

AMENDMENT NUMBER 1
AND
ENVIRONMENTAL ASSESSMENT
AND
SUPPLEMENTAL REGULATORY IMPACT REVIEW
AND
INITIAL REGULATORY FLEXIBILITY ANALYSIS
TO
THE SECRETARIAL FISHERY MANAGEMENT PLAN
FOR THE
RED DRUM FISHERY OF THE GULF OF MEXICO

MAY, 1987

GULF OF MEXICO FISHERY MANAGEMENT COUNCIL
LINCOLN CENTER, SUITE 881
5401 WEST KENNEDY BOULEVARD
TAMPA, FLORIDA 33609
(813) 228-2815

I. Introduction

A fishery management plan for the red drum fishery of the Gulf of Mexico (FMP) was prepared by National Marine Fisheries Service (NMFS) and implemented by the Secretary of Commerce (Secretary) on December 19, 1986 [51 FR 46678]. The FMP was prepared in response to a change in market conditions resulting in a significant increase in demand for large (adult) red drum and a resultant significant increase in harvest of adult red drum from the Exclusive Economic Zone (EEZ) during 1985 and 1986. A stock assessment prepared by NMFS (Powers and Scott, 1986; Powers, Conser and Scott, 1986; Scott, 1986 and 1986b) indicated significant risk of adversely impacting the spawning stock biomass (SSB), associated with annual harvest level of adults as high as 1.2 million pounds.

On June 25, 1986 the Secretary implemented a 90-day emergency rule [51 FR 23553] limiting landings of red drum from the EEZ to one million pounds. This quota was harvested by July 20th. The emergency rule was extended an additional 90 days [51 FR 34220] was promulgated, effective September 24th, and prohibited retention of any red drum from the EEZ through December 22, 1986. During 1986, 8.2 million pounds of red drum were harvested from the EEZ (Table 12-1). This amendment by the Gulf of Mexico Fishery Management Council (Council) respecifies problems in the fishery and objectives of the FMP, modifies the management unit, provides a procedure for setting total allowable catch (TAC), provides for allocation of the TAC, and deletes the FMP exemption to states' law.

II. Description of Fishery and Utilization Patterns

The fishery and utilization patterns are described in Sections 5.0 through 11.0 of the FMP.

III. Statement of the Problem

As a result of application of gear technology and testimony before the Gulf of Mexico Fishery Management Council by the commercial fishing industry operating in the north central Gulf of Mexico that spawning size red fish was an exploitable resource if a market could be developed, the Council moved in 1981 to prepare a profile on red drum. The Council, in conjunction with the Gulf States Marine Fisheries Commission (GSMFC) completed the profile in 1983 (Swingle et al, 1984). Upon completion, the Council determined that there was no need to prepare an FMP until such time that industries marketing effort was successful and additional exploitation of the resource occurred. The profile indicated a significant problem with recruitment from the estuaries in Texas and Florida. In 1986 the Council's Scientific and Statistical Committee (SSC) concluded that "the high rate of inshore fishing under equilibrium yield conditions has, or will, reduce the spawning stock biomass (SSB) below 20 percent of virgin spawning biomass, thus exceeding the 20 to 40 percent of virgin SSB guideline as a range where recruitment overfishing is likely to occur". Subsequent information on inshore fishing mortality indicated the recruitment problem was Gulf-wide.

EEZ harvest of red drum greatly escalated in 1985 and 1986 due to changing market demands, creating concern that the unregulated fishery would overexploit the stock resulting in recruitment overfishing. The Council was contacted by Congressman John Breaux, Chairman of Subcommittee on Fisheries, Wildlife Conservation and Environment, and requested to recommend regulatory action.

While the Council was considering whether to proceed with development of a FMP, Mr. Breaux introduced H.R. 4690 which would require an emergency Secretarial rule until such time as the Council prepared a FMP. NMFS acted by implementing an emergency rule to temporarily regulate the fishery while they prepared a Secretarial FMP for the fishery. The Secretarial plan, utilizing the Council's profile, was rapidly prepared and implemented and the Council is now proposing an amendment which would modify certain provisions of the Secretarial FMP.

IV. Proposed Action

The action proposed through this Amendment of the FMP consists of the following new measures and revisions of existing measures:

- o The management unit is modified to include primary and secondary management areas of the EEZ.
- o The problems in the fishery and objectives of the FMP are modified, restated and a new objective added.
- o The statement of OY is revised.
- o Commercial user group allocations are specified.
- o A bag limit for the primary area of the EEZ is specified.
- o Prohibition of sale of fish harvested under the bag limit is specified.
- o A procedure for specifying TAC is included.
- o The Resource Assessment Program (RAP) is deleted as a management measure and moved to the research section of the FMP.
- o Permits and landing requirements are specified.
- o Data to be collected from fish dealers are described.
- o The provision for supersession of states' fishery laws is deleted.

ACTION 1: MANAGEMENT UNIT

Section 12.2 is revised by deleting the existing text and adding new subsections as follows:

12.2.1 Species Managed

The species managed includes only the red drum (Sciaenops ocellatus) population occurring in the U.S. Gulf of Mexico.

12.2.2 Management Areas

The management areas shall consist of a "Primary Area" which is the EEZ between the Florida/Alabama state border and the Texas/Louisiana state border

and of two "Secondary Areas" which are the EEZ off Florida and off Texas (Figure 1). The regulations of the amendment shall apply only to these areas, unless otherwise specified. The states will be requested to adopt compatible regulations for their fisheries when applicable.

Rationale: The EEZ was divided into two types of management areas based on differing historic stock trends in the fishery, differing geographic jurisdictional limits and socioeconomic considerations. The Gulf SSB appears to be a single genetic stock based on biochemical analyses of fish flesh utilizing electrophoretic and mitochondrial DNA techniques (SSC Minutes, 1987). The SSC also indicated there is insufficient data on migration patterns on historic levels of harvest or abundance to support division of the Gulf into primary and secondary areas and the stock should be considered as one management unit, i.e., there is a poor biological basis for such a division, although there may be social, economic or other reasons.

The Council upon reviewing the SSC recommendation concurred that the stock was likely a single genetic entity, but the preponderance of available scientific data indicated no significant migration and mixing of the SSB throughout the range of the fishery and that for management purposes the division into primary and secondary management areas was useful, and not significantly different from such management division utilized for king and Spanish mackerel. The Council felt not only was there some biological justification but also there were social, economic, and political reasons for such a separation.

The Council's original contention in the draft amendment was that migration of the stock and the SSB was primarily an inshore/offshore migration and was localized in terms of significant lateral migration between distant geographical areas. This was based on conclusions cited by Perret et al (1980), Beaumarrriage (1969), Swingle et al (1984), NMFS (1986), Green (1986), Marwitz (1986), and the work of other authors summarized in these publication. There are, however, three exceptions in the literature to such localized migration. Overstreet (1980) reported on two large red drum (810 and 760 mm) which were tagged off Mississippi and recaptured off Galveston, Texas and Port St. Joe, Florida respectively. Green (1986) reporting on the 12,449 red drum tagged in Texas waters from 1950 to 1975 listed one 565 mm fish which was reported as captured off St. Petersburg, Florida. However, data compiled from Green (1986) for 319 red drum recaptured which were larger than 500 mm indicated a maximum distances on recovery of about 70 miles and average distance generally less than 15 miles (see Table 12-4). Marwitz (1986 and personal communication) reporting on the 14,447 red drum tagged in Texas from 1975 to 1982, with a recovery rate of 20.4 percent (by December 1983), indicated all recaptures were from Texas jurisdiction. James Tilmant, NPS, (personal communication) indicated the maximum distance from tagging site to recapture site to be 26 km (16 miles) for red drum tagged (24 recaptures) in Everglades National Park. NMFS tagged approximately 5,600 adult red drum offshore in the northern Gulf in 1986. Scott Nichols, NMFS, (personal communication) indicated approximately 30 fish had been recaptured with some movement of recaptured fish tagged east of the Mississippi River to waters off the western side of the river and vice versa. One fish tagged off Mississippi had been recovered at Pensacola, Florida.

The degree to which the individual schools of the SSB migrate between geographical areas is still largely uncertain and is an important management consideration, in that, if the movements of these fish are primarily localized (e.g.,

50 to 70 miles) then local geographical abundance of the SSB would be affected by recruitment from the juvenile populations of adjacent inshore areas. Conversely, recruitment abundance of larval fishes to the adjacent inshore fisheries from the localized aggregation of SSB would also be affected. This is a very important management consideration because of the differing long-term historic trends of fishing mortality on the inshore juvenile populations which were much higher for west central Florida and Texas (Swingle et al, 1984) and if SSB movement was restricted should have reduced abundance of local aggregation of SSB off these areas.

Swingle et al (1984 - Section 5.1.4.4) cite fishing and total mortality rates (F and Z) for the west coast of Florida based principally on the Schlitz tagging studies conducted in the early 1960s. These mortality rates were extremely high, indicative of a low escapement rate to the offshore SSB, even at that time. No harvest restrictions were applied to the Florida fishery until 1984, even though fishing pressure in terms of participants increased significantly over that time period.

Similarly, mortality rates in the Texas fishery were high (FMP Section 5.1.4.4 and Swingle et al, 1984). High fishing mortality rates will normally correlate with low average size and low catch per unit effort (CPUE). Both of these conditions were characteristic of the Texas fishery (Swingle et al, 1984, Section 5.1.4.4). McEachron and Green (1982) reported on CPUE and average weight for Texas coastwide fishery from 1975 to 1981 with CPUE ranging from 0.02 to 0.06 fish per man hour and average weight ranging from 1.6 to 2.3 pounds. Simons (1960) reported an average weight of 2.1 pounds for the Upper Laguna Madre indicative of heavy fish pressure at that time. This is a major change from Jordan and Everman's (1896) description of red drum from the Texas fishery as being two to five feet in length and 10 to 75 pounds in weight. The much more limited data from other states suggests a higher historic escapement rate. For example, CPUE estimates reported for Louisiana in the early 1960s were 0.25 and 0.26 fish per man-hour (Swingle et al, 1984, Section 5.1.4.4).

These historical data suggest a longer-term reduced escapement from Texas and Florida state fisheries which, considering the fish live 25+ years, should have resulted in reduced SSB offshore. Preliminary estimates of SSB density from a pilot study utilizing aerial survey techniques conducted by NMFS in 1986 (see Table 12-3) suggest this may have occurred. Estimates ranged from 87 pounds per square nautical (n) mile off west central Florida to 3501 pounds per square n. mile off Louisiana. The Council concluded that until better information is available on the degree of mixing of the SSB that the available biological data supported division of the Gulf into management areas that would be treated differently. Other fishery trends exist related to the division into management areas. Historically, over 98 percent of all commercial and recreational EEZ catch has been from NMFS statistical areas 11 through 16 (Figure 1) off Alabama, Mississippi, and Louisiana (FMP Table 8-10 and Table 12-1). This also appears indicative of a higher standing stock abundance of adults in the EEZ off the primary area which resulted from a higher historical escapement rate of juveniles (or subadults) from the estuarine areas inshore of the primary area (see Table 12-3).

In addition to these apparent differences in stock structure, both Texas and Florida have fishery jurisdictions of nine nautical miles vs three nautical miles for the other states¹. Therefore, Texas and Florida exercise control over a greater portion of the offshore SSB. In 1986 aerial surveys of the SSB Dr. Andy Kemmerer, NMFS, (personal communication) indicated most fish sighted off these states were within state jurisdiction.

This difference in extent of jurisdiction over the SSB relates to other socioeconomic and political reasons for treating the management areas differently. Texas Parks and Wildlife Department, recognizing that red drum in state jurisdiction was being overfished, began regulatory actions limiting fishing pressure in the mid-1970's and, based on legislative action, implemented a prohibition on the sale of fish harvested from Texas waters in 1981. They have progressively increased regulatory restrictions on recreational fishermen, so that currently fishermen are limited to a bag limit of 5 fish per trip that must be between 18 and 30 inches in size. The prohibition on possession of red drum greater than 30 inches in length applies to fish regardless of where caught and was designed to increase the SSB off Texas.

In Florida, where fishing mortality levels documented in the early 1960's indicated escapement of juveniles to the SSB in the west central area was about 1 percent or less of each year-class, regulatory actions to reverse this trend were not initiated until 1984. Minimum and maximum sizes of 18 (16 in Panhandle) and 32 inches (1 fish limit over 32 inches) were implemented. More stringent regulation, including bag limit, closed season and "game" fish status, which were intended to increase juvenile escapement were rejected for implementation by the Florida Governor and Cabinet. As an interim alternative the fishery has been closed with a complete moratorium on harvest by emergency rule through June 31, 1987 and is proposed to be extended by permanent rule for an indeterminate period until a conservative management strategy acceptable by recreational and commercial user groups is developed, Connor Davis, FMFC, (personal communication). The Council recognized that both states were taking significant conservation actions to increase the SSB and the condition of the inshore fisheries, that their current management approach was to prohibit harvest of adult red drum, that by virtue of their extended jurisdiction they exercised regulatory control over a larger portion of the SSB existing offshore, and that allowance of harvest from the secondary areas of the EEZ would complicate or circumvent these conservation efforts. Therefore, on this basis there appeared to be good social and political justification for the management area divisions. In as much as from a historical perspective virtually all EEZ catch had come from the primary area there appeared to be economic differences supporting the management area division. The Council also recognized conservation actions implemented or ongoing in the states bordering the primary area; however, data on historic recreational and commercial fishing activity and on stock abundance suggested a higher SSB abundance (also see Table 12-3) and a greater user group

1. Alabama's territorial jurisdiction extends to 6 n. miles in the EEZ off Sand Island. Louisiana's territorial jurisdiction extends beyond 3 n. miles in ten localities. It extends 9 n. miles off the Quarte Bayou Pass (near Grand Isle). Principal areas where state jurisdiction exceeds 3 n. miles are: Atchafalaya Bay from South Point on Marsh Island to Point Au Fer Island; Whiskey Pass in Isles Dernieres; Terrebonne Bay; Little Timbalier Pass; West Bay at mouth of Mississippi River; Garden Island Bay; and Breton Sound.

dependence on the EEZ fishery for this area, thereby supporting the management area division.

Rejected Alternatives for Action 1

- a. Management area is range of red drum in Gulf of Mexico with authority of FMP applying to EEZ.

Rationale: This definition, as used in the FMP, was rejected because of the difference in stock structure, jurisdictions, and socioeconomic differences cited for the proposed alternative.

- b. Management area consists of a primary area (EEZ between 88° and 93°, i.e. statistical areas 11 through 16) and two secondary areas (EEZ west of 93° and east of 88°) (Figure 1).

Rationale: Although historically almost all of the EEZ catch came from statistical areas 11 through 16, this option was rejected to make the boundaries between areas consistent with state boundaries since state fishery jurisdiction extended to nine nautical miles off Texas and Florida and for other social and political considerations which support the preferred alternative.

ACTION 2: PROBLEMS IN THE FISHERY

Section 12.3 is revised as follows:

12.3 Problems in the Fishery

The problems in the fishery identified by the Council are as follows:

1. Intense fishing mortality on the inshore juvenile red drum population resulting in decreased recruitment to offshore spawning stock, which will likely cause eventual recruitment failure if not corrected.
2. Potential for recruitment overfishing from reduction of the offshore spawning stock by increased offshore fishing mortality.
3. Uncertainty regarding the condition and age composition of the offshore spawning stock and the size of such stock necessary to provide optimum recruitment to and maintenance (or restoration) of the inshore populations.
4. Increasing demand for red drum and increased competition among harvesters of the resource.
5. Inconsistency between the states' and federal regulatory agencies may disrupt enforceability of management regulation which could result in inadequate protection of red drum resources in both state and federal waters.
6. An historic and continuing trend in degradation and reduction of red drum habitat.

The higher level of fishing mortality historically characteristic of the Texas and Florida fisheries appears to have become, or is becoming, characteristic of the entire inshore fishery (FMP Section 5.1.4.4 and SSC Minutes, 1987). This results in concern over the long-term stability of the SSB (see SSC Minutes, 1986; Powers and Scott, 1986; Powers, Conser and Scott, 1986) which has been declining due to decreased recruitment (escapement) to the SSB. Also the SSB has been impacted by the greatly increased level of fishing mortality applied to the offshore fishery during 1985 and 1986 (12 million pounds). Both actions raise the potential for recruitment overfishing of the SSB. Additional scientific information is needed to determine the current size of the SSB, its relation to virgin SSB and the size of the SSB that must be maintained in order to optimize recruitment to the inshore fisheries. Until these data become available there is considerable uncertainty about the condition of the SSB and risk associated with continuing harvest of the SSB, especially from secondary areas. Inherent in the problem related to uncertainty regarding the condition of the stock(s) is recognition of the limited data base for management. This includes data related to the SSB and to a more limited extent data on the juvenile populations in some geographical areas.

Commercial harvestors had increased their harvesting activity in 1984 through 1986 largely in response to increased consumer demand for fish and, more particularly, for red drum. The popularity of "blackened redfish" and other Cajun cuisine undoubtedly resulted in increased consumer preference specific for red drum. Also related to this increase harvesting activity and consumer demand was the improved handling, processing, distribution and marketing systems developed by Gulf coast vessel operators and processors (AP Minutes, 1986). These improved systems allowed consumers to receive high quality fresh fish nationally within a few days of harvest.

Because of changed market conditions and continually increasing human population migration to the coastal areas of the Gulf states there is increasing demand for red drum by recreational and commercial harvestors resulting in increased competition and a developed potential harvesting capacity that greatly exceeds the ability of the stock to satisfy that capacity without being overfished. Therefore, increased state and federal regulation of the stock is required. In order to allocate the available fish among users, much additional social and economic information is required to clarify the values attributed to red drum by each user group. Until these data become available, there will be considerable uncertainty about the effect of regulations on the value of the resource to society. The current inconsistencies in management between regulatory entities (NMFS through the FMP and the states) has (or will) contribute to decreased enforceability of existing regulatory measures and inadequate protection of the stock. Both the Council's SSC (1986) and NMFS stock assessment personnel in the FMP (Section 5.5) have arrived at the same conclusion that unless fishing mortality is reduced in the inshore fishery, the SSB will be reduced below the level (20 percent to 40 percent of virgin biomass) necessary to sustain the stock. The states are taking actions which will reduce that mortality and allow a greater escapement rate of juveniles to the SSB. The FMP has provisions which allow harvest of the SSB and which allow the landing of incidental bycatch in violation of state laws. The amendment through objective (3) will provide for a fair allocation of the EEZ resource when stock assessment information indicate a greater level of harvest may be taken without adversely impacting the long-term stability of the SSB. However, current stock assessment information suggests that harvest levels in the inshore fishery must be severely

reduced to assure such long-term stability. Efforts by the states to reduce inshore harvest and allow greater escapement to the SSB will be most difficult to implement politically if inshore recreational and commercial users of the resource perceive the fish reduced from their catches will be utilized to support a EEZ fishery instead of contributing to rebuilding the SSB.

Long-term degradation of inshore habitat has reduced its capability to support a population of juveniles comparable to the level supported when virgin SSB existed in the fishery. Red drum is an estuarine dependent species. Historically under less stringent environmental protection programs, there has been significant alteration of these estuaries which resulted both in destruction and degradation of habitat critical to red drum. Even under current habitat protection programs which generally preclude approval of projects or activities that adversely impact large tracts of estuarine wetlands, the cumulative environmental impact of the thousands of minor projects that are completed is significant. These impacts have reduced the habitat suitable for red drum and thereby the capability of the estuaries to support a population of red drum comparable to that existing at virgin biomass.

Section 6.1 of the FMP summarizes a number of natural and human activities that have impacted this habitat, such as residential alteration of estuaries in Florida, current annual losses of 50 square miles of Louisiana estuarine habitat, cumulative wetland loss in Louisiana in excess of 1.1 million acres since 1900, and riverine transport of two-thirds of the sediments and industrial pollutants from the continental U.S. into the Gulf of Mexico. Coupled with the impact of reduced habitat on the standing stock of juveniles is the periodic impact of variation in natural environmental parameters or conditions such as temperature, river flow, and blooms of toxic red tide organisms. These may result in significant mortality of a particular year-class or of the standing stock of several year-classes of juveniles. Data collection and analytical techniques for predicting year-class strength are currently not developed to a level which would allow rapid implementation of management reducing harvest levels on reduced year-classes; therefore, fishing pressure is not reduced when such environmental conditions result in reduced standing stocks. FMP Section 5.4.2 cites data from Powers and Scott (1986) which suggest significant reduction of two year-classes.

Rejected Alternative to Action 2:

- a. Retain problems as cited in the FMP.

Rationale: The Council's restatement of the problems includes most elements cited in FMP Problems 1, 2, 3, 5, 6 and 7, but in that the Council had the advice of its SSC and AP before specifying the problems, restated them in language more consistent with stock assessments and user group perceptions of the problems.

ACTION 3: MANAGEMENT OBJECTIVES

Section 12.4 is revised as follows:

12.4 Management Objectives

The proposed management objectives of the Amendment are as follows:

1. Cooperatively with the states provide at least a 20 percent level of escapement of juvenile red drum to the offshore spawning stock, and control offshore fishing mortality to assure optimum recruitment and enhancement of the inshore and offshore populations.
2. Establish, implement, and maintain research and data gathering programs to ensure that appropriate data will be available to formulate management measures and monitor the condition of the stock.
3. If a total allowable catch (TAC) is determined which provides for an EEZ catch, then the TAC will be fairly allocated between EEZ users of the resource.
4. Maximize the economic and social benefits of the resource to the nation.
5. Identify and encourage actions resulting in the conservation, restoration, and enhancement of red drum habitat.

In addressing objective (1) the Council has requested that the states modify their rules regulating the state fisheries to achieve a minimum escapement level of juveniles to the offshore spawning stock biomass (SSB) of 20 percent of the number that would have escaped had there been no inshore fishery. The Council's Scientific and Statistical Committee (Minutes, September, 1986) and NMFS in the FMP (Sections 5.3.1 and 5.5) concluded that the SSB should not be reduced below 20 percent to 40 percent of the level existing before exploitation (Virgin Biomass). They also concluded that current inshore exploitation rates are and have been higher than the level which would maintain the SSB at 20 percent to 40 percent of virgin biomass, and if these exploitation rates are not reduced the SSB will be overexploited, even if no fishing occurs on the SSB. The Council has proposed a minimum of 20 percent escapement level as an interim target level, realizing that in the long-term the percentage may have to be increased to assure the stability of the SSB. In computation of the MSY a spawning stock biomass per recruit (SSBR) ratio of 30 percent was used (Section 5.2.3) which is more conservative than the 20 percent level. The Council has included in Amendment Measure 12.6.2 (Action 5) procedures for an annual stock assessment and for an annual assessment of the level of juvenile escapement by geographical area (by state). These assessments will keep the Council apprised of the status of the SSB and the need for increased escapement levels.

To achieve this target level of escapement, each state will have to assess the current escapement level and adjust its rules. Since current escapement levels differ by state the rules necessary to attain this escapement level will vary. Rules regulating legal size and bag limits such as implemented by Texas are the type of measures needed to achieve the targeted level, by reducing harvest of juvenile and adult fishes rather substantially. The Council will control fishing mortality on the SSB through this Amendment and subsequent plan amendments.

In order to assess the condition of the stock, specify the acceptable biological catch (ABC) range, set TAC and identify the social and economic impacts, a comprehensive and continuing research and data gathering program is required. The fishery independent (and some aspects of fishery dependent) program is and will be carried out by NMFS and the states. Fishery dependent catch statistics

are included in the FMP as reporting requirements. The NMFS Southeast Fishery Center (SEFC) and the Council's scientific stock assessment group (Section 12.6.2) will provide annual assessments of the stock condition and the potential economic, social, and ecological consequences of proposed harvest levels.

If a revised TAC is established for the primary area it will be fairly allocated between users, through subsequent amendments to the FMP.

The harvesting capability of recreational and commercial user groups greatly exceeds the ability of the resource to satisfy the potential demand if unregulated harvesting were allowed. Current stock assessment analyses suggest the resource is currently fully exploited or overexploited throughout much (or all) of its range. In addressing allocation of the allowable catch the Council will attempt to maximize the economic and social benefits to the nation.

The Council through its Habitat and Environmental Protection Committee and Advisory Panels will continue to address habitat issues impacting the red drum habitat to prevent, reduce, or mitigate man-made alterations impacting such habitat.

Rejected Alternative to Action 3

- a. Retain objectives specified in the FMP.

Rationale: The Council's objectives incorporate the content of all of those of the FMP except Objective 7 and more clearly specify the actions to be achieved through the Amendment. Objective 7 relates to supersession of state laws, and it and its companion management measure were rejected by the Council as unnecessarily increasing the enforcement burden on the states to assure that illegal harvest was not landed.

ACTION 4: STATEMENT OF OPTIMUM YIELD

Section 12.5.1.2 is revised as follows:

12.5.1.2 Optimum Yield (OY)

OY is defined as:

- o All red drum recreationally and commercially harvested from state waters landed consistent with state laws and regulations, under a goal of allowing 20 percent escapement of the juvenile population.
- o All red drum commercially or recreationally harvested from the Primary Area of the EEZ under the TAC level and allocations specified under the provisions of the FMP, and a zero retention level from the Secondary Areas of the EEZ.

Rationale: This statement of OY acknowledges that the optimum harvest level from state controlled fisheries is consistent with obtaining an escapement level of juveniles to the SSB of 20 percent of the number that would have escaped had there been no inshore fishery in order to assure long-term stabilization of the SSB throughout its range. Consistent with this goal is the OY statement limiting offshore harvest to the primary area and within the TAC range set by the

Council. This acknowledges that, historically, escapement to the EEZ SSB from areas bordering the secondary areas has been less than from areas bordering upon the primary area (see Amendment Section 12.2.2 for discussion of data). Data on migration (FMP Section 5.1.3) suggest little or no mixing between these areas. Therefore, the prohibition on retention from the secondary areas is consistent with state and federal actions to increase the SSB in these areas. (Note: such state actions include or will include hatchery programs in Texas and Florida, respectively.) The impact of such a prohibition on retention on small business entities (fishermen) is expected to be negligible. This is based primarily on the fact that, historically, EEZ catches by commercial and recreational users has been almost entirely (more than 98 percent) from the primary area. It is based secondarily on the fact that state jurisdictions extend to nine nautical miles bordering the secondary areas, thereby encompassing most of the east and west portions of the SSB within state jurisdictions, i.e., virtually no change in regulation affecting fishermen, since both states currently prohibit harvest of adult fish and since EEZ harvest landed in these states has always been negligible.

Rejected Alternative to Action 4

a. OY statement of the FMP

Rationale: This statement specifies as OY, harvest taken legally from state and federal waters without acknowledging the need for more restrictive state management regimes necessary to provide for increased escapement. And it considers the entire Gulf EEZ without acknowledging the likelihood of historical reduction of the SSB in secondary areas, thereby allowing harvest from these areas for which the state programs are attempting to increase the SSB.

b. All red drum commercially or recreationally harvested from the EEZ under a TAC level and allocations specified under provisions of the FMP.

Rationale: This was rejected since historical data on mortality suggested the need for subdividing the EEZ for management purposes and allowing no catch from secondary areas where active state programs for rebuilding the reduced SSB are occurring.

c. OY in EEZ is equal to zero unless escapement of juveniles into adult stock is in excess of 20 percent of the number which would have escaped had no fishery for juvenile fish existed. Should escapement exceed 20 percent, OY in the EEZ shall be that amount of fish which meets the following criteria:

- (1) Result from harvesting adults which are in excess of the 20 percent escapement goal at a fishery mortality rate of $F_{0.1}$, and
- (2) Is reduced by the number of adults harvested in state waters (i.e., over 30 inches).

OY in the EEZ shall be allocated in the following priority order (Note: harvest, except for research, is allowed only in Primary Area):

1. Research
2. Bycatch
3. Directed Fishery

Rationale: The Council rejected this statement as being inconsistent with the Council's management unit and unduly complicated for assessing whether the criteria are met, but incorporated many of its concepts into the preferred OY alternative, into the TAC setting procedure (12.6.2), and into the statement of allowable harvest levels for the primary area (12.6.3).

ACTION 5: PROCEDURE FOR SPECIFYING TAC

Section 12.6.2 is revised as follows:

12.6.2 Procedures for Specification of TAC in the Primary Area and for Allocations

1. Prior to October 1st each year the SEFC will: a) update the stock assessment for red drum; b) reassess the MSY level; c) specify the best estimate of the standing stock and its age composition; d) re-examine and specify the level of offshore standing stock necessary to optimize larval recruitment to the inshore fishery; e) specify the geographical variations in stock abundance, mortality, juvenile escapement and recruitment, and summarize current and historical information on migratory movements of the stock; and f) analyze social and economic data available in the fishery.
2. The Council will convene a scientific assessment group, appointed by the Council, who will review the SEFC report(s), current harvest statistics, economic, social, and other relevant data and who will prepare a written assessment report to the Council specifying a range of acceptable biological catch (ABC) for the Primary Area. The report will set forth a risk analysis showing the probabilities of adversely impacting the spawning stock biomass (SSB) through fishing at each level of ABC and the economic and social impacts of those levels. Such a report shall include consideration of the fishing mortality rate(s) relative to F_{MSY} and $F_{0.1}$, abundance relative to optimum spawning biomass, trends in recruitment and whether overfishing is occurring for the stock as a whole or upon a portion of the stock for any geographical area. The specification of ABC shall separately identify that quantity of the offshore population in excess of the SSB necessary to optimize recruitment and in excess of annual surplus production that may be harvested. Such report will, when requested by the Council, include information on the levels of bag limits, size limits, specific gear harvest limits, and other restrictions required to prevent a user group from exceeding their allocation or quota under a TAC specified by the Council for the Primary Area, along with the economic and social impacts of such restrictions.
3. The Council will consider the report and recommendations of the assessment group and such public comment as may be relevant. A public hearing will be held at the time and place where the Council takes action on the report. Other public hearings may be held. The Council may convene its Red Drum Advisory Panel and Scientific and Statistical Committee to provide advice prior to taking action.
4. In selecting a TAC level, the Council will, in addition to consideration of the recommendations, comments, and advice provided for in (1), (2), and (3) and the objectives of the FMP, utilize the following criteria:

- a. Set TAC from within or below the ABC range, and
 - b. Given a total specified quantity of offshore population (above annual surplus production) which is greater than a SSB necessary to optimize recruitment, the percentage of this quantity which may be included in the TAC shall be set by the Council periodically or annually.
5. Changes in user group allocations for the Primary Area, if any, will be by subsequent plan amendment.

Rationale: The Council proposes this procedure whereby the SEFC will provide an annual stock assessment and the Council's scientific assessment group will compute an ABC range for the Primary Area based on that stock assessment and risk analyses. The Council may set a modified TAC for the Primary Area. Changes in allocations, if any, under the revised TAC will be by plan amendment to assure the greatest possible scientific review and public input into that decision. The Secretarial FMP will be revised to include new information and an EA/RIR/IRFA will be prepared analyzing beneficial and adverse impacts of the alternatives, as part of that plan amendment.

Rejected Alternatives to Action 5

- a. No Action, utilize the procedure of the FMP to set a commercial quota and recreational allocation for the fishery, with Regional Director (RD), NMFS, making decision.

Rationale: This was rejected because it addresses only the directed commercial and recreational fishery allocations and because the RD makes the decision setting the harvest level. The preferred alternative allows setting allocation levels by the Council through plan amendment after consideration of the positions of its AP and SSC and public comment. The plan amendment process will allow the Council to completely update and revise the FMP based on new information and to formulate allocations based on a more thorough analysis of the new scientific information, social and economic impacts of alternatives and public input. The FMP procedure sets a TAC for the entire EEZ whereas under the Amendment TAC will be set only for the Primary Area since scientific information suggests the SSB of the Secondary Areas has been significantly reduced due to long-term high inshore fishing mortality.

- b. Include as part of the amendment procedure provisions whereby allocations and quotas would be set by notice action or regulatory amendment.

Rationale: The Council considered and rejected this alternative and instead proposes to take such action by plan amendment (see rationale for proposed alternative). Implementation through the plan amendment process, including holding public hearings, will require approximately six to eight months in contrast to the four months required for regulatory amendment and the two months required for notice action. However, it allows revision of the existing FMP and a more thorough and deliberate analysis of the new stock assessment information and impacts of alternatives which appears warranted considering the current state of knowledge on the SSB. The two- to six-month delay should have little impact on small business entities, since directed commercial fishing entities can fish for other species and have demonstrated their ability to rapidly harvest the resource,

harvesting in a few months amounts much greater than is likely to be their quota. Other participants are granted bycatch or allocation allowances.

ACTION 6: ALLOWABLE HARVEST LEVELS FOR PRIMARY AREA

FMP Sections 12.6.3 and 12.6.4 are revised in their entirety as 12.6.3 as follows:

12.6.3 Harvest Levels for the Primary Area of the EEZ

12.6.3.1 Commercial Harvest

The primary area of the EEZ shall remain closed to directed commercial harvest until such time as the states bordering the primary area have attained a goal which provides a minimum aggregate level of escapement of juveniles of 20 percent of the number that would have escaped had there been no inshore fishery. The incidental bycatch quota for the non-directed commercial fishery (excluding shrimp vessels) of 100,000 pounds established by the FMP is maintained, but such fish must be landed in conformance with state laws. The incidental bycatch quota for shrimp vessels of 200,000 pounds established by the FMP is maintained and also must be landed in conformance with state laws. Incidental bycatch in the shrimp and non-directed commercial fishery is defined as not exceeding 5 percent by weight of the total catch landed for each trip.

Rationale: The Council's Scientific and Statistical Committee (Minutes, September, 1986) and NMFS in the FMP (Sections 5.3.1 and 5.5) concluded that the SSB should not be reduced below 20 percent to 40 percent of the level existing before exploitation (Virgin Biomass). They also concluded that current inshore exploitation rates are and have been higher than the level which would maintain the SSB at 20 percent to 40 percent of virgin biomass and if these exploitation rates are not reduced the SSB will be overexploited, even if no fishing occurs on the SSB. The Council has proposed a minimum of 20 percent escapement level as an interim target level, realizing that in the long-term the percentage may have to be increased to assure the stability of the SSB. In computation of the MSY a spawning stock biomass per recruit (SSBR) ratio of 30 percent was used (Section 5.2.3) which is more conservative than the 20 percent level. The Council has included in Amendment Measure 12.6.2 (Action 5) procedures for an annual stock assessment and for an annual assessment of the level of juvenile escapement by geographical area (by state). These assessments will keep the Council apprised of the status of the SSB and the need for increased escapement levels. The Council's SSC further concluded, after reviewing the stock assessment information (Powers et al, 1986; Powers and Scott, 1986; Scott, 1986; and Scott, 1986b), that the high rate of inshore fishing under equilibrium yield conditions has or will reduce the SSB below a range where recruitment overfishing will occur. They further concurred that the SSB will continue to decline over time from state fishery mortality (F) and offshore natural mortality (M) even if no fishing occurs in the EEZ. Sections 5.4 and 5.5 of the FMP support the conclusions of the SSC and recommends to reduce the risk of a subsequent decline in inshore recruitment that the SSB not be reduced below 20 - 40 percent of levels that existed before exploitation. Even though present production is less than MSY (17.4 million pounds), maximum sustainable production will not be reached given present inshore exploitation rates. In addition, limited offshore age-frequency data indicated that survival to the offshore SSB may be decreasing. If the inshore mortality rates are maintained at the levels they appear to be at the present then

it is very likely in the long-run the SSB will be reduced below critical levels, even if no offshore fishing occurs.

The states have been requested to modify their rules to achieve a minimum escapement level of juveniles to the offshore SSB of 20 percent of the number that would have escaped had there been no inshore fishery, so that the trends detected by the SSC and in the FMP are alleviated. Actions by the states, which are ongoing, to achieve this goal would be defeated or greatly prolonged by allowing significant harvest from the EEZ. Section 5.5.2 of the FMP sets forth the acceptable biological catch (ABC) as 0.5 to 2.5 million pounds. The section concludes that additional long-term risk to the SSB of offshore yields of ABC are relatively small but the cumulative affect of this level of offshore yield over a number of years could be large. Offshore yield of 0.5 to 2.5 million pounds will be conservative over the short-run (one to two years). However, a risk to future recruitment still exists and must be considered when actual levels of total allowable catch (TAC) are specified. The Council has, therefore, taken a prudent conservation position by prohibiting directed commercial harvest from the primary area until the 20 percent escapement goal is realized and by prohibiting any harvest, including retention of bycatch, from the secondary areas of the EEZ where the SSB has been more severely impacted (see Table 12-3). The Council recognized that incidental bycatch has been historically taken by the shrimp industry from the EEZ and that it has and will be taken by commercial vessels targeting other species and, therefore, retained a 300,000 pound allocation for such bycatch from the primary area. Such landings must be in conformance with state laws so that state restoration efforts are not circumvented. Landing of red drum by vessels operating under the bycatch allocations will be prohibited by regulation when those allocations are reached.

The impacts of the proposed alternative have been described in the FMP's RIR and IRFA for 1987. The Amendment would essentially continue the same level of impact for subsequent years until the escapement goal is reached or stock assessment analyses indicate a sufficient standing stock of SSB to allow increased harvest. The only change affecting commercial landings by the amendment is the requirement that bycatch from the non-directed commercial fishery be landed in conformance with state law rather than exempt from state law as provided for by the FMP. Such landings from vessels would be limited to possession limits for fish over 30 inches of two fish per crew member for Louisiana and Mississippi landings and zero fish for Texas and Florida landings, which could reduce landings under the 100,000 pound allocation unless such fish were landed in Alabama. The principal entities affected would be purse seine vessels which are prohibited by state law from landing red drum from the EEZ in all states except Alabama, which was their major landing area prior to the FMP. Contrasted to this potential impact on these users is the impact on the states of the FMP provision exempting such landings from state law (a provision currently in litigation between three states and the Secretary). The State of Texas estimates an annual enforcement cost to that State of \$330,000 to attempt insure such fish were legally harvested from the EEZ rather than illegally taken from state jurisdiction (correspondence from Gary Matlock, date 3/10/87). Presumably enforcement costs for the other states (excluding Alabama) would be similar. During the period December 19, 1986 through February 28, 1987 approximately 900 pounds of bycatch was landed under the FMP.

12.6.3.2 Recreational Harvest

The Council, after reviewing public testimony and AP, SSC, and NMFS comments on alternative bag limits, has selected a recreational bag limit for the primary area of the EEZ of one fish per person per trip. The Council is further proposing as measures of the Amendment that sale of fish caught under the bag limit be prohibited and such fish be landed in conformance with state law of the state where landed.

Rationale: Recreational anglers have historically landed EEZ catches of red drum which ranged between 34 thousand and 2.1 million pounds annually and averaged 854 thousand pounds during the period 1979-1985 (Table 12-1). The Council proposes to prohibit any retention of fish, by recreational or commercial users, from the secondary areas of the EEZ. The Secretarial FMP provides for a bag limit of one fish per person per trip. States bordering the primary area of the EEZ currently allow harvest of two fish greater than 30 or 32 inches.

The bag limit of one fish per trip would be the same as that of the Secretarial FMP. It results in a 63 percent reduction in average recreational EEZ catch for the period 1979-1985 and in an estimated harvest level of 325,000 pounds. It is a more conservative action than the two fish bag limit alternative or than existed before implementation of the FMP and would, therefore, contribute to restoration of the SSB.

This bag limit was recommended by the charter boat operators testifying at public hearings as adequate to maintain customer participation in EEZ charter trips. The bag limit will revert to zero if the 325,000 pound allocation is reached during a fishing year.

The FMP requirement that fish be landed in conformance with state law of the state where landed is maintained as it enhances state enforcement efforts related to size limits and provides an avenue for the states to adopt more restrictive rules than exist for the EEZ (such as a zero bag limit) in support of their efforts to restore the SSB. The prohibition on sale of fish caught under a bag limit is to enhance enforcement of state and federal rules and to separate catches for recreational and commercial components of the fishery. No economic impact is anticipated as a result of the no-sale provision, as recreational fishermen landing one fish are unlikely to sell their catch. Persons who sell their catch in states bordering the primary area must obtain a commercial hook-and-line license (or similar commercial license) and their catch would fall under the allocation and rules for non-directed commercial fishery.

Rejected Alternatives to Action 6

a. Specify a directed commercial harvest level

Rationale: As indicated in the rationale for the proposed alternative the scientific community has expressed concern over the future viability of the SSB and stock unless actions are taken to reduce inshore fishing mortality and the states are attempting to reverse this trend. The risk analyses of the stock assessment (Powers et al, 1986; Powers and Scott, 1986) show significant risk to the SSB associated with long-term EEZ harvest levels as high as the mid range of ABC (0.35-2.5 million pounds). The Council has allowed a bycatch level which allows

the directed fishery to operate targeting other species and retain incidental bycatch of red drum, much of which is killed in harvesting activity. The total bycatch and recreational harvest allocations approach one-fourth of the maximum level of ABC. To allow harvest beyond this level, considering the risk, would be a foolhardy action, not in the best interests of the resource. The Council will conduct annual or periodic stock assessments (as new data become available) and have elected to respecify allocations by plan amendment which provide the flexibility to revise and adjust any aspect of the FMP based on these data.

b. Specify a bag limit of zero

Implementation of a zero fish bag limit for the primary area of the EEZ would be the most conservative of the alternatives. If adopted it would help to restore the SSB more rapidly thereby resulting in reduction of the fishing restrictions applied to the inshore fishery. It would also be on parity with the Amendment prohibition on directed commercial harvest from the primary area and with the zero retention level for all users in the secondary areas of the EEZ. It would adversely impact charter vessels based in states bordering the primary area that target red drum from the EEZ during certain periods of the year.

It would also impact sponsors and participants in "redfish rodeos" and other fishing tournaments which are common in states bordering the primary area. The recreational allocation of 325,000 pounds is basically equal to the commercial bycatch allocation of 300,000 pounds.

c. Specify a bag limit of two fish

Rationale: This bag limit would result in a reduction of 46 percent over the unregulated harvest from the EEZ existing before implementation of the FMP and result in an estimated harvest level of 461,000 pounds. It could, however, result in an increase in harvest level of 42 percent greater than currently allowed under the FMP. It would be the least conservative alternative in restoring the SSB.

ACTION 7: RESOURCE ASSESSMENT PROGRAM (RAP)

Section 12.6.5 is deleted in its entirety and is moved and discussed under Section 12.9, Research and Data Requirements.

Rationale: There is no reason to include a research program as a management measure of an FMP. Research has been carried out in support of the Council's other seven FMPs without being set forth as a management measure since such measures are usually codified as regulation. This research program is more properly discussed under Section 12.9. All FMP regulations have a provision allowing the RD to carry out research which may conflict with existing rules.

Rejected Alternative to Action 7

a. Retain the RAP as a management measure.

Rationale: As indicated above this is improper in that management measures are actions which are set forth by regulation. That is not possible for the RAP. The RAP provisions will change from year to year.

ACTION 8: PERMIT AND LANDING REQUIREMENTS

Section 12.6.6 is renumbered and revised by deleting "directed and" by adding language as follows:

12.6.4 Permit and Landing Requirements

Permitting and landing requirements for vessels operating in the directed fishery for red drum taken from the primary area of the EEZ shall be established when a TAC level is determined which allows that fishery. Red drum taken as bycatch shall be landed in conformance with state laws. All red drum from the directed commercial fishery from the EEZ shall be treated as imports into the state of landing and shall be subject to existing state law for documentation of sale and transport. In the event no such state laws exist, such fish must be accompanied by the NMFS documentation to the final retail distributor. Vessels landing or possessing on board red drum in excess of five percent of the total weight of all catch per trip are considered as fishing on the directed fishery.

Rationale: The FMP and its regulations currently requires permits for participants in directed and non-directed commercial fisheries. The Amendment does not alter the requirement for vessels in the non-directed fishery but provides that permitting and landing requirements shall be specified for vessels in the directed commercial fishery at such time as that fishery is resumed. Fish legally harvested from that fishery would be treated as imports into the states because the larger size of EEZ fish would make most of such catch illegal under the possession laws of the states. It is the Council's intent that such directed harvest, legally taken, be allowed to enter the market under these landing criteria which will be promulgated as regulation when a TAC is specified which allows a directed fishery. Documentation of EEZ catch entering the state market place is necessary to assure that fish landed, not in conformance with state size and possession limits, were legitimately taken from the Primary Area under the FMP provisions. This is necessary so that state rules directed toward providing the long-term escapement level required for maintenance of the offshore SSB are not circumvented thereby defeating that conservation effort. No additional federal, state or industry impacts will occur at this time under the Amendment. The impact of requiring permits for non-directed vessels has been described in the RIR/IRFA for the FMP.

Rejected Alternatives to Action 8

- a. Retain FMP provision, i.e., permits for vessels in directed and non-directed commercial fishery only.

Rationale: This measure was modified because the Council felt it was not necessary to permit vessels in the directed fishery at this time.

- b. Do not require any permits.

Rationale: Permits are necessary to identify principal harvesters from the Primary Area to allow collection of information (see FMP Section 12.6.7), to document EEZ catches, and to monitor catch levels within quota limitations.

- c. Require permits of dealers handling red drum.

Rationale: This was rejected because these dealers are known by NMFS and state port agents. Such dealers are required to report EEZ catches under the FMP.

d. Require observers on vessels.

Rationale: This was considered and rejected as unnecessary at this time since the directed commercial fishery currently is not allowed. In the draft Amendment (Section 12.6.4) federal cost for observers to document legally harvested EEZ catch was estimated at approximately \$15,000. There may be more cost efficient methods of documenting such catch than by observers which will be considered when the directed fishery is resumed.

e. Do not require documentation of fish harvested from EEZ.

Rationale: This system will not be implemented under the regulations of the current Amendment but without such documentation state rules designed for restoration/maintenance of an adequate SSB could be circumvented and most of the EEZ catch as a result of their larger length would be illegal under state possession laws.

f. Require permits for shrimp vessels and recreational charter and guide vessels landing more than 100 pounds per trip.

Rationale: This provision of the draft Amendment was rejected by the Council, after reviewing NMFS comments, as unnecessarily burdensome on participants and not necessary for obtaining catch information from these entities.

ACTION 9: REPORTING REQUIREMENTS

Section 12.6.7 is renumbered and revised by adding the following paragraph:

12.6.5 Management Measure #5: Reporting Requirements

[Retain Existing Text, Adding Following to Paragraph Two:]

All dealers and processors purchasing red drum directly from fishermen for resale, or persons landing red drum for transport prior to sale, or processing will be required to report (if selected), the poundage purchased (or landed), type of gear, price, estimated average size, area caught, and date.

Rationale: This is a cosmetic change to the text of the FMP and in no way changes the FMP regulations on reporting. This change just identifies to NMFS those data elements the Council felt were important. These data elements are currently being collected under regulations of the FMP.

The impact of the proposed measure on dealers and persons landing red drum for transport will consist of burden hours associated with reporting. Reporting burdens for dealers including those with transport vehicles, were approved under the FMP and requirements of the Paperwork Reduction Act and is discussed in the RIR for the FMP.

ACTION 10: PROHIBITION OF SALE/TRANSFER AT SEA

Section 12.6.8 is renumbered and all text retained unchanged as follows:

12.6.6 Prohibit the Sale or Transfer of Fish at Sea

[No change to text.]

ACTION 11: EXEMPTION FROM STATE LAWS

Section 12.6.9 is deleted in its entirety.

Rationale: This section provided an exemption to state landing, possession, or sales laws for fish legally harvested from the EEZ. It would result in supersession of state laws which are designed to rebuild and maintain the stock. It is deleted because such a measure would adversely impact the cooperative state/federal approach to restoration/maintenance of the stock proposed under this Amendment. It is not necessary since 12.6.6 (Action 8) will provide an avenue for marketing EEZ fish caught in the directed commercial fishery (when that fishery is allowed) by requiring a documentation trail through the market place for legally harvested fish. Therefore, there would be no anticipated impact on participants in the directed commercial fishery by elimination of this provision. The impact on vessels in the non-directed commercial fishery is discussed under 12.6.3.1.

Rejected Alternative to Action 11

a. No action.

Rationale: See rationale for preferred alternative. Impact on the states is discussed under 12.6.3.1.

ACTION 12: RECOMMENDATIONS TO STATES

Section 12.7.1 is revised as follows and Section 12.7.4 is deleted (see Action 11) in its entirety:

12.7.1 Increased Escapement to Spawning Stock Biomass (SSB)

The Gulf Council in the course of review of the Secretarial Red Drum Fishery Management Plan (FMP) and the associated stock assessment for the red drum resource was confronted with the fact that the current data indicate that there is inadequate escapement of juvenile red drum from state waters for long-term maintenance of an adequate offshore spawning stock, under current or recent harvesting restrictions. The Council, therefore, requested each state to modify its rules regulating the state fisheries so that a minimum of 20 percent of the juvenile red drum (that would have escaped had there been no inshore fishery) are allowed to survive and escape to the offshore spawning stock in order to assure continuation of these fisheries. The Council in this amendment for the offshore fishery has an objective of maintaining an adequate spawning stock biomass, but needs the assistance of the states in assuring that annual recruitment to the offshore waters is adequate to obtain that objective.

V. Environmental Consequences

The actions proposed in this amendment have no adverse impact on the physical environment.

The effect of these actions is to prohibit any harvesting activity from the Secondary Areas of the EEZ (Figure 1) where scientific information suggests the spawning stock biomass has been reduced as a result of historically high fishing mortality on the inshore fisheries which provide recruitment to the SSB and where state efforts to increase the size of the SSB include prohibition on retention of adult fish. And to allow a controlled harvest as commercial bycatch and restricted recreational harvest from the Primary Area of the EEZ equivalent to one-fourth of the maximum level of ABC. A stock assessment procedure is established to provide annual or periodic assessments of the escapement level of juvenile fish by state, and of ABC and TAC. Allocations of the surplus SSB, if any, among users will be by plan amendment when stock assessment information indicates that TAC may be increased.

The FMP and this Amendment provide for control of a previously unregulated fishery in the EEZ in order to prevent recruitment overfishing of the SSB and provide for restoration of the SSB in areas where it has been historically reduced, while allowing a regulated commercial bycatch and recreational harvest consistent with the stock assessment information.

The economic and social impacts include a significant reduction in harvest from the EEZ over that which existed in the unregulated fishery in 1984 through 1986. This economic impact, which primarily effects 12 vessels, has been described in the EIS for the FMP. The Amendment will continue a reduction in the unregulated harvest level but provides for a limited harvest consistent with the conservation and rebuilding of the stocks. The prohibition on directed commercial harvest from the Primary Area is continued by the Amendment until rebuilding the SSB is accomplished or until new stock assessment information supports a plan amendment to allow such an allocation. The prohibition on any harvest from the Secondary Areas has a very minor economic impact in that less than 2 percent of the EEZ harvest come from those areas prior to the implementation of the Amendment (or FMP), possibly due to decreased abundance of the SSB. These prohibitions will have a longer term benefit through restoration of the SSB in all those areas. State actions recommended under the Amendment will similarly have a beneficial effect by increasing escapement to the SSB. Economic impacts on users through the Amendment will consist of a potential for reduction of bycatch landed by participants in the non-directed commercial fishery.

Economic impacts on the states associated with increased enforcement cost related to the FMP exemption of commercial landings from state law are eliminated. These annual costs were estimated by one state to be \$330,000 and may have totaled \$1 million for all affected states.

The proposed actions of the Amendment have no anticipated impact on threatened or endangered species or on marine mammals. A Section (7) consultation was held for the FMP with a "no jeopardy opinion" being rendered. The Amendment does not materially alter provisions of the FMP, except to prohibit harvest from the Secondary Areas (Figure 1) and delete the exemption to state laws.

VI. Conclusions

o Mitigating Measures Related to the Proposed Action

None.

o Unavoidable Adverse Effects

Continuation of FMP prohibition on harvest.

o Relation Between Local, Short-term Users of the Resource and Enhancement of Long-Term Productivity

Short-term utilization of the resource by up to 12 purse seine vessels was significantly reduced by the FMP and by the emergency rule promulgated by the Secretary and is discussed in the EAs and EIS submitted with those actions. The Amendment continues this reduction since the level of harvest under the unregulated condition would have caused recruitment overfishing impacting both the inshore and EEZ fisheries and the stability of the stock. Through these actions the stock will be maintained, restored, and stabilized yielding a greater long-term productivity.

o Irreversible or Irretrievable Commitment of Resources

Federal enforcement commitment is unchanged and state enforcement commitment is significantly reduced.

RECOMMENDATIONS

Having reviewed the environmental assessment and available information relating to the proposed actions, I have determined that there will be no significant environmental impact resulting from the proposed actions.

Approved: _____
Title

Date

RESPONSIBLE AGENCIES

Gulf of Mexico Fishery Management Council
Lincoln Center, Suite 881
5401 West Kennedy Boulevard
Tampa, Florida 33609
(813) 228-2815

LIST OF AGENCIES AND PERSONS CONSULTED

Gulf of Mexico Fishery Management Council
- Red Drum Advisory Panel
- Scientific and Statistical Committee
- Special Red Drum Scientific Committee

National Marine Fisheries Service
- Southeast Fishery Center
- Miami Laboratory
- Panama City Laboratory
- Mississippi Laboratories
- Southeast Regional Office

State Coastal Zone Programs
- Florida
- Alabama
- Mississippi
- Louisiana

LIST OF PREPARERS

Gulf of Mexico Fishery Management Council
- Wayne E. Swingle, Biologist
- Paul J. Hooker, Ph.D., Economist

Southeast Fishery Center, NMFS
- Joseph Powers, Ph.D., Stock Assessments

LOCATION AND DATES OF PUBLIC HEARINGS

Public hearings were held from 7:00 p.m. to 10:00 p.m. on the following dates:

April 9, 1987

Fort Myers Tourist Center
Patio of the Fort Myers Exhibition Hall
2254 Edward Drive
Post Office Box CC
Ft. Myers, Florida 33902

April 13, 1987

Ramada Inn Hotel - Westshore
5303 West Kennedy Boulevard
Tampa, Florida 33609

Texas A&M Research and Extension Center
Highway 44 (4 miles west of the airport)
Corpus Christi, Texas

April 14, 1987

Mobile Municipal Auditorium
401 Auditorium Drive
Mobile, Alabama

Harris County Courthouse Annex
16603 Bucanner
Clear Lake City, Texas

April 15, 1987

Biloxi Cultural Center
Assembly Room
217 Lameuse
Biloxi, Mississippi

University of Southwestern Louisiana Conference Center
2 Rex Street, USL Campus
Lafayette, Louisiana

April 16, 1987

University of New Orleans
Auditorium BA-165
Lake Front
New Orleans, Louisiana

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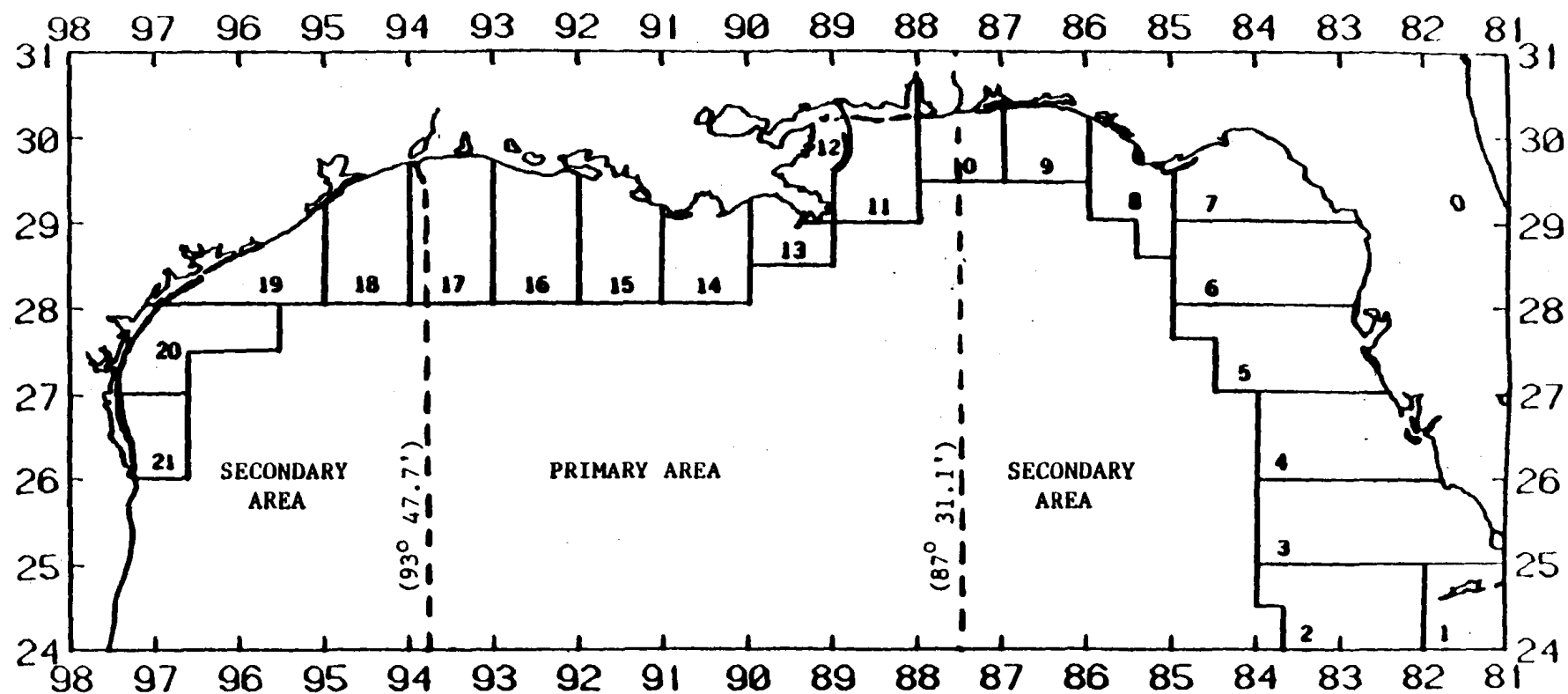


Figure 1. Statistical zones in the Gulf of Mexico

Table 12-1. Reported Commercial and Estimated Recreational Red Drum Landings
(thousands of pounds) in the Gulf of Mexico, 1979-1986

Year	Recreational ¹			Commercial ²					
	State Waters ³	EEZ	Total ⁴	State Waters	EEZ	Total ⁴	State Waters	EEZ	Total
1979	8,536	34	8,570	2,691	80	2,771	11,227	114	11,341
1980	6,863	1,282	8,145	2,681	48	2,729	9,544	1,330	10,874
1981	5,351	306	5,657	2,717	31	2,748	8,068	337	8,405
1982	10,259	475	10,734	2,348	77	2,425	12,607	552	13,159
1983	5,397	2,065	7,462	2,881	206	3,087	8,278	2,271	10,549
1984	4,934	1,491	6,425	3,347	987	4,334	8,281	2,478	10,759
1985	6,212	324	6,536	2,886	3,457	6,343	9,098	3,781	12,879
1986 ^{5/}	3,484	232	4,080	5,346	8,184	13,535	10,223	7,268	17,615
Total ^{6/}	47,552	5,977	53,524	19,551	4,886	24,437	67,103	10,863	77,960
Average ^{6/}	6,793	854	7,647	2,793	698	3,491	9,580	1,552	11,138

¹Source: Marine Recreational Fishery Statistics Survey data provide to NMFS Southeast Fisheries Center by D. Duel, December 3, 1986. ²Source: NMFS Landing Statistics, 1979-1985; 1985 data are preliminary. ³Landings in state waters include landings for which the area of capture is unknown. ⁴May not equal column totals due to rounding.

⁵ Preliminary data subject to change, Texas data and headboat data not available

⁶ for 1979-1985

Table 12-3. Summary of Red Drum Stock Density from NMFS Aerial Survey Conducted in 1986.

<u>Area</u>	<u>Pounds Per Square Nautical Mile*</u>
South Texas	855
North Texas	1286
Louisiana ^{1/}	3501
Central Gulf ^{2/}	1247
North Florida	110
Central Florida	87
South Florida	496

* inside 12 fathoms

^{1/} West of Mississippi River

^{2/} East Louisiana, Mississippi, and Alabama

Total Estimated Biomass = 35 million pounds. Expansion from fish sighted in strip transects; therefore, minimum estimate.

Table 12.4 Summary of Movement of Tagged Red Drum over 500 mm (TL) Computed From Texas Parks and Wildlife Department Data ^{1/}.

Length Range ^{2/} (mm)	Number of Fish	Days of Freedom			Miles Between Tagging & Recovery Sites		
		Minimum	Maximum	Average	Minimum	Maximum	Average
500-599	176	1	710	215	0	55	5.7
600-699	120	18	796	325	0	67	8.8
700-799	19	30	641	428	0	66	13.5
800-899	3	333	618	523	2	20	7.9
900-914	1	-	-	5078	-	-	74.6

^{1/} Source: Green, L. 1986. Fish tagging on Texas Coast, 1950 - 1975 (Appendix G). Management Data Series Number 99. Texas Parks and Wildlife Department. 206p.

^{2/} Size at recovery.