requirements of applicable law.

Discussion: This option would require the Regional Director (RD) to provide guidance to the Council in modifying proposed management measures under this framework procedure that are unacceptable to NMFS. This additional requirement is similar to that required for plan amendment procedures as specified in the Magnuson Fishery Conservation and Management Act (Sec 304(b)(2)). This language is required in the framework procedure to ensure the Council is provided guidance in modifying management measures to be more acceptable. The 15-day review period by the RD should not be burdensome because the framework procedure already requires action by the RD within this time period by specifying that the Council is to provide its recommendations to the RD by October 15 and the RD is to forward the proposed rule for publication by November 1.

Regulatory Impacts: This option does not have any socioeconomic impact. In addition, management cost is unlikely to change with this option.

Rejected Alternative:

Option A3: Provide for future subdivision of quotas into subquotas by the framework procedure.

Discussion and Regulatory Impacts: If information indicates management of reef fish stocks would be enhanced by either geographic or species level subdivisions then it would be preferable to make these changes under the framework procedure at the time that TACs are considered. The Council rejected this option because it felt such changes should be by amendment to the FMP. There are no immediate socioeconomic consequences of this option.

B. AMBERJACK SPECIES AND SIZE LIMITS

Current management measures apply only to greater amberjack and include a recreational bag limit of three fish per person per day and size limits of 28 inches fork length for recreational fishermen and 36 inches fork length for commercial fishermen.

Proposed Alternative:

Option B1: Include Almaco jack and banded rudderfish in the fishery management unit.

Discussion and Regulatory Impacts: This proposed measure will have no impact on the fishery or resource until management measures are implemented. This measure will make it possible to implement management measures through the framework procedure, thus facilitating more timely future management action when stock assessment information becomes available. Since lesser amberjack are already included in the management unit,

rules that may be proposed for these species under the framework procedure will have associated impacts which will be described at that time.

Rejected Alternatives:

Option B2: Apply identical management measures (for example, bag and size limits and commercial quotas) to both greater and lesser amberjacks.

Discussion: The current limits for greater amberjack have been burdensome to enforce and have created confusion among the fishing public because characteristics for identification of the amberjack species from the literature are somewhat confusing with many morphometric characters or counts overlapping.

To illustrate this problem, greater amberjack and lesser amberjack have 30-34 and 29-32 soft rays in the second dorsal fin, respectively. Taxonomic keys show lesser amberjack to have eight spines in the first dorsal fin, while greater amberjack have seven spines. However, lesser amberjack occasionally have seven and older individuals of these species may have fewer spines as the small anterior spine can become embedded under the dorsal scales. Due to the overlap and variability of the various features cited in various keys differentiation of the species was confusing, especially for preserved specimens. However, researchers at the University of South Alabama, working under a MARFIN grant, developed distinctive characteristics for separating the four species of Seriola. Live, iced, frozen and refrigerated specimens are easily distinguished by color patterns, and certain morphological characteristics. Therefore, the Council rejected this proposed alternative. This information will be provided to the public.

Although lesser amberjack are reported by taxonomists as relatively rare in the Gulf, fishermen indicated that although they are uncommon in the near-shore waters they are fairly abundant offshore. Historically, few of them were landed due to their smaller size and relatively poorer value. Since the FMP placed the size limit on greater amberjack, more of the lesser amberjack have been harvested, particularly from off Louisiana. Both fishermen and dealers can readily distinguish the two species.

Regulatory Impacts: Since lesser amberjack is smaller in size than greater amberjack, this option would generally prohibit any lesser amberjack from being landed. However, if lesser amberjack is more abundant as reported by commercial fishermen, the imposition of size limits based on greater amberjack biological characteristics would result in losses to both the commercial and recreational sectors of the fishery in those areas of the Gulf where lesser amberjack are more prevalent. Since there is no evidence to suggest that lesser amberjacks are overfished, there will be no gains to offset the expected loss of catches. Public testimony indicates that areas of localized lesser amberjack abundance occur off Louisiana and possibly southwest Florida.

Option B3: Apply identical management measures (for example, bag and size limits and commercial quotas) to all four species of amberjacks (greater amberjack, lesser amberjack, Almaco jack, and banded rudderfish).

Discussion: This measure was rejected because recent information indicates identification of these amberjacks is possible. Almaco jack are readily identified because it has a deeper body shape, juvenile banded rudderfish are easily distinguished by body markings and older specimens by color of fin margins.

Greater amberjack, lesser amberjack, banded rudderfish, and Almaco jack have 30-34, 29-32, 34-39, and 28-31 soft rays in the second dorsal fin, respectively. Gillraker counts may be used to separate lesser and greater amberjack. Taxonomic keys show lesser amberjack to have 8 spines in the first dorsal fin, while greater amberjack and Almaco jack have 7 spines, and banded rudderfish have 7-8 spines. In addition, older individuals of these species may have fewer spines as the small anterior spine can become embedded under the dorsal scales. Information on the distinguishing characteristics will be prepared for distribution to the public.

The Council is not proposing this measure because it would unduly restrict harvest of lesser amberjack, Almaco jack and banded rudderfish since these species can be identified by fishermen and enforcement agents as being different from greater amberjack. Juvenile banded rudderfish and occasionally lesser amberjack are used also as bait by fishermen and this measure would prohibit that practice.

Regulatory Impacts: Since this measure was rejected in favor of providing the public with information upon which to distinguish between the four amberjack species, there will be a public information dissemination cost associated with resolving the problem of enforcing regulations on amberjacks since there is a large number of fishermen who have had difficulty in separating the species. Enforcement costs are likely to be lower under this option relative to the status quo and similar to the costs associated with the preferred option. If this option had been selected, harvest of the smaller species would have been largely curtailed resulting in loss of some undetermined level of commercial and recreational benefits. Since there is no evidence to suggest that lesser amberjack, Almaco jack and banded rudderfish are overfished, there would be no gains to offset the expected loss of catches.

C. GROUPE QUOTAS

The following options were considered to address monitoring the deep-water and shallow-water grouper quotas.

Proposed Alternatives:

Option C1: Status Quo -- Maintain the separate deep-water and shallow-water grouper quotas.

Discussion: After consideration of AP, SSC and public comment on the alternatives of the draft amendment, the Council concluded that retention of the separate quotas for deep and shallow-water grouper (Status Quo) was the most beneficial and practical alternative, despite the associated problems. The draft amendment cited as problems associated with this option those related to intensive concentration of effort on deep-water groupers upon closure of

shallow-water grouper quota, classification of some species caught under both deep-water and shallow-water fishing operations and improper identification and classifications of some species.

Option C-2 resolves the problem of assigning scamp to the quotas. Improper identification and/or classification will be resolved over time through educational programs. Most importantly the Status Quo option by having a separate quota for deep-water groupers, which are more easily overexploited, provides a higher degree of protection against such over-exploitation by allowing the Council to adjust that quota separately if information suggests these stocks are being adversely impacted.

Regulatory Impacts: This option, being the status quo, would maintain the consequences of having a separate quota for the two classes of grouper species as described in the preceding discussion. Thus, no changes on the nature of such consequences on the stock and fishing industry may be expected.

Option C2: Scamp can be landed throughout the year until both grouper quotas are reached. Scamp shall be counted as part of the shallow-water quota until that quota is filled, then scamp shall be counted as part of the deep-water quota for the remainder of the fishing year until that quota is filled, after which no more landings shall be allowed.

Discussion: The Council selected this option in lieu of options presented in the draft amendment based partly on AP, SSC and public comment. The problem was that scamp was caught under both deep-water and shallow-water fishing operations, with the larger fish usually being in the deeper water. Scamp were classified as a shallow-water quota species under the FMP. This resulted in the waste of scamp taken in deeper waters after closure of the shallow-water quota.

Public testimony indicated scamp was more dominant in the shallow waters in the eastern Gulf (Florida shelf) and in the deep waters in the western Gulf. The preferred option allows all scamp to be counted in the shallow-water quota until that quota is filled, recognizing that scamp landings are higher from the shallow-water fishery in the eastern Gulf (usually more than 75 percent are landed in Florida), possibly since total grouper landings are much higher (Table 1). Scamp are an incidental catch and minor component in the grouper fisheries, i.e., they cannot be effectively directly targeted. This prevents them being directly targeted in shallow waters if that quota is filled. The proposed option reduces waste of scamp (usually dead due to embolism) from the deep-water fishery that previously occurred when the shallow-water fishery was closed.

Regulatory Impacts:

Since scamp is a relatively minor component of the total grouper catch, classifying scamp as either shallow-water or deep-water species or both has minimal effects on the timing of closure of either grouper fishery. Due mainly to the fact that scamp cannot be effectively targeted, classification of scamp as both shallow and deep water groupers will not change

the level of effort expended on the species. In this regard, the cost of fishing will not be affected by such classification. However, to the extent that the classification of scamp in both quotas will resolve the problem of discards of dead scamp, the measure has a benefit.

It is important to note that if the grouper quotas were to be combined, then these benefits would automatically occur and the need for this measure would disappear.

Rejected Alternatives:

Option C3: Combine the deep and shallow-water grouper quotas into a single overall grouper quota.

Discussion: Since grouper species often intermix, catches frequently are comprised of several species, and fishing for a single species is usually not possible. The monitoring of separate deep and shallow-water quotas is further complicated in that most fish landed in Alabama, Mississippi, and Texas are not identified to species; and 28 percent of grouper landed in Louisiana are not currently identified (Table 3). Only in Florida where a trip ticket landings system has existed since 1986, are grouper species identified (more than 97 percent of the Florida grouper landings are identified to the species level).

The 1986 through 1989 average cumulative monthly grouper landings were examined to determine the approximate closing times for the various quotas examined in the three options (see Figure 1). With deep and shallow-water quotas it would have been expected that the deep-water quota would be reached about one month prior to the shallow water quota, assuming no other management measures in Amendment 1 affected landings. Similarly, with eastern and western zone quotas (see Option C4) it would be expected that the western zone quota would be filled about one month prior to the eastern zone quota. Under quota restrictions of Amendment 1 an overall quota would be expected to close sometime in mid-October, about halfway between the individual closures expected with separate quotas. Historically, cumulative within-season landings exhibit similar trends throughout the grouper fishery, whether one separates the fishing by depth or geographic zones. The Council determined that the elimination of administrative and enforcement problems associated with having separate quotas did not compensate for the value of retaining a separate deep-water quota to afford greater management control over these species which could be more easily overexploited. Further, the results of this comparative analysis of historical 1986-89 landings must be considered approximate because the relative annual fishing pressure may change due to the quotas and because other management measures implemented in 1990, i.e., size limits and longline restrictions, will affect total harvest and the timing of quota-based closures. Accordingly it is reasonable to expect that the quotas would be met later in the fishing season than indicated by the trends in historical, prequota landings.

Regulatory Impacts: The ex-vessel price for shallow-water groupers has historically been slightly higher than that for deep-water groupers. For the 1986-1989 period, the ex-vessel price for shallow-water groupers averaged \$1.67 per pound compared to the \$1.60 price per

pound for deep-water groupers. In 1990, the ex-vessel prices from January through October averaged \$1.87 and \$1.74 for shallow-water and deep-water groupers, respectively, which shows a slightly wider price differential. During the closure for shallow-water groupers (November-December 1990), the price per pound for deep-water groupers increased to \$2.02 from the November-December average of \$1.65 for the 1986-1989 period. Even when adjusted for inflation, an increase in the price for deep-water groupers is still perceptible (1986-1989: \$1.25 per pound and 1990: \$1.74 per pound), and this could likely be due to the ban on harvest of shallow-water groupers. Also, it may be noted that the deep-water grouper landings for the closure months of 0.25 MP differ only slightly from the 1986-1989 average landings of 0.21 MP for these two months. Apparently, the increase in deep-water grouper price during the closure had not been large enough to eliminate the relative cost disadvantage of harvesting these groupers.

The increase in grouper prices due to the closure could have been moderated by the increase in imports of groupers, considering that grouper imports are significant determinants of domestic grouper prices in the Southeast (Keithly and Prochaska, 1985). Grouper imports into the southeastern U.S. increased dramatically from 0.5 MP in 1983 to 8.9 MP in 1987, and have been more abundant in April and the fall months (Adams and Lawlor, 1989). It is very likely that this trend has strengthened in more recent years. Available data for 1990 (supplied by John Vondruska of NMFS) show that in the fall months (September-November) imports averaged about 0.67 MP per month compared to the 1983-1987 average (for the same months) of slightly above 0.4 MP per month.¹ The 1983-1987 average grouper imports for December was slightly above 0.2 MP; in December 1990 imports were approximately 0.88 MP. The January-April 1991 grouper imports averaged about 0.98 MP per month compared to the 0.36 MP monthly average for 1983-1987. It cannot be exactly determined whether the recent increase in imports is attributable to closures or potential closures in the domestic grouper fishery. Possibly, the closure could have sent a signal to importers and exporters of a potential short supply of groupers due to regulations or stock decrease. At any rate, imports must have moderated the price increase in groupers due to the closure. The direct implication here is that most of the impacts of regulations would be felt by the harvest sector rather than by processors and consumers.

This option may be expected to result in some harvest substitution of shallow-water groupers for deep-water groupers relative to status quo. Given the scenario depicted above that demand for shallow-water groupers is stronger than that for deep-water groupers, the industry as a whole may gain from this option relative to the status quo from the standpoint of generating more ex-vessel revenues. It is also possible that the fishing cost could decrease

¹The two numbers are not exactly comparable. The import figure for the 1983-1987 period refers only to imports in the southeastern U.S. while that for 1990 refers to imports to the whole country. However, the 1990 data do not include fillets while those for 1983-1987 include all product forms. Historically, fillets comprise about one-third of total grouper imports.

under this option, since generally it is less costly to fish for shallow-water groupers than for deep-water groupers.

The impacts of this option on the various species of groupers and consequently the commercial and recreational benefits derived therefrom are relatively unknown. However, this option is likely prevent wastage of species that must be discarded because the quota to which that species belongs is filled and harvest prohibited. For example, as was shown for the case of scamp, this alternative would automatically resolve the problem.

The cost of monitoring the quota would be slightly lower under this option relative to the status quo. In addition, enforcement and compliance costs may be lower under this option, since confusion over classification of certain species as deep-water or shallow-water groupers is minimized.

Based on the probable outcome of higher benefits and lower costs, this alternative is preferred over the status quo alternative in terms of economic impacts.

Option C4: Reclassify scamp as a deep-water grouper species.

Discussion: Scamp are currently listed as part of the shallow water quota category. Fishermen report catching significant quantities of large scamp in association with the deep-water grouper species and that these fish have to be returned to the sea, dead, after the shallow-water grouper quota has been filled and the fishery closed. This measure would prevent the wastage associated with having to return the harvested fish to the water. Since scamp also occur in the shallower water as juveniles and young adults then these fish would have to be returned to the water if the deep-water fishery is closed prior to the shallow-water fishery and some fish will die. It is probable, however, that more of these released fish could survive in the shallower water. Public testimony indicates that this species occurs more in the deeper waters in the northwestern Gulf and in shallower waters in the eastern Gulf. This measure would require recalculation of the shallow and deep-water quotas to reflect the transfer of historical scamp landings.

Regulatory Impacts: As stated earlier the classification of scamp has minimal impacts on the timing of a closure of either the deep-water or shallow-water grouper fishery and hence on the general economics of the entire grouper fishery. Due to the fact that scamp occur in both shallow and deep waters, this option implies that closure of the deep water grouper fishery before the shallow water grouper fishery entails a slight increase in operating cost in the latter fishery since scamp have to be sorted out and discarded. This slight increase in cost has also happened in the deep water grouper fishery since currently scamp are classified as shallow water groupers. Hence, the expected economic impact of the alternative is negative.

Option C5: Combine the deep and shallow-water grouper quotas into two overall grouper quotas separated into an eastern group (Florida) and a western group (Alabama, Mississippi, Louisiana, and Texas).

Discussion: The Council originally established the two grouper quotas because it appeared to be the best biological criterion for managing groupers and to accommodate the western Gulf fishery which harvests predominantly deep-water species. An overall quota could potentially adversely impact the western Gulf fishery if the much larger eastern Gulf fleet fills the quota with shallow-water catches. A potential solution to this problem would be to maintain an overall quota that includes all species but to separate the quotas into eastern and western sub-quotas based on historical landings by state. This option explores the feasibility of geographic sub-quotas.

This option would provide for a western Gulf fishery quota based on the historical landings from the western Gulf that would protect the fishery from premature closure due to landings from the larger shallow-water eastern Gulf fishery. This option would result in zone allocations of the grouper quota amounting to 10 percent for the western Gulf and 90 percent for the eastern Gulf (see Table 1). Given the current 11.0 million pound grouper quota, this allocation would result in a 1.1 million pound western Gulf quota and a 9.9 million pound eastern Gulf quota.

However, an enforcement problem would occur since at-sea enforcement is not possible. The grouper fleet is very mobile and it is possible for a vessel to fish in one zone yet land his catch in another zone. With this option, both zones might close at similar times. If both zones close within a month of one another, then the problem will be relatively minor. However, if one zone did close substantially sooner than the other, then vessels from the other zone could force premature closure by unloading their harvest in the open zone. The relative amount of zone switching will also depend on the local availability of alternative fisheries. Conversely, if both zones close at similar times, then there is no need for separate geographic quotas since an overall quota would accomplish the same goal with less administrative and enforcement complications.

Regulatory Impacts: This option would increase the costs of fishing because if the zones did not close at the same time, a portion of fishermen would not cease fishing, but would switch their effort to the open zone and would incur higher operating costs created by the more distant trips. Since there is no biological evidence upon which to base the allocation of the quota and since the total quota would be unchanged, there are no offsetting gains expected. Enforcement costs tend to be higher under this option relative to the preferred option. Hence, the expected economic outcome of the measure is negative.

D. MORATORIUM ON COMMERCIAL PERMITS

The Council is proposing implementation of a temporary moratorium on the issuance of commercial permits to moderate short-term future increases in fishing effort and attempt to stabilize fishing mortality. A moratorium should provide a basis for development of a more comprehensive effort limitation program for the commercial fishery and is a prudent first step in the development and evaluation of more comprehensive alternative effort limitation programs that could provide better long-term control of fishing effort.

A moratorium is a form of limited access management that, in this case, is intended to provide a temporary stable basis while the Council develops a more comprehensive effort limitation program. In principle, its direct effect is to limit the number of participants in the fishery to a number equal to or less than those permitted on the date the moratorium goes into effect. Even with a moratorium, voluntary exit from the fishery can occur under conditions of deteriorating stock or market conditions. However, in the case of improving conditions in the short run, the financial performance of the fishery participants may improve and fishing effort will probably increase as individual permitted fishermen attempt to catch a greater share of the available quota. This will diminish the overall economic performance of the fishery because the race to harvest fish is not eliminated by the restriction on new entrants.

The permit moratorium proposed is essentially a license limitation which in itself will not fully control fishing effort for the reasons explained above. Nonetheless, a moratorium would stabilize the number of participants at the level which exists when the moratorium goes into effect and the Council will have time to evaluate alternatives for more comprehensive effort limitation programs that would replace the temporary moratorium and provide a basis for long-term management. As the initial step in this direction, a control date of November 7, 1989, for the reef fish fishery was established via publication in the Federal Register. The intent of the notice was to inform the public that entrants into the fishery after November 7, 1989, may not be assured of future access to the reef fish resource if an effort limitation management regime is implemented and if the control date notice is used as a criterion for future participation.

From a management standpoint, the moratorium provides fishery managers an opportunity to collect detailed information and closely study the performance of the fishery since the participants are easily identified. In addition, some of the problems related to development of a comprehensive limited access management program would be resolved. One of these would be that the identification of participants would be known and this would ease the problems associated with the initial distribution of "licenses" or catch privileges.

The proposed moratorium considers four features: 1) a date for implementing the moratorium; 2) permit transfers during the moratorium; 3) vessel size for permit transfer; and, 4) the reissuance of permits not renewed.

Proposed Alternatives:

Option D1: Establish a moratorium on the acceptance of additional commercial permit applications post-marked, or hand-delivered, after the effective date of implementing regulations for a maximum period of 3 years, during or after which the Council will consider and may implement a more comprehensive effort limitation program.

Option D2: During the moratorium persons eligible to have a permit are only those that had a permit during 1991 or who qualify on the basis of their earned income in 1991 and apply for a permit before the deadline in option D1 above. During the moratorium, permit holders may retain their permit only if they maintain their permit eligibility. This is not intended to prevent new entrants allowed by option E2 as follows.

Option D3: Except as discussed in Section E, after 1992 permit holders may use earned income from any one of the last two years to maintain their eligibility to retain their permit.

Discussion: As compared to other options, D1 limits the duration of the moratorium to 3 years, rather than 5 years. During this period the Council will develop through FMP amendment a more comprehensive limited access program for presentation to the public. Likely the most effective system for the reef fish fishery will be some type of individual transferable quota (ITQ) system. After public hearings the Council will decide whether to implement the system or to end the moratorium. The moratorium will become effective upon implementation of this amendment (approximately March, 1992). Option D2 limits eligibility to persons holding a permit in 1991 (having met the earned income requirement in 1990) or obtaining a permit before the date of the moratorium and qualifying based on 1991 income. The FMP requirement for a permit is that a person be able to demonstrate that more than 50 percent of his or her earned income was derived from commercial, charter or headboat fishing in the preceding year. Option D3 would change that requirement to any one of the last two years. This was done recognizing that a person could be precluded from meeting the income requirement during a single year due to sickness or incapacitation of his vessel. Eligibility from commercial fishing may be from participation in any fishery, not just for reef fish. The moratorium would terminate automatically three years after the implementation date, unless the Council has implemented a limited access system maintaining or modifying the moratorium as part of that system.

Regulatory Impacts: Amendment 1 to the Reef Fish FMP implemented in 1990 required the applicant for a permit to demonstrate that more than 50 percent of earned income was derived from commercial or charter fishing in the immediately preceding year and it is assumed that all qualified and interested fishermen obtained a permit. Permit records show that in 1990 1,622 commercial permits were issued and as of October 31, 1991, the number of commercial permits totaled 1,720 (Table 4).

A moratorium on permits is expected to induce an increase in permits just prior to the start of the moratorium and this process appears to have begun. Recognizing that the first public hearings on this process were held in August of 1991, from Table 1 note the number of permits issued during August-October, 1991 and compare these numbers with the experience of 1990. It is seen that the number of permits issued during this period did not taper off as much as in 1990 and in fact increased in October. Additional increases in the number of permits are expected for the last two months of 1991 (latest data available as this is written) as well as for the first three months of 1992 which is the earliest projected date for the moratorium. These estimates suggest that about 300 new permits will be generated as potential, but not necessarily active, participants attempt to establish a fishery right (some

minor growth would be expected even without a moratorium). This will lead directly to two types of negative economic outcomes. First, since some time is given for persons meeting the 50-percent income requirement to obtain a permit, an increase in permits would entail an equivalent increase in the number of vessels that could fish commercially in the reef fish fishery. Even though it is fully expected that some permitted vessels will not actually participate, there is some potential for an increase in fishing effort. Since the fishery already contains more than enough harvesting capacity, e.g., the quotas are routinely met before the end of the fishing season, any additional effort will lead to a reduction in economic benefits. In addition, those who obtain a permit just to establish a potential future fishing right will bear the cost of a permit and the time cost for applying. This cost is expected to be \$36.50 (\$34 permit fee beginning in 1992 and \$2.50 fisherman time cost) for each additional permit holder or \$10,950 annually for the expected 300 "extra" permits. Since the quota system controls the harvest level no potential change in harvest may be attributed to the moratorium. Hence, any change in the ex-vessel price for reef fish could not be directly associated with the moratorium. Over the span of the proposed moratorium, the number of permits and vessels could decrease, but such decrease would materially depend on other features of the moratorium such as permit transfer, re-issuance of permits and other such features.

Another potential adverse impact of the moratorium is that for those species not managed by quota, there is the possibility that the increased effort resulting from the moratorium could result in overfishing and the attendant loss of economic benefits. However, as will be explained in the following paragraphs, this possibility must be contrasted with similar negative effects expected under the status quo.

Even though the negative impacts discussed above will occur, the appropriate comparison is with the status quo. Under the open access (status quo) situation, the amount of effort would be expected to expand and even though this would occur over a period of years, the amount of actual new effort would be at least equal to the additional effort which may be created as a result of participants attempting to establish long-term fishing rights under the moratorium. Given the supposition that the current regulations to rebuild and maintain stocks will work, there will be additional economic incentives for increased effort by existing and new participants over time and this is a very important consideration and a reasonable economic argument for a moratorium as an interim step toward an ITQ or other system. In this case the open access nature of the fishery will ensure that the maximum effort will be applied and maximum effort implies the lowest level of net benefits.

A moratorium provides a planning period for both the industry and the management agencies within which an understanding of the nature and characteristics of fishery can be gained and the necessary data for an ITQ or similar management system can be collected. In addition, fishing operators are given some time to decide whether to remain in the fishery, although this decision could partly be affected by restrictions on permit transfer or permit retirement.

As mentioned earlier, the participants would not be faced with increasing externality from new entrants, although they would face competition from the permit holders who gained eligibility during the several months preceding the start of the moratorium. If some recovery of stocks occurs, this would raise the profitability of the industry and the individual participants, at least until the effort increases and dissipates the benefits. And, domestic producers would still be vulnerable to competition from imports which have been increasing over the years.

A moratorium has some adverse social consequences, although the extent of these consequences depends largely on the requirement for inclusion in the moratorium program and opportunities in other fisheries. For one, crew members who may desire to operate their own vessel when they have accumulated the necessary capital could be ineligible to join the fishery as independent operators if permit transfers are not allowed (see Section E).

Overall, a moratorium as contrasted with the status quo provides a better opportunity for the evaluation of a permanent and more comprehensive limited access program and probably will result in less overall effort additions than would be expected under open access and it is thus concluded that a moratorium, to be followed by an ITQ or similar system, will have a positive impact relative to the status quo.

Option D2 tends to enhance regulations as repeated rule violations could result in permit revocation. Also, it affords management some assurance that cooperation may be expected of the moratorium participants in terms of supplying the necessary information for the evaluation of a more comprehensive limited entry program.

Option D3 accommodates hardship cases such as when a permittee fails to meet the income in one year due to circumstances beyond his control, like boat sinking or damage, illness, etc. In this way the cost of ascertaining the eligibility of permit holders would slightly fall.

Rejected Alternatives:

Option D4: Establish a moratorium on the issuance of additional commercial permits effective July 1, 1992, for a maximum period of five years, during or after which the Council may implement a permanent more comprehensive effort limitation program.

Discussion: This option is similar to the proposed option but provides the commercial fishery with a greater window of opportunity for obtaining permits before the moratorium begins whereas the proposed option prevents the issuance of additional permits after the implementation date. While this option allows those people that may have been planning to enter the fishery in the near future the opportunity to get permits before the moratorium begins, it also provides the opportunity for a larger number of people to obtain permits simply for speculative purposes and could allow a large increase in the number of permitted vessels with later implementation of the moratorium and potentially result in increased fishing effort capacity. Such an increase in permits would be counter to the intended goal of the moratorium, which is to stabilize fishing effort capacity since some of the additional

permits will be used for fishing and some may be obtained as a speculative investment and either be used in the future or transferred to someone who would use the permit for commercial fishing.

Regulatory Impacts: This option presents an alternative to Option D1. Under this option the moratorium starts on July 1, 1992 and lasts for a maximum of 5 years. Since under Option D1 the moratorium is expected to start in March 1992, Option D4 provides a 3-month extension for filing permit applications in addition to having the moratorium in operation for up to two more years. In this case, Option D4 relative to Option D1 may be expected to allow more speculators to join the moratorium, since most of those who are fully committed in the reef fish fishery are very likely to possess permits in 1991. To the extent that this situation allows an increase in fleet capacity and eventually in effort, Option D4 is inferior to the Option D1, but superior to the status quo.

Recall that Option D4 provides for a **maximum** of 5 years for the moratorium. The moratorium may end earlier and possibly coincide with the 3-year time frame under Option D1. Indeed it is also possible that after the implementation of the 3-year moratorium the Council may choose to extend the moratorium for another 2 years. Under these two scenarios, Option D1 does not differ from Option D4 to any great degree. The important point then is not so much the stipulation as to the maximum duration of the moratorium but the length of time for completing the evaluation and design of a permanent limited access program. Currently, biological studies are relatively complete only for a few reef fish species under the management unit. It cannot be projected at this time when the biological assessments of most reef fish species may be completed. An economic survey of the commercial reef fish industry will be possibly undertaken in 1992, and studies based on such information collected may be available sometime in 1993 or 1994. Several questions eliciting socioeconomic information have been included in the 1991 Marine Recreational Fishery Statistics Survey, and studies may be available in 1993 or 1994. No sociological studies are yet planned for the reef fish fishery. Assuming these latter studies are done sometime in 1992 or 1993, information may be available in 1993 or 1994. Under these conditions, a 3-year moratorium sunsetting in early 1995 appears to be relatively constraining considering the complexity of the fishery and the nature of the participants of the fishery. On the other hand, if there is a distinctively clear effort to undertake the necessary evaluation for instituting a permanent limited access program, 3 years may just be sufficient to complete the evaluation. It is concluded from the foregoing that benefits from a maximum 5-year (relative to 3-year) moratorium ranges from zero to slightly positive and it was established earlier that the additional 3-month window allowed by Option D4 will definitely reduce the overall level of benefits.

Option D5: Status Quo -- Do not implement a moratorium on the issuance of commercial permits.

Discussion: The major species within the reef fish complex are overfished or fully exploited, necessitating restrictive commercial quotas and size limits. The current fishery is overcapitalized and capable of harvesting the quotas at such a rate that future fishing

seasons will become shorter in duration. With status quo new entrants are allowed in the fishery and the fishing seasons will continue to become shorter further disrupting the availability of domestic product in the market and increasing the economic risk of failure to both vessel owners and dockside facilities. As the fish stocks recover fish abundance will increase and, without a moratorium, the existing fleet likely will increase resulting in even shorter fishing seasons. Quota management, by itself, is only a short-term solution to the goal of reducing fishing mortality; without complementary effort limitation management measures quotas alone may disrupt the economic and social structure of the fishery. The moratorium would provide only a temporary first step in stabilizing fishing effort by regulating additional entrants into the fishery that may be attracted by the increased level of abundance resulting from stock recoveries.

Regulatory Impacts: This option has no short-run consequences. However, if a limited access system of management is being considered for the reef fish fishery, permits and vessels could easily multiply under this option. This is unlikely to have adverse short-term consequences on the stock and the fishery dependent on it but, in the long-term, such inaction could cause overfishing of stocks currently unregulated or delay rebuilding of overfished regulated stocks. Over the long-term the harvest restrictions that would be necessary to prevent overfishing of these unregulated reef fish stocks without complementary controls on fishing effort could impact the domestic fishery, its profitability, and the associated markets. Therefore, it is concluded that this option, status quo, is economically inferior to the set of proposed alternatives.

Option D6: Establish a moratorium on the issuance of additional commercial permits effective January 1, 1992, for a maximum period of five years, during or after which the Council may implement an effort limitation program.

Discussion and Regulatory Impacts: This option differs from Option D1 regarding the starting time and duration of the moratorium. Since this option reduces the period of time for an induced increase in fishery participants, the number of permit applicants under this option would be less than under Option D1. However, additional administrative and legal costs would invariably result because the NMFS would be faced with canceling permits if the action went into effect on the expected March, 1992 date. An additional important consideration is that the Council may not be able to issue the permit moratorium on a retroactive basis, in which case any analysis is moot. If legal, this option would be expected to have slightly higher benefits than the proposed alternative because of the shorter window and because the 5-year period may be slightly better than a 3-year period from an economic perspective.

Option D7: Only vessel owners or operators who held permits in 1990 or 1991 are eligible to apply for a permit during the first year of the moratorium.

Discussion: This option limits the pool of eligible people for obtaining permits in 1992 to those that held permits in one of the previous two years. This option would prevent the

negative impacts discussed above of a potentially large increase in permittees prior to implementation of the moratorium. If permits become transferrable during the moratorium then additional people can enter the fishery, but only if someone else exits. Thus, overall fishing effort would be better stabilized if this option is used in conjunction with the establishment of a moratorium and it would address not only the present participation in the fishery but also address, with permit transferability, historical participation and dependence on the fishery. The Council rejected this option because it would establish the moratorium retroactively to implementation of the amendment's rules.

Regulatory Impacts: This option, when combined with any of the above options except the status quo, would restrict the number of participants during the moratorium to those who have permits at the end of 1991 and would thus minimize the potential for an increase in permits and vessels induced by the announcement of the moratorium. In particular, this option would prevent the issuance of new permits during early 1992 before the implementation of the moratorium, or later in 1992 if the implementation date is delayed for any reason. As discussed above, there were about 1,622 permits issued in 1990 and about 1,800 are expected to be issued by the end of 1991 (Table 4). Very likely this option would restrict the number of permits and vessels to about these numbers and probably would include more vessels than would actually be fishing. Once again it may be important to consider whether or not the retroactive feature would be legal (or successfully challenged in court). The potential adverse social consequences of a moratorium would tend to be increased under this option if no permit transfers are allowed during the moratorium. However, it is likely that the "full-time fishermen" in the reef fish fishery would have had permits in any of these two years so any negative social impacts would apply to those not in the reef fish fishery or to crew members on permitted reef fish vessels.

Based on the foregoing, the main feature of this option is the restricted window for permit application and this would be superior to the more extended window provided under Option D1.

E. PERMIT TRANSFERS DURING THE MORATORIUM PERIOD

As a general rule, the more restrictive transfer options will yield greater overall economic benefits since the fishery is in an overcapitalized state. Although this is the projected outcome, such restrictions have associated and unavoidable social consequences and some potential negative economic ramifications. For example, from a social perspective, hardship cases would not be allowed and from an economic perspective, restrictive transfer rules would prohibit the entry of new participants who may otherwise be a source of new technology and more efficient or less wasteful harvesting methods.

Proposed Alternatives:

Option E1. Transfer of permits between vessels owned by a permittee is allowed.

Discussion: Since a permit is issued for a specific vessel, this measure would allow a permittee to transfer the permit to another vessel during the moratorium. Such transfers would alleviate problems caused by the loss of vessels through sinking and vessels with permanent structural damage or are in need of replacement. Without this measure permittees who suffer such catastrophic accidents would be further affected by not being able to resume their previous occupation as commercial reef fish fishermen. Without a vessel the permittee would have to forsake his right to fish in the reef fish fishery, his permit would be voided, and it would have to be returned to NMFS.

Regulatory Impacts: Transferability of permits during the moratorium endows the permit with some value. This value would depend on a host of factors, including the status of the stock, market conditions, and the nature and restrictions on permit transfer. Under this particular option, the nature of the transferability restricts the relative value endowed on permits to the permit holder. If transfer of permits is prompted by hardship cases, there would be no value endowed on the permits. In this case, the fairness issue of the program is enhanced. If transfer of permits involves the replacement of a virtually unusable vessel with a more efficient one, permits would possess some value which would be realized by the owner through relatively higher profitability of his operation. The efficiency of the individual operation is increased although not necessarily that of the industry considering the already heavily capitalized industry. In cases of transfer, effort in the fishery may increase if no restrictions are imposed on the size of vessels involved in the transfer of permits. Hence, some positive benefits are offered by this option, at least from the standpoint of equity and individual operation's efficiency. However, there is the possibility under this option that fleet capacity would increase, especially when this option is viewed in conjunction with Option F1.

Option E2: The transfer of permits between individuals is allowed only with the transfer of a permitted vessel. If the permit recipient is not eligible for a commercial permit then the recipient shall be granted one year in the commercial fishery in which to meet the eligibility requirements. If, after the initial year, the recipient does not become eligible to maintain the permit, then it shall revert to NMFS. During the first year that a non-qualifying individual holds a permit, the permit shall be non-transferable to another non-qualifying individual.

Discussion: This is a more liberal modification of rejected option E4. It is more liberal in that persons purchasing a vessel are allowed one year to fish and meet the qualifying criteria of more than 50 percent earned income from commercial, charter or headboat fishing. Whereas under option E4 the purchaser would have had to meet that qualifying criteria. This was done to facilitate the sale of vessels by persons leaving the fishery without potential economic loss on the vessel value, i.e., could sell to highest bidder without consideration of purchaser's eligibility to qualify for a permit. It was also done recognizing there is a large annual turnover of ownership for certain classes of vessels, i.e., charter and headboats.

The transferability of the permit with the vessel may result in an increased value for vessels and creates some value for the permit. However, considering that approximately 1,600

permits were issued (5 percent to charter and headboats) and more are likely to be issued before the moratorium, the increased vessel values may not be significantly greater than under open access. The option's provision preventing transfer between two non-qualifying individuals during the first year after initial transfer is to prevent speculative gains by persons who have no intention of entering the fishery.

Overall the option's provisions will stabilize the number of permitted vessels during the moratorium while providing an avenue for new entrants to replace current participants. Since permit holders must maintain their eligibility (see Option D2) during the moratorium by qualifying in at least one of the two preceding years, some permits may be retired by NMFS reducing the number of permit holders if not active participants.

Regulatory Impacts: Generally if permits are transferable, the demand for permits and the consequent value of permits would be high (low) if the reef fish stock or market conditions are favorable (unfavorable). In the case of a block sale, i.e., tying the sale of permits to the vessels, which is intended in this option, the value of permits even in favorable stock and market conditions would be limited by the value of the associated vessel. If the subject vessel is relatively unusable in the reef fish or other fisheries, a block sale would render the value of the permit very low. Conversely, if the subject vessel has many uses, block sale could generate the seller windfall gains. If the likelihood for such gains is high, a person with a virtually unusable boat licensed in the reef fish fishery may transfer his permit to another boat under Options E1 and F1 and subsequently sell the boat and license to interested parties. A somewhat increased value may also occur if the buyer has another vessel that he can easily transfer the permit to, as allowed under Options E1 and F1. However there currently appears to be more than enough vessels in the commercial reef fish fishery and other commercial fisheries so that this option would initially tend to limit the value of permits. In addition, the emerging dominance of imports in many reef fish species could deter further investment in the fishery. Sales made under this option may involve transfers to family members. In principle, this option limits permit sales and prevents a possible increase in fleet capacity although Option E1 together with Option F1 tends to negate such effect.

The provision for a qualifying period of one year for a permit recipient (through transfer) who is otherwise not eligible partly addresses the concern of the moratorium creating exclusive clubs. It does allow re-entry of former commercial fishermen and persons with no history of commercial fishing, particularly corporations, to enter the reef fish fishery. The likelihood of this occurrence is probably low considering the general outlook of a fishery that is overcapitalized and facing strong competition from imports.

Based on the foregoing, the expected economic outcome of this relatively restrictive option is positive.

Rejected Alternatives:

Option E3. Transfer of permits is prohibited during the moratorium.

Discussion: This option would reduce the number of permits during the moratorium through attrition and provides the most effective means of reducing fishing effort. Negative impacts would occur with this option on both existing participants in the fishery and on potential participants. This would have adverse impacts on permittees whose vessels were lost or in need of replacement. This measure would also penalize those permittees who want to exit the fishery but may be unable to sell their vessel because, without a permit, it's value is greatly diminished. The goal of the moratorium is primarily to control increases in fishing effort by limiting the number of permitted fishermen in the fishery, and not necessarily by limiting the fishermen only to those that are currently in the fishery. However, with this option no new entry is allowed during the moratorium.

This measure could severely impact the participation levels in the commercial fishery, particularly if Option G1, no reissuance of retired permits, was also implemented.

Regulatory Impacts: This option would result in permit and vessel reductions if the retired permits are not re-issued. Initial voluntary exit from the fishery usually involves the marginal operators, and their exit could raise the average level of efficiency and profitability in the industry. At the same time, however, more efficient operators would be prevented from joining the fishery. If exit from the fishery is involuntary as would happen in hardship cases such as boats sinking or physical illness, negative socioeconomic impacts will be introduced by this option. Generally, this option has positive effects from the standpoint of the economics of the whole industry and most of the participants but has unavoidable adverse social and individual impacts. It is expected that these adverse social consequences tend to outweigh the economic gains.

Option E4: Transfer of permits between eligible individuals is allowed only with the transfer of a permitted vessel.

Discussion: This option like the proposed option (E2) allows permit transfers only upon the transfer of a permitted vessel. Vessel transfers would allow people that currently can qualify for a permit, but do not have one, to obtain a permit through purchase of a permitted vessel. Compared to the option (E5) that allows transfer of permits without being tied to a vessel transfer, this option would better control fishing effort during the moratorium without the administrative burden of having to track the sizes of outgoing and incoming vessels. However, this option is restrictive because it might force a permittee who wanted to leave the reef fish fishery to sell his permitted vessel rather than use it in another fishery. Although a permitted fisherman could exit the fishery and simply retire his permit to NMFS, it is not likely he would do so if he could benefit from selling both the permitted vessel and its associated permit.

Like the proposed option, this option would also require someone who wanted to enter the fishery to purchase a vessel that is already permitted. This requirement would potentially inflate the value of permitted vessels in two ways. First, because new vessels could not be brought into the fishery except by a permitted person (under option E1), existing permitted vessels provide the only avenue for new entry. Second, the permit itself may eventually take

on a market value eventually and be incorporated into the selling price of the vessel. The extent of inflated values would depend on the demand for permits. Since the moratorium is a temporary measure it is expected that such windfall profits would be minimal because catch restrictions will continue to be implemented in the near future and may even discourage new entrants into the reef fish fishery.

Regulatory Impacts: The impacts of this option are similar to those described under Option E2 with respect to limiting the increase in fleet capacity. However, it does not address the issue of entry into the fishery as does Option E2, and in this regard may be deemed inferior relative to Option E2.

Option E5: Transfer of permits between eligible vessel operators or owners is allowed.

Discussion: During the course of the moratorium; 1) permitted persons may die, or become disabled, 2) the permitted vessel could sink or be in need of repair to the extent that continued fishing is not possible, or 3) a permittee may want to transfer the permit and/or vessel to a family member.

This measure would allow anyone to enter the fishery by obtaining a permit from a current participant. Upon transfer, the currently permitted vessel would exit the fishery and be replaced by the vessel owned by the new permittee. With this measure entrants can obtain a fishing vessel from any source and are not required to purchase an existing permitted vessel. This flexibility allows permitted fishermen to exit the fishery without being pressured to sell their vessel.

If permits are transferrable among eligible individuals during the moratorium without being tied to the transfer of a vessel then the permit might become a marketable financial instrument, potentially providing a windfall profit to initial permit recipients. However, since the moratorium is a temporary measure it is expected that such windfall profits would be minimal because catch restrictions will continue to be implemented in the near future and may even discourage new entrants into the reef fish fishery.

Regulatory Impacts: Under this option, permits could command a value which would be mainly dependent on fish stock and market conditions. Permit values would be constrained by restrictions on vessel capacity involved in the transfer. If there is no such restriction as in Option F1, an increase in effort in the fishery will more likely occur with this option than in any of the other options involving transfer of permits. However, this option offers more flexibility for commercial fishermen to enter or exit the reef fish fishery. It appears that this option has the potential to render more efficient individual fishing operation, but probably at the expense of the overcapitalizing further the industry.

Based on the foregoing, this option has either positive or negative impacts on the industry, depending on additional requirements for vessel transfer.

F. VESSEL SIZE RESTRICTION FOR PERMIT TRANSFERS

This section addresses the possibility of over-capitalization in the fishery during the moratorium by evaluating the need for restricting permit transfers among vessels of similar size.

Proposed Alternative:

Option F1. Transfer of permits between vessels is allowed without regard to vessel size.

Discussion: This option would allow unrestricted transfers among vessels and is unlikely to result in a greater increase in fishing effort during the moratorium. Such unlimited transfers would allow a permit holder to transfer vessels without the constraints on vessel size suggested in option F2. Since there is apparently no direct relationship in this fishery between vessel size and fishing power overall effort capacity is unlikely to be increased during the moratorium. A limit on vessel size would have largely only constrained the market ability of vessels by persons leaving the fishery and limited new entrants to replacing those vessels only with similar size vessels. Vessel size is unlikely to be a consideration in the draft amendment developed for a limited access system since that system would likely leave it up to the participants how to more effectively harvest their allocated share of the resources (see discussion under F2 below).

Regulatory Impacts: Although not necessarily a measure of technical efficiency, vessel size imposes some constraints on the efficiency of a vessel. Under Option F1, there would be virtually no restriction on the general motivation of moratorium participants to replace vessels with more technically efficient ones. Such motivation is particularly heightened when under the permanent limited access program that would eventually replace the moratorium the extent of harvest privileges are proportional to vessel catches during the moratorium. This increase in technical efficiency may be beneficial to individual fishing operations but not to the industry as a whole. An increase in fleet size may not ensue even under the scenario described if some type of permit consolidation occurs or if the economic outlook of the reef fish fishery, whether stock or market-driven, worsens or if the economic outlook in other fisheries improves during the moratorium. This option offers the moratorium participants some flexibility in adjusting the technical efficiency of their individual operations. In addition, addressing safety concerns regarding vessels of certain sizes is accommodated under this option.

Rejected Alternative:

Option F2. Transfer of permits between vessels is allowed only to a vessel with an overall length no greater than the originally permitted vessel (with a 5 foot tolerance allowed).

Discussion: This option, was considered to prevent increases in fishing power by permit transfers during the moratorium. This option would have applied only to new vessels entering the fishery. The option was rejected because there was not a direct relationship

between vessel length and fishing power. Historically when Gulf commercial vessels engaged in distant water operations off Mexico and Central America they were much larger (60-80 feet) and were typically slower, displacement hull vessels. In more recent years the industry has largely replaced these vessels with smaller, planing hull vessels which operate at higher speeds and are more efficient in terms of fuel consumption for miles traveled. The fishing power is more of a function of number of fishermen and gear used, and fishing success is related to area fished.

Regulatory Impacts: One impact of this option is to limit the value of permits sold. Another effect is to restrict the increase of one major component of effort, i.e., vessel size. However, experience has shown that the fishermen may react by increasing the horsepower, vessel width, or other vessel feature to increase the overall fishing power of the vessel. In contrast with the preferred option, individual operators are prevented from choosing the scale of operations that they deem most efficient. Relative to the entire industry, this option has potential positive benefits in terms of restricting the increase in one important component of effort and industry capitalization.

An important consideration in this or similar options designed to control effort is that the experience in the U.S. and other countries is that it may not be possible to accomplish such a goal effectively. The problem appears to be that loopholes will exist in even the most cleverly designed measures. Although in principle the direction of impacts of this option is determinate, the realization of such impacts is uncertain.

G. REISSUANCE OF PERMITS NOT RENEWED

Some permits will be retired during the course of the moratorium due to attrition, permit sanctions, etc. Since the Council in developing a limited access system will provide for new entrants, such new entry could be prohibited or a limited amount could be allowed by reissuing permits to eligible fishermen.

Proposed Alternative:

Option G1. Permits that are not renewed will not be reissued by NMFS during the moratorium.

Discussion: This measure would effect a reduction in the number of permitted commercial fishing vessels through attrition. This would not impact existing participants in the fishery but would prevent new entrants, other than obtaining a permitted vessel, during the moratorium.

Regulatory Impacts: Since permits are assigned to vessels, this option would result in vessel reduction. If permit retirements were voluntary, the capacity of the remaining fleet would be reduced minimally since such type of exit usually involves marginal operators. Considering that the level of harvest capacity in the fishery will be high during the

moratorium, involuntary retirement of permits may also be expected to minimally reduce the harvest capacity of the industry. The value of permits will be minimally affected despite a possible slight reduction in the number of permits. This option may be expected at best to prevent a significant increase in effort and harvest capacity in the industry. From this standpoint, a slight positive impact may be expected of this option.

Rejected Alternatives:

Option G2. Permits that are not renewed will be reissued by NMFS through a lottery to interested persons who meet the eligibility requirements.

Discussion: This measure was rejected because it would maintain the existing level of vessels in the fishery if every retired permit is reissued. For the duration of the moratorium the fairest means for reissuing permits under this measure would be through a lottery. Since permit transfers are allowed, this option would serve to limit increases in permit value because they will be available virtually free from the government.

Regulatory Impacts: This option addresses both the question of re-issuance of permits not renewed and the method of re-issuing them, i.e., by lottery. Since permits are tied to vessels, re-issuing permits imply maintaining a certain number of vessels in the fishery. Considering that the fishery is very likely to be overcapitalized during the moratorium, the economic effect of this option is expected to be negative. However, re-issuance of permits lends support to the fairness issue relative to those who were initially excluded from the moratorium. These individuals may be totally dependent on the fishery, as in the case of crew members, but were excluded due to lack of access to finances for the purpose of acquiring vessels of their own.

Re-issuing permits by lottery appears to be a fair method, but certain complications may arise. Under the condition that permits are tied to the vessels, participating in the lottery may necessitate an investment in vessels. The intent of this option is presumably not to require vessel investment to qualify for the lottery. As long as lottery participants understand this intent, this particular complication can be avoided.

Administration cost would be to be higher under Option G2 relative to Option G1. The cost amount is directly proportional to the complexity of the lottery. In sum, the expected economic outcome of this option is negative.

Option G3. Permits that are not renewed will be reissued by NMFS on a sequential basis. Those eligible applicants that have waited the longest for a permit will be issued permits first.

Discussion: This option was proposed at the Louisiana public hearing as an alternative to Option G2 above. The argument was that reissuance of permits through a lottery was unfair to the public because those applicants that had been waiting the longest for a permit may

be in more desperate need to enter the reef fish fishery. It was argued that a "first-come/first-served" system was more fair and appropriate.

Regulatory Impacts: This option differs from Option G2 only with respect to the method of re-issuing permits. Previous discussion related to the re-issuance of permits not renewed also applies here. Whether this option presents a more fair and appropriate method depends mainly on what is considered to be the basis for fairness. If fairness is based on significant dependence on the reef fish fishery, this option can only be considered more fair than a lottery if there is a direct correlation between such dependence on the fishery and timing of applications. If the first 10 or 20 applicants have about equal dependence on the fishery, a modified lottery which gives more winning chances to these applicants may be more fair. If fairness is based on some other criteria, different conclusions can result.

This option has an expected negative economic impact.

6. PUBLIC AND PRIVATE COSTS OF MANAGEMENT

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 specific action include:

Council costs of document preparation, meetings, public hearings, and information dissemination.....	\$23,611
NMFS administrative costs of document preparation, meetings and review.....	\$ 5,000
Law enforcement costs.....	\$ none
Public burden associated with permits.....	\$13,322
Federal costs associated with permits.....	\$ none
TOTAL.....	<u>\$41,933</u>

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 expected to be no increased costs of law enforcement relative to the status quo because there will be no new types of regulations to enforce. There will be increased public burden associated with the action because it is expected that growth in the number of permits will occur as potential fishery participants attempt to establish a right to participate even if they do not plan on participating at present. The increased number of permits is estimated to be about 365 and each permit involves a cost of \$36.50 which is

comprised of the \$34 cost of the permit plus a time cost of \$2.50 for applying for the permit. All of the increased costs for additional permits will be passed on to the participants in the form of permit fees, and no additional Federal costs associated with permits are expected.

7. SUMMARY OF REGULATORY IMPACTS

Table 5 presents a summary of impacts of the various measures contained in this amendment. The total administrative costs associated with the proposed action is estimated to be about \$41,933. Due to the nature of most measures and the availability of limited information, the results are qualitative, but provide a means for ranking the various alternatives. The net impact of the proposed set of regulations inclusive of administrative costs is expected to be positive.

Pursuant to E.O. 12291, a regulation is considered a "major rule" if it is likely to result in: a) an annual effect on the economy of \$100 million or more; b) a major increase in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions; or c) significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of United States-based enterprises to compete with foreign-based enterprises in domestic or export markets. The real (inflation-adjusted) ex-vessel value of commercial reef fish (all species) landings in the U.S. Gulf of Mexico was about \$28.6 million in 1990, and averaged annually at \$27.2 million for the 1981-1990 period. The recreational sector has been harvesting slightly less than the commercial sector, but no valuation of total recreational benefits in the reef fish fishery is available. Since the proposed regulation does not directly involve reductions (or increases) in commercial or recreational harvests, its impact on the economy is not expected to equal or exceed \$100 million annually. In addition, the price of reef fish products to consumers in any region will not be affected; a minimal additional cost to the commercial reef fish industry of about \$13,322 will ensue resulting from permit increases induced by the moratorium; and, a one-time cost to the Council and NMFS of about \$28,611 has been incurred in the preparation of the proposed regulation. The proposed rules affecting the framework procedure, amberjack size limits, and grouper quotas will not have any significant adverse impacts on the industry. The moratorium will restrict entry into the reef fish fishery in order to start the process of rationalizing competition in the fishery in terms of matching harvesting capacity with the limited reef fish resource. Investment, productivity, innovation, and the ability of United States-based enterprises to compete with foreign-based enterprises will not be adversely impacted by the moratorium. Employment will be restricted to a level that can be rationally supported by the fishery. Since the eligibility requirements for entry into the fishery at start of and during the moratorium are not very restrictive, employment will not be substantially reduced by the moratorium. In fact, the moratorium is expected to initially cause a slight increase in employment corresponding to the projected increase in permits. In view of the foregoing discussion, it is concluded that this regulation, if enacted, would not constitute a "major rule" under any of the mentioned criteria.

8. INITIAL REGULATORY FLEXIBILITY ANALYSES

The purpose of the Regulatory Flexibility Act is to relieve small businesses, small organizations, and small governmental entities from burdensome regulations and record keeping requirements. Since small businesses will be affected by the regulations to be promulgated under FMPs and plan amendments, this document also serves as the Initial Regulatory Flexibility Analysis (IRFA). In addition to analyses conducted for the Regulatory Impact Review (RIR), the IRFA provides an estimate of the number of small businesses affected, a description of the small businesses affected, and a discussion of the nature and size of the impacts.

The Small Business Administration (SBA) defines a small business in the commercial fishing activity as a firm with receipts of up to \$2.0 million annually. The SBA defines a small business in the charter boat activity as a firm with receipts up to \$3.5 million per year.

Determination of Significant Impact on a Substantial Number of Small Entities: The proposed action will affect most of the 1500-1800 small business entities involved in the reef fish fishery, so the "substantial number" criterion will be met. However, the "significant economic impact" criterion will not be met. The proposed regulations are not likely to result in reduction of gross revenues to the industry participants. Current industry participants are, in principle, eligible to undertake their business operations without additional costs to them as a result of the proposed regulations. Compliance costs are not expected to materially change. Therefore, an IRFA is not required. A RIR was done to satisfy the requirements of E.O. 12291 and the results of that analysis apply for the purposes of the IRFA since all the firms involved are small business entities. Therefore, most of this IRFA will consist of references to the RIR. Other information required for the IRFA is contained in other sections of this amendment (see Table of Contents for relevant sections).

9. ENVIRONMENTAL ASSESSMENT

Physical Environment

The proposed action will have no impact on the physical environment.

Fishery Resource

The proposed action will improve management's ability to control fishing mortality exerted on the reef fish resources and will benefit the resource in the long-term. Short-term impacts on the resource are negligible.

Human Environment

The proposed action will directly impact the potential for entry into the reef fish fishery. The amendment allows entry but only via purchase or transfer of a vessel with the permit. This will create a greater cost for new entrants, but that cost is unlikely to be significantly higher than under open access (status quo) for the period of the moratorium (three years). By allowing this entry (rather than no new entry) the value of vessels by persons leaving the fishery is not significantly reduced, but will likely be slightly enhanced. In the long-term this action should provide increased benefits to the fishery participants and associated industries.

Effect on Endangered Species and Marine Mammals

The proposed action will have no impact on marine mammals or endangered and threatened species, but would reduce those impacts that may have occurred with continued expansion of the fleet under open access.

Effect on Wetlands

The proposed action will have no effect on flood plains, wetlands, or rivers.

Mitigating Measures Related to the Proposed Action

No environmental impacts are expected with the proposed action, therefore no mitigating actions are proposed.

Unavoidable Adverse Affects

There are no unavoidable adverse affects resulting from this proposed action.

Irreversible and Irretrievable Commitments of Resources

There are no irreversible commitments of resources caused by implementation of this action.

Finding of No Significant Environmental Impact

The proposed amendment is not a major action having significant impact on the quality of the marine or human environment of the Gulf of Mexico. The proposed action is to stabilize effort in the fishery and a management adjustment based on the framework procedure for rebuilding overfished reef fish stocks as set forth in Amendment 1 to the Reef Fish FMP. The proposed action should not result in impacts significantly different in context or intensity from those described in the Environmental Impact Statement and Environmental Assessment published with the regulations implementing the FMP and Amendment 1.

Having reviewed the environmental assessment and available information relative to the proposed actions, I have determined that there will be no significant environmental impact resulting from the proposed actions. Accordingly, the preparation of a formal environmental impact statement on these issues is not required for this amendment by Section 102(2)(c) of the National Environmental Policy Act or its implementing regulations.

Approved: _____
Assistant Administrator for Fisheries

Date

RESPONSIBLE AGENCY:

Gulf of Mexico Fishery Management Council
Lincoln Center, Suite 331
5401 West Kennedy Boulevard
Tampa, Florida 33609
813-228-2815

10. OTHER APPLICABLE LAW

Impacts on Other Fisheries

Data available to the Council indicate this amendment will have an unknown impact on other fisheries, depending on the exclusion rules established during the moratorium. Since permit transfers are allowed and permits are not reissued, this action is unlikely to result in increased fishing effort in other fisheries in the Gulf, during the moratorium period.

Habitat Concerns

Reef fish habitats and related concerns were described in the FMP and Amendment 1.

Vessel Safety Considerations

There are no fishery conditions, management measures, or regulations contained in this amendment that would result in the loss of harvesting opportunity because of crew and vessel safety effects of adverse weather or ocean conditions. Although some concerns have been raised by the people engaged in the charter boat sector fishery the Council has reviewed that issue with the Coast Guard and has concluded that none of the proposed management measures directly or indirectly pose a hazard to crew or vessel safety under adverse weather or ocean conditions. Therefore, there are no procedures for making management adjustments in the amendment due to vessel safety problems because no person will be precluded from a fair or equitable harvesting opportunity by the management measures set forth.

No vessel will be forced to participate in the fishery under adverse weather or ocean conditions as a result of the imposition of management regulations set forth in this amendment. Therefore, no management adjustments for fishery access will be provided. There are no procedures proposed to monitor, evaluate, and report on the effects of management measures on vessel or crew safety under adverse weather or ocean conditions.

Coastal Zone Consistency

Section 307(c)(1) of the Federal Coastal Zone Management Act of 1972 requires that all federal activities which directly affect the coastal zone be consistent with approved state coastal zone management programs to the maximum extent practicable. The proposed changes in federal regulations governing reef fish in the EEZ of the Gulf of Mexico will make no changes in federal regulations that are inconsistent with either existing or proposed state regulations.

While it is the goal of the Council to have complementary management measures with those of the states, federal and state administrative procedures vary and regulatory changes are unlikely to be fully instituted at the same time.

This amendment is consistent with the Coastal Zone Management programs of the states of Alabama, Florida, Louisiana, and Mississippi to the maximum extent possible; Texas does not have an approved Coastal Zone Management program. This determination has been submitted to the responsible state agencies under Section 307 of the Coastal Zone Management Act administering approved Coastal Zone Management programs in the states of Alabama, Florida, Mississippi, and Louisiana.

Paperwork Reduction Act

The purpose of the Paperwork Reduction Act is to control paperwork requirements imposed on the public by the federal government. The authority to manage information collection and record keeping requirements is vested with the Director of the Office of Management and Budget. This authority encompasses establishment of guidelines and policies, approval of information collection requests, and reduction of paperwork burdens and duplications.

The Council proposes, through this amendment, to establish no additional permit or data collection programs. Therefore, no increased reporting burden on the public or cost to the government will be incurred through this amendment.

Federalism

No federalism issues have been identified relative to the actions proposed in this amendment and associated regulations. The affected states have been closely involved in developing the proposed management measures and the principal state officials responsible for fisheries management in their respective states have not expressed federalism related opposition to adoption of this amendment. Therefore, preparation of a federalism assessment under Executive Order 12612 is not necessary.

11. SCIENTIFIC RESEARCH AND DATA NEEDS

The following scientific research and data needs have been identified with assistance from the scientific and industry advisory panels.

Biological Needs

- a statistically designed survey to evaluate the magnitude of red snapper bycatch in the trawl fisheries and its impact on the red snapper population
- estimates of release mortality rates
- evaluation of shrimp bycatch data collected by the States
- detailed analysis of SEAMAP and groundfish survey length frequencies and catch rates
- development of fishery independent population monitoring procedures
- an index of spawning stock size
- fecundity and maturity by age

- evaluation of current and historical levels of offshore trawling vessels fishing the Gulf, and fishing effort by geographical area and water depth
- a statistically designed survey of bycatch reduction from each of the approved TEDs
- natural mortality rate(s), especially for juvenile fish

Socioeconomic Needs

- identify levels of participation in the reef fish multi-species fishery
- local and regional economic assessment of the shrimp bycatch and impacts of restricting bycatch
- a detailed sociological study of the Gulf of Mexico reef fish fishery
- relevant social variables added to the MRFSS data collection program currently maintained by NMFS to provide an understanding of red snapper anglers
- special studies to address decision making behavior of user groups regarding various regulatory alternatives for decision makers to consider and implement more palatable regulations
- descriptive studies of the commercial red snapper fishery and their communities
- documenting variability within recreational and commercial fisheries regarding harvest, profitability, motivations, and satisfactions

Social Impact Assessment Needs

The Council has two sociologists on the Reef Fish Scientific Assessment Panel to provide advice on social impacts of potential management action. However their participation cannot and should not be regarded as a substitute for a relevant social impact research program sponsored by the National Marine Fisheries Service.

Social scientists are concerned with knowing about the composition of marine fisheries (recreational and commercial), how they are organized in groups, and how they will likely react to proposed changes in the management regime. In addition to demographic characterizations of fisheries, it is important to understand patterns of participation and how proposed changes will impact their livelihood and lifestyle. From a recreational standpoint, we are interested in variation in the angler population with regard to benefits sought and satisfaction. We are interested in impacts on peoples and their communities over time in order to understand displacement of user groups and succession in fisheries. By observing and monitoring how segments of the marine fisheries industry differentially cope and adapt

to management actions over time, more effective implementation and management is possible.

While the Magnuson Fishery Conservation and Management Act mandates an understanding of all the impacts of fisheries management, little research data is available to managers regarding red snapper or any other Gulf fishery for that matter. Currently, there is no social research program in support of fisheries management within NMFS. Furthermore, there is considerable misunderstanding of the social component relative to the component of marine fisheries management. These two components should not be in opposition; rather, they should provide an inextricable tie between understanding social impacts and achieving biological goals. When decision makers lack a predictive understanding of what is palatable to various segments of the fishery and lose the ability to reach a negotiated allocation, resource protection goals may not be achieved. Also, without an understanding of management measures palatable to various user groups, scientific assessment panels may be less than effective in providing assistance to the Gulf Council. Acquisition of appropriate research data will require support on a continuing basis, not as a "single-shot band aid" whenever management decisions reach a crisis level that demands social input.

Finally, there is the matter of what we know or do not know about the social component of the Gulf of Mexico reef fish fishery. There are no previous social studies regarding the commercial fishery, the recreational private-boat fishery, and the recreational charter/party boat angler fishery. We have little understanding of how these various groups will be impacted by the proposed management scenarios or how they will respond in their fishing activity. Methodologies exist to explore these matters but have never been supported in the past.

12. REFERENCES

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