# AMENDMENT 1

# TO THE

# FISHERY MANAGEMENT PLAN

# FOR

# CORAL AND CORAL REEFS

(Including Environmental Assessment,

Regulatory Impact Review, and

Initial Regulatory Flexibility Analysis)

Gulf of Mexico Fishery Management Council

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## I. Introduction

The Fishery Management Plan for Corals and Coral Reefs (FMP) was submitted by the Gulf and South Atlantic Fishery Management Councils for Secretarial approval on April 19, 1982, and was finally implemented on August 22, 1984 (49 FR 29607). The current FMP set optimum yield (OY) for stony corals and sea fans at zero, except as may be authorized for scientific and educational purposes under permit issued by the Southeast Regional Director (RD) of National Marine Fisheries Service (NMFS). OY for octocorals, except for sea fans, was set at the level harvested by U.S. fishermen with the expected level of harvest estimated to be 1,463 colonies annually from the exclusive economic zone (EEZ). The FMP provides that the condition of the stocks of octocorals and the harvest be monitored so that the Secretary can take appropriate action should there be a threat of overfishing. Management Measure 1 establishes a procedure whereby the Secretary through regulatory amendment or emergency action can restrict harvest of one or more species of octocorals to a specific level or restrict harvest from specific areas or restrict methods of harvest, if in the judgement of the Gulf of Mexico and South Atlantic Fishery Management Councils (Councils) there is a threat of localized depletion or overfishing of any of the octocorals.

Persons utilizing chemicals to collect fish in coral areas must first obtain a permit from the RD or the State of Florida where most collecting occurs. Persons who propose collecting prohibited corals or any coral from the habitat areas of particular concern (HAPCs) established by the FMP must also obtain a scientific permit from the RD. Regulations promulgated through the FMP prohibit non-permitted persons from damaging, harming, killing, or collecting prohibited coral which includes all stony coral, sea fans, and coral reefs and coral in HAPCs. Coral taken incidentally in other fishing activities must be returned to the water in the area of fishing as soon as possible, except that scallop and groundfish vessels with unsorted catch may land coral taken incidentally, but not sell it. Groundfish vessels operate in the central Gulf area where there is generally no stony coral. Scallop vessels generally operate off Cape Canaveral and Apalachicola, Florida.

## II. Description of the Fishery and Utilization Patterns

Since the FMP was implemented, NMFS has issued the following number of annual permits for the harvest of prohibited coral:

| FY | Permits |
|---|---|
| 1985 | 4 |
| 1986 | 1 |
| 1987 | 5 |
| 1988 | 3 |
| 1989 | 5 |
| 1990 | 2 |

All of these permits were issued to universities or research institutions.

In the South Florida area, the marine life industry harvests octocorals (primarily gorgonions) for the aquarium trade. There are probably less than 100 commercial collectors. At the time of drafting the FMP, this harvest level was estimated to be 5,845 colonies annually, 1,463 of which came from the EEZ. Current harvest levels are unknown, but an industry spokesman has estimated the 1989 harvest from the EEZ at about 10,000 to 20,000 colonies, and collectors usually wait for an order before harvesting octocorals (Dr. Henry Feddern, personal communication).

A rough estimate of the abundance of octocorals on a one-meter wide transect across the 6,000 patch reefs of the Florida Keys of at least 30 million colonies was made by Jennifer Wheaton (personal communication). This can be extrapolated for the entire surface of the patch reefs to be 4.7 billion colonies. Octocorals also occur on hard bottoms.

The Florida Department of Natural Resources (FDNR) is instituting a licensing and reporting system under the state trip ticket system in 1990 for products landed by the marine life industry, including soft corals by number (Dr. Robert Muller, personal communication). This system will include and identify products landed from federal and state waters.

Currently, the State does not restrict the harvest of octocorals other than the two species of sea fans outside of its parks, sanctuaries, and preserves[1]. The FMP similarly does not currently restrict harvest of octocorals, other than the two species of sea fans, outside of the HAPCs but monitors changes in abundance through the scientific community and authorizes the Secretary at the request of the Councils to prevent overfishing of any species or localized area by regulatory action. Neither the Councils nor the State of Florida placed harvest limitations on octocorals because abundance levels were high, especially in State waters, and directed harvest levels were moderate[2]. Octocorals rejuvenate removed portions and grow much faster than stony coral.

Incidental bycatch by trawls generally consists of sea pansies (Renilla) and sea whips (Leptogorgia), which are widely distributed. Leptogorgia is common along Gulf beaches in windrows following storms.

## III. Statement of the Problem

NMFS in July, 1989, published revised guidelines for fishery management plans that interpretatively address the Magnuson Act national standards (50 CFR Part 602). These guidelines require each FMP to include a scientifically measurable definition of overfishing and an action plan to arrest overfishing should it occur. The Councils reviewed these requirements and concluded that overfishing of corals could not occur; and, therefore, the plan was consistent with the guidelines since the provisions of the FMP provided for harvest of prohibited coral only for scientific and educational purposes by permit controlled by NMFS and provided a procedure to prevent overfishing of other corals. NMFS determined that an amendment to the plan was necessary because it did not include a measurable definition of overfishing.

## IV. Proposed Action

The actions proposed in this Amendment to the FMP are as follows:

- inclusion of octocorals in the management unit as a controlled species;
- restatement of Optimum Yield (OY) for the fishery to include octocorals;
- inclusion of a definition of overfishing
- inclusion of a permit system to take octocorals

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1 The Florida Marine Fisheries Commission (FMFC) will begin review of the marine life industry in 1990 to assess whether regulation is needed. Commercial harvesters will be requested to have a permit.

2 Directed harvest for aquarium use was believed to affect nine species (FMP Section 5.1.1.5). Testimony from marine life collectors suggests that at least 14 species are currently collected.

- o provide reporting requirements for those taking corals under federal permit
- o inclusion of a FMP section on Vessel Safety Considerations
- o revision of the FMP section on Habitat of the Stocks.

ACTION 1: The Management Unit

A. **Preferred Option**

**The management unit consists of coral reefs, stony corals, and octocorals including the two sea fans (Gorgonia ventalina and Gorgonia flabellum) in the EEZ in the jurisdiction of the Gulf of Mexico and South Atlantic Fishery Management Councils.**

**The Species Included**

**Included in this management unit are:**

**Coral Reefs: The hard bottoms, deepwater banks, patch reefs, and outer bank reefs as defined in this plan.**

**Stony Corals: For the purpose of this plan, includes species belonging to the Class Hydrozoa (fire corals and other hydrocorals) and Class Anthozoa, Subclass Zoantharia (stony corals and black corals).**

**Octocorals: Includes Class Anthozoa, Subclass Octocorallia (soft corals, horny corals, sea fans, whips, and pens).**

Rationale:

a. Ecological: The FMP implemented in 1984 included coral reefs, stony corals, and octocorals in the management unit but only regulated the taking of reefs, stony corals, and sea fans. No regulation of the other octocorals was provided unless they occurred in HAPCs. An OY for those octocorals was established from a crude estimate of the 1981 harvest by the Florida marine life trade. The estimated harvest was 5,845 colonies of which 1,463 came from the EEZ. OY was set at all octocorals that may be harvested by U.S. fishermen. The current (1989) commercial harvest from the EEZ is estimated at 10,000 to 20,000 colonies (Dr. Henry Feddern, personal communication). The amount of octocorals taken recreationally for personal use in aquaria is not known but is believed to be a fraction of that taken commercially.

The Councils noted that should harvest of octocorals become accelerated, they may use a procedure whereby if the Scientific and Statistical Committee or other sources notified the Councils of excessive harvest, the Councils would request the Secretary to utilize any available procedures to restrict the harvest. Neither the Councils nor anyone else has an accurate estimate of the current harvest of octocorals; although it is generally believed to be well within the ability of the resource to maintain itself.

The State of Florida is initiating a monitoring process for all commercial marine products which would include octocorals. Almost all of the directed harvest of octocorals in the management area comes from Florida waters or the adjacent EEZ. In the absence of federal regulation, Florida could regulate its own registered vessels in the taking of octocorals. Florida regulations currently protect only living stony corals and sea fans.

Octocorals are principally found on hard bottoms where they provide cover and habitat for fishes and invertebrates. The octocoral habitat is particularly critical to lobsters in the 20-40 mm size range (Jennifer Wheaton, personal communication).

While the current fishery for octocorals is well within the capacity of the resource to maintain itself, it is possible that harvest could become accelerated on some species and recruitment overfishing could occur. The Councils' technical advisors have recommended that all octocorals be included in the management unit and that a limit be placed on the harvest of species other than sea fans which are to remain as prohibited corals.

b. Socioeconomic: With octocorals included in the management unit, they must be included in the definition of overfishing, OY, and a program to prevent overfishing. Inclusion of octocorals in the management unit is bound to add to management costs, especially that octocorals currently appear to have the potential for a growing commercial utilization. This inclusion could have minor or major economic and social implications depending on the measures adopted to manage this resource. Reportedly, there are under 100 commercial harvesters of octocorals, and the wholesale value of the harvest is estimated to range from $40,000 to $120,000. Because the number of recreational users and the amount of their harvest is not known, it is not possible to evaluate their activity at this time.

B. Rejected Alternative

Exclude octocorals from the management unit.

Rationale:

a. Ecological: While octocorals are ecologically important as habitat for important marine species and are aesthetically valuable to recreational divers, the current directed EEZ fishery is estimated to be under 20,000 colonies a year. The standing population of octocorals on the patch reefs of the Florida Keys has been estimated to be above 4.7 billion colonies. There is the concern that harvest could be accelerated on one or more species thus leading toward overfishing of the stocks and depletion of the habitat for other species.

In the absence of management regulations for species in a fishery management plan, however, a state may regulate its registered vessels in the harvest of those species in federal waters. No state currently restricts octocoral harvest.

b. Socioeconomic: There are probably under 100 commercial harvesters of octocorals. The wholesale value of the current estimated harvest is $2 to $6 per colony or $40,000 to $120,000. Exclusion of octocorals from the management unit could mean less potential restrictions on the industry currently exploiting the resource. However, there is also the potential for the users to overfish the resource as eventually to impair the utility of the resource as habitat for several marine species or to support the industry itself.

## ACTION 2: OPTIMUM YIELD (OY)

**A. Preferred Option**

**Section 12.3.1 is revised as follows:**

**OY for coral reefs, stony corals, and sea fans (*Gorgonia ventalina* and *Gorgonia flabellum*), hereafter to be referred to as prohibited corals, in the EEZ is to be zero (0) except as may be authorized for scientific and educational purposes. The level of harvest is expected to be about**

**140 kilograms per year. Harvest of allowable octocorals (those other than sea fans) in the EEZ is not to exceed 50,000 colonies per year. Fishing for octocorals in the EEZ will cease when the quota is reached.**

Rationale:

a. Ecological: This option would allow limited harvest of allowable octocorals in the EEZ somewhat above the current level. It is believed to be conservative and sustainable.

The Councils noted that the conservative estimate of standing stock of allowable octocorals on the patch reefs of the Keys alone is 4.7 billion colonies. Some 14 of the 77 octocoral species are being harvested. This would be 18 percent of the species and, if evenly distributed by number (which is not likely but our best assumption), would comprise a standing stock of 846 million colonies. A very conservative harvest level of one percent would be 8.5 million colonies. The allowable OY of 50,000 colonies would provide an ample harvest for commercial and recreational users until such time as better data become available without compromising the stock.

The Scientific and Statistical Committee of the Gulf Council recommended some level of harvest reflecting current use which would be consistent with this option. Directed harvest of allowable octocorals is occurring almost entirely in and off South Florida (principally Monroe County). The State of Florida currently is not regulating harvest levels of octocorals, but has initiated a program to evaluate the marine life industry that collects marine organisms for the aquarium trade. Since the great majority of the reef tracts lies within or adjacent to State jurisdiction, the implementation of an EEZ harvest limitation level by the FMP will be difficult to enforce until the State concludes that data support regulation of octocorals within its jurisdiction. There is little coral within other state jurisdictions.

b. Socioeconomic: A continuation of the current harvest of allowable octocorals would not disrupt current business practices of the marine life harvesters. If at the time of implementation the currently perceived level of use is maintained, the immediate impact of this redefinition is expected to be minimal. If demand has significantly increased, the net effect of this measure may no longer be minimal. On the negative side, growth of the commercial industry may be stunted. On the positive side, the new OY could prevent the eventual occurrence of over-commitment of resources into the industry and at the same time preserve the value of the resource to non-consumptive users. Non-disturbance of ecological balance and subsequent prevention of negative impacts on other fisheries may also be achieved. At present, however, it is not known what precise harvest level would be deleterious to the fishery as a whole, but a harvest level of 50,000 colonies appears to be acceptable to harvesters who provided testimony at public hearings. This quota applies only to the EEZ, and filling of this quota and closure of the harvest does not apply to harvest in state waters.

B. Rejected Alternative:

Section 12.3.1 is revised as follows:

OY for species in this management unit which includes coral reefs, stony corals, and sea fans is to be zero (0) except as may be authorized for scientific and educational purposes. The level of harvest is expected to be about 140 kilograms per year. (This option, consistent with Action 1, Option B, excludes octocorals from the management unit.)

Rationale:

See rationale for Action 1, Option B.

C. Rejected Alternative:

Section 12.3.1 is revised as follows:

OY for species in this management unit which includes coral reefs, stony corals, and octocorals is to be zero (0) except as may be authorized for scientific and educational purposes. The level of harvest is expected to be about 140 kilograms per year.

Rationale:

a. Ecological: This option includes all octocorals as prohibited species available only under very limited scientific collecting. The exclusion of octocorals from harvest retains them as habitat for lobsters and fishes that inhabit the hard bottoms.

b. Socioeconomic: An OY of zero simply closes out commercial and recreational harvest of allowable octocorals from the EEZ. The industry is mainly composed of marine life dealers who collect marine specimens for the aquarium trade. An estimate of harvest from the EEZ by this group has been made at 10,000 to 20,000 colonies valued at about $2 to $6 per colony at the wholesale level and about $18 or more per colony at the retail level (Dr. Henry Feddern, personal communication). There also may be some collecting by individual hobbyists, but the extent of this take is unknown.

## ACTION 3: DEFINITION OF OVERFISHING

**A. Preferred Alternative: Section 5 of the FMP is amended to add:**

**Overfishing is defined as an annual level of harvest that exceeds OY.**

Rationale:

a. Ecological: OY for coral reefs, stony corals, and sea fans is set at zero. OY for allowable octocorals is to be 50,000 colonies per year, a scientifically acceptable level of harvest well within the sustainable yield of the resource.

b. Socioeconomic: This action provides the required definition of overfishing. The only change is a restriction of harvest of octocorals which is discussed under Action 2, OY.

B. Rejected Alternative -- No Action -- No definition of overfishing.

Discussion: If this alternative was selected, the FMP would not be in compliance with 50 CFR Part 602.11 regarding overfishing.

## ACTION 4: REVISION OF MANAGEMENT MEASURE 1

**A. Preferred Option: Add octocorals to the managed corals.**

**Management Measure 1 of the FMP is revised as follows:**

**Prohibit the taking of stony corals or octocorals or the destruction of these corals and coral reefs in the EEZ of the Gulf of Mexico and South Atlantic Fishery Management Councils' geographic area of authority, except as provided by permit in this plan.**

Rationale:

a. Ecological: This action adds octocorals other than sea fans, which are already included, to the regulated species. It would regulate the harvest of these species to maintain harvest levels within OY.

b. Socioeconomic: The proposed allowable level of harvest of octocorals is judged to be adequate to supply current users and harvesters.

B. Rejected Alternative -- No change in Measure 1

Measure 1: Prohibit the taking of stony corals or sea fans or destruction of these corals and coral reefs in the EEZ of the Gulf and South Atlantic Fishery Management Councils' geographical area of authority, except as provided for by permit in this plan.

Rationale:

a. Ecological: This alternative is in conflict with Action 2 because it would allow overfishing of octocorals which had not previously been included as prohibited species.

b. Socioeconomic: See rationale for Action 2.

**ACTION 5: SUPPLEMENT TO MANAGEMENT MEASURE 2**

**A. Preferred Option: Management Measure 2A is added as follows:**

**Measure 2A:**

**A valid federal or state of landing permit is required for any person harvesting allowable octocorals in the EEZ, and any person using a state or federal permit to take octocorals in the EEZ must agree that catch and gear must conform to regulations in the state of landing or federal regulation regardless of where harvested; and if state regulations differ from federal regulations, those harvesting must comply with the more restrictive regulations. A closure on reaching the quota in federal waters is not intended to affect harvest in state waters, nor is such a closure in state waters intended to affect harvest in federal waters.**

**The regional director of NMFS is authorized to issue a recreational permit with a fee of $5.00 per year which would allow take of a daily bag limit of octocorals other than sea fans. A commercial permit with a fee of administrative cost of issuance (estimated cost about $20.00) would allow harvest without a daily bag limit.**

Rationale:

a. Ecological: The permit system for taking allowable octocorals would identify harvesters and allow monitoring of the catch to assure that OY is not exceeded. Florida has begun to monitor commercial harvest with trip tickets, but recreational take is not monitored. Florida has, however, stated that it can determine the amount of the catch with samples of license holders. This fishery is almost entirely located in South Florida. That state is developing a plan for the marine life fishery and will regulate the harvest of all forms of marine life. In the absence of license or permit requirements by the state where landed, a federal permit is required to take or possess octocorals in the EEZ.

b. Socioeconomic: A permit system utilizing existing state commercial and recreational permits (or in their absence, federal permits) to harvest octocorals would provide a mechanism to identify harvesters

in order to monitor catch. Of the states having licenses which apply to harvest of octocorals, only Florida with its commercial marine life permit monitors octocoral catch and is likely to propose regulations for state waters. Because almost all of the known current harvest of allowable octocorals occurs off Florida where state permits are already required, the number of federal permits issued is expected to be low.

The requirement that a person using a state or federal permit for octocorals to fish in the EEZ must agree to abide by the more stringent of state or federal harvest regulations regardless of where harvested currently would require conformance to federal regulations; as no state currently has harvest regulations. Essentially, this would require that recreational harvesters who fish in the EEZ and state waters must abide by the federal bag limit and that octocorals taken incidentally without a permit (except for the groundfish and scallop vessel exclusions) must return the octocorals in state as well as federal waters. Because octocorals are sessile organisms, a separate OY has been established for federal waters and a closure on reaching a quota should not deter fishing in another area where a quota has not been attained.

The only significant change would be the application of the federal bag limit to recreational harvesters in Florida waters. However, the limit of six colonies per person per day was deemed to be ample and acceptable according to public testimony.

Permit, Reporting and Catch Regulations Applicable to Octocorals by State

| | Texas | LA | MS | AL | FL | GA | SC | NC |
|---|---|---|---|---|---|---|---|---|
| Commercial Permit | - | Yes | - | - | Yes | - | - | - |
| Recreational Permit | - | Yes | - | - | Yes | - | - | - |
| Commercial Catch Reported | - | - | - | - | Yes | - | - | - |
| Regulations | - | - | - | - | - | - | - | - |

B. Rejected Alternative -- No permit required for harvesting allowable octocorals

No Action: No federal permit is required for harvest of octocorals in the EEZ.

Rationale:

a. Ecological: No state currently requires a permit specifically for taking octocorals. Florida does have a commercial permit for harvesting marine life for sale. Reporting has begun in 1990 which will provide an estimate of commercial landings of octocorals in that state. In other states where licenses may be required for catch or sale of marine products, which includes octocorals in some instances, there is no program for reporting octocoral catch. In order to determine the extent of this harvest, a federal permit is proposed in absence of a state permit.

b. Socioeconomic: Because almost all known octocoral harvest occurs in or off Florida, most commercial and recreational harvesters are already permitted (licensed) by the state.

**ACTION 6: BAG LIMITS FOR OCTOCORALS**

**A. Preferred Option: Management Measure 2B is added as follows:**

**Measure 2B:**

**Bag Limits for Recreational Permits: A recreational bag limit of six colonies of allowable octocorals per person per day is allowed for recreational permit holders.**

Rationale:

a. Ecological: This action would limit daily harvest in excess of six colonies to those operating under a commercial permit. The commercial users are more easily identified and their catches monitored, particularly in Florida where almost all of the harvest occurs. Recreational users, whose total catch will be difficult to identify, will be restricted to the bag limit.

b. Socioeconomic: This level of catch was recommended by recreational aquarium hobbyists as being adequate. The projected short-term impact of this measure on the recreational sector is negative but expected to be minimal. In the long-term, this measure would enable the resource to support on a continuing basis an increasing number of recreational users. The lower license fee of $5.00 would separate the users. Because most of the harvest is landed in Florida, where a recreational fishing license applies to octocorals, few federal permits are expected to be issued.

## ACTION 7: INCIDENTAL CATCH OF OCTOCORALS

**A. Preferred Option: Management Measure 3 is revised to address bycatch of octocorals as follows:**

**Measure 3: Prohibited species of coral taken incidentally in other fisheries must be returned to the water in the general area of capture as soon as possible. An exception is provided for the groundfish, scallop, or other similar fisheries where the entire unsorted catch is landed. In such instances, the corals may be landed but may not be sold. Allowable octocorals taken as bycatch without a state or federal permit are to be treated as prohibited species.**

Rationale:

a. Ecological: This prohibits taking of prohibited species and octocorals without a permit, even those taken incidentally as bycatch. Allowance is still made for unsorted bycatch in scallop and groundfish fisheries.

b. Socioeconomic: The economic impact of this action is negligible. It merely provides for enforcement of the management of harvest.

The Councils recognize that an unavoidable bycatch of some corals occurs with bottom trawls used to take groundfish, scallops, and shrimp. The catch of the latter is usually sorted with unwanted bycatch returned to the water. In the groundfish and scallop fishery, however, the entire catch is usually landed without sorting. Some corals occur on trawlable bottom and have been taken and landed without apparent damage to the stock. The Councils do not wish to disrupt these fisheries, however, they do not wish to provide a legal opening for the development of a fishery for prohibited corals.

B. Rejected Alternative - No change; Octocorals not to be returned as bycatch.

Measure 3: Stony corals and sea fans taken incidentally in other fisheries must be returned to the water in the general area of capture as soon as possible. An exception is provided for the groundfish, scallop, or other similar fisheries where the entire unsorted catch is landed. In such instances, the corals may be landed but may not be sold.

Rationale:

a. Ecological: Allowing the retention and sale of incidentally harvested octocorals could result in difficulty in enforcement of the management measures and exceeding the OY.

b. Socioeconomic: The current use of octocorals taken as bycatch is not known but is likely to be insignificant.

## ACTION 8: REPORTING OF CATCH

A. **Preferred Option: The Councils recommend a mandatory reporting system for catch statistics of allowable octocorals to be on selection from federal permittees by the Science and Research Director of NMFS.**

Rationale:

a. Ecological: Reporting of catch is necessary to determine if catch exceeds OY and overfishing occurs. Florida will monitor commercial octocoral take landed in Florida. The extent of other catch is not known. The Research and Science Director is authorized to implement a reporting requirement if needed to monitor catch under federal permits.

b. Socioeconomic: The expected number of federal permittees is unknown; however, the number is believed to be small. There would be no duplication of state and federal reporting requirements. Some unquantifiable cost would be borne by some permittees, but benefits afforded by better information are deemed to outweigh such cost.

B. Rejected Alternative: No action -- No federal statistical reporting requirement

Rationale:

a. Ecological: Florida requires reporting of harvest of marine life including octocorals. Recreational catch is not known. Most commercial and recreational catch is landed in Florida.

b. Socioeconomic: Statistical reporting always imposes some cost to users and administrators. However, in this instance the number of federal permits is expected to be low, and catch may be insignificant enough that reporting requirements may be determined by the Science and Research Director to be unnecessary.

## ACTION 9: VESSEL SAFETY CONSIDERATIONS

**Section 13.0 of the FMP is modified by adding a new subsection 13.11 Vessel Safety Considerations to read as follows:**

### 13.11 Vessel Safety Considerations

**No management measures included in the FMP or in this Amendment constrain access to the fishery such that vessel safety would be compromised due to weather or unsafe ocean conditions. Permitted persons may harvest the allowable amount of coral at any time during the fishing year (October 1 - September 30) and, thereby, may avoid unsafe conditions.**

## ACTION 10: HABITAT OF THE STOCKS

**Since corals are sessile animals the FMP section on Description of the Stocks (5.0) and the FMP section on Description of the Habitat (6.0) adequately describe the habitat of the stocks (105 pages in aggregate), including condition of the stocks as well as man-induced and natural impacts to the habitat. Therefore, this Amendment modifies the FMP by including the following updated revised subsections: 6.4 Habitat Information Needs; 6.5 Habitat Protection Programs; and 6.6 Habitat Recommendations. These revisions are in Appendix A.**

## V. Coastal Zone Consistency

Copies of the proposed action were provided to the Coastal Zone Management Offices of the Gulf and South Atlantic states. The action as proposed will be consistent with plans of coastal states.

## VI. Environmental Consequences

Physical Environment - The proposed actions in this amendment will have no adverse impact on the physical environment.

Fishery Resource - The proposed actions are intended to maintain the coral and coral reefs and to prevent them from becoming overfished.

Human Environment - Some marine life fishermen would be affected by restrictions intended to conserve the stocks of octocorals. Long-term benefits are expected to exceed short-term loss.

Effect on Endangered Species and Marine Mammals - The proposed amendment will have no effect on endangered species and marine mammals. A Section 7 consultation was held for this amendment with a "no jeopardy opinion" being rendered. The proposed actions do not alter provisions of the FMP that would affect these animals.

Effect on Wetlands - The proposed amendment will have no effect on any flood plains, wetlands, trails, or rivers.

## VII. Conclusions

The NMFS requires a Regulatory Impact Review (RIR) for all regulatory actions that are of public interest. The RIR does three things: 1) it provides a comprehensive review of the level and incidence of impacts associated with a proposed or final regulatory action, 2) it provides a review of the problems and policy objectives prompting the regulatory proposals and an evaluation of the major alternatives that could be used to solve the problem, and 3) it ensures that the regulatory agency systematically and comprehensively considers all available alternatives so that the public welfare can be enhanced in the most efficient and cost effective way.

The RIR also serves as the basis for determining whether any proposed regulations are major under criteria provided in Executive Order 12291 (E.O. 12291) and whether the proposed regs will have a significant economic impact on a substantial number of small entities in compliance with the Regulatory Flexibility Act of 1980 (RFA). The primary purpose of the RFA is to relieve small businesses, small organizations, and small governmental jurisdictions (collectively: "small entities") of burdensome regulatory and record-keeping requirements. An Initial Regulatory Flexibility Analysis (IRFA) has been done as part of the RIR to determine whether the requirements pursuant to this amendment, if promulgated, would not have a significant effect on a substantial number of small entities.

The analyses of the impacts of alternative measures considered under this amendment have been done in previous sections and are deemed to satisfy the basic elements for RIR/IRFA. Table 1 is a summary of impacts of the proposed and rejected measures.

TABLE 1
Summary of Impacts

| Actions | Preferred Option | Rejected Option |
|---|---|---|
| Action 1 | + or - | - or + |
| Action 2 | - | + or - |
| Action 3 | - or + | Will not meet regulatory guidelines |
| Action 4 | - | + or - |
| Action 5 | no impact | no impact |
| Action 6 | - or o short term, + long term | N/A |
| Action 7 | no impact | |
| Action 8 | - short term, + long term | N/A |
| Action 9 | no short term impact; + long term | N/A |
| Action 10 | no short term impact; + long term | N/A |

Mitigating Measures Related to the Proposed Action - No significant environmental impacts are expected; therefore, on mitigating actions are proposed.

Unavoidable Adverse Effects - None: no change is proposed.

Relation Between Local, Short-Term Users of the Resource and Enhancement of Long-Term Productivity -A small fishery for octocorals would be prohibited.

Irreversible or Irretrievable Commitment of Resources - None.

Enforcement Costs - Costs of this action are estimated to be $85,000.

Finding of No Significant Environmental Impact

Having reviewed the environmental assessment and available information relating to the proposed actions, I have determined that the proposed actions will not significantly affect the human environment and that preparation of an environmental impact statement is not required.

Assistant Administrator for Fisheries

Date

## RESPONSIBLE AGENCIES

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

South Atlantic Fishery Management Council
One Southpark Circle, Suite 306
Charleston, South Carolina 29407-4699
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National Marine Fisheries Service
Duval Building, 9450 Koger Boulevard
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## LIST OF AGENCIES AND PERSONS CONSULTED

Gulf of Mexico Fishery Management Council
- Coral Advisory Panel
- Scientific and Statistical Committee

South Atlantic Fishery Management Council
- Coral Advisory Panel
- Scientific and Statistical Committee

National Oceanic and Atmospheric Administration (NOAA)
- Office of General Counsel (SER)

National Marine Fisheries Service (SER)
- Southeast Regional Office
- Southeast Fisheries Center

Florida Marine Life Association
Florida Marine Aquarium Society
Project Reefkeeper

## LIST OF PREPARERS

Gulf of Mexico Fishery Management Council
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## LOCATION AND DATES OF PUBLIC HEARINGS

June 11, 1990
Key West, Florida
Casa Marina Hotel

July 9, 1990
Key Biscayne, Florida
Sheraton Royal Biscayne Hotel

## APPENDIX A

### 6.4 Habitat Information Needs

The following research needs relative to coral habitat are provided so that state, federal, and private research efforts can focus on those areas that would allow the Councils to develop measures to better manage corals and their habitat:

1. Identify optimum environmental and habitat conditions that limit coral production;

2. Determine the relationship between coral reefs and estuarine habitat conditions;

3. Quantify the relationships between coral growth and production and habitat;

4. Identify additional areas of particular concern for coral;

5. Determine methods for restoring reef habitat and/or improving existing environmental conditions that adversely affect reefs;

6. Identify mitigative methods for preserving and/or establishing reef;

7. Determine the impacts of trap fishing and trawling on coral and reef habitats.

### 6.5 Habitat Protection Programs

State and federal agencies and laws and policies that affect coral habitat are found in Section 7.0 of the Coral EIS and FMP (1982). Specific involvement by other federal agencies are identified below.

**Office of Coastal Zone Management, Marine Sanctuaries Program, NOAA:** Specifically, this program manages and funds the marine sanctuaries program. On-site management and enforcement are generally delegated to the states through special agreements. Funding for research and management is arranged through grants.

**National Marine Fisheries Service:** The enactment of the Magnuson Act provides for exclusive management of fisheries seaward of state jurisdiction. This includes both specific fishery stocks and habitat. The process for developing FMPs is highly complex. It includes plan development by various procedures through fisheries management councils. National Marine Fisheries Service implements approved plans. The Coast Guard, National Marine Fisheries Service, and states enforce fishery management plans. Fishery management plans for billfish, corals, and coral reefs, coastal migratory pelagics, red drum, reef fish, shrimp, spiny lobster, stone crab, sharks, snapper and grouper, and swordfish are in force in the Gulf of Mexico and South Atlantic.

**National Park Service:** National parks and monuments are under the jurisdiction of National Park Service. Management, enforcement, and research are accomplished in house.

**Minerals Management Service:** This agency has jurisdiction over mineral and petroleum resources on the continental shelf. Management has included specific lease regulations and mitigation of exploration and production activities in areas where coral resources are known to exist.

**Fish and Wildlife Service:** Fish and Wildlife Service assists with environmental impact review, develops biological resource evaluations, and administers the endangered species program with the NMFS. In the Keys area, the Fish and Wildlife Service manages several national refuges for wildlife.

**Geological Survey:** In the coral reef areas, the Geological Survey has conducted considerable reef research and assisted or cooperated with other institutions and agencies to facilitate logistics and support of coral reef research.

**Coast Guard:** The 1978 Waterways Safety Act charges the Coast Guard with marine environmental protection. The Coast Guard is the general enforcement agency for all marine activity in the federal zone. Among the duties are enforcement of sanctuary and fishery management regulations, managing vessel salvage, and coordinating oil spill cleanup operations at sea.

**U.S. Army Corps of Engineers:** The Corps contracts and regulates coastal engineering projects, particularly harbor dredging and beach renourishment projects. The Corps also reviews and is the permitting agency for coastal development projects, artificial reefs, and offshore structures.

**Environmental Protection Agency:** This agency has a general responsibility for controlling air and water pollution. Disposal of hazardous wastes and point-source discharge permitting are Environmental Protection Agency functions. Certain mineral and petroleum exploration and production activities are managed by Environmental Protection Agency. Environmental research germane to waste disposal and pollution also are funded.

Federal environmental agencies such as the National Marine Fisheries Service, Minerals Management Service, Fish and Wildlife Service, and the Environmental Protection Agency also analyze projects proposing inshore and offshore alterations for potential impacts on resources under their purview. This is similar to the function of the Council's Habitat Protection Committees. Recommendations resulting from these analyses are provided to the permitting agencies (the Corps for physical alterations in inshore waters and territorial seas, the Minerals Management Service for physical alterations in the Outer Continental Shelf or the offshore Exclusive Economic Zone (EEZ) and Environmental Protection Agency for chemical alterations). Even though the Corps of Engineers issues permits for oil and gas structures in the EEZ, they only consider navigation and national defense impacts, thus leaving the rest to the Department of the Interior, in a nationwide general permit.

In administering the oil and gas resources on the Outer Continental Shelf, the Department of the Interior, through the Minerals Management Service, has not been recognizing the authority of the Fish and Wildlife Coordination Act. Instead they have contended that the Outer Continental Shelf Lands Act, as amended, supersedes the Fish and Wildlife Coordination Act. They also require that the oil and gas lease permit stipulations be more closely coordinated with other Department of the Interior bureaus, e.g., Fish and Wildlife Service, as provided in Departmental Manual 655. Coordination with other federal and state agencies is less frequent. For example, coordination between National Marine Fisheries Service and Minerals Management Service results from NOAA participation in the Outer Continental Shelf Advisory Board's Gulf of Mexico Regional Technical Working Group, which usually convenes three times a year, and from authorities under the Endangered Species Act and National Environmental Policy Act. The latter involves the periodic review of environmental statements for proposed lease sales. While review under the Endangered Species Act generally involves exploration and development plans, it is very difficult for agencies like National Marine Fisheries Service to have Minerals Management Service implement less environmentally damaging procedures in oil and gas operations around reefs, etc., if the Fish and Wildlife Service has not already objected to the procedure during the Department of the Interior, DM 655 coordination. However, though not required to do so, the Fish and Wildlife Service frequently informally coordinates their proposed actions under DM 655

with National Marine Fisheries Service. None of the Fish and Wildlife agencies have veto power over Minerals Management Service permitting for oil and gas exploration, development and production on the Outer Continental Shelf, or on essentially the EEZ.

Environmental Protection Agency is the permitting agency for chemical discharges into the Gulf of Mexico, under the National Pollution Discharge Elimination System (NPDES) program of the Clean Water Act for chemicals used or produced in the Gulf (i.e., drilling muds, produced water or biocides) and then released, or under the Ocean Dumping Regulations of the Marine Protection, Research and Sanctuaries Act if the chemicals are transported into the Gulf for the purpose of dumping. When discharge or dumping permits are proposed, federal and state Fish and Wildlife Agencies may comment and advise under the Fish and Wildlife Coordination Act and National Environmental Protection Act. The Councils may do likewise under the Magnuson Act and National Environmental Protection Act. The Councils also protect reef fish habitat under the Corals and Coral Reefs Fishery Management Plan.

## 6.6 Habitat Recommendation

The coral resources contribute to the food supply, economy, health of the nation, and provides habitat for recreational and commercial fishing opportunities and aesthetic enjoyment. The continued use of these resources can only be assured by the wise management of all aspects of habitat. Increased productivity may not be possible without habitat maintenance and regulatory restrictions.

Recognizing that all species are dependent on the quantity and quality of their essential habitats, it is the policy of the Councils to protect, restore, and improve habitats upon which commercial and recreational marine fisheries depend, to increase their extent and to improve their productive capacity for the benefit of the present and future generations. This policy shall be supported by three objectives which are to:

1. Maintain the current quantity and productive capacity of habitats supporting important commercial and recreational fisheries, including their food base. (This objective may be accomplished through the recommendation of no loss and minimization of environmental degradation of existing habitat);

2. Restore and rehabilitate the productive capacity of habitats which have already been degraded; and

3. Create and develop productive habitats where increased fishery productivity will benefit society.

To achieve these goals the Councils have formed Habitat Protection Committees and Advisory Panels. The purpose of the committees is to bring to the Councils' attention activities that may affect the habitat of the fisheries under their management. The Councils pursuant to the Magnuson Act, will use its authorities to support state and federal environmental agencies in their habitat conservation efforts and will directly engage the regulatory agencies on significant actions that may affect habitat. The goal is to ensure that habitat losses are kept to the minimum and that efforts for appropriate mitigation strategies and applicable research are supported.