AMENDMENT 2

to

The Fishery Management Plan

for

Spiny Lobster

in

The Gulf of Mexico

and

South Atlantic

including

Environmental Assessment

and

Regulatory Impact Review

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I. Introduction

The directed fishery for spiny lobsters[1/] occurs entirely within or off the waters of the State of Florida (partially in the EEZ) with the principal harvest area being the Florida Keys reef tract. Consequently, the great preponderance of landings have occurred in Monroe County, Florida (96 percent in 1984). East coast landings have occurred primarily in Dade County (Miami area), Florida (Table 1). Landings of smaller amounts and/or of a sporadic nature have occurred in other east and west coast counties. Historically, Florida fishermen harvested lobster from the Bahamian reef tracts and landed them in Florida. The Bahamian government prohibited this harvest in the 1976-77 season and actively enforced the prohibition in more recent years. Occasional landings (possibly of sublegal size lobsters) have occurred in other Gulf and East Coast states (FMP - Exhibit 8-5). Over 90 percent of spiny lobster consumed in the U.S. are imported.

Almost all of the research and data collection (other than for commercial statistics before 1984) on the fishery has been carried out by the agencies and institutions of the State of Florida (State). Likewise, management of the fishery has been almost entirely based on rules developed by the State from these data. The FMP and subsequent amendments have largely extended current State rules into the EEZ.

The FMP was developed primarily to address concerns of the State which, in part, resulted from implementation of the Magnuson Act. A principal concern was the landing or potential for landing illegal sized lobsters in other states. Prior to the Magnuson Act, the State could regulate activity in the EEZ by vessels registered in other states if they had Florida citizens on board (Skioriotes vs. Florida). After passage of the Magnuson Act, the State could not regulate the activity in the EEZ of any vessel not registered in Florida. There was no way to prevent harvest from the EEZ by these vessels during the closed spawning season or to regulate use of gear in the EEZ that was prohibited in the fishery without a FMP. Also recognized in developing the FMP was that the majority of catch was taken from the 3 to 200 mile zone (Fisheries of the United States - 1976 through 1987), but not necessarily predominately from the EEZ (since State jurisdiction extends nine nautical miles in the Gulf).

Since the implementation of the FMP, the principal emphasis related to management and resulting in amendments or proposed amendments has been in attempting to keep EEZ rules current with those of the State. This has been difficult to accomplish since the implementation periods required under State and federal law differ, with the federal system requiring a longer period. This has resulted, in some instances, in the Councils proceeding with a management measure in a FMP amendment that was altered or not implemented by the State during the amendment process, or conversely, an inordinate delay in implementing compatible federal rules. The proposed action of this amendment is to provide a regulatory amendment procedure under which rules promulgated by the State would be implemented by the Regional Director, NMFS, under oversight by the Councils, provided that they were consistent with the goals and objectives of the FMP, the national standards, the Magnuson Act, and other applicable laws.

[1/] The FMP, as amended, also regulates slipper lobster (Scyllarides spp.)

Table 1. Reported landings (whole weight), number of traps fished and number of craft fishing in the south Florida spiny lobster commercial fishery, 1952-1985 (calendar year) 2/

Calendar Year	EAST COAST OF FLORIDA Reported Landings (lbs x 10^3)	No. Traps x 10^3	lbs/trap	WEST COAST OF FLORIDA Reported Landings (lbs x 10^3)	No. Traps x 10^3	lbs/trap	FLORIDA TOTAL Reported Landings (lbs x 10^3)	No. Traps x 10^3	lbs per Trap	No. Craft	Traps Per Craft
1952	1136	10	112	467	5	99	1603	15	108	88	186
1953	1421	19	74	574	7	88	1995	26	77	147	179
1954	1223	19	65	722	12	62	1945	30	64	157	196
1955	1879	26	41	1210	13	93	2289	39	59	166	235
1956	799	16	49	2309	17	137	3108	33	94	128	257
1957	651	14	46	3384	22	154	4035	36	112	161	223
1958	623	11	56	2328	23	100	2951	34	86	187	184
1959	543	18	30	2635	34	78	3178	52	61	254	204
1960	719	19	38	2126	55	39	2845	74	39	221	333
1961	702	13	53	2100	39	54	2802	52	54	195	268
1962	672	16	42	2434	58	42	3106	74	42	248	300
1963	815	20	40	2770	60	46	3585	80	45	246	326
1964	786	40	20	2844	70	39	3630	114	32	341	333
1965	1329	49	27	4379	90	49	5708	139	41	352	418
1966	1686	76	22	3650	75	49	5336	151	35	488	309
1967	1677	94	18	2719	92	30	4396	186	24	528	352
1968	2234	70	32	3892	99	40	6126	188	36	452	373
1969	2929	68	43	4621	97	48	7550	165	46	440	376
1970	3018	69	44	5235	150	35	8253	219	38	492	445
1971	3418	79	43	4653	147	32	8071	226	36	520	434
1972	6267	98	64	4640	176	27	10907	272	40	599	455
1973	5622	135	42	4993	172	29	10615	304	35	671	454
1974	4139	144	29	5631	227	25	9770	371	26	698	538
1975	2319	92	25	4472	428	10	6781	520	13	823	632
1976	987	32	31	4136	319	13	5123	348	15	549	630
1977	1501	47	32	4693	408	12	6194	455	14	635	717
1978	891	43	21	4711	529	9	5602	572	10	672	851
1979	841	29	29	6939	565	12	7780	594	13	686	892
1980	999	35	28	5696	525	11	6695	560	12	595	941
1981	880	27	33	5014	517	10	5894	544	11	583	933
1982	857	40	21	5640	582	11	6497	542	12	539	1006
1983	654	35	19	3663	520	7	4317	555	8	550	1009
1984	205	20	10	5961	699	9	6166	675	9	610	1107
1985 1/	290	25	13	5018	541	9	5308	564	9	517	1091
1986	621	40	16	4334	536	8	4955	576	9	549	1049
1987	570	40	14	5496	515	11	6066	555	11	489	1135

1/ Preliminary

2/ Caution! Much of east coast landings and part of west coast landings before 1977 are from the Bahamas according to statistical agents.

II. Description of the Fishery and Utilization Patterns

The fishery and its biological, economic, and social characteristics are adequately described in the FMP and Amendment 1. Because the fishery, as described in these documents, is overcapitalized and has too many units of gear and participants (especially part-time fishermen) the Councils, State and industry have been developing a limited access (entry) system for the commercial fishery. As part of development of this system, the Councils published a notice of a control date (January 15, 1986) for entry into the fishery (51 FR 5713). The notice announced that anyone entering the commercial fishery after that date may not be assured of future access if a system that limits participants is implemented.

During 1988, the Florida legislature passed an act (HB 1201, amending 370.14 F.S.) that provided for a moratorium on issuance of new trap permits from July 1, 1988 through July 1, 1991, while the State and industry evaluate the structure of a limited access system. The act limits permit numbers to those held in the 1987/88 season; however, the permits are transferable and permits not renewed each year may be reissued by the State. During the three-year period, the State and industry will submit a bill to the legislature for a limited access system, and the Councils will develop an amendment to implement a system in the EEZ.

III. Statement of the Problem

The State has managed the spiny lobster fishery inside and outside its territorial waters from 1919 (FMP, Prochaska and Baarda 1975) until the passage of the Magnuson Fishery Conservation and Management Act (Act) in 1976. The State was authorized under the Magnuson Act to continue regulation of fishing craft registered in the State until federal regulations inconsistent with those of the State were implemented by the Spiny Lobster Fishery Management Plan (FMP). Thus the Magnuson Act left that segment of the fishery in the Exclusive Economic Zone (EEZ) unregulated from the perspective of foreign fishing and fishermen registered in other states.

Federal management was considered necessary to establish a comprehensive and unified management regime throughout State waters and EEZ, and to facilitate compliance and enforcement of regulations (see FMP's EIS). After passage of the Magnuson Act, the harvest of undersize lobsters and out-of-season harvest in the EEZ became an increasingly severe problem. Since the same stock of lobster ranged throughout both state and federal waters in the southeastern U.S., federal management was needed and was supported by both the State and fishing industry.

The Spiny Lobster FMP, implemented in July, 1982, largely complemented the State's management regime and provided protection for the fishery throughout its range. The FMP provided management authority only for that part of the fishery operating in the EEZ; the fishery within state waters remained under State authority. To achieve its conservation and management objectives and to effectively coordinate management with the State, the FMP adopted many of the management measures employed by the State. However, certain of the State lobster regulations were not initially adopted by the Councils with the consequence that some management measures implemented in federal waters were different from those of the State (see

Amendment 1 for a discussion of these differences). In 1984, the Councils initiated Amendment 1 to the FMP in an attempt to resolve the remaining state/federal management incompatibilities and generally to improve management of the resource. In 1986, the Florida Marine Fisheries Commission (FMFC) obtained authority over the spiny lobster fishery from the State legislature and initiated a review of the fishery and its management. Although the State, through its FMFC representative on the two Councils, had extensive input during the three-year development process of Amendment 1, the resulting state and federal regulations implemented in 1987 still contained significant incompatibilities with regard to bag and size limits, permits, and use of undersize lobsters as attractants due to changes by the State during the Secretarial review period of Amendment 1. These incompatibilities occurred primarily due to differences in the relative responsiveness of the federal and state management systems.

Concern over the current difficulties experienced in implementing compatible regulations prompted the Councils to pursue alternative state/federal management structures that would optimize the use of limited state and federal resources, prevent duplication of effort, and make maximum use of the existing State regime. These efforts culminated in a joint meeting of the Councils and the Florida Marine Fisheries Commission in January, 1988, to discuss alternative management structures presented by the NMFS Regional Director (RD). The NMFS developed a prototype plan amendment that would allow either the Councils or Commission to propose EEZ regulations for implementation through the RD by the regulatory amendment process. This prototype was based on the premise that more timely regulatory mechanisms than plan amendments are needed at the federal level and that a more formal mechanism is needed for state and federal coordination. Clearly, a proposed regulation under the amendment must be consistent with the Magnuson Act, objectives of the FMP and other applicable federal law.

As a consequence of the January meeting, the FMFC requested the Councils to develop a plan amendment to address modifications by regulatory amendment to 1) the opening and closing dates of the fishing season, 2) minimum size, 3) bag limits, 4) escape gap requirements, 5) numerical trap limits, 6) possession of undersize lobsters, and 7) trap construction requirements. Management topics in the FMP that were not addressed in the FMFC letter are fishing permits, Spanish lobster, protection of egg-bearing lobsters, non-trap gear use, vessel and gear identification, pre- and post-season soak periods, fishing another persons trap, and the daylight fishing restriction. The FMFC also expressed their preference that the Council remain responsible for document preparation of federally required supporting material.

The following issues were presented for the Councils' review at a subsequent meeting as the foundation for development of Amendment 2 of the Spiny Lobster FMP:

1. The intent of federal management is to complement state management and extend management coverage of the U.S. spiny lobster fishery resource throughout its range.

2. The spiny lobster fishery resource in the EEZ is the property of the United States and should be managed for the benefit of everyone in the U.S. in accordance with the provisions of the Magnuson Act.

3. The common property nature of fishery resources tends to cause overcapitalization in the industry, increases the chances of resource depletion, and decreases the incentive for conservation of the resource by the users.

4. There is a need to provide a flexible coordinated federal and state management system that minimizes regulatory delay while retaining Council and public input into management decisions and that can rapidly adapt to changes in resource abundance, new scientific information, and changes in fishing patterns.

5. The Councils need to address two basic issues in developing the amendment. First, the Councils should determine the level of Council involvement in the regulatory amendment process. And, second, the Councils should determine which management measures are to be changed by regulatory amendment or notice action mechanisms.

Under the procedure proposed by the RD changes in the regulations can be proposed to the RD by either the FMFC directly or by the Councils upon request by the FMFC. As outlined in the RD's memorandum, proposals emanating from the FMFC must have completed the final public hearing stage and which the FMFC has voted to put before the Governor and cabinet. Additionally, proposals to be entertained by the RD should be structured to take effect in State waters at the commencement of the fishing season in which the parallel federal regulations would be expected to be implemented. FMFC proposals and supporting analyses would be reviewed for federal consistency by the RD prior to the RD obtaining the concurrence of both Councils. The concurrence of the Councils would formally authorize the RD to begin the regulatory amendment process. Proposals and analyses that are determined to be inconsistent would be returned to the FMFC, accompanied by a letter of explanation from the RD, for further development.

The intercouncil committee reviewed the issues and made a single recommendation, as a motion, which was approved by the Councils:

> "The Councils should develop a framework plan amendment to provide for future regulatory changes in the EEZ that will give the Regional Director authority, at the request of the State of Florida, to make appropriate regulatory changes to maintain compatibility of management measures in both state and federal waters.
>
> NOTE: Implementation of this motion does not mean the Councils will relinquish their authority over the fishery because the framework amendment developed by the Councils will establish bounds on the range of management actions available to the Regional Director for framework management measures. Also some aspects of the fishery, such as implementation of limited entry and changes to OY/MSY will still require a plan amendment."

The regulatory amendment concept allows timely continuing adjustment of management regulations if processed by NOAA review personnel within the time period specified in federal guidelines. Ease of continuing management adjustment under a regulatory amendment process depends on the foresight exercised in developing the amendment, and on identification of continuing research and data needs to monitor the changing conditions in the fishery. The procedure provides instructions to the RD as to how specified management measures will be determined

or changed, with or without the assistance of the Council, as the amendment is implemented and maintained. Provided the amendment contains adequate instructions, the RD is clearly implementing the amendment under the procedure rather than amending the FMP. Annual changes should be able to be made in three to five months, from the time that the needed change is identified by the Council or RD to implementation.

The Councils feel that utilizing a regulatory amendment procedure approach for implementation by the RD of certain types of rules adopted by the State under oversight by the Councils has the following advantages:

- o provides a more flexible and timely system that should result in compatible rules between state and federal jurisdictions;
- o provides ample and fair opportunity for public input into the rulemaking process through State hearings and workshops (see Appendix A), Council oversight, and to NMFS during the public comment period on the proposed rule;
- o is more cost-effective: 1) allowing the Councils and RD to utilize public hearing information gathered by the State and utilize socioeconomic analyses prepared by the State, 2) reduces enforcement cost and increases effectiveness through compatible rules, and 3) through agreed upon protocol, shifts the data gathering and management interpretation costs and enforcement costs to the State;
- o provides the Councils with opportunity to review each rule for consistency with the FMP objectives and the Magnuson Act and to cease the implementation process until issues over consistency have been resolved;
- o in no way prohibits the Councils from exercising their amendment or public hearing authority for changes to the FMP;
- o provides the State with a more responsive management system for a fishery that is largely a State fishery (99.3 percent of permit holders in 1986 were State residents), whereas previously by virtue of the localized geographical scope of the fishery the Councils placed higher priorities on amending FMPs with regional application, thereby delaying implementation of compatible rules and impacting effective management of the fishery; and
- o assures that the management objectives of the Council and FMFC are most effectively carried out in a manner that benefits the resource and user groups and within standards of the Magnuson Act and standards of the FMFC.

IV. Proposed Action

The actions proposed in this amendment to the FMP include:

- o revision of several issues (problems) in the fishery expressed in the FMP including citing in summary form the Statement of the Problem
- o statement of a new objective for the FMP providing for more effective cooperative state and federal management of the fishery

- o restatement of Optimum Yield (OY) for the fishery
- o statement of protocols and a regulatory amendment procedure for more effective cooperative management agreed upon by the Councils and State
- o consideration of a measure to reduce mortality of undersize lobster by prohibiting their use as bait
- o inclusion of a FMP section on Vessel Safety Considerations
- o revision of the FMP section on Habitat of the Stocks

ACTION 1: ISSUES IN FISHERY

Problems and Issues in the Fishery

Issues currently identified in the FMP, as amended, are as follows:

1. The number of undersize lobsters taken and sold illegally continues to be significant. Enforcement of size limit regulations will be a major consideration when developing procedures for implementing management measures.
2. Whereas the present practices involving the use of undersize lobsters as attractants is causing significant mortality to undersize lobsters and subsequent loss in yield to the fishery, there is controversy over the methods to reduce the mortality of undersize lobsters used as attractants in traps.
3. There is an increasing number of traps in the fishery.
4. Incompatible federal and State regulations hinder effective enforcement of the minimum size limit and the prohibition against spearing lobsters.
5. The abandonment of traps during the closed season has created a significant "ghost fishing" mortality that represents a loss in yield to the fishery.
6. The major user groups of the resource are not adequately defined to insure fair and equitable treatment. The existing Florida permit system is not sufficient in identifying major user groups resulting in an inability to properly assess the impacts of alternative management measures on the users of the resource. In addition, data on recreational harvest is nonexistent. Existing data sources will need to be supplemented, especially as future allocations of the resource are considered. (Note: By current State rule, commercial fishermen must have both permit and products license.)

Proposed Alternative: Revise Issues 1, 3, 4, 5 and 6 and by adding a new issue (7) to read as follows:

"1. The number of undersize lobster taken or sold illegally continues to be a problem."

"3. There is an excessive number of traps in the fishery."

"4. Incompatible federal and State regulations hinder effective management and enforcement and delay in implementing federal rules compatible with those of the State exacerbates this problem."

"5. Abandonment of traps creates some ghost fishing mortality that represents loss in yield to the fishery."

The third sentence of 6 (above) is modified to read as follows: "While tagging studies indicate that recreational harvest is likely to be about ten percent of the commercial harvest, additional data on the recreational harvest is needed."

"7. The increasing recreational harvest, especially in the special season, may be impacting the resource and needs to be evaluated as to amount of harvest and impacts on handling and short mortality."

Rejected Alternative: Status quo - retain issues unchanged.

Discussion (Issues 1 and 3): The Councils' Advisory Panels (APs) reviewed all the issues in the fishery and recommended language modification for each issue. The Councils concurred with their suggested revisions of Issues 1, 3 and 7 (new). The APs indicated that better enforcement had resulted in a great decline in the number of illegally harvested undersize lobster, and it was not a "significant" problem now but was still a problem (Issue1). They also pointed out that data in Table 1 indicate that trap numbers are not "increasing" but agreed there is still an excessive number of traps in the fishery, i.e., more than is needed to harvest the resource (Issue 3).

Economic and Social Impacts: None are associated with these revisions of the issues.

Discussion (Issue 4): The Florida Marine Fisheries Commission (FMFC) and the Councils at their joint meeting in January, 1988 have concluded that the current system of periodic amendments of the FMP by the Councils to make federal rules compatible with those of the State is too inflexible and inordinately delays effective management of the fishery, due to the rules being unenforceable until compatibility is achieved. Since participants in the fishery are almost entirely citizens of the State and since the State primarily collects and analyzes the management information and provides the enforcement of the rules, the FMFC has, therefore, normally provided the lead in establishing management measures for the fishery. The Councils have largely been in a reactive posture of revising federal rules to be compatible with those of the State. Delays by the Councils due to the more prolonged federal implementation system and due to higher priorities for FMP and amendment development have caused a problem in maintaining effective management.

Economic and Social Impacts: There are no direct economic or social impacts related to the proposed or rejected alternatives. The proposed alternative is a summary of the statement of the problem for this amendment and is therefore indirectly related to the impacts stated for Action 4.

Discussion (Issue 5): The APs and subsequently the Councils concluded while ghost fishing by lost or abandoned traps continues to cause mortality that such mortality probably is no longer significant. A cooperative program of the State and industry resulted in removal of more than 10,000 such traps during 1988.

Economic and Social Impacts: None are associated with revision of the wording of this issue.

Discussion (Issue 6): The proposed alternative simply modifies an incorrect statement in Issue 6 of the FMP while continuing to identify the need for better recreational catch data. Although a statistical survey of the recreational harvest from the fishery has not been conducted, there have been studies completed which have estimated recreational harvest. Tag returns in the Upper Keys suggested recreational harvest was 9 percent of commercial harvest (Davis and Dodrill, 1980). Examining this study and other unpublished studies by FDNR, Lyons and Kenney (1981) concluded recreational harvest from the fishery to be about 10 percent of commercial harvest. The magnitude of this estimate appears to be supported by other studies (Austin et al, 1980) (Zuboy, 1980).

Economic and Social Impacts: There are no impacts associated with correction of this error. The modified statement is based on the best available information.

Discussion (Issue 7): The APs suggested this new issue to focus attention on the need for research and data gathering information on not only recreational harvest levels but also impacts of recreational fishery on handling and short mortality which they perceived to be a major problem.

Economic and Social Impacts: None are associated with including the issue. If the studies are done, they will have an economic cost.

ACTION 2: MANAGEMENT OBJECTIVES

Management Objectives

Management objectives currently identified in the FMP, as amended, are as follows:

1. Protect long-run yields and prevent depletion of lobster stocks.
2. Increase yield by weight from the fishery.
3. Reduce user group and gear conflicts in the fishery.
4. Acquire the necessary information to manage the fishery.
5. Promote efficiency in the fishery.

Proposed Alternative: Include new objective as follows:

6. Provide for a more flexible management system that minimizes regulatory delay to assure more effective, cooperative State and federal management of the fishery.

Rejected Alternative: Status quo - do not include objective 6.

Discussion: The intent of this amendment is to provide for a system that achieves the proposed objective. Selection of the rejected alternative would mean that the

amendment should not go forward and that all future changes in the FMP will be by FMP amendment.

Economic and Social Impacts: Adding the objective has no impact. These alternatives are indirectly related to those under Action 4 where impacts of that action are discussed.

ACTION 3: STATEMENT OF OPTIMUM YIELD (OY)

The current statement of OY in the FMP, that applies to spiny lobster is as follows:

> "OY is specified to be all spiny lobster more than 3.0 inches carapace length or not less than 5.5 inches tail length[2/] that can be legally harvested by commercial and recreational fishermen given existing technology and prevailing economic conditions. OY is estimated at 9.5 million pounds".

Proposed Alternative: The first sentence of the statement of OY is amended to read as follows for spiny lobster (OY for slipper lobster is unchanged):

> "OY is all spiny lobster with carapace or tail lengths equal to or larger than the minimum legal lengths that are harvested legally under the provisions of the FMP[3/].

Rejected Alternative: Do not modify the statement of OY.

Discussion: The proposed procedure under Action 4 would allow the minimum legal size to be increased when information demonstrates that increased yield can be gained from the fishery through such action. As indicated in the discussion of biological impacts under Action 5 the mortality rates of sublegal lobster must first be reduced before yield per recruit can be increased by increasing the size limit. Retaining the current OY statement (rejected alternative) would require the FMP be amended when such an increase in legal size is proposed under the procedure. The proposed alternative does not alter the status quo at this time but would allow greater increases in yield from the resources at such time as the size is changed under the regulatory amendment procedure, an action which would result in harvest levels more nearly approaching the numerical expression of OY, i.e., 9.5 million pounds (See Table 1 and Action 5 discussion).

Economic and Social Impacts: No impacts occur as a result of adoption of the proposed alternative at this time. At such time as an increase in size is proposed through the regulatory amendment procedure of Action 4 an Environmental Assessment (EA) and Regulatory Impact Review (RIR) will discuss the economic and social impacts which are associated with that action.

[2/] Tail length measure applies only if legally separated from the body.

[3/] Current legal size specified in the regulations is 3.0 inches.

ACTION 4: PROTOCOL AND PROCEDURE FOR AN ENHANCED COOPERATIVE MANAGEMENT SYSTEM

Introduction:

Under Action 4 which address the Statement of the Problem the Councils are proposing a more flexible, timely and cost-effective system of implementing rules by regulatory amendment. Included under the action are (1) a protocol agreed to by all parties which describes the respective roles of state and federal governments, (2) a regulatory amendment procedure specifying the actions taken by each party in implementing the rules (Paragraphs 1 through 5 of the Procedure) and (3) appropriate rules or regulatory changes that may be implemented under the procedure (Paragraph 6, Parts A and B of the Procedure).

Under this regulatory amendment procedure each proposed rule or set of rules must be adopted by the State through their hearing process and be submitted to NMFS and the Councils along with socioeconomic analyses, hearing summaries, and other supporting information. The Councils and NMFS must concur that the proposed rule is consistent with the FMP objectives and other federal law. NMFS, the Councils' staffs and FMFC staff will prepare the regulatory amendment and supporting documentation. This documentation will include an EA and RIR which examine in detail the environmental, social and economic impacts of each proposed rule and the alternatives to the rule. The rules implemented will be subject to approval by NMFS after review of public comment submitted directly to NMFS during the comment period on the regulatory amendment.

PROTOCOL:

The Councils, FMFC and NMFS hereby adopt the following protocol which describes the roles of the federal and State governments:

1. The Councils and NMFS acknowledge that the fishery is a State fishery (which extends into the EEZ) in terms of current participants in the directed fishery, major nursery, fishing, and landing areas, historical regulation of the fishery and is a fishery requiring cooperative state/federal efforts for effective management through a FMP.

2. The Councils and NMFS acknowledge that the State is managing and will continue to manage the resource to protect and increase the long-term yields and prevent depletion of the lobster stocks and that the State Administrative Procedure Act and rule implementation procedures, including final approval of the rules by Governor and Cabinet provide ample and fair opportunity for all persons to participate in the rulemaking procedure (see Appendix A).

3. FMFC acknowledges that rules proposed for implementation under this amendment must be consistent with the management objectives of the FMP, the national standards, the Magnuson Act and other applicable federal law. Federal rules will be implemented in accordance with regulatory amendment procedures.

4. The Councils and NMFS agree that for any of the rules defined within this amendment that the State may propose the rule directly to NMFS, concurrently informing the Councils of the nature of the rule and that NMFS will implement

the rule within the EEZ provided it is consistent under the protocol number 3. If either of the Councils informs NMFS of their concern over the rule's inconsistency with protocol number 3, NMFS will not implement the rule until the Councils, FMFC, and NMFS or their representatives meet and resolve [4/] the issue.

5. The State will have the responsibility for collecting and developing the information upon which to base the fishing rules, with assistance, as needed, by NMFS and cooperatively share the responsibility for enforcement with federal agencies.

6. FMFC will provide to NMFS, and to the Councils written explanations of its decisions related to each of the rules (including a statement of the problem that the rulemaking addresses, how the rule will solve the problem, and how interested parties were involved in the rulemaking), summaries of public comments, biological, economic and social analyses of the impacts of the proposed rule and alternatives, and such other information that is relevant.

7. The rules will apply to the EEZ for the management area (N.C. to Texas) unless the Regional Director, NMFS, determines they may adversely impact other state and federal fisheries. In that event, the RD may limit the application of the rule, as necessary, to address the problem.

8. The NMFS agrees that its staff will prepare the proposed federal rule. The Councils agree that their staffs with assistance by the staffs of FMFC and NMFS will prepare the EA/RIR and other documents required in support of the rule.

PROCEDURE:

Proposed Alternative: Adopt the procedure as follows:

1. This procedure will function under and be governed by the protocols for cooperative management agreed upon by the FMFC, the Councils, and NMFS.

2. Based on the best available scientific information, the State of Florida's Marine Fisheries Commission (FMFC) will develop alternative proposed rules and socioeconomic analyses on the effects of these alternatives, hold public hearings (as required by Florida's Administrative Procedure Act), and at a final hearing select each preferred alternative rule for recommendation to the Florida Governor and Cabinet for implementation (see Appendix A). After approval of the rule or rules by the Governor and Cabinet, the FMFC will advise the Councils and Regional Director (RD), NMFS of the recommended rule(s) and proposed implementation date and will provide to the RD and to the Councils the analyses of the effects and impacts of the recommended and alternative rules

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[4/] The issue will not be resolved until the Councils have withdrawn thier objections.

and summaries of public comment. For rules to be implemented by the start of the fishing season (currently August 1), FMFC must complete these actions on or before February 1. The Councils will submit the rule and supporting analyses to the SSCs who will advise the RD, through the Councils, of the scientific validity of the analyses. The Councils will also submit the rule and supporting analyses to the advisory panels for comment.

3. The RD will review the recommended rule, analyses, and public record, and if he preliminarily determines that the rule is consistent with the objectives of the FMP, the National Standards, and other applicable law, he will notify the Councils and FMFC of his intent to implement the rule in the EEZ. If in the judgment of the RD, the rule or its supporting record are not consistent with these statutory criteria or the FMP objectives, he will immediately notify the Councils and the FMFC of the deficiencies in the rule or supporting record. The FMFC may submit additional information or analyses to correct the deficiencies in the record.

4. When in the judgment of either of the Councils the rule is not consistent with the Magnuson Act or the objectives of the FMP, they will inform the RD and FMFC. In this case the RD will not proceed with implementation of the rule until this issue has been resolved [4/].

5. When the RD has preliminarily concluded the rule is acceptable, he will draft and publish the proposed rule for implementation by regulatory amendment. Based on State analyses of impacts, the Councils' staffs with assistance from FMFC will prepare the supporting documentation [EA/RIR, etc.] that accompany the proposed rule. The effective date of rules promulgated under this procedure will be the starting date of the next fishing season following approval of the regulatory amendment unless otherwise agreed upon by FMFC, the Councils, and the RD. A reasonable period for public comment on the proposed rule shall be provided.

   After reviewing public comment if the RD has concluded the rule is not consistent with the FMP objectives, the National Standards, other applicable law, or the provisions of this procedure, he will notify the Councils and FMFC of that fact and/or the need for proceeding with implementation by FMP amendment. If the supporting record is still deficient, he will delay taking action until the record has been supplemented by FMFC and/or Councils' staffs. If the RD has concluded the rule is consistent, he will publish the final rule.

6. PART A (GEAR RESTRICTIONS)

   Appropriate rules or regulatory changes that can be implemented under this part include:

   a. Limiting the number of traps that may be fished by each vessel.
   b. Describing the construction characteristics of traps, including requiring escape gaps.

[4/] The issue will not be resolved until the Councils have withdrawn their objections.

c. Specification of gear and vessel identification requirements.
d. Specification of gear that may be utilized or prohibited in directed fishery and specification of bycatch levels that may be taken as incidental catch in non-directed fisheries.
e. Changes to soak or removal periods and requirements for traps.

6. PART B (HARVEST RESTRICTIONS)

Appropriate rules or regulatory changes that can be implemented under this part include:

a. Recreational bag and possession limits.
b. Changes in fishing seasons.
c. Limitations on use, possession, and handling of undersized lobsters.
d. Changes in minimum legal size.

Rejected Alternative: Do not adopt the procedure (i.e., all changes by plan amendment) and/or delete one or more of the gear or harvest restrictions (Parts A and B of Paragraph 6) as inappropriate for change by the regulatory amendment procedure.

Discussion: The Councils, NMFS, and FMFC during 1987-1988 reviewed the problems associated with and the inflexibility of the current rule implementation system, alternative systems, and types of rules that should be included in a regulatory amendment procedure system. The Councils rationale supporting the proposed alternative over the rejected alternative are listed in the Statement of the Problem (Page 6).

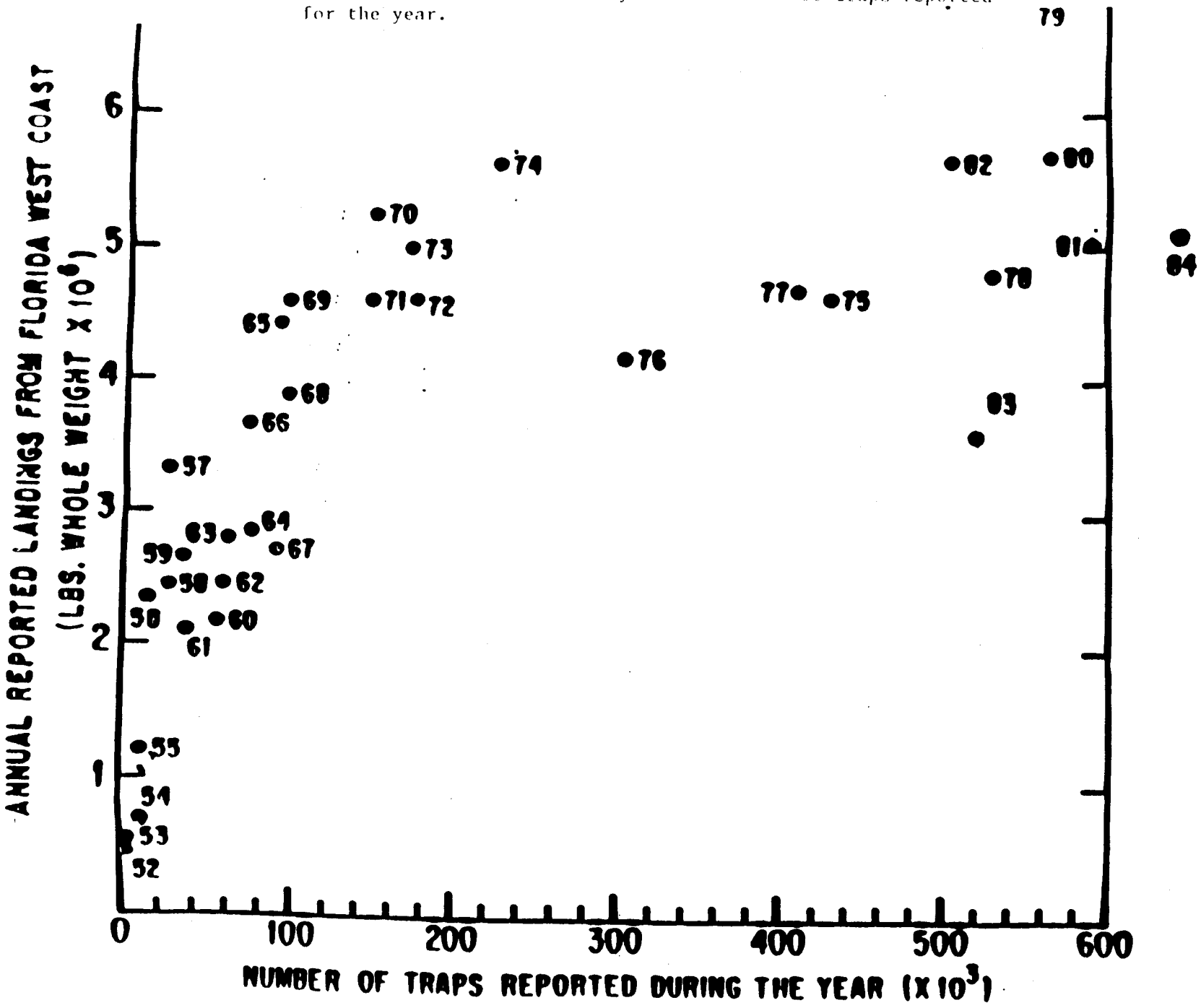
Biological Impacts: This action, in itself, has no impact but merely provides a procedure for implementing future regulatory changes. Actions that may be implemented under the procedure will have biological impacts which will be described in the regulatory amendment for that action.

Economic Impacts: The principal economic impacts related to the proposed alternative are to defer some of the federal costs to the State. These include much of the data collection, research and stock assessment costs of NMFS and the plan amendment development and public hearing costs of the Councils as well as some of the costs associated with reviews by the Council's Scientific and Statistical Committees (SSC) and Advisory Panels (AP).

The costs incurred by the Gulf Council as lead for development of the FMP through FY 1981 were $237,998 including meeting costs of $41,185. The South Atlantic Council probably incurred similar meeting costs, but not the level of the staff and contractual cost of Gulf Council. Amendment 1 required approximately three years for development and implementations and staff and meeting costs to the Gulf Council were on the order of $100,000. These types of costs would be significantly reduced by the proposed alternative, with the principal Council cost being staff support in drafting each EA and RIR from data submitted by the State.

The rejected alternative would require a FMP amendment for each rule or set of rules proposed by the State which in addition to staff and Council meeting costs similar to that for Amendment 1 would require public hearing, SSC and AP cost for each amendment on the order of $24,600.

Figure 1. Annual (calendar year) reported landings in the commercial west coast Florida spiny lobster fishery versus number of traps reported for the year.



Since each rule or set of rules proposed by the State under the procedure will require a thorough economic analysis in the accompanying RIR, no discussion of the impacts or potential impacts of the restrictions under Parts A and B are provided. However, a general discussion of the Council's rationale for including each type of restriction in the procedure follows.

Social Impacts: These impacts should remain the same under either alternative.

Rationale for Including Restrictions:

Part A (Gear Restrictions)

a. Limiting number of traps

The fishery has an excessive number of traps well beyond the number needed to harvest the resource (see Table 1 and Figure 1). Landings have been essentially stable since the early 1970's when approximately 200,000 traps were fished on the West Coast (Figure 1). Traps have increased both as a result of increased number of fishermen and increased number of traps per fisherman. The State and industry are developing a limited access program to limit and eventually reduce participants. The number of traps should be reduced to decrease the adverse biological and economic impacts and to improve the efficiency of the industry.

The excess number of traps in the fishery is directly related to the mortality associated with use of undersize lobsters as bait (Action 5). As the number of traps increases, the associated mortality increases. Reducing the number of traps by 50 percent without altering baiting practices would increase yield per recruit by 5 to 25 percent (Amendment 1 - 6.3.1.6).

In open access fisheries, units of gear always tend to increase to an overcapitalized level, because each participant feels he must increase to remain competitive with other participants who are both increasing in number and who are increasing their gear. The end result is a loss of industry efficiency.

b. Describing construction characteristics of traps, including a requirement for escape gaps

Currently most gear used in the fishery are wood traps constructed of treated laths. Some plastic traps with degradable surfaces are also utilized. The current rules specifying construction characteristics may need to be changed to reduce mortality from ghost traps (by requiring degradable panels that deteriorate more rapidly than the wooden traps) or to prevent environmental degradation (e.g., from materials utilized to treat wood laths).

Escape gaps in traps are required in most of the world's managed lobster fisheries to allow undersize lobsters to escape assuring continued biological stability of the stocks and improvements in yield from the resource (see discussion of baiting mortality under Action 5). Escape gaps are an inexpensive method (cost approximately $0.60 per trap) of assuring high survival of undersize lobsters. They can also serve a dual purpose of degradable panel for traps that

may be lost, as they do in the American lobster fishery of some states, by using degradable fasteners. Compliance is more easily monitored than is a prohibition on possession of undersized lobsters since traps can be pulled and examined for gaps or obstruction of the gap at any time and cases made for non-compliance, whereas, the prohibition on possession requires monitoring each trap haul. Escape gaps may even facilitate natural baiting of traps by juveniles that enter the trap via the gap (during daylight hours) and reduce the adverse impact of mortality associated with current confinement practices, i.e., they can leave to feed at night. Because of the low unit cost, escape gaps can be changed in size, as minimum harvestable size is respecified, without major cost to individual fishermen (see Table 1) (also see discussion under Part B 6.d.).

c. Specification of gear and vessel identification

The current system of vessel identification for the lobster fishery differs from that utilized for vessels operating under other FMPs (i.e., a standardized federal system). Many lobster fishermen also participate in other fisheries, and it may be desirable to modify the current lobster system, which would likely require changes for gear identification also.

d. Prohibited gear and incidental catch limits

The current directed commercial fishery for lobster has too many participants and too many units of gear to operate efficiently and without some adverse impact on the stocks. The State and industry are attempting to reverse this trend. The State has prohibited utilization of certain types of gear in the directed fishery and provided incidental catch limits for non-directed fisheries. Because of the inventive nature in fisheries development and in order to be fair to the full-time participants in the directed fishery whose numbers they are trying to reduce, certain additional or new gear will likely have to be prohibited in either commercial or recreational fisheries. Similarly, incidental bycatch limits may need to be revised.

e. Changes in soak times or removal times for traps

Current rules provide for a five-day soak time for placing and baiting traps at the beginning of the season and a five-day removal period at the end, with an additional ten days in cases of documented hardship (vessel breakdown, etc.). The preseason soak time is somewhat related to use of treated wood traps. If the number of traps per vessel is significantly reduced or plastic traps become the preferred gear, it may be useful to change this period. Large numbers (thousands) of traps are lost or abandoned at the end of each season, and it may be useful to amend the rules to allow any person to retrieve these traps for his own use after a certain date or to allow an extension for organizations to retrieve the traps.

Part B (Harvest Restrictions)

a. Recreational bag and possession limits

The amount of landings of spiny lobster by recreational fishermen is not known. When studies are completed documenting the landings, it may be beneficial to

to prevent persons from circumventing the bag limit. Such overall possession limits might also be used to describe incidental bycatch limits for other non-directed fisheries.

b. Changes in Fishing Seasons

The current season has been compressed to about five months (Table 2) of the eight-month legal season. It may be useful from a biological or industry standpoint to modify the season. If the minimum size is increased, it would be necessary to modify the starting date of the season to allow time for additional growth. A change in starting date could be used as a proxy for increased minimum size, e.g., delaying until 50 percent (or some other percentage) of population has carapace length of 3-1/8 inches, retaining legal length of three inches, etc. It may be useful or necessary to change the special recreational season if the size limit is changed.

c. Limitations on Use, Possession and Handling of Undersize Lobsters

See Action 5 for discussion of rule changes related to prohibitions and limitations on possession. Conversely, after participation levels and trap levels are reduced and stabilized in the fishery, data may indicate an allowance of undersized lobsters for baiting purposes which allows increased harvest efficiency without significant adverse impact to stocks through mortality, i.e., a permissible level of mortality.

d. Changes in Minimum Legal size and Statement of OY

As pointed out in discussions of mortality of undersize lobster (see Action 5), additional gains in yield per recruit could be achieved by increasing the minimum size if that mortality was eliminated or reduced. This may become a very important economic consideration to the industry, particularly if operating under a limited access system.

ACTION 5: POSSESSION OF UNDERSIZE LOBSTER

Proposed Alternative. Take no action - allow the action to be taken under the regulatory amendment procedure.

Rejected Alternative 1. Prohibit harvest and possession aboard a vessel of more than 50 undersize lobster or one per trap on board, whichever, is greater, until April 1, 1990. On August 1, 1990 possession of undersize lobster is prohibited (lobster must be held in live wells as provided for in the FMP).

Rejected Alternative 2. Status quo - allow up to 100 undersize lobster to be possessed aboard a vessel in the EEZ provided the vessel has a live well.

Discussion: The State has implemented rejected Alternative 1 as rule. The Councils rejected that alternative because of discussions between representatives of the industry and State that suggested some modification of that State rule may occur before the effective date of the rule in 1990. Therefore, it appeared more consistent with the thrust of this Amendment (for flexibility in rule changes) to defer action and allow the State to submit its final rule under the procedure of Action 4.

Biological Impacts:

The stock assessment section (5.4.1) of Amendment 1 concluded that "the loss of undersize lobster due to baiting mortality not only affects potential yield, but reduces the reproductive potential of the population. Thus, the future stability of the resource is jeopardized by the current magnitude of undersize lobster mortality". Undersize lobster fishing mortality consists of two components, illegal harvest and mortality associated with their use as bait (exposure, handling injury and confinement). Together, these sources of mortality result in loss of potential yield from the fishery of 63 to 83 percent (FMFC, 1987). They also prevent additional gains in yield per recruit that could be obtained from increasing the minimum size. Mortality associated with baiting practices was judged as having the most negative impact on yield per recruit (Amendment 1 - 5.4.1). That mortality was estimated as 26 percent per month (FMFC, 1987). The use of live wells provided for in Rejected Alternative 2 should have eliminated or significantly reduced that portion of the baiting mortality related to exposure (i.e., 25.3 percent - Amendment 1 - 5.4.2). However, overall baiting mortality was estimated at 47 percent of animals used (6.3.1) indicating at least half the mortality would continue to occur. Rejected Alternative 1 would further reduce this mortality, but not eliminate it (i.e., it is unlikely that all undersize lobster would be removed from traps harvested). Complete prohibitions on possession Rejected Alternative 2 would also probably significantly reduce mortality associated with illegal harvest of undersized lobster.

Economic Impacts:

FMFC (1987a), after adjusting the reduction in baiting mortality for a complete prohibition on possession to 60.6 percent to account for lack of compliance, unintentional handling mortality, etc., calculated increases in yield ranging from 363,600 to 2.1 million pounds and $0.9 to $5.5 million exvessel or $0.4 to $2.5 million in fishermen net income. The past expenditures for live wells would be lost under Rejected Alternative 1. This loss would be about $200 for each fishermen discounted over two to three years for each of the 1,820 commercial fishermen (FMFC, 1987a). Under Rejected Alternative 2, this loss would not occur.

The principal potential impact on the industry from a prohibition on use of undersize lobsters for bait would be a loss of efficiency per trap (for some fishermen at least). Traps baited with one or two short lobsters resulted in catches 1.9 times more than those with no lobsters (FMFC, 1987a). Those baited with three lobsters resulted in catches three times greater than with no bait (Heatwolfe, et al, 1987). If the shorts were not caught later as legals, $0.12 to $1.23 million in revenue could be lost. However, that loss is very improbable considering the number of traps and the fact that total landings have been stable since 1969 as the number of traps increased (Figure 1). As a function of increased number of traps and possibly increased efficiency by using shorts as bait, the season has been compressed, with 90 percent of harvest occurring within the first five months (Table 2). From a commercial industry standpoint, total catch and thus annual catch per trap would increase from the prohibition which may also result in a redistribution of the catch in time (longer season) and space (more legals may be caught by persons fishing in the lower Keys). Similarly, recreational participants would benefit from increased numbers of legal size lobsters that would provide increased abundance levels over a longer period.

Table 2. Cumulative Percent of Annual Landings Spiny Lobster Harvested by Month

	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March
1985/86	25.0	48.4	64.3	76.5	90.0	94.9	97.6	100.0
1984/85	24.9	44.3	63.6	80.5	88.5	94.2	96.9	100.0
1983/84	26.4	45.3	60.1	75.0	82.6	90.2	94.4	100.0
1982/83	26.4	47.2	67.6	82.9	90.6	95.4	98.1	100.0
1981/82	30.8	45.1	63.4	79.3	89.9	95.2	98.7	100.0
1980/81	29.1	45.4	62.8	79.4	87.4	94.9	98.5	100.0
1979/80	20.4	39.1	57.3	74.0	84.9	92.1	96.8	100.0
1978/79	17.0	32.2	55.8	71.7	82.1	90.6	96.1	100.0
1977/78	21.4	39.4	65.1	79.6	88.8	96.9	99.5	100.0
1976/77	26.9	42.0	63.1	78.4	86.8	93.1	96.8	100.0
1975/76	29.1	46.8	63.4	74.6	81.5	86.7	93.7	100.0
1974/75	26.4	39.8	62.9	72.0	87.4	93.4	96.8	100.0
1973/74	18.7	38.0	57.5	72.6	85.2	90.2	93.8	100.0
1972/73	15.6	30.9	52.0	68.6	80.5	89.0	95.1	100
1971/72	22.1	36.5	53.7	68.8	76.9	85.8	95.0	100.0
1970/71	17.6	33.5	54.7	72.1	86.8	92.1	97.9	100.0
1969/70	18.9	36.3	50.1	64.7	77.1	85.9	93.3	100.0
1968/69	19.7	33.2	51.0	71.3	80.7	84.9	92.3	100.0
1967/68	16.4	28.4	43.8	58.2	68.7	79.3	88.2	100.0
1966/67	20.8	32.5	51.4	74.4	83.3	89.9	93.4	100.0
1965/66	18.0	31.5	58.3	73.1	83.2	86.5	89.6	100.0
1964/65	17.9	31.7	46.8	63.8	73.3	79.4	85.5	100.0
1963/64	17.5	32.0	46.4	62.3	77.2	85.7	93.1	100.0
1962/63	18.1	31.6	43.9	62.8	79.1	88.3	93.0	100.0
1961/62	17.9	32.8	46.9	63.8	74.7	83.3	88.7	100.0
1960/61	19.6	32.9	52.2	67.3	78.2	84.5	92.8	100.0
1959/60	19.3	34.1	46.9	62.3	76.4	83.7	91.1	100.0

Social Impacts: Judging from past testimony on this issue, there is significant opposition to reducing or eliminating use of shorts as bait, even though increased industry yields would result. Therefore, it is doubtful that with the prohibition that the practice will be discontinued. More likely, at minimum, shorts harvested in a trap will be returned to the water in that trap.

ACTION 6: VESSEL SAFETY CONSIDERATIONS

Section 8.0 of the FMP is modified by adding a new subsection 8.5 Vessel Safety Considerations to read as follows:

8.5 Vessel Safety Considerations

No management measures included in the FMP, as amended, or proposed in this Amendment adversely impact vessel safety that would result from weather or unsafe ocean conditions through constraints placed on access to the fishery.

The legal season for harvest is eight months in duration, but the effective (or productive) season has been compressed to five months (Table 2); therefore, participants can adjust their vessel activities for weather and ocean conditions without effect on their harvesting opportunities. The FMP provides for a special recreational two-day season prior to the regular season. Weather and sea conditions could preclude safe vessel operation during this period. However, these persons can also fish at any time during the eight-month season. Further, since this fishery largely occurs in the Florida Keys unless the weather is extremely severe, vessels can operate safely on the leeward side of these Keys. The FMP provides for a five-day soak period for placement of traps before the season. However, if weather conditions prohibit vessel operations in some areas during this period, the traps may be set at any time during the season. The FMP also provides for a five-day retrieval period for removing traps at the end of the season. The FMP also provides for a 10-day extension to the retrieval period, upon request, for "hardship", including bad weather. Also due to the compression of the productive season to five months, most traps are removed before the end of the season. The FMP, as amended, requires use of a live-well on board vessels utilizing sublegal lobsters as bait. The U.S. Coast Guard reviewed this issue and concluded such use was not a threat to vessel safety.

ACTION 7: DESCRIPTION OF THE HABITAT OF THE STOCKS

Section 6.0 of the FMP is updated and editorially revised to provide habitat descriptions and analyses required by amendment of the Magnuson Act. The revised text is appended to this document as Appendix B.

V. Environmental Consequences

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

The effect of these actions is to amend the FMP to include a regulatory amendment procedure whereby future actions in terms of proposed rule changes regulating the fishery may be implemented under the protocol and conditions of that procedure rather than amending the FMP for each rule change. The procedure requires that for each proposed future action an Environmental Assessment (EA) and Regulatory Impact Review (RIR) be prepared setting forth the environmental, economic and social impact of that proposed action and the alternatives to that action. Therefore the actions proposed in this Amendment have no environmental consequences. Its only effect will be to shift a great portion of the federal management costs for the fishery to the State of Florida (see Action 4).

The proposed actions of the Amendment have no anticipated impact on threatened or endangered species or marine mammals. A Section (7) Consultation was held for the Amendment with a "no jeopardy opinion" being rendered. The Amendment does not alter any of the rules of the FMP. At such time as rules are proposed under the Amendment's procedure the impact of each rule will be reexamined.

VI. Conclusions

- Mitigating Measures Related to the Proposed Action

  None

- Unavoidable Adverse Impacts

  None

- Relationship Between Local, Short-term Use of the Resource and Enhancement of Long-Term Productivity

  No impacts on short-term use are anticipated. Long-term productivity should be enhanced by implementation of a more flexible and cost effective system that will improve cooperative state/federal management of the resource, eliminate inconsistencies between state and federal rules improving enforcement efficiency and eventually result in substantial increases in productivity from the resource.

- Irreversible or Irretrievable Commitment of Resources

  The federal management commitment will be significantly reduced.

Findings of No Significant Environmental Impact

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

_____ _____

Assistant Administrator for Fisheries Date

RESPONSIBLE AGENCIES

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LIST OF AGENCIES AND PERSONS CONSULTED

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

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

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

National Marine Fisheries Service (SER)
- Division of Fisheries Management

Florida Department of Natural Resources
- Marine Fisheries Commission (FMFC)
- Florida Marine Research Institute

LIST OF PREPARERS

Gulf of Mexico Fishery Management Council
- Wayne Swingle, Biologist, Drafter
  (Editorial Assistance from Personnel of Agencies Consulted)

LOCATION AND DATES OF PUBLIC HEARINGS

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

January 11, 1989

Key West, Florida
The Commissioners Meeting Room
310 Flemming St.
Key West, Florida 33040

January 12, 1989

Marathon, Florida
Marathon High School Cafeteria
350 Sombrero Beach Road
Marathon, Florida 33050

LITERATURE CITED

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APPENDIX A

Public Participation in Rulemaking Activities of the Florida Marine Fisheries Commission

by
Charles L. Shelfer
General Counsel

Pursuant to Chapter 286, Florida Statutes, the Florida Marine Fisheries Commission may only take official action in duly noticed, public meetings. The Commission meets 25-30 days out of each year, and makes a concerted effort to rotate its meeting periodically to all the regions of the state.

Commission consideration of a fisheries problem usually begins in informational workshops at which the public is encouraged to attend and directly address the board. There may be several of these workshops on a single species prior to any policy decisions being made, either as a segment of the Commission's regular meeting or as a special workshop held in the localities being affected.

After the workshops are completed, MFC staff develops policy options that are considered at a fully-noticed public meeting. Again, the public is invited to address the Commission on the options. Such meetings may last several hours and the MFC may listen to as many as 50 speakers. After public testimony, options are chosen by votes of the Commission. Occasionally, more than one such options session is needed to allow the Commission to arrive at a satisfactory set of options. Each such session provides an opportunity for public comment.

Once policy options are chosen, MFC legal staff drafts rules to implement the decisions. On most controversial issues, the MFC will meet again to consider the language of the draft rules. Again, public testimony is taken, but is allowed only for the purpose of suggesting changes to the draft. The Commission, at the conclusion of the meeting, will amend the language and approve the rule for formal rulemaking proceedings.

Formal rulemaking begins with a notice of proposed rulemaking published in the Florida Administrative Weekly. The date of publication serves to begin a 21-day period during which written comment is solicited. Such written comments are required by law to be included in the record of the proceeding. After the 21-day period, the Commission then holds a noticed formal rulemaking hearing. Anyone wishing to address the Commission on the proposed rule is allowed to do so, though each such witness is sworn. At the conclusion of public testimony, the MFC makes whatever changes to the rules it deems appropriate and approves the rules for submission to the Governor and Cabinet. The MFC is only allowed to make such changes to proposed rules as are supported by the record of the proceeding.

At all Commission meetings up to this point, public comment and testimony may be limited, depending on the number of persons wishing to speak on an issue. A speaker may be limited to a specific number of minutes (e.g. 3 minutes or 5 minutes) within which to make his point. Representatives of statewide organizations may be given additional time and speakers are encouraged to avoid duplicative comments or defer to organization representatives.

The Governor and Cabinet of the State of Florida is empowered to approve or disapprove a proposed rule of the MFC, but it has no power to amend. MFC rules are considered at regular meetings of the Governor and Cabinet at which any interested party may speak.

At each stage of MFC consideration of fisheries issues, public comment is welcomed. Experience has shown that the same persons appearing before the MFC on an issue will return time and again and give the same comments, as the issue evolves toward an approved rule. The Commission strives to encourage public input, despite the repetition and often tedious nature of the process.

APPENDIX B

REVISED HABITAT SECTION

SPINY LOBSTER

FISHERY MANAGEMENT PLAN

HABITAT SECTION FOR THE SPINY LOBSTER FISHERY MANAGEMENT PLAN

6.2 Description of habitat of the stocks comprising the management unit

The U.S. spiny lobster fishery is confined to south Florida; primarily Monroe County (Figure 6-1). The principal habitat used is offshore coral reefs and seagrasses. In south Florida the Mesozonic and Cenozoic strata of the Florida Platform dominate. The Florida Platform is fronted by shelf-edge reef complexes of the Cretaceous Era. It is characterized by three regional structures but only the Southwest Florida Reef Tract is of prime importance to spiny lobster. The bottom is composed of sand and shell inshore and coral-sponge farther offshore. Salinity and temperature are high throughout most of the year and are generally higher than in the area north of Tampa. Bottom topographies on the continental shelf have high relief; i.e., coral reefs, artificial reefs, rocky hard-bottom substrates, ledges and caves, sloping soft-bottom areas, and limestone outcroppings. More detail on these habitat types is found in the fishery management plan (FMP) for Coral and Coral Reefs (GMFMC and SAFMC, 1982).

The spiny lobster spawns in offshore waters along the deeper reef fringes (Lyons et al. 1981). Although adult males and females sometimes inhabit bays, lagoons, estuaries, and shallow banks, none are known to spawn there (Marx and Herrnkind 1986). Requirements of offshore spawning habitat are high shelter quality, suitable water conditions (stable temperature and salinity, low surge and turbidity), and adequate larval transport by oceanic currents (Kanciruk and Herrnkind 1976 in Marx and Herrnkind 1986).

The following excerpt from Marx and Herrnkind (1986) detail habitat requirements for the various spiny lobster life stages:

> "Phyllosoma larvae inhabit the epipelagic zones of the open ocean, which are characterized by relatively constant temperature and salinity, low levels of suspended sediments, and few pollutants. Relatively stable, natural conditions are apparently required for optimum survival. Ingle and Whitham (1968) noted that 'spiny lobster larvae are extremely delicate, physically, and inordinately fastidious, physiologically.' Larvae are particularly sensitive to silt particles, which can, in extreme instances, lodge on their setae, weigh them down, and cause death (Crawford and De Smidt 1922). Because nutritional requirements change throughout the life of the larvae (Provenzano 1968; Phillips and Sastry 1980), enhanced growth and survival require a diverse, productive oceanic plankton community. Positive correlations between plankton biomass and density of late-stage phyllosomes were reported by Ritz (1972). Although pueruli settle on isolated oceanic banks where the minimum depth exceeds 10 m (Munro 1974), productive fisheries apparently require well-vegetated shallow habitat for juvenile development. Biscayne Bay and Florida Bay are critical nurseries for Florida lobsters (Davis and Dodrill 1980). These bays are characterized by extensive meadows of benthic vegetation, primarily turtlegrass (Thalassia testudinum), shoalgrass (Halodule wrightii), and various algae (Tabbs et al. 1962; Hudson et al. 1970; Eldred et al. 1972). Macroalgal

communities interspersed among these area apparently are important for the earliest benthic stages. Red algae, Laurencia spp., are abundant in waters supporting concentrations of young juveniles (Eldred et al. 1972; Andree 1981; Marx 1983). Intricate algal branching provides young lobsters with cryptic shelter and supports a diverse assemblage of small gastropods, crustaceans, and other prey.

Juveniles larger than 20 mm CL take refuge in both biotic (sponges, small coral heads, sea urchins) and abiotic (ledges, solution holes) structures. The importance of shelter availability on population distribution is magnified because, unlike clawed lobster, spiny lobsters can modify but not construct dens (Kanciruk 1980). Substantial addition of artificial shelters in Biscayne Bay caused population redistribution but did not increase the numbers of lobsters in the area (Davis 1979). The south Florida juvenile lobster population may be limited by recruitment, emigration, food, and perhaps other factors (Davis 1979).

Adults inhabit coral reef crevices or overhangs, rocky outcroppings, ledges, and other discontinuities in hard substrate. Residential patterns of habitation are apparent in large, permanent dwellings near extensive feeding grounds (Herrnkind et al. 1975). Soft-substrate shelters, like grass-bed ledges, are occupied primarily during nomadic movements. Muddy, turbidity-prone substrates are usually avoided (Herrnkind et al. 1975; Kanciruk 1980).

Throughout benthic life spiny lobsters use other habitats besides those providing shelter. Lobsters concentrated during the day in localized dens disperse at night to forage over adjacent grass beds, sand flats, and algal plains (Herrnkind et al. 1975). Interactions between population density of spiny lobster and food availability have not been studied in south Florida. Extreme variation in growth rates, both among individuals and by habitat, suggests that food abundance is a critical factor, as demonstrated in spiny lobster species elsewhere (Chittleborough 1976)."

6.2.1 Habitat condition.

In southeast Florida, lobsters are distributed in accord with the habitats serving each life stage. Reproductively active adults are mainly found along the oceanic (eastward) and gulfward (west) reef and hard substrate fringes of the Keys and Florida Bay. However, some of these individuals transit back and forth to the bay during non-reproductive periods. Juveniles above 20 mm CL are abundant but scattered throughout middle and lower Florida Bay wherever benthic conditions provide refugia. The larger juveniles wander over all intervening habitats and feed extensively in vegetated substrates; they make up the bulk of animals captured in traps within the bay. The distribution and abundance of young juveniles between settlement and 20 mm CL are yet to be quantitatively estimated. Based on recent ecological studies (Marx and Herrnkind, 1985, Herrnkind and Butler, 1986, Herrnkind, et al., 1988), it is likely that settlement occurs wherever swimming postlarvae are brought into contact with inshore stands of benthic algae and other fouling assemblages. Slightly older individuals can be reliably found in mixed substrates within and adjacent to such areas. Upon

outgrowing the algal habitat, the young juveniles take on an increasingly nomadic lifestyle as they gain locomotory proficiency.

Maintaining healthy settlement and early juvenile habitat is crucial both because it is essential for regional lobster recruitment and because it is so vulnerable to human and natural impacts. Nearshore and shallow water vegetated habitats are especially subject to degradation by pollution, physical disturbance (e.g., prop damage, dredging, burial), turbidity, etc., (see below), as well as natural cold chill, vegetation die-off and salinity flux. Each hectare (10,000 m^2) of red algal meadow is calculated to nurture 1,000 juvenile lobsters annual as new settlers continually recruit monthly, then grow and emigrate to other habitats after several months (Marx, 1986).

Offshore areas used by adults appear to be the least affected by nearshore habitat alterations and water quality degradation. Since most of the catch comes from offshore, there is an unknown effect of pesticides, herbicides, and other harmful wastes which have been considered as deleterious to many inshore fisheries. Nearshore reefs and seagrasses have been adversely affected to various degrees by man (see later discussion), but overall are in good condition. Some coral reef and seagrass tracts are protected as marine and estuarine sanctuaries. These include Dry Tortugas (Ft. Jefferson National Monument), Everglades National Park, Biscayne National Park and other important areas listed under Section 6.2.1.1.

The coastal areas used by spiny lobsters are stressed by alterations of the environment coupled with local changes in environmental parameters such as temperature and salinity. Natural and man-induced changes have altered freshwater inflow and removed much habitat. Natural wetland losses result from forces such as erosion, sea level rises, subsidence, and accretion. The major man-induced activities that have impacted environmental gradients in the estuarine and nearshore zone are:

1. construction and maintenance of navigation channels;
2. discharges from wastewater plants and industries;
3. dredge and fill for land use development;
4. agricultural runoff;
5. ditching, draining, or impounding wetlands;
6. oil spills;
7. thermal discharges;
8. mining, particularly for phosphate, and petroleum;
9. entrainment and impingement from electric power plants;
10. dams;
11. marinas;
12. alteration of freshwater inflows to estuaries;
13. saltwater intrusion;
14. non-point-source discharges of contaminants;
15. the setting of traps on reefs;
16. ghost fishing by lost or abandoned traps; and
17. the use of oil in treating traps.

All of south Florida's coastal areas have been impacted to some degree by one or more of the above activities. The bays and estuaries also have been the most impacted by water quality degradation. Numerous pollution-related reports and

publications exist, but there still is no complete list of chemical contaminants, their effects, or concentrations. A comprehensive inventory to assess how seriously the coastal areas are polluted also is needed.

Florida's spiny lobsters spend a substantial part of the adult period offshore and carry out reproduction in waters stabilized by oceanic conditions. Such habitat is subject to human impact, although less so than nearshore areas. There, the apparent obligatory relationship between young juveniles and shallow bay algal habitats makes essential the identification, management and protection of such areas for this species. The degree to which variable estuarine conditions impact lobster recruitment (e.g., in upper Florida Bay) also should be assessed as such habitat is necessary for recruiting other economically important species including shrimp, red drum and snook.

6.2.1.1 - Habitats of particular concern (HPC) are those which play an essential role in the life cycle of the species. Specific areas have been identified in the Gulf of Mexico in the Coral and Coral Reefs FMP (GMFMC and SAFMC, 1982). These include the Biscayne National **Park, Biscayne Bay Lobster Sanctuary,** the Key Largo Coral Reef Marine Sanctuary, the John Pennekamp Coral Reef State Park, and the Dry Tortugas (Figure 6-2). Since these reefs also provide excellent spiny lobster habitat, they are again identified here as HPCs.

6.2.1.2 - Spiny lobster postlarvae may avoid settling in heavily silted stands of benthic algae (Herrnkind, et al., 1988). Based on this and the above discussion (6.2.1), it is likely that the vegetated habitat in areas of high postlarval settlement and early juvenile development will be identified as HPC as information permits.

6.2.1.3 - We are unaware of any current habitat condition that affects the ability to harvest and market spiny lobster resources. However, low levels of DDT, PCB, endrin, and dieldrin organochlorines have been found in other offshore species such as red and black grouper, gag, and red snapper. If the residue levels of organochlorines or other pesticides in spiny lobsters ever become dangerous to humans it is likely that the marketability of spiny lobster could be adversely affected.

6.2.2 Habitat threats.

Currently, the primary threat to nearshore habitat comes from oil and gas development and production, offshore dumping, dredging and dredged material disposal, and the discharge of contaminants by river systems which empty into south Florida nearshore waters. The destruction of suitable benthic algal stands and seagrass beds, as well as reefs (natural and man-made) or other types of hard bottom areas also may prove deleterious to this fishery as the species requires these habitats. Natural impacts on reef habitat may arise from severe weather conditions such as hurricanes and excessive freshwater discharge resulting from heavy rain. Human impacts on reef habitat result from activities such as pollution, dredging and treasure salvage, boat anchor damage, fishing and diving

related perturbations, and petroleum hydrocarbons (Jaap 1984). Ocean dumping and nutrient overenrichment also may cause local problems.

Nearshore reefs, especially off Florida, may be impacted by coastal pollution such as sewage and non-point-source discharges, urban runoff, herbicides, and pesticides (Jaap 1984). Residues of the organochlorine pesticides DDT, PCB, dieldrin, and endrin have been found in gag, red grouper, black grouper, and red snapper (Stout 1980). Heavy metal accumulations in sediment and reef biota near population centers have been noted (Manker 1975). Disposal of wastes has created local problems. Jaap (1984) reports of batteries and refuse disposed of on the reef flat at Carysfort Lighthouse in Florida.

Dredging and salvaging near or on reefs is potentially the most damaging physical human activity. Dredge gear impacts reefs by dislodging corals and other organisms and by creating lesions or scars that lead to infection or mortality. Sedimentation from dredging may seriously damage reefs. Dredged sediments may be anaerobic and bind up available oxygen thereby stressing corals and other sessile reef organisms. If the organisms cannot purge the sediments deposited on them, they generally are killed. Silt generated by dredging may remain in the area for long periods and continue to impact reefs when suspended during storms. Spiny lobster larvae are especially sensitive to mortality from sedimentation. Reef habitat also may be removed by dredging for borrow materials and disposal on beaches and by dredging and filling associated with navigation channel construction and maintenance.

Anchor damage is a significant threat to reefs, especially those composed of corals. Anchors, ground tackle, lines, and chains can break hard and soft corals, scar reefs, and open lesions which can become infected. Heavy use of reef areas by boaters can compound the problem. Although anchoring by oil and gas lease operators is prohibited on most of the coral reefs in the Gulf of Mexico, anchoring for other purposes is not restricted. Fishing gear such as bottom trawls, bottom longlines, and traps also may damage reefs. Effects would be similar to anchor damage. Hook-and-line fishing and related losses of line, leaders, hooks, and sinkers also may damage corals. Disposal of garbage by boats has been identified as a problem at Pulaski Shoal near Dry Tortugas (Jaap 1984).

Recreational spearfishing, especially with explosive power heads, has damaged corals and may become more of a problem in areas of heavy diver concentration. Divers often overturn corals and cause other damage. Specimen collecting also may result in localized reef damage, especially when chemical collecting agents are improperly used.

6.2.3 Habitat information needs.

The following research needs relative to spiny lobster habitat are provided so that state, federal, and private research efforts can focus on those areas that would allow the GMFMC and SAFMC to develop measures to better manage spiny lobster and their habitats:

1. Identification of optimum habitat and environmental conditions for all life stages, especially the crucial settlement and early juvenile stages about which little is presently known;

2. The quantitative relationships between recruitment and production and their relationship to habitat;
3. Effects of water quality degradation on production;
4. Identification of areas of particular concern;
5. Determination of habitat conditions that limit production;
6. Methods for restoring habitat and/or improving existing environmental conditions that adversely affect production and;
7. Determination of the larval origin of spiny lobster.

6.2.4 Habitat conservation programs.

State and federal agencies and laws and policies that affect spiny lobster habitat are found in Section 7.0 of the FMP for Coral and Coral Reefs and the FMP for Spiny Lobster (GMFMC & SAFMC 1982). Also see Figure 6-3. Specific involvement by other state and federal agencies are noted as follows. However, state involvement is limited mainly to Florida where the resource is centered.

State Programs

State of Florida Department of Natural Resources (DNR). Is responsible for management of all marine fishery resources in state waters. DNR has policing powers through the Florida Marine Patrol to enforce state and some federal statutes. In the area of specific regulations for reef management, the department enforces statute 370.110 (prohibition of harvest, damage, or sale of fire coral, sea fans, and the true stony corals), 370.114 (protection of all corals in John Pennekamp Coral Reef State Park), 370.08 (management of fish collecting chemicals), and 370.15 (fishery gear regulation). The Division of Recreation and Parks manages and operates state parks and federal marine sanctuaries through agreements with the National Oceanic and Atmospheric Administration (NOAA). The Division of Marine Research conducts scientific research to support management in the area of coral reef ecology and fisheries.

State of Florida Department of Environmental Regulation (DER). Within state waters DER has management powers over environmental change caused by human activity. All major engineering projects must be reviewed prior to permitting. Both environmental monitoring and research are conducted. In the area of permitting, DER reviews permits for any human activity that affects the marine environment. Coastal dredging is managed through 370.03 and marine pollution under statute 370.09.

State of Florida Department of Administration (DOA). Under special powers the DOA can enact "State Area of Critical Concern" and decree special regulations for indefinite periods if growth or other activities overload the capacity of local government to adequately manage the resources.

State of Florida Department of State (DOS). DOS manages salvage of historical artifacts in state waters. In the Keys area this includes numerous vessels sunk offshore. The activity is managed through the licensing of salvagers and monitoring of operations.

Florida Aquatic Preserve System. By special legislative action, the Florida Aquatic Preserve Act of 1975 (Florida Statutes, Sections 258.35-258.44) was created to establish a direct means of permanently preserving submerged, state-owned lands. The Act defined an aquatic preserve as a "biologically, aesthetically or scientifically ... exceptional area of submerged lands and its associated waters set aside for maintaining the area essentially in its natural or existing condition (Florida Statutes, Section 258.37-258.38). The aquatic preserves created under this Act include only lands and water bottoms owned by the state (Florida Statutes, Section 253.03) and other lands or water bottoms that another government agency might authorize for preservation. No privately owned lands or water bottoms are included in the Act unless by special agreement with the private owner. Other specific exclusions from the aquatic preserves are areas altered by channel maintenance, by other public works projects and, lastly, lands lost by artificially induced erosion.

The original Florida Aquatic Preserves Act of 1975 outlined boundaries for 31 Preserves. Although most of these are in inshore waters, such as rivers and estuaries, ocean areas also may be included. At least three preserves in the Florida Keys probably include coral habitats - the Coupon Bight Aquatic Preserve adjacent to and south of Big Pine Key, Florida; Lignumvitae Key Aquatic Preserve to the south of Key Largo, Florida; and the Biscayne Bay Aquatic Preserve in Biscayne Bay, Florida.

Florida State Park System. The relevance of the State Park System to spiny lobster habitat is due principally to the John Pennekamp Coral Reef State Park on and off Key Largo, Florida. This outstanding park adjacent to Key Largo Coral Reef Marine Sanctuary contains significant coral reef habitats. The John Pennekamp State Park was established in 1959 and includes over 125 km^2 (36 nm^2) of state waters.

State Laws, Regulations, and Policies Under Florida's coral law, it is unlawful for any person to take, otherwise destroy, sell, or attempt to sell the following: 1) any sea fan of the species Gorgonia flabellum, or the species Gorgonia ventalina; 2) any hard or stony coral (Scleractinia); or 3) any fire coral (Millepora). Possession of any fresh, uncleaned, or uncured specimen of these species without a certified invoice of importation from a foreign country or proof that the specimen was taken before July 1, 1976, is also illegal. Sea fans or stony corals may be taken for scientific or educational purposes only by permit from the Department of Natural Resources [Fla. Stat. (370.114)]. The Florida Marine Patrol must be informed of the time, place, method, quantity, and species to be collected. Dead corals and coral rubble (i.e., coral rock) may be collected without a permit. It is unlawful to take dead or live coral from, or possess it within, John Pennekamp Coral Reef State Park [Fla. Stat. (370.114)]. By a joint management agreement between the State of Florida and the NOAA, state park rangers and Coast Guard personnel patrol (Cooperative Agreement No. 04-6-158-44116 between Florida DNR and U.S. Department of Commerce, NOAA, and 15 C.F.R. 929) both the State Park and the Key Largo Coral Reef Marine Sanctuary (KLCRMS).

Indirect authorities with relevance to corals include fishery gear regulations [Fla. Stat. (370.15)], a permit system for the use of chemicals to collect marine specimens [Fla. Stat. (370.08)] ocean water contamination regulations [Fla. Stat. (370.09)], and dredge and fill regulations [Fla. Stat. (370.03)]. State habitat

programs include Aquatic Preserves [Fla. Stat. (258.35)], Areas of Critical State Concern [Fla. Stat. (380.05)], Environmentally Endangered Lands [Fla. Stat. (259)], and State Parks.

Section 7 of Article II of the Florida Constitution provides that it shall be the policy of the State to conserve and protect its natural resources and scenic beauty. The Florida code (Ch. 17-4.28 and 4.29) regulates dredge and fill activities, (Ch. 7-4.02) protects submerged lands, (Ch. 17-3, Fla. Admin. Code) provides water quality standards and (Ch. 161 F.S.) protects beaches and shorelines. In addition, the Randall Act (Ch. 253 F.S.) prevents the sale of state-owned lands, except after conservation considerations are met. This Act stopped the sale of state-owned submerged lands. By definition, submerged lands in Florida are those lands covered by the categories of water listed in Section 17-4.28(2), Fla. Admin. Code, and having plant dominance as therein listed. Some of the dominant plants are mangroves (black, red, and white), as well as the major marine grasses (halodule, manatee, and turtle grass).

Florida's Coastal Zone Management Program has been approved by the federal government. Included in the program are all the codified statutes and rules of the DNR and the DER that pertain to the marine environment.

Federal Programs

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

In terms of complementing the protection of coral habitat from a site-specific perspective, this is one of the most important federal programs. This program was authorized under Title III of the Marine Protection Research and Sanctuaries Act (MPRSA) of 1972. Its purpose is to preserve or restore the conservation, recreational, ecological, or aesthetic values of localized area "... as far seaward as the outer edge of the continental shelf, ...(and in) other coastal waters whether the tide ebbs and flows ..." (MPRSA, Section 302a). In effect, the MSP is a coastal water counterpart to the more familiar national park, forest, wildlife refuge, and wilderness systems.

Site management and administrative responsibility for a sanctuary may either be retained by OCZM or delegated with necessary funding support to other appropriate management units.

The NSP is particularly interested in protecting outstanding coral reef areas. One of the six existing sanctuaries - the KLCRNMS off Key Largo, Florida, complements state efforts at John Pennekamp State Park by protecting a 343 km^2 (100 nm^2) section of the upper Florida reef tract. A management plan for the Key Largo sanctuary has been designed to provide the protection necessary and insure long-term viability of the ecosystem. The management plan also addresses public education, environmental and regulatory enforcement monitoring, and regulatory enforcement needs at the site. Enforcement is conducted cooperatively by the DNR (Marine Patrol and Park Rangers) and the U.S. Coast Guard.

The Looe Key National Marine Sanctuary covers a 5 nm^2 coral reef area located 6.7 nm east of Big Pine Key, Florida. It was designated in January 1981 to maintain, protect, and enhance the quality of the natural, biological, aesthetic and cultural resources of the Looe Key system, to promote and stimulate marine research efforts directed toward improved management decision making and identification and analysis of marine ecological interrelationships, and to enhance public awareness of the functioning of the Looe Key coral reef system.

National Marine Fisheries Service (NMFS). 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. NMFS implements approved plans. The Coast Guard, NMFS, and states enforce FMPs. FMPs for coral and coral reefs, reef fish, grouper and snapper, and spiny lobster are in force.

NMFS has implemented rules for Council FMPs that directly or indirectly protect the habitat of spiny lobster. Rules for the Coral FMP (50 CFR Part 638) prohibit harvest and possession of coral except by scientific permit and establish HAPCs where certain fishing gear is prohibited. Rules for the Reef Fish FMP (50 CFR Part 641) establish a stressed area (encompassing most natural reef areas in the Gulf) where certain gear is prohibited (i.e., roller trawls, power heads, fish traps). Rules for the Shrimp FMP (50 CFR Part 658) establish the Tortugas Sanctuary that encompasses all the Florida Reef Tract and most of Florida Bay within which trawling is prohibited. Rules for the Stone Crab FMP (50 CFR Part 654) establish a "line of separation" seaward of the Tortugas Sanctuary within which trawling is prohibited from January 1 to May 20.

National Park Service (NPS). National parks and monuments are under the jurisdiction of NPS. Management, enforcement, and research are accomplished in house. The system of national parks and monuments operated by the NPS, in the broadest terms, preserve for all times scenic beauty, wilderness, native wildlife, indigenous plant life and areas of scientific significance and antiquity {16 U.S.C. (1)}. Although the NPS includes several marine areas, their distinctly land-based orientation makes them somewhat less likely to include new marine areas within their system. Nevertheless, areas operated by the NPS within the present study area include and manage significant coral resources - the Everglades National Park, the Biscayne National Park north of Key Largo, Florida, and the Fort Jefferson National Monument in the Dry Tortugas, Florida.

Both the statement for management for the Jefferson National Monument and the general management plan for Everglades National Park and Biscayne National Park, include as major management objectives the protection of natural resources (including corals) within their boundaries. At the Fort Jefferson Monument, all areas within the Monument's administrative boundaries (with the exception of Garden Key), are classified as an outstanding natural area under the NPS's land classification system. Prohibited activities include commercial fishing and the taking of lobsters, while allowed uses include sport fishing and nonconsumptive recreational activities.

Minerals Management Service (MMS). This agency has jurisdiction over mineral and petroleum resources on the continental shelf. The MMS along with the U.S. Geological Survey is charged with administering mineral exploration and development on the Outer Continental Shelf (OCS), pursuant to the OCS Lands Act (OCSLA), as amended in 1978 [43 U.S.C. (1331 et seq.)]. The MMS serves as the administrative agency for leasing submerged federal lands.

Of particular interest is MMS' the ability to withdraw tracts from proposed OCS mineral lease sales for lack of information, aesthetic, environmental, geologic, or other reasons. The presence of coral reefs, hard bottoms, or other marine areas containing significant resources could be reasons for withdrawing tracts. Further, the OCSLA [43 U.S.C. (1341)] also provides for permanent disposition from leasing; Key Largo Coral Reef was provided such protection by President Eisenhower, through Proclamation No. 3339 (55 CFR 2552) which established the KLCRMS.

During 1988, the Governor of the State of Florida requested that OCS drilling not be allowed south of 26 N. latitude to assure protection of coral reef habitats. The Oil Pollution Convention (T.I.A.S. 4900,6109) and the Oil Pollution Act [33 U.S.C. (1001-1016)] also prohibit oil discharges within 50 nm of shore by U.S. and foreign vessels.

Fish and Wildlife Service (FWS). FWS assists with environmental impact review, develops biological resource evaluations, and administers the endangered species program with the NMFS. Three National Wildlife Refuges are located in the Florida Keys which undoubtedly contain coral habitats: The National Key Deer Refuge, The Great White Heron National Wildlife Refuge, and the Key West National Wildlife Refuge. These areas, however, rely on the coral permitting authority of the State of Florida to protect the corals.

Geological Survey (USGS). In the coral reef areas USGS has conducted considerable reef research and assisted or cooperated with other institutions and agencies to facilitate logistics and support of coral reef research. The USGS also is charged with supervising mineral development operations on the OCS. Further, the USGS must ensure oil company compliance with regulations and lease stipulations once a lease is sold. This represents a key management authority for ensuring protection of coral communities. Although these authorities are not comprehensive, they are significant because of the widespread interest in current OCS oil and gas development and its potential impacts on corals.

Coast Guard. The 1978 Waterways Safety Act charges the CG with marine environmental protection. The CG 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 COE contracts and regulates coastal engineering projects, particularly harbor and channel dredging and beach renourishment projects. The COE also reviews and is the permitting agency for coastal development projects, artificial reefs, and offshore structures.

Environmental Protection Agency (EPA). This agency has a general responsibility for controlling air and water pollution. Disposal of hazardous wastes and point-source discharge permitting are EPA functions. Certain mineral and petroleum exploration and production activities also are managed by EPA. Environmental research germane to waste disposal and pollution also are funded. EPA regulates chemical discharges into Gulf of Mexico and south Atlantic waters, under the National Pollution Discharge Elimination System (NPDES) program of the Clean Water Act for chemicals used or produced in the Gulf and south Atlantic area (i.e., drilling muds, produced water or biocides) and then released, or under the Ocean Dumping Regulations of the MPRSA if the chemicals are transported into the Gulf and south Atlantic area for the purpose of dumping.

Federal environmental agencies such as the NMFS, FWS, and the EPA also analyze projects proposing inshore and offshore alterations for potential impacts on resources under their purview. Recommendations resulting from these analyses are provided to the permitting agencies (the COE for physical alterations in inshore waters and territorial sea, the MMS for physical alterations in the OCS or the offshore Exclusive Economic Zone (EEZ) and EPA for chemical alterations). Even though the COE 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 Interior (DOI), in a nationwide general permit.

6.2.5 Habitat recommendations.

The spiny lobster fishery contributes to the food supply, economy, and health of the nation, and provides recreational and commercial fishing opportunities. The fishery is dependent upon the survival of spiny lobster resources, which can only be assured by the wise management of all aspects of the habitat. Increased productivity of spiny lobster stocks 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 GMFMC and SAFMC 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 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 net 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 GMFMC and SAFMC have formed Habitat Committees and Advisory Panels for the Gulf and south Atlantic states. 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 their 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 spiny lobster habitat. The goal is to insure that spiny lobster habitat losses are kept to the minimum and that efforts for appropriate mitigation strategies and applicable research are supported.

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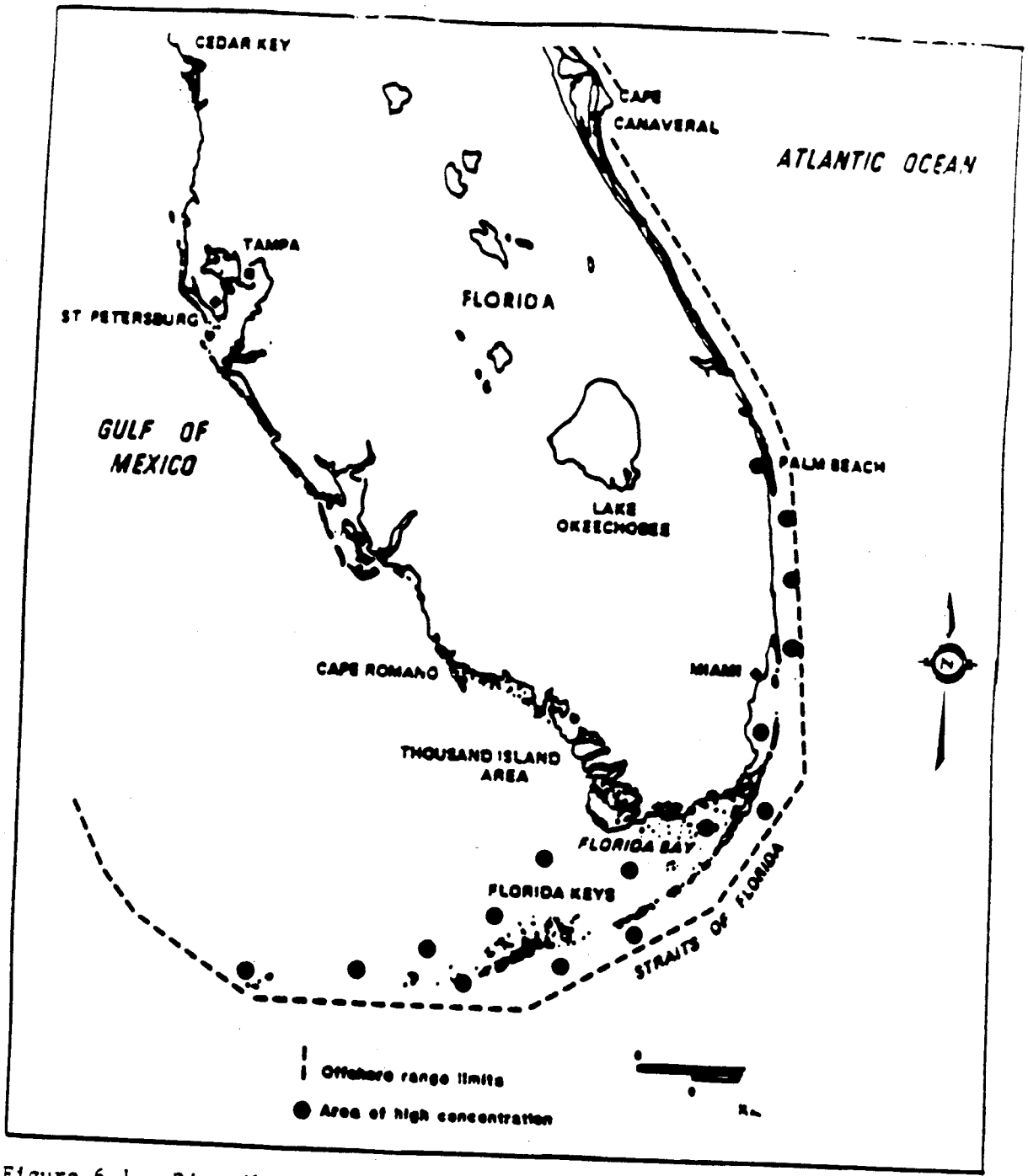

Figure 6-1. Distribution of the spiny lobster on the south Florida coast.

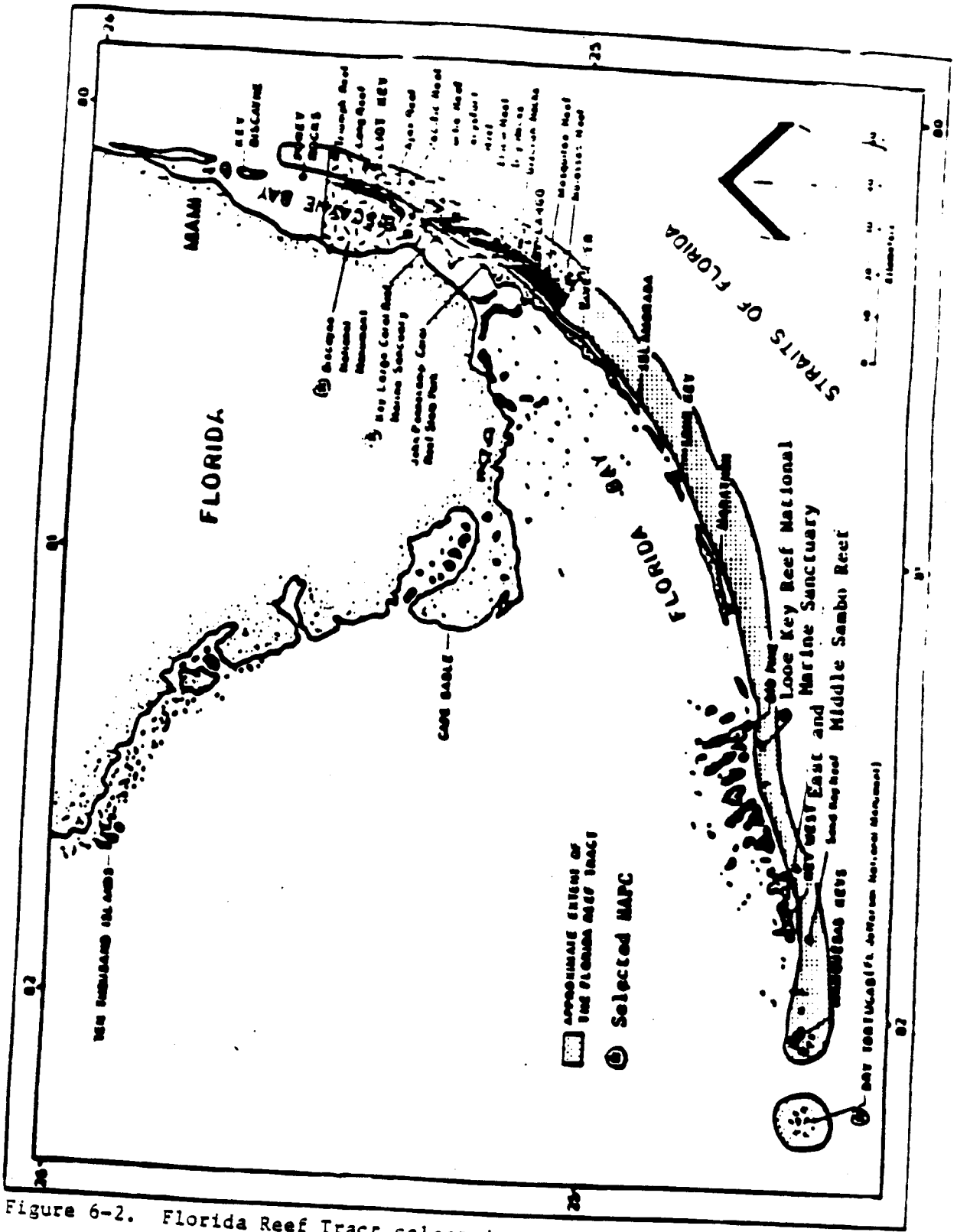

Figure 6-2. Florida Reef Tract selected as Habitat Areas of Particular Concern.

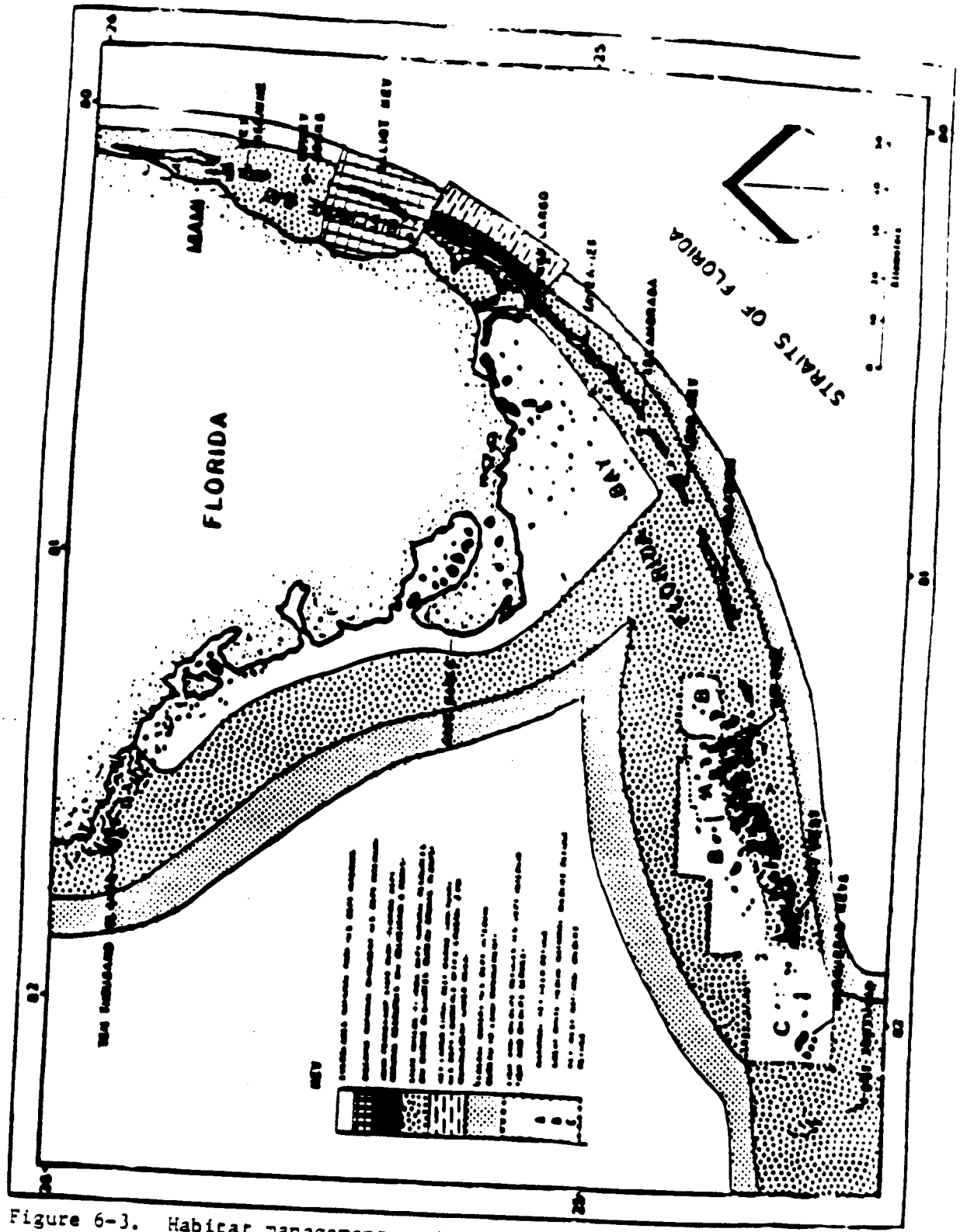

Figure 6-3. Habitat management authorities and associated programs along the Florida Reef Tract (after Marx and Herrnkind 1986).